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Implications for Practice and Court

Springer

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Implications for Practice and Court

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Preface

Introduction

This book is a lengthy one consisting of 34 chapters arranged into two major sections. The first section of the book gives the basics in the area of psychiatric/psychological injury, malingering, and its detection and assessment, focussing on posttraumatic stress disorder (PTSD). The second section adds material, in particular, on pain, on traumatic brain injury (TBI), on therapy, and on ethics, as well as supplements for study and education.

Content

Specifically, this work is about the detection of malingering, feigning, and related response biases expressed by evaluees in forensic and related disability evaluations, in general, and in psychological and psychiatric injury cases, in particular. Psychological injury involves PTSD, chronic pain, TBI (especially mild, MTBI). This book is the first authored (as opposed to edited) broad-coverage book in the field on malingering. Also, it covers other areas of psychological injury, such as the injuries themselves (PTSD, pain, TBI) and their assessment and treatment. Another major focus of the book is on ethics. The work looks dispassionately at the science in the field, and points out inconsistencies, while proposing solutions to facilitate both practice and testimony for court. This book adopts a middle-of-the-road and state-of-the-art perspective that makes it ideal for use in both the latter contexts.

The first part of the book analyzes and discusses the inconsistencies in definitions that mark the field of study of malingering and related terms, as well as indicating the difficulties in establishing the prevalence or base rate in psychological/psychiatric injury populations in forensic disability and related contexts. It analyzes extant models related to malingering/feigning, (a) especially that of Slick et al. (1999), which is on Malingered Neurocognitive Dysfunction (MND), and (b) its

modifications suggested by Rogers et al. (2011a, b) and Boone (2011), as well as (c) another malingering-related model on pain, MPRD, Malingered Pain-Related Dysfunction (Bianchini et al. 2005). Based on these two models of malingering in neurocognition and in pain (MND and MPRD, respectively, as well as the proposed revisions by Rogers et al. and Boone), and (d) on a fourth major source, the work of Rubenzer (2009) on testing for malingered PTSD, the author of the monograph developed a new diagnostic system applicable to PTSD cases. Then, based on this PTSD model, he revised the MND and MPRD models to develop his own. Therefore the three proposed malingering-detection systems are quite uniform, except for some critical examples (the revised MND and MPRD models are presented in depth in the supplementary/appendix section later in ends the book).

The present work also describes a model of the distribution of malingering and other response biases, as well as a questionnaire based on it. They that can be used in surveys of professionals undertaking evaluations related to malingering and other response biases. The types of response biases in the questionnaire are compatible with the three malingering diagnostic systems created. The distributions obtained in surveys with the questionnaire could help clarify the prevalence or base rate of the various types of credible and noncredible response styles in the questionnaire. If used in surveys this way, the results could help practice in the area both for mental health and legal professionals, as well as court. In addition, the first part of the book includes a review of an important test in the area, the MMPI-2-RF (Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form; Ben-Porath and Tellegen 2008/2011).

The second part of the book includes monograph literature review, focusing on the work of (a) Larrabee (2012) and (b) Reynolds and Horton (2012) on the topic of malingering in neuropsychology. Also, it focuses on recent work on malingered PTSD. This part of the book concentrates on controversies/contrasts, the adversarial divide and law, stringent research (the work of Rogers), as well as the question of gold standards in malingering diagnostic systems and assessment. It gives the practitioner much material to work with, such as differences in more plaintiff-related and defense-related approaches to malingering, chapters that help in detecting malingered PTSD, and discussion of law and causality.

The third part of the book looks at assessment and the most recent journal literature. First, it examines even-handedly evaluator and evaluee factors that influence disability evaluations, including biases such as confirmatory bias. It focuses on expert report writing/testimony. As for the journal literature review, it examines recent articles published in the field (in 2012).

The fourth part of the book examines the psychological injuries of MTBI and chronic pain, as well as conversion disorder. There is a chapter on pain feigning, which includes a proposed instrument to assess it.

The fourth part of the book then continues discussing psychological injury, malingering, ethics, and law, examining the most recent book on the topic. It analyzes in much depth the book on TBI by Carone and Bush (2013), and the most recent articles published in the field (in 2012). The book by Carone and Bush and the most recent literature review both include sources consistent with the present approach, as well as others that are examined critically when they are not.

The last substantive chapters of the book are in this fourth part. They shift gears into areas that are more general than psychological injury and law. They consider therapy and ethics within the psychological injury context, but also deal with general issues in psychology. In these chapters, after reviewing relevant, recent literature, the book presents broad models that allow for expert practice and reflection. The second therapy chapter of this part presents a transdiagnostic therapeutic module based on belief in free will and change processes. The second ethics chapter of this part presents a model of ethical thought and ethical decision-making.

The fifth part of the book is comprised of supplementary material and appendices. There are two chapters on tests and testing and three on tables presenting the specific malingering diagnostic systems created in the present work.

The sixth part of the book includes three chapters on education and study, including one on a glossary of terms. The first chapter outlines a course proposal for the area of psychological injury and law, for which the present book could serve as its textbook (e.g., graduate; upgrading; continuing education). The next chapter provides study questions to help review its contents.

The concluding two chapters to the book first present guidelines to cut scores for PTSD tests when working in the area of psychological injury and law. Then the last chapter considers the most recent articles relevant to the book that were published in the journal *Psychological Injury and Law*. A brief overview of the book. It ends with recommendations.

Conclusion

Overall, the present book has much to offer to the reader. (a) It gives a comprehensive overview of the field of psychological injury and law. (b) Also, it indicates that progress is being made in meeting court admissibility criteria of good or acceptable science compared to poor or "junk" science. This progress includes movement toward the development of "gold standard" models and criteria related to malingering and related response biases, but much research remains to be done. It emphasizes that the proposed system developed by the author can be used by psychiatrists and other mental health professionals, not just psychologists. It should be noted that the systems should be used with caution until shown to be sufficiently valid for assessment and court purposes. (c) Further, the book expands into the useful areas of appropriate therapy and ethics in the field. It includes ethics material related to assessment and malingering, in particular, and to working in the area of psychiatric/psychological injury and law, in general. To conclude, the present book argues for a comprehensive, impartial, and scientifically-informed approach to assessment in the area of forensic disability and related contexts involving psychological injuries, including of malingering and related negative response bias detection. Moreover, by having such an approach to all areas of practice in the area, including in therapy and ethical decision-making, the professional will facilitate functioning effectively in the field and also avoid some of the pitfalls in the area.

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Note that I have no conflicts of interest to report with respect to this book, although I do receive mostly plaintiff referrals, rather than defense.

Contents

Part II Malingering Detection, Law, Causality

Brief Biography

Gerald Young, Ph.D., is an Associate Professor at Glendon College, York University. He is Editor-in-Chief of *Psychological Injury and Law* and President of the *Association for Scientific Advancement in Psychological Injury and Law*. He has published other works in the area (e.g., *Causality of Psychological Injury: Presenting Evidence in Court*, 2007). His other area of research is in child development (*Development and Causality: Neo-Piagetian Perspectives*, 2011), which was referred to in a review as his "magnum opus" and as "remarkable." His most recent trade book is called *You Can Rejoin Joy: Blogging for Today's Psychology* (2013; rejoiningjoy.com). He may be reached at gyoung@glendon.yorku.ca.

Table of Terms and Sources

Abbreviation	Name	Source(s)
MMPI-2-RF	Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form	Ben-Porath and Tellegen (2008/2011)
MND	Malingered Neurocognitive Dysfunction	Slick et al. (1999)
MPRD	Malingered Pain-Related Disability	Bianchini et al. (2005)

Part I
Psychological Injury, Malingering, Definitions, Gold Standards, Models

Chapter 1
Introduction: Psychological Injury, Malingering, Ethics, and Law

1.1 Introduction

To begin, this introductory chapter provides the reader with a detailed summary of the book. Next, it describes in depth the area of psychiatric/psychological injury and law. This book is about the major areas of psychiatric/psychological injury and law, and especially about scientific, impartial, and comprehensive approaches to malingering and its detection.

The book constitutes a whole, but for organizational purposes and easier reading, it is comprised of two related sections. There are 17 chapters in each of the two sections that comprise the present book. The first one, presents the basics in the area, from the major areas of psychological/psychiatric injury and law, to malingering and its detection and assessment. Much of this first monograph portion of the present book relates to the psychological injury of PTSD (posttraumatic stress disorder). The first monograph (A) portion of the book ends by considering the most recent publications in the area.

The second section of the book examines other psychological injuries and confounds, such as pain, traumatic brain injury (TBI), PPCS (persistent post-concussive symptoms), and conversion disorder. Main foci are on therapy and on ethics. It concludes with supplementary material, including on tests/testing, cut off scores, tables of the proposed malingering diagnostic systems, and education/study material.

Table of Terms and Sources

Abbreviation	Name	Source(s)
DAPS	Detailed Assessment of Posttraumatic Stress	Briere (2001)
DSM-IV-TR	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision	American Psychiatric Association (2000)
DSM-5	Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, (2013)	American Psychiatric Association (2013)
F	Infrequency Scale	Butcher et al. (1989)

(continued)

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(continued)

Abbreviation	Name	Source(s)
F-NCR-D	Feigned Neurocognitive Related Disability/ Dysfunction	Young (2014); present work
F-PR-D	Feigned Pain Related Disability/Dysfunction	Young (2014); present work
F-PTSDR-D	Feigned Posttraumatic Stress Disorder Disability/Dysfunction	Young (2014); present work
MMPI	Minnesota Multiphasic Personality Inventory	Hathaway and McKinley (1943)
MMPI-2	Minnesota Multiphasic Personality Inventory, Second Edition	Butcher et al. (1989, 2001)
MMPI-2-RF	Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form	Ben-Porath and Tellegen (2008/2011)
MND	Malingered Neurocognitive Dysfunction	Slick et al. (1999)
MPRD	Malingered Pain-Related Disability	Bianchini et al. (2005)
PAI	Personality Assessment Inventory	Morey (1991, 2007)
R-PAS	Rorschach Performance Assessment System	Meyer et al. (2011)
SIRS	Structured Interview of Reported Symptoms	Rogers et al. (1992)
SIRS-2	Structured Interview of Reported Symptoms, Second Edition	Rogers et al. (2010)
TOMM	Test of Memory Malingering	Tombaugh (1996)
VSVT	Victoria Symptom Validity Test	Slick et al. (1997/2005)
WMT	Word Memory Test	Green (2005)

1.2 Book Summary

This book, on the topic of Psychological Injury, Malingering, Ethics, and Law, is a book of several firsts. In this regard, it is the first book in the area of psychiatric/psychological injury and law that covers all its major areas, such as the major psychological injuries, their assessment, and their treatment. Second, with respect to its major focus, that of malingering, it is the first authored (as opposed to edited) broad-coverage book in the field. Third, it is a book of both innovations and critical review. One cannot go without the other. By careful analysis of existing concepts and practices, I end up proposing new models, from malingering detection to ethics.

The primary focus of this work is about the detection of malingering, feigning, and related response biases expressed by evaluees in psychological and psychiatric injury cases in the forensic disability or related contexts (e.g., for tort and worker compensation). It will help in evaluations related to PTSD, TBI (and/or related neurocognition), and chronic pain cases, in particular. The work looks dispassionately at the science in the field, and points out inconsistencies, while developing models with respect to malingered and related presentations/performances that are based on prior models. Also, it proposes other solutions to facilitate both practice and testimony for court and related legal venues.

The book is divided into six parts – which are introduced briefly before their in depth description. The first part of the book is on key terms and prevalence rates in the area, key tests, and a series of innovations that were developed on approaches to

malingering and models for its detection. It focusses on PTSD. The second section of the book especially considers law and causality, including the adversarial divide. The third section of the book is comprised of a review of evaluator and evaluee factors in assessment; also, it gives an up-to-date literature review that includes an in-depth review of an excellent book by Carone and Bush (2013). The fourth section of the book looks at other psychological injuries, such as pain, TBI, PPCS, and conversion disorder. Then, there are chapters on therapy and ethics. The last two sections of the book include supplementary and appendix material – on tests/testing, and cut scores on the proposed malingering diagnostic systems, and on education and study, including a glossary of terms.

1.3 First Part

Contents. This part of the book aims to clarify the nature of malingering, feigning, exaggeration, and related response biases, and their prevalence or base rate. It begins with a review of recent literature that demonstrates the confusions and ambiguities in defining terms such as malingering, exaggeration, and related response biases, and performance invalidity or self-unfavorable test results. It shows the difficulties in establishing base rates or prevalence in the area of assessment of credibility or feigning of psychological/psychiatric injuries. Next, the work examines the model of Slick et al. (1999) on MND (Malingered Neurocognitive Dysfunction) criteria, as well as the critiques and recommendations of it offered by Rogers et al. (2011a, b) and by Boone (2011), which have contributed greatly to the field. This section of the book also presents the major tests used in the field, such as symptom validity tests and embedded scales in the MMPI-2-RF (Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form; Ben-Porath and Tellegen 2008/2011).

Then, in the penultimate chapter, Chap. 5, the book describes modeling that could help in understanding malingering and related terms and in determining their presence in evaluations, while approaching the question from a middle-of-the-road perspective. In particular, the author presents a model of Feigned Posttraumatic Stress Disorder Related Disability/Dysfunction (F-PTSDR-D), the first system developed for malingering detection of PTSD. The author developed this model based on the Malingered Pain-Related Disability system (MPRD; Bianchini et al. 2005), itself modeled on the MND system. The work of Rubenzer (2009) also helped in elaborating the system, through his proposed weighting scheme for invalidity or effort tests/measures/scales/detectors. Then, on the basis of the F-PTSDR-D, the author developed revisions of the MND and the MPRD systems (labeled the Feigned Neurocognitive-Related Disability/Dysfunction and the Feigned Pain-Related Disability/Dysfunction systems, or the F-NCR-D and F-PR-D systems, respectively). (The table presenting the F-PTSDR-D system constitutes a separate Chap. 6, and the revised MND and MPRD models are presented in depth in the supplementary/appendix section, Chaps. 27 and 28.) The three systems have been constructed to be quite similar, with the only difference concerning the specific examples provided. This contrasts with the differing approaches in the MND and

MPRD systems. In addition, for cases of polytrauma and comorbidities, the chapter provides guidelines for their combined usage.

The three malingering detection systems that are described for use with cases of PTSD, TBI, and pain are tightly constructed, and cover multiple ways of arriving at careful estimates of the degree of malingering/feigning/response bias involved in forensic disability and related determinations. They include criteria related not only to psychological testing, such as 60 rules, but also to 30 different types of case inconsistencies/discrepancies. In this regard, the systems that have been constructed can be used effectively by all types of mental health professionals, including psychiatrists and others and not only psychologists. In terms of the detailed criteria developed for rating purposes in the systems as applied to assessments in forensic disability and related contexts, the numerous, specific rules (60) about using tests for system rating purposes and the 30 types of inconsistencies/discrepancies that have been developed in this regard are aimed to cover all types of contingencies. This is another example of how tightly the systems have been constructed in order that their application should yield similar ratings by different raters, or good inter-rater reliability.

In general, the systems proposed have the potential for their ratings to reflect not only adequate reliability but also adequate validity. Aside from prospects for achieving good inter-rater reliability, the systems appear to have the elements needed for arriving at adequate validity (e.g., construct, content, criterion). Indeed, the systems were developed rationally to represent state-of-the-art developments in the science in the field and middle-of-the-road practice in it, which constitute important principles underlying validity. In the end, in using the systems, evaluators might find it difficult to attribute definitively malingering, but astute assessors can find other ways to describe clear feigning or lack of credibility of the presentations and performances of evaluees.

Chapter 5 in the first section of the book also describes a questionnaire developed for survey and a corresponding graphical depiction or model of the range of response biases that can be evident in forensic disability and related contexts, including malingering. The questionnaire and model illustrate the range of ratings possible in forensic disability and related determinations with respect to malingering and related biases, from (a) absent and minimal/mild, credible exaggeration to (b) gross, noncredible exaggeration and overt malingering. The central "gray zone" is the crucial, indeterminate one. The questionnaire and model that had been developed served as a basis for elaboration of the three malingering diagnostic systems just described, given that the questionnaire and its associated model present a seven-step range of response styles from absent response bias to frank malingering that was incorporated into the systems. The responses to the proposed survey, if undertaken, could provide definitive information on the prevalence or base rate of malingering and related response biases. These data could help research and practice in the area, for example, with respect to sensitivity and specificity estimates of key tests in the area, as well as their cut scores. Calculations such as these would be invaluable in the work of mental health professionals, as well as court.

The fifth chapter in the first section of the present work also describes a dimensional model of malingering focusing on the intersection of conscious versus unconscious factors, internal versus external incentives, and attitudes of clients/evaluees

(and treatment providers) compared to claim evaluators and assessing mental health professionals. The purpose in presenting the model is to provide balance – evaluees are not the only actors in the litigation process with financial incentives that should be checked.

Contributions. The first part of the monograph on introductory material stands to contribute to the field in several important ways. (a) It defines and differentiates the basic terms in the field related to malingering, feigning, and other response biases. By disentangling them, the field can proceed with better research and modeling on malingering and related response, presentation, and performance biases. (b) It reviews the literature on prevalence or base rate of these biases, from malingering to definite bias to exaggeration. In so doing, it supports a model with a distribution that is more normatively appropriate than some of the estimates in the literature, e.g., with a large indeterminate gray zone. (c) It analyzes the two existing models of malingered response, presentation, and performance in psychiatric/psychological injury assessments, and the recommendations for their change (the MND and MPRD models; and the Rogers-Boone and colleagues recommendations). (d) It creates a new model for non-credible, feigned, or malingered posttraumatic stress disorder (F-PTSDR-D). (e) It revises the MND and MPRD models so that, aside from differing examples for each, they are identical with the F-PTSDR-D one. The revised malingering-detection systems or models for MND and MPRD are referred to as F-NCR-D and F-PR-D systems, respectively. The three models end up being uniform, facilitating their learning and use. Moreover, the first part of the present work indicates how the three malingering-detection systems or models that have been constructed can be used together in cases of claimed polytrauma/comorbidity. (f) The first section of the book includes other innovations – it offers a model of the various terms in the field, which are aligned on a seven-step progression from absent bias to malingering. Based on the model, it provides a survey questionnaire that could be used to research the base rates or prevalence of the different biases, including of malingering. (g) It describes a model that indicates the pressures on all stakeholders and professionals in the field, including mental health workers, and indicates that the model applies to patients and evaluees, as well.

Together, these contributions to the field of malingering and related response, presentation, and performance biases, as well as others contributions in the remainder of the book (for example, I even attempt to redefine malingering, suggest that conversion disorder be changed in terminology to conversion complications disorder, and, for therapy and ethics, presents new models), have the potential to alter the field in terms of its conceptualization, modeling, empirical research, practice, and application in court.

1.4 Second Part

Contents. The second part of the book reviews much of the recent literature on the topic of malingering-related response styles and biases. First, it examines sources that present contrasting views of how difficult it is to attribute malingering.

Drob et al. (2009) pointed out the major difficulties in attributing malingering in assessments related to forensic disability cases. In contrast, Larrabee (2012) presented the ways that malingering could be assessed effectively. In describing and comparing the two points of view, the chapter provides a critical appraisal of the validity of their arguments. The main conclusion is that much more research is needed before definitive ways of assessing malingering are clearly established. Moreover, it might be difficult to attribute malingering absent incontrovertible evidence, but there are always ways of describing clear feigning or a lack of credibility when it is expressed.

The present monograph focuses greatly on PTSD and the next chapter in this second part of the book describes the controversies related to PTSD, the difficulties in diagnosing it, and the issues related to assessing malingered PTSD. In particular, it compares and contrasts four recent book chapters on the topic – Andrikopoulos and Grieffenstein (2012), Howe (2012), Laureau (2011), and Rosen and Grunert (2012). The main difference in these four survey chapters relates to the different components of the assessment of PTSD that each considers the most important. Also, they differ in the tests recommended for effective evaluation.

The next chapter examines in more detail evidence law/federal laws of evidence and causality. It reviews two chapters in which Kauffman was involved in 2012 and then two chapters in 2009 also on questions of law. For causality, I focus on my work in 2007–2008. For the law portion of the chapter, I adopt a review and commentary format, and indicate where matters are not as clear-cut as presented. For the causality portion of the chapter, I indicate how the question of malingering detection is embedded in a larger framework. This is the first chapter of a series of chapters that uses much tabular material and figures drawn from other sources with no or little change. This approach provides a comprehensive review of other sources and makes the chapters useful for practice.

The chapter that follows explores relevant concepts and issues related to malingering. It especially focuses on the work of Rogers who, for example, describes the types of research designs needed in the field. Further, it describes his interview tests of feigning in forensic contexts, the SIRS (Structured Interview of Reported Symptoms; Rogers et al. 1992) and the SIRS-2 (SIRS-Second Edition; Rogers et al. 2010).

1.5 Third Part

Content. The next three chapters present in detail information that is needed for conducting effective disability assessments, including information about malingering detection. Part of the first of the three chapters examines sources of bias and error in evaluators. As a counterbalance, the chapter after that one looks at other factors, such as evaluee factors, that might affect assessments. The third chapter in this section of the book concentrates on report writing and disability evaluations, including once evaluees have been cleared of malingering.

A major part of this section of the book includes a final literature review so that the book is particularly up-to-date, state-of-the-art, comprehensive, and respectful of all positions in the field. Of note, I analyze in depth the book by Carone and Bush (2013) on SVTs (symptom validity tests), MTBI (mild traumatic brain injury), and malingering. That book is exceptional and covers most of the relevant material in the area. Notably, it deals with ethics, types of instruments, clinical judgment in assessment, special populations, and malingering diagnostic systems.

The chapters on malingering detection systems in Carone and Bush (2013) include surprises because traditional approaches are altered. Specifically, Slick and Sherman (2013) proposed a revised MND diagnostic system (Slick et al. 1999) and Bianchini et al. (2013) proposed that the MPRD model that they created for pain cases (by having extended the MND model) (Bianchini et al. 2005), could be applied unaltered to cases of PTSD. In my comments on these chapters, I take issue with both these proposals, and end up confirming the value of my own models in these regards.

In the third section of the book, also, I present a review of the most recent journal articles published in the field up in, 2012. The pointed analysis that I undertake of the articles suggests directions pertaining to current tests and procedures in assessment of malingering in forensic disability and related contexts. Moreover, there is a chapter section on being an expert and how to prepare for court.

Contributions. The chapters in this part of the book and the prior one often use a compare-contrast format and, by adopting this approach, they point out differences and inconsistencies in approaches to detecting malingering and how the area might be presented for court purposes. It helps the practitioner by indicating the alternate points of view and the difficulties they present through extensive comments on contradictions. The chapters include much tabular material and figures from other sources to help review the field in depth as it pertains to assessment in forensic disability and related determinations and the assessment context, in general. Aside from using material published elsewhere, I add integrated material so that it presents in a usable way, for example, for understanding causality and for report writing.

The third part of the book is notable for its extensive literature review of recent material. The most recent book in the field (Carone and Bush 2013) is analyzed in two chapters and the most recent literature published in 2012 in journals is analyzed in another. The review of the book by Carone and Bush (2013) and the review of the most recent literature in the field both follow the same approach. Both include sources that are consistent with the present approach, and I describe these in depth, and both include sources that are not consistent with the present approach, and I examine them critically.

The comments on Carone and Bush (2013) and also on the most recent review of journal articles serve to reinforce the value of the present proposals on malingering, its definition, its prevalence, systems to diagnose it, and the best instruments and measures to use in assessment. The section on expert witnesses and preparing for court adds to the material in the book that helps span the adversarial divide in the field and have science more than anything else speak to and in court.

1.6 Fourth Part

Content. The fourth part of the book begins with a review of psychological injuries other than PTSD (MTBI, chronic pain). It continues with a chapter on pain feigning and its detection, including a proposed instrument for the task. Next, a chapter follows on conversion disorder. It argues that the DSM-5 (Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition; American Psychiatric Association 2013) should consider keeping the label of conversion in its diagnostic terminology but should consider changing the label to Conversion Complications Disorder. In examining conversion disorder, it deals with possible confound in attributing malingering.

The fourth part of the book continues with chapters on therapy and ethics. These are the last substantive chapters of the book. They shift gears into areas that are more general than the area of psychological injury and law, and so will be of interest to the general psychology reader. They consider therapy and ethics within the psychological injury context, but also deal with general issues in psychology, such as evidence-based practice and ethical decision-making. In these chapters, after reviewing relevant, recent literature, I present broad models that allow for expert therapeutic practice and reflection on ethical dilemmas. The therapy chapters review transdiagnostic approaches, in particular, while explaining clearly particular schools of thought in therapy and particular therapeutic techniques applicable to patients with psychological injuries. In continuation of my effort to be innovative, it proposes transdiagnostic therapeutic modules related to belief in free will. The ethics chapter reviews rehabilitation, in general, and psychological injury considerations, in particular, leading to models for ethics in psychological injury and law related to ethical practice and ethical decision making that could apply to the full field of psychology.

Contributions. The fourth part of the book offers students and practitioners summaries related to pain, MTBI, and conversion disorder. The chapters on therapy and ethics not only provide a comprehensive approach to both but also offer models that will facilitate effective therapeutic practice and ethical thinking. Moreover, the models could have a generalized applicability to psychological practice in relation to psychotherapy and ethical thought.

1.7 Fifth and Sixth Parts

Content. The fifth part of the book is less substantive in the sense that it provides supplementary material such as on tests and testing and appendices on the diagnostic systems already justified in Chap. 5. There are two chapters on tests and testing, including a pain feigning inventory, and three on tables presenting the specific malingering diagnostic systems described in Chap. 5. The Sixth part of the book includes three chapters on education and study, including one on a glossary of terms. Aside from a concluding chapter it offers one on cut scores related to PTSD testing.

The test and testing chapters of the book examine in at more detail some of the tests in the field beyond those already discussed. For example, they discuss (a) the

MMPI-2 (Minnesota Multiphasic Personality Inventory, Second Edition; Butcher et al. 1989, 2001), (b) the DAPS (Detailed Assessment of Posttraumatic Stress; Briere 2001), (c) newer ones, such as the MMPI-2-RF, (d) the R-PAS (Rorschach Performance Assessment System; Meyer et al. 2011), and (e) a symptom validity test, the VSVT (Victoria Symptom Validity Test; Slick et al. 1997/2005).

The next chapter after the test/testing ones outlines a graduate course proposal for the area of psychological injury and law. This course proposal for the area indicates that it should give much prominence to malingering. There has yet to be a course on this topic, as far as is known, and the present book could serve as its textbook. The course could be tailored for professional upgrading and also for use in continuing education. The next chapter of the book provides study questions, with many general ones and also many on each of the chapters, too. They will help the reader in learning the book material sufficiently well enough for purposes of graduate study, continuing education, or professional updating. The chapter after this one provides a glossary of terms. Both this chapter and the one previous to it briefly overview the field of psychological injury and law.

The last substantive chapter of the book is mostly on cut scores for various tests, especially related to PTSD. It serves as a detailed complement to Chap. 4 in which the MMPI-2-RF is presented. It concludes that much research is needed on the question, which is a good conclusion to the book as a whole for the area of malingering.

The final chapter of the book terminates with review of the book's major themes. It includes a review of recent publication in the journal *Psychological Injury and Law*. It provides both directions for further research and practice recommendations, including for court.

Contributions. The supplementary chapters on tests and testing constitute a useful feature that gives specifics for practice in the field. The three chapters of tables on the malingering diagnostic systems that the book author created will facilitate their use in practice, which should be cautious until they are shown ready for the rigors of court. The course outline and study questions at the end of the book, as well as the glossary, will help the student, young professional, and seasoned professional in graduate school, continuing education courses, or post-graduate professional updating. The cut-score chapter indicates where we stand in PTSD testing and how much progress we still have to make.

1.8 Conclusions on the Book's Contributions

To elaborate, the major contribution of the present book lies in its exhaustive, up-to-date literature review and the detailed analysis of the strengths and weaknesses in the literature. It gives a comprehensive overview of the field of psychological injury and law that will help with undertaking scientifically-informed, impartial, and comprehensive assessments in the area and with functioning effectively in court. The review and critical commentary has led to conceptual and practice contributions that are well-supported scientifically.

Specifically, the major contribution of the present book lies in its presentation of the latest conceptualization and empirical work in a critical area of psychiatric/psychological injury and law, that is, with respect to malingering. The knowledge and practice implications provided help the professional working in the area meet court admissibility criteria of good or acceptable science compared to poor or "junk" science. Further, the concepts and models developed by the author help toward the development of "gold standard" work related to malingering and related response biases, although the proposed malingering diagnostic systems should be used with caution until shown to be sufficiently valid for assessment and court purposes. Specifically, the book's major conceptualization lies in the three malingering detection diagnostic systems that it presents (F-PTSDR-D, F-NCR-D, F-PR-D; for assessment of cases of PTSD, TBI/neurocognition, and pain, respectively). In general, much research remains to be undertaken on reliability and validity on the assessment of malingering and related biases, including with respect to the three malingering diagnostic systems that have been developed (two that are revisions of extant systems, the MND for neurocognition and MPRD for pain, and one that is a new model, for PTSD).

The major contribution of the book in practice lies in its careful, detailed scientific approach to understanding and assessing malingering and related biases. This will help make assessments in forensic disability and related contexts, as well as testimony based on them, more reliable and valid. The more the latter happens in different areas of one's practice, the more the evaluator will keep credibility and keep the practice thriving. In addition, the book examines therapy both from a transdiagnostic approach and for specific techniques needed in the area of psychological injury. It presents a model of broad therapy for use in psychological injury practice.

The major contribution of the book to ethics includes its emphasis on functioning in the field in a scientific, pro-active, impartial, and comprehensive approach. Moreover, it develops a model of reflective thinking about ethics that is applicable not only to the particular one of psychological injury and law but also to psychology, in general.

The major contribution of the book to education lies in its extensive scientific, practice, ethical, and legal contributions, and the manner in which they are explained. It could function to educate both students and professionals.

To conclude, the present work emphasizes the importance of adopting a comprehensive, impartial, and scientifically-informed approach to practice, in general, and assessment, in particular, in the area of forensic disability and related contexts. By having such an approach, the practitioner will meet professional and court requirements both for ethical practice and admissibility to court. Cases involving psychological injuries (especially PTSD, pain, MTBI) involve contentious and controversial issues, such as whether they exist more than on a transient basis and can lead to disability. In this regard, it is important to have adequate conceptualization pertaining to and assessment of malingering and related negative response biases. Moreover, by adopting a scientifically-informed, impartial, and comprehensive approach to all areas of practice in the area, not only in assessment and preparing for court but also for therapy and ethical decision making, the mental health professional will

facilitate more effective work in the area and also avoid some of its pitfalls, including related to the adversarial or plaintiff-defense divide. Finally, the book has been written to be of use to all mental health workers in the field, including psychiatrists, and should be helpful to attorneys and third parties who work in it.

1.9 The Field of Psychological Injury Defined: Wikipedia Entry by the Author (Modified)[1]

"Psychological Injury" refers to psychological or psychiatric conditions associated with an event at issue that leads, or may lead, to a lawsuit in tort action or other legal-related claims, for example, in Worker Compensation, Veteran's Administration (VA), and Social Security Administration (SSA) cases. Claimable injuries might result from events such as a motor vehicular collision or other negligent action. They might cause impairments, disorders, and disabilities perhaps as an exacerbation of pre-existing condition (e.g., Drogin et al. 2011; Duckworth et al. 2008; Kane and Dvoskin 2011; Koch et al. 2006; Schultz and Gatchel 2009; Young 2010, 2011; Young et al. 2006, 2007).

The field psychological injury stands at the intersection of forensic psychology, assessment, trauma psychology, rehabilitation psychology, neuropsychology, and the psychology of pain. For an overview of forensic psychology as it applies to psychological injury and law, refer to Otto and Weiner (2013). The relevant topics include: Assessing employment discrimination and harassment (Baker et al. 2013), Disability and worker compensation (Piechowski 2013), Overview of forensic psychology (Otto and Goldstein 2013), Forensic training and practice (Packer and Borum 2013), Ethics in forensic practice (Martindale and Gould 2013), Legal contours of expert testimony (Erickson and Ewing 2013), Forensic report writing (DeMier 2013), Psychological evaluation of emotional damages in tort cases (Foote and Lareau 2013), Evaluation of malingering and related response styles (Rogers and Bender 2013), Forensic assessment for high-risk occupations (Corey and Borum 2013), and Forensic evaluation in Americans with Disabilities Act cases (Foote 2013). Also forensic psychology is treated in Kane (2012).

Legally, psychological injury is considered a mental harm, suffering, damage, impairment, or dysfunction caused to a person as a direct result of some action or failure to act by some individual, perhaps as an exacerbation of a pre-existing condition. The psychological injury must reach a degree of disturbance of the pre-existing psychological/psychiatric state such that it interferes in some significant way with the individual's ability to function. If so, an individual may be able to sue for compensation/damages. If the symptoms and effects persist, the injured person may become a complainant or plaintiff who initiates legal action aimed at obtaining compensation against whomever is considered responsible for the injury.

[1] Thanks to Eric Drogin and Andrew Kane for their detailed corrections and additions.

Typically, a psychological injury may involve PTSD, TBI, a concussion, chronic pain, or a disorder that involves mood or emotions (such as depression, anxiety, fear or phobia, and adjustment disorder). These disorders may manifest separately or in combination (co-morbidity).

In the following, psychological injury is discussed in relation to the law, forensic psychology, assessment, malingering, diagnosis, treatment, PTSD, chronic pain, TBI, disability, return to work, psychological tests and testing, and causality.

1.10 Psychological Injury and Law

Research and practice in the scientific field of psychological injury are predictably and intimately associated with legal research and practice. For example, workers in the field need to know evidence law, tort law, and insurance law, both at the national and local (state, provincial) levels in their countries of practice. This association between psychological injury and law began to be recognized as a distinct scholarly and professional entity in the first decade of this century, in particular, as the result of the development of the first scientific society (the Association for the Scientific Advancement of Psychological Injury and Law, or ASAPIL, www.asapil.net) and the first journal *Psychological Injury and Law* devoted exclusively to this topic (see Young 2008a, for a review of the history of the field).

This type of case is quite adversarial, because psychological injury is associated with court, and because complainants might exaggerate or even feign symptoms outright. Psychologists and other mental health professionals must be well-trained in legal matters, knowledgeable regarding forensic psychology, and qualified to conduct appropriate diagnostic and other assessment procedures (Boone 2007; Larrabee 2007). Also, see various professional guidelines, such as the American Psychological Association (2002), Committee on the Revision of the Specialty Guidelines for Forensic Psychology (2011), and Pope and Vasquez (2011).

When mental health professionals fail to undertake comprehensive, impartial, and scientifically informed assessments, they risk challenges to the admissibility of the evidence that they present to court and having it dismissed as poor or "junk science." The decision of the Supreme Court of the United States in *Daubert v. Merrell Dow Pharmaceuticals, Inc.* (1993) provided a basis for determining acceptable science in court, and required judges to function as "gatekeepers" for evaluating the probative or helpful value of the testimony for the case at hand. Two additional, related SCOTUS cases – *General Electric Co. v. Joiner* (1997) and *Kumho Tire Co. v. Carmichael* (1999) have been considered to comprise what is often referenced as the "*Daubert* trilogy." A Canadian case that addresses many of the same issues is *R. v. Mohan* (1994). Some states still function according to *Frye*, or general acceptance standards, in determination of admissibility to court

(*Frye v. United States*, 293 F. 1013, 34 ALR 145 (D. C. Cir 1923). Also, see the Federal Rules of Evidence (United States Government Printing Office 2011).

Note that psychological injury, as presently defined, is treated in court uniquely in civil cases. In this sense, although the area of psychological injury and law is related to forensic psychology, it does not relate to the criminal component of this area. Matters generally important to forensic psychology, such as adopting the correct procedures in practice and understanding the relationship of psychology and court, are also essential to practice in the area of psychological injury and law.

1.11 Assessment and Malingering

Psychologists are trained and expected to be comprehensive, scientific, and impartial in conducting their assessments (Heilbrun et al. 2009). Such assessments involve (a) interviewing (of the person being assessed, and perhaps involving family, work, and professionals), (b) document review (e.g., other reports; about school, work), and (c) psychological testing. The tests they use either directly assess – or include scales that assess – various signs of psychological injuries, and many are sensitive to malingering (conscious fabrication of symptoms for monetary or other personal gain, or symptom feigning, though this is not very common) and other response biases (Rogers 2008; Rogers and Bender 2013).

For example, rather than engaging in malingering, a complainant might be exaggerating excessively, or catastrophizing, out of an unconscious "cry for help" for not having been "heard" in prior assessments or for having her pains and other symptoms continue to limit her life activities. The validity of the complainant's presentation, whether physical or psychological, needs to be determined by comprehensive assessments that can help discern threats to validity such as these. Psychologists should not arrive at facile conclusions either way along these lines. They must resist the pressure of the adversarial divide and the referral source, as well as other sources of undue influences on their professional judgment, in order to arrive at unbiased conclusions (see Berry and Nelson 2011).

1.12 Diagnosis and Treatment

Psychologists and psychiatrists are those professionals typically qualified by their regulating or licensing bodies or boards to diagnose and treat psychological injuries. Psychologists are trained in the study of behavior and its assessment, diagnosis, and treatment. Many psychological tests are limited in their use to psychologists, in that psychiatrists are unlikely receive substantial training in test administration and interpretation. However, being medical professionals, psychiatrists have skills and a knowledge base not typically available to psychologists. The *Diagnostic and Statistical Manual of Mental Disorders* – its fourth edition

(*DSM-IV-TR*, American Psychiatric Association 2000) – has been updated by a fifth edition (DSM-5, American Psychiatric Association 2013) (see Young and First 2010, and Young 2013 for a critique). This manual series is prepared under the aegis of the American Psychiatric Association, but psychologists contribute to this process by participating in its working groups.

Rehabilitation and other clinical psychologists – such as trauma psychologists – may be in professional contact with injured survivors at the onset injury, shortly thereafter, and throughout the course of recovery, such that these professionals, too, need to know about the legal ramifications of the field. They may employ cognitive behavioral approaches to help their patients deal with any physical injuries, pain experience, PTSD, mood, and effects of their brain injuries (Young 2008b). They may assist the families of the injured, including spouses and children. They typically adopt a systems approach, working as part of rehabilitative teams. Their hardest cases occur when there is a death in the family as a result of the event for which legal action is involved and therapy is needed. These clinical, rehabilitation, and trauma psychologists refer to treatment guidelines in preparing their treatment plans, and attempt to keep their practices evidence-based when feasible.

1.13 Major Psychological Injuries

- *Posttraumatic Stress Disorder*. The field of psychological injury is beset by controversies. In this regard, the three major diagnoses in the *DSM–IV-TR* and DSM-5 most central to this area are often criticized for their definition, validity, and usefulness in court, and for their ease in feigning or malingering without detection. For example, PTSD is diagnosed based on 17–20 major symptoms (e.g., flashbacks, startling, nightmares, fears), but these often are placed on attorneys' websites under clear headings such as, "Do you have these symptoms of PTSD?", with the result that plaintiffs can be coached all the easier in how to present with this disorder. Moreover, the diagnosis may be given inappropriately to individuals based upon the slightest of traumatic events, even though it was meant originally for quite severe ones. There has been an explosion in cases involving the diagnosis of PTSD, and even in the military the diagnosis may be given too easily without careful assessment. In cases of valid presentation of PTSD, psychologists can help patients deal with their condition by applying specialized cognitive behavioral techniques such as systematic desensitization and exposure therapy (see Frueh and Wessely 2010).
- *Chronic pain* is another controversial psychological condition, labeled in the *DSM-IV-TR* as Pain Disorder Associated with Psychological Factors (with or without a Medical Condition and in the DSM-5 as Somatic Symptom Disorder with pain as the predominant complaint). The "biopsychosocial approach" recognizes the influence of psychological factors (e.g., stress) on pain. It was once thought that chronic pain could be the result of a "pain-prone personality" or that it is "all in the head." Contemporary research tends to dismiss such

conceptualizations, but they continue persist and cause distress to patients whose pain is not recognized as real. Psychologists have an important role to play in helping patients in pain by providing appropriate education and treatment (for example, about catastrophizing or fearing the worst, and by using standard cognitive and behavioral techniques, such as breathing exercises, muscle relaxation, and dealing with cognitive distortions) (see Gatchel et al. 2007; Schatman and Gatchel 2010).

- TBI refers to mild to severe pathophysiological effects in the brain and central nervous system due to strong impacts, such as severe blows to the head and penetrating wounds that might take place in accidents and other events at claim. Neuropsychological deficits associated with TBI include those relating to memory, concentration, attention, processing speed, reasoning, problem solving, planning, and inhibitory control. When these effects persist, other psychological difficulties might arise, even in mild cases (such as concussions). However, the underlying reason for the perpetuation of the symptoms beyond the expected time frame might be due to associated factors, such as poor sleep, fatigue, pain, headaches, and distress. Psychologists can help patients with TBI by guiding them in cognitive remediation and dealing with family. When the effects are serious and even devastating, the degree of care from the team may be intensive, covering multiple aspects of daily living (see Ruff and Richards 2009).

1.14 Disability and Return to Work

When psychological injuries compromise daily activities, psychologists need to address the degree of disability (see Schultz 2009; Schultz and Rogers 2011). Patients express symptoms that might be accurately diagnosed as PTSD, Pain Disorder, and/or TBI. However, the critical issue is the degree of impairment, limitation, and participation restriction in daily activities in which patients would normally participate at work, at home, in childcare, and in schooling. When the patient cannot undertake the functions involved in these important roles, the psychologist or other mental health professional may conclude that a disability is present, but this cannot be ascertained by the mere presence of a diagnosis of one sort or another. Rather, the psychologist must demonstrate that the person is disabled from the essential duties, tasks, or activities of the role at issue. For example, a forefinger injury leading to chronic pain might mean relatively little to an investment banker – as long as medications control it and other areas of functioning are not greatly affected – but might be devastating to a violinist. Psychologists may refer to the American Medical Association's *Guides to the Evaluation of Permanent Impairment* (Rondinelli et al. 2008) in arriving at disability determinations, which addresses mental health, neuropsychological, and pain issues. However, like the *DSM-IV-TR* and DSM-5, this compendium is sometimes questioned for its scientific validity and usefulness.

Tort actions and other civil actions are often based on serious, permanent and important psychological injuries that create disabilities of a substantial

nature in other areas, such as leisure activities, home care, and family life. Often, psychologists in court lock horns over the degree to which the event at claim and its psychological effects have created serious and potentially permanent psychological disabilities – in part, because there is no one test that can measure "disability," per se.

Treating psychologists try to help clients return to work (RTW) or to their other functional roles and activities of daily living (ADLs). Clients are expected to adhere to treatment regimens, or be compliant with treatment recommendations. Partly, this serves to mitigate their losses, or attempt to return to their pre-event physical and psychological condition. When they reach or are progressing to their maximum medical recovery (physical and psychological/psychiatric recovery), RTW might be attempted on a modified, part time, or accommodated basis, and treatment might continue to help full re-integration into the workforce or other daily roles, and to maintain gains and avoid deterioration. Or, clients might be sent for training or education, based on their transferable skills residual to the event at claim and its effects. For those who do not make full recovery and remain disabled because of their permanent barriers to recovery, the goals of rehabilitation include optimizing adjustment, quality of life (QOL), residual functionality, and subjective sense of wellness.

1.15 Psychological Testing and Tests

Psychologists need to be trained to the highest professional standards if they undertake this type of work, and they need to use the most appropriate tests available for detecting feigning, malingering, and related response biases. In addition, psychologists need to be able to arrive at scientifically-informed conclusions in their evaluations that will withstand the rigors of scrutiny by psychologists on the opposing side and of cross-examination in court.

In terms of their education and training, psychologists need to be able to address the full array of areas under discussion, especially in forensic, rehabilitation, and trauma areas. They must become experts in assessment and testing, especially regarding (a) personality tests (e.g., the MMPI-2 and the revision the MMPI-2 RF as well as the PAI, Personality Assessment Inventory; Morey 1991, 2007), and their embedded validity scales, such as the F family of scales in the MMPI tests, and (b) stand-alone symptom validity tests (e.g., the TOMM, Test of Memory Malingering; Tombaugh 1996; WMT, Word Memory Test; Green 2005; SIRS and the revision SIRS-2). The key factors in the development of tests that are acceptable to psychologists and to court are that the tests should have acceptable psychometric properties, such as reliability and validity. Also, these tests must be standardized by using populations that make sense for the area of psychological injuries, such as accident survivors experiencing pain and other trauma victims. For further work on the area of assessment in psychological injury, see Erard (2012).

1.16 Causality

Another aspect important for psychologists to consider is the degree of influence of mental health conditions already present prior to the event at claim. Just as one might have a pre-existing back injury that a whiplash injury in an accident did not make worse, it could be that pre-existing psychological disorders were not worsened by the effects of an event at claim, no matter how traumatic. Therefore, in some cases – such as those involving a serious pre-existing schizophrenia or brain damage – it is possible that the event that had occurred did not actually exacerbate what had existed prior to the event at issue, or make things any worse. In other cases, by contrast, the person might have pre-existing psychological or psychiatric vulnerabilities, or relatively mild psychological or psychiatric conditions, and the event at issue brought to the surface the vulnerabilities or made the pre-existing conditions clearly worse. These are sometimes labeled "thin skull" or "egg-shell psyche" cases, and are the most intriguing and difficult to manage because of the potential "gray zones" in their causal interpretation (Young 2008c). Extraneous stresses, such as job loss due to worksite bankruptcy, might also complicate causal determination. Ultimately, the mental health professional considers the full range of pre-event, event, and post-events factors in apportioning or deciding upon causality.

Note that "litigation distress" refers to one source of stress for complainants or litigants; it concerns iatrogenic or stressful factors in the insurance and legal process that add to their stresses and complicate their recovery and, as well, psychologists' understanding of the causality behind their injuries. Indeed, their injuries have been referred to as a result of "compensation neurosis;" however, there is little evidence to support this claim. For example, their injuries generally do not magically heal after they receive their financial settlements.

1.17 Value of the Field and Validity of the Injuries

Psychological injury and law is a vibrant, fast-growing discipline that stands at the intersection of forensic psychology, rehabilitation psychology, trauma psychology, and the law, as found in the society ASAPIL and its flagship journal *Psychological Injury and Law*. It is at times controversial, but is constantly being researched and refined. Practitioners must remain abreast of related scientific, regulatory, and ethical developments or risk being challenged in court for the admissibility of their evidence, and even exposing themselves to malpractice claims for negligence.

Psychological injuries remain contested disorders and conditions, especially because of their association with court and related venues. However, psychologists and other mental health professionals who use state-of-the-art knowledge and procedures can help ascertain when they are valid. In such cases, the psychological injuries are no less real and no less in need of treatment.

1.18 Chapter Conclusion

The area of psychiatric/psychological injury and law will appeal to students and professionals in all fields of mental health, from psychiatry and psychology to nursing and social work and other disciplines. The book concentrates on psychological study and practice in the area. The book begins with this present introduction defining the field after presenting a summary of the book. It ends with education and study questions. In between, the reader will encounter scientifically-informed presentations of major topics in the area, especially of malingering, with much practice applications and preparation for court, including at the ethical level.

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Chapter 2
Malingering: Definitional and Conceptual Ambiguities and Prevalence or Base Rates

2.1 Introduction

This chapter presents different approaches to the definition of malingering, such as the psychiatric and legal. It builds on the DSM-IV-TR (Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision; American Psychiatric Association 2000) and DSM-5 (Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition; American Psychiatric Association 2013) approach that involves both conscious, overt malingering and gross exaggeration for external incentives, such as financial gain. Malingering should be attributed only when the evidence is incontrovertible. Psychological approaches are described that have conflated exaggeration, in general, with frank malingering. Other psychological approaches are presented that adhere to the traditional approach of pairing only gross exaggerations with outright malingering.

The chapter also considers the base rate of malingering, or its prevalence, in psychological/psychiatric injury populations, such as forensic disability claimants. The definitional and conceptual ambiguities and problems that have been described interfere with obtaining accurate estimates of the prevalence of malingering, feigning, exaggeration, and related response biases. Multiple studies and recent reviews on the prevalence of malingering in the forensic disability and related context refer to the percentage of up to 50 % or so (although others tend to the other extreme of little malingering in such cases). However, the percentage might be this high because exaggeration and malingering are categorized together in the research on the topic. A more balanced view would consider these aspects of response bias as separate, or at least exclude minimal exaggeration or exaggeration that is not gross from any general definition of malingering.

Moreover, in adopting such a strategy, not only the research on prevalence or base rate would be improved but also in practice the definition and its application in assessment would be tightened. However, even if there would be less cases of malingering attribution that would obtain with a tighter definition, the astute assessor still can arrive at useful conclusions on doubtful cases for court purposes. When evaluee presentation and performance indicates noted degrees of noncredible

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feigning in forensic disability and related mental health assessment cases in which there is insufficient evidence to attribute malingering, per se, the chapter indicates that there still would be room for the astute evaluator to indicate in ways helpful to court the presence of noncredible, feigned performance and presentation.

In reviewing the literature, the chapter presents some major instruments used in the field, such as symptom validity and personality tests [e.g., Test of Memory Malingering (TOMM); Tombaugh 1996; Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form (MMPI-2-RF); Ben-Porath and Tellegen 2008/2011]. Moreover, the chapter introduces major extant "diagnostic" systems or models in use related to the detection of malingering and related response biases, such as the MND (Malingered Neurocognitive Dysfunction) and the MPRD (Malingered Pain-Related Disability) models of Slick et al. (1999), and Bianchini et al. (2005), respectively.

Table of Terms and Sources

Abbreviation	Name	Source(s)
A-Test	A-Test	Chafetz (2008)
CARB	Computerized Assessment of Response Bias Test	Allen et al. (1997), Conder et al. (1992)
CVLT	California Verbal Learning Test	Delis et al. (1987)
DSM-IV	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition	American Psychiatric Association (1994)
DSM-IV-TR	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision	American Psychiatric Association (2000)
DSM-5	Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition	American Psychiatric Association (2013)
F	Infrequency Scale	Butcher et al. (1989)
FBS	Symptom Validity Scale (originally called Fake Bad Scale)	Ben-Porath and Tellegen (2008/2011), Lees-Haley et al. (1991)
Fp(-r)	Infrequent Psychopathology Responses	Ben-Porath and Tellegen (2008/2011)
F-PR-D	Feigned Pain-Related Disability/Dysfunction	Young (2014); present work
F-r	Infrequent Responses	Ben-Porath and Tellegen (2008/2011)
Fs	Infrequent Somatic Responses	Ben-Porath and Tellegen (2008/2011)
LMT	Letter Memory Test	Inman et al. (1998)
M-FAST	Miller Forensic Assessment of Symptoms Test	Miller (2001)
MMPI-2	Minnesota Multiphasic Personality Inventory, Second Edition	Butcher et al. (1989, 2001)
MMPI-2-RF	Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form	Ben-Porath and Tellegen (2008/2011)
MND	Malingered Neurocognitive Dysfunction	Slick et al. (1999)
MPRD	Malingered Pain-Related Disability	Bianchini et al. (2005)
MSVT	Medical Symptom Validity Test	Green (2004)
PDRT	Portland Digit Recognition Test	Binder (1993), Binder and Willis (1991)

(continued)

(continued)

Abbreviation	Name	Source(s)
-r	Revised (e.g., FBS-r)	Ben-Porath and Tellegen (2008/2011)
RC	Restructured Clinical Scales	Ben-Porath and Tellegen (2008/2011)
RDS	Reliable Digit Span	Greiffenstein et al. (1994)
SIMS	Structured Inventory of Malingered Symptomology	Widows and Smith (2005)
SIRS	Structured Interview of Reported Symptoms	Rogers et al. (1992)
TOMM	Test of Memory Malingering	Tombaugh (1996)
VSVT	Victoria Symptom Validity Test	Slick et al. (1997/2005)
WAIS-III	Wechsler Adult Intelligence Scale, Third Edition	Wechsler (1997)
WMT	Word Memory Test	Green (2005)

2.2 Conceptual and Definitional Ambiguities

2.2.1 Introduction

Mental health professionals need to conduct comprehensive, impartial, and scientifically-informed evaluations in forensic disability and related contexts in order to both (a) ascertain the credibility of the presenting symptoms and performances and (b) arrive at valid and supported conclusions, for example, about diagnosis, prognosis, disability status, and treatment recommendations. Psychologists are particularly well-suited for this task given their expertise in psychological tests, including those that can help attribute the presence of malingering and related motivations to an acceptable degree of certainty for court and related purposes. Psychiatrists have an important role to play, as well, in these types of assessments, and their focus on inconsistencies and discrepancies in patient presentation, self-report, documentation, collateral informants and information, and so on, has played a central role in this field.

Malingering is a relevant consideration when making a number of important clinical and/or forensic decisions, such as whether to pursue medical intervention in the former setting or whether to award tort damages or worker compensation benefits in the latter setting. However, the valid assessment of malingering is a notoriously complicated problem that continues to elicit heated debate about issues among forensic psychologists, clinical psychologists, rehabilitation and trauma psychologists, occupational psychologists, personality psychologists, health psychologists, and other mental health professionals, as well as scholars of law, the court, and jurisprudence. In particular, there is no clear consensus on the definition of malingering nor its criteria and there are disparate base rate or prevalence estimates that confound reliable and valid research and assessment in the field.

Psychiatric/psychological injuries refer to psychiatric or psychological conditions associated with an event at claim, such as posttraumatic stress disorder (PTSD), pain disorder (chronic), and mild traumatic brain injury (MTBI). The diagnosis of a

psychiatric/psychological injury might lead to a lawsuit in tort action or other legal-related venues, for example, in worker compensation and disability insurance cases. Typically, the precipitating event is a negligent action, such as conducting a vehicle negligently in a motor vehicle accident (MVA).

Without careful definition of terms and elucidation of ambiguities in the field, a comprehensive, scientifically-informed literature review cannot be undertaken. Therefore, a primary goal of this chapter in this part of the book is to disambiguate the terms in the field related to malingering and related response styles and biases. This will help lead to better surveys than have been undertaken to date so that the normative base rate of malingering and related response biases can be ascertained in populations relevant to work in the area of psychiatric/psychological injury. The chapter does not include a comprehensive review of all the literature on base rates of malingering and related response biases, but does review much of the most recent literature and select examples in past literature to make the points raised. Clear inconsistencies in basic concepts and criteria related to malingering exist and need to be clarified to prepare for better research than has been conducted to date. For example, the Mittenberg et al. (2002) survey is highly influential but contains some inconsistencies that will be clarified.

The chapter describes other examples in the most current literature in the field that include some inconsistencies beyond their good work (e.g., Frederick 2012; Miller et al. 2011). The adversarial (plaintiff/defense) divide that marks the field makes it difficult to avoid some inconsistencies both in practice and research. However, the dispassionate, balanced view that is adopted in the present chapter leads to solutions with respect to these inconsistencies [For further argument about the effect of the adversarial system on the field, see Young 2010].

2.2.2 Different Approaches to the Same Terms

Carone and Bush (2013a) focused on symptom validity, assessment, and malingering in MTBI. In Carone and Bush (2013b), they offered an excellent, historical perspective on the topic. They noted cases of malingering in the bible, and noted that early books on the topic appeared in the nineteenth century and early twentieth century (Gavin 1843; King 1906). In the modern era, Rogers (2008) book is considered the classic text. Carone and Bush reviewed how the definition of and approach to malingering has changed over different editions of the psychiatric manual, the DSM. The most recent versions are the DSM-5 (Diagnostic Statistical Manual of Mental Disorders, Fifth Edition; American Psychiatric Association 2013) and the DSM-IV-TR (Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision; American Psychiatric Association 1994, 2000). Moreover, the term malingering is defined or approached differently in psychology, psychiatry, and law.

For psychiatrists, malingering involves the "intentional production of false or grossly exaggerated physical or psychological symptoms" that derives from "motivation by external incentives," for example, for obtaining financial compensation (in the DSM-IV-TR, DSM-5).

However, the American Psychological Association's dictionary of psychological terms does not reference exaggeration in its definition of malingering (VandenBos 2007). For this psychological dictionary, malingering is the deliberate feigning of an illness or disability that is motivated to achieve a particular specific external factor or outcome (e.g., financial gain obtained by faking physical illness).

As for a legal definition, similarly, Black's law dictionary (Garner 2009) provides a definition that includes feigning for external incentives, such as disability benefits, but does not include an exaggeration component ("to feign illness or disability," [for example, to initiate receiving or] "to continue receiving disability benefits").

The court expects mental health professionals to use the DSM-IV-TR as the basis for diagnosis. However, the DSM's approach to malingering is quite criticized with respect to its criteria (e.g., Berry and Nelson 2010), and often alternative approaches are used in psychiatric/psychological evaluations to rule it in or out (e.g., Rogers and Granacher 2011).

The DSM-IV-TR and DSM-5 suggest that any combination of four factors is indicative of possible malingering: (a) the referral context is medicolegal; (b) the objective findings are "markedly" discrepant with the evaluee's claimed "stress or disability;" (c) the evaluee exhibits a lack of cooperation with the assessment procedure or with suggested treatments; and (d) he or she is diagnosed with antisocial personality disorder. For the DSM, malingering should be "strongly suspected" if any combination of these factors is present.

However, the first factor automatically and erroneously brands all evaluees in forensic disability examinations as possible malingerers; the second and third factors might reflect the confrontational nature of the examinations; and the fourth factor suffers from the inclusion fallacy mentioned for the first factor. For reasons like this, workers such as Boone (2011a) have indicated that the DSM-IV-TR has not been found to be accurate with respect to malingering.

What about regular dictionary definitions of malingering? Merriam-Webster's includes an exaggeration component but without specifying degree, such as is the case for the DSM's adjective of "grossly" exaggerating (definition: to pretend or exaggerate incapacity or illness, e.g., to avoid work; Mish 2003).

Miller et al. (2011) have presented differential definitions of terms related to malingering. *Fabrication* refers to fraudulently presenting in a wholesale invention symptoms or impairments that are present as being the result of an injury. In *exaggeration*, the evaluee represents true symptoms or impairments caused by an injury as worse relative to their actual condition. The authors added that in clinical and forensic evaluees exaggeration probably is the most common "form of malingering". Note that in this approach even the mildest of exaggerations can be used to index malingering, which is inconsistent with the DSM approach. *Extension* is another type of fraudulent claim: symptoms or impairments caused by an injury have recovered or improved, but they are claimed to continue at the level of the initial injury or to even have worsened over time. Finally, in *misattribution*, symptoms that preceded, postdated, or are otherwise unrelated to an injury are fraudulently attributed to it.

Kane and Dvoskin (2011) have an equilibrated approach to the relationship of exaggeration and malingering. For them, exaggeration concerns a "relatively mild

overstatement" of injury sequelae and, furthermore, it might be either within or outside of conscious awareness. In contrast, for Kane and Dvoskin, feigning, as defined by Rogers (2008), refers to deliberate fabrication or gross exaggeration of psychological or physical symptoms. Moreover, use of the term is generic, and does not connote any assumption about its underlying goal. For Kane and Dvoskin, the DSM-IV-TR approach to defining malingering is the appropriate one [intentional production of false/grossly exaggerated symptoms, motivated by external incentives … (American Psychiatric Association 2000)]. In terms of malingering attribution, absent direct proof, with appropriate assessment, a "strong inferential statement" can be made about the likelihood of its presence. Note that, as with most workers in the field, although Kane and Dvoskin accept the legitimacy of the definition of malingering in the DSM-IV-TR, they do not endorse as useful the four DSM-IV criteria of malingering.

Despite the difficulties in assessing underlying motivations, the terms involved in malingering and related biases can be defined. Warren (2011) noted that in primary gain, which is an internalized motivation, symptoms create relief and help avoid an unconscious, internal conflict, for example, by providing an acceptable excuse to avoid a situation. Primary gain is different from secondary gain, for which the motivation is conscious and externally-based and it is related to obtaining or to avoiding something knowingly and willingly. For Warren, symptom exaggeration is also a conscious act. She related it to malingering by indicating that it can be a component of it, but that this does not mean that the presence of exaggeration automatically means that malingering is taking place. For example, a person might exaggerate to obtain help. Warren's (2011) approach is consistent with that of Kane and Dvoskin (2011).

Ruff and Jamora (2008) presented a figure that captures well the relationship between malingering and other response biases in relation to hypothesized conscious and unconscious process (see Fig. 2.1). In addition, they introduced the important variable of socio-cultural context. Assessments of psychological injuries need to consider age, gender, and socio-cultural variations and factors. Also, see the description by Slick and Sherman (2013) in Chap. 16 on terminology related to primary and secondary gain, volition, and effort.

2.2.3 Comment

Unless there is scientific, conceptual, or pragmatic reason for changing the DSM-IV-TR (2000); DSM-5 (2013) approach to defining malingering, that approach should remain as the only one in use in the field. Nevertheless, the DSM-IV-TR approach to defining malingering can be qualified to separate its two major components. That is, its definition includes both (a) overt, outright, frank, and conscious, intentional fabrication, feigning, or dissimulation of symptoms, disorders, disabilities, or functional impairments for external incentives such as financial gain, and for which there is incontrovertible, indisputable, or compelling evidence, and (b) conscious, intentional gross exaggerations of symptoms, disorders, disabilities, or functional impairments that clearly are greater than the moderate level for the same external

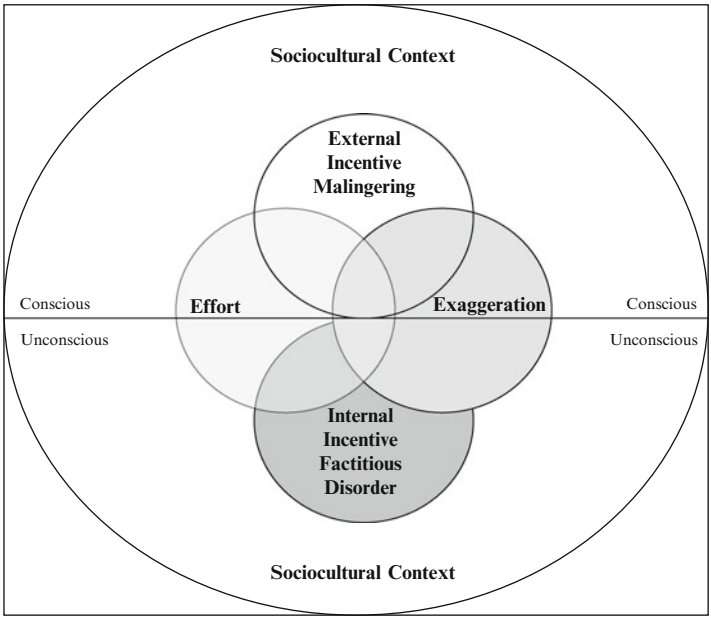

Fig. 2.1 Symptom invalidity model
The figure organizes the DSM categories on one axis and symptom invalidity on another, while indicating the variable of sociocultural context. Malingering, exaggeration, and poor effort are hard to differentiate and they overlap. Malingering takes place for conscious reasons, whereas factitious disorder develops for unconscious ones. Exaggeration and poor effort might take place for either conscious or unconscious reasons
Abbreviation. DSM Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association 2000)
Adapted with permission of Springer Science+Business Media. Ruff and Jamora (2008); with kind permission from Springer Science+Business Media B. V. [Figure 2, Page. 131]

incentives, and for which there is incontrovertible, indisputable, or compelling evidence. Later Part II of the book, I revisit the definition of malingering, questioning several facets of its received definition in the DSM approach.

2.3 Recent Literature on Malingering and Related Response Biases

2.3.1 Inconsistent Conceptualizations

In the following, I focus on some inconsistencies with respect to how malingering is treated in several recent chapters in books that will be read widely and influence practitioners. In particular, the works of Miller et al. (2011) and Frederick (2012)

are reviewed. Then, I analyze the widely-cited survey of Mittenberg et al. (2002) on the prevalence of malingering and related motivations in assessments in forensic disability and related contexts concerning psychiatric/psychological injuries.

IMEs. In Miller et al. (2011), two inconsistencies are evident. First, the position of Miller et al. (2011) that exaggeration is part of malingering represents a view that is inconsistent with the predominant DSM view. Malingering should include only gross exaggerations and not unqualified exaggeration because, by definition, the latter's motivational base might not be known, and the degree involved might be mild.

Second, Miller et al. (2011) noted correctly that an IME (independent medical examination) is not truly "independent." They specified that mental health professionals might undertake IMEs for either the plaintiff or the defense side in a personal injury case. They referred to arriving at objective conclusions in the case at hand. This approach is the one to which all evaluators should adhere no matter what the referral source.

However, the authors added that the "job" of an IME assessor is to conduct an assessment of the plaintiff for the purpose of attempting "to refute the plaintiff expert's claims" about the injury at issue or its relationship to the event in dispute, or both (p. 279). They added that this "typically" requires that the evaluator should adopt an "adversarial" role with respect to the evaluee.

If Miller et al. are referring to the fact that a good portion of evaluees in forensic disability and related assessments express problematic presentations and performances of one type or another, their wary approach about conducting assessments in this context is fully warranted. However, if they mean otherwise, such as evaluators needing to advocate for the positions of the referral source, their opinion is inconsistent with prevailing professional education, training, and practice. This latter conclusion about the role of IME assessors with respect to psychological and psychiatric injuries appears inconsistent with the middle-of-the-road, balanced, impartial perspective needed in assessment for forensic disability and related assessments and for court and court-related matters.

Definition. Frederick (2012) has written a chapter on malingering, cooperation, and effort for the edited volume by Faust (2012), which is the most recent edition of Ziskin's classic work on testimony and court. He began the chapter by indicating that malingerers will either fabricate their impairments or disability or they will "exaggerate" the degree of their impairment or disability. No qualifier is given about the degree of exaggeration needed to constitute malingering. Later in his chapter, Frederick indicated that elevation on scales related to exaggeration "generally" are "better explained" as exaggeration that is aimed at "proving" an impairment [symptom, disability] for "some secondary gain" (p. 238).

Frederick (2012) referred to Rogers' (1990) classic model that malingering is adaptive behavior and can be readily, routinely, or often anticipated or expected in adversarial examinations evaluations. According to this adaptational model, malingering in these evaluations takes place not because the evaluees are "bad," but because deception of perceived enemies is appropriate. In my reading between the lines, the Rogers model opens the gate for ascribing the motivation of malingering

to evaluees in civil proceedings because it minimizes the stigma or pejorative connotation associated with the term.

Frederick (2012) reviewed the literature on the prevalence of malingering, in particular, and he cited the study on its prevalence by Mittenberg et al. (2002). They surveyed practitioners about their approaches to the matter in over 30,000 cases of neuropsychological assessment that took place in the prior year. Other articles cited in the Frederick review did not give percentages higher than 35 % for malingering. Nevertheless, Frederick (2012) concluded that the prevalence rate of malingering based on the literature review is "probably not more than 50 %–60 %."

However, in describing Mittenberg et al. (2002), Boone (2011a) added the rate at issue and can be up to 41 % for cases of mTBI. The goal of the survey was to seek the estimated rate of "feigned cognitive impairment." For the different civil cases of personal injury, disability, fibromyalgia/chronic fatigue, chronic pain, and neurotoxic cases, the percentages did range up to 35 %. In contrast, she cited Boone et al. (1995), who found that in the worker compensation context, feigned cognitive deficits in stress claims are as low as 15–17 %. Therefore, in reading these sources, I was confused both about the base rate of malingering or feigning in the various forensic disability and related contexts and the actual base rate reported in Mittenberg et al. (2002).

Base rate. Reference to the actual research conducted by Mittenberg et al. (2002) revealed several inconsistencies. First, in the survey, the definitions of malingering and exaggeration were not provided to the respondents. Moreover, not only was malingering conflated with exaggeration in the study but also exaggeration was not specified for severity. In addition, by capitalizing together the terms malingering and exaggeration, the specific question in the survey accentuated that exaggeration and malingering are considered as a unified concept. That is, the base rate or prevalence of putative malingering or feigning that derived from the Mittenberg et al. survey might have included cases of the simplest of exaggeration and not just ones of overt malingering. Finally, the survey involved questions about "probable" exaggeration or malingering, so that inconclusive cases of exaggeration might have been included with malingering even when it was not definitely suspected in the estimates of the latter's prevalence. Finally, note that the survey title included: probable symptom exaggeration *and* malingering, but the particular question on the topic used in the survey included the word "or" rather than "and," adding to the confusions for any survey respondent and readers of the research.

The Mittenberg et al. publication constitutes a classic study that is cited frequently, and it was used as a general pre-conference reading for the American Academy of Clinical Neuropsychology Consensus Conference Statement on effort, response bias, and malingering (Heilbronner et al. 2009). It reinforced the conference's impression that "non-credible somatic disability presentation shows base rates of 30–40 % in secondary gain contexts (Mittenberg et al. 2002) similar to those reported for non-credible cognitive performance disability" (p. 1108). Therefore, Heilbronner et al. (2009) arrived at conclusions on base rates about somatic disability partly based on the Mittenberg et al. study that included in its base rate estimates possibly the mildest of exaggerations, conflating its estimate of

base rate for malingering. Given these inconsistencies in Mittenberg et al., reference to it in Heilbronner et al. does not provide sufficient evidence to support their contention that non-credible somatic and cognitive performance disability presentations are as high as 40 %.

To conclude his chapter, Frederick (2012) returned to the argument raised at its outset that malingering "represents" an "obstruction of justice" that is liable to "criminal penalties" (e.g., *United States v. Greer* 1998). In making this claim about the behavior of plaintiffs in cases of personal injury, there are important implications both for the court to consider and that evaluators need to take into account. First, if there is no incontrovertible evidence of malingering, evaluators who arrive at a conclusion about the presence of malingering based on either problematic test results or inconsistencies in the data gathered, or both, are making serious allegations about the plaintiff of a criminal nature that might be overstepping their professional and ethical boundaries and competencies. Moreover, because they are stepping into the criminal arena in making the accusation, the degree of certainty about the evidence used to arrive at the conclusion changes to the stricter and more rigorous criteria expected in criminal cases. In civil cases, the evidence proffered in support of a conclusion only has to be at the level of "more likely than not," or at a level of 50 % degree of certainty (or more). But for criminal matters, the level of certainty for conclusions must meet higher standards – the accused is considered innocent until clearly proven guilty "beyond a reasonable doubt."

Therefore, the question arises whether in forensic disability and related contexts the civil test of evidence being "more likely than not" is a sufficient basis for attributing malingering. The evidence should be incontrovertible in this regard, and not merely suggested as possible or probable according to some test results or file inconsistencies/discrepancies. It would be more prudent in such cases to word conclusions in terms of generic feigning or the like.

Note that the argument that conclusions about malingering are criminal allegations is opposite to the one by Rogers that malingering is adaptive and therefore not as pejorative an attribution as one would think. By conflating malingering in the civil arena with criminal intent as well as including exaggeration as part of malingering, Frederick (2012) might be lowering the bar for its attribution too low and raising the bar for its implications when attributed too high.

As indicated, there are solutions to the quagmire that can be used. By using terms such as "total lack of credibility" instead of malingering itself when the reliable data gathered in an evaluation do not warrant the attribution of malingering, the court [and evaluee] would be better cases with incontrovertible evidence for served. In this manner, malingering would become a term reserved exclusively for its valid attribution.

2.3.2 Consistencies

Boone. In the context of differentially diagnosing malingering versus somatoform disorder and factitious disorder, Boone (2011a) examined the psychological testing needed to infer an attribution of malingering. She referred to recommended practice

by Bush et al. (2005) and by the American Board of Clinical Neuropsychology (2007). She cited research that failure on two or more tests of effort can best discriminate between credible and non-credible populations (e.g., Victor et al. 2009). Boone added that although failure on two or more tests of effort represents an appropriate criterion for distinguishing credibility, the more there are "failed indicators," the more confidence one can have in conclusions – with four, if not five test failures considered giving the opportunity for perfect specificity or incontrovertible evidence. Once an evaluee reaches this level of test failure, the evaluator needs to determine whether the evaluee had engaged in either conscious or non-conscious fabrication of symptoms. She concluded that available assessment techniques "do not distinguish" between the two types of conclusions. She added that the "gold standard" for identifying malingering of symptoms has been performance on forced-choice symptom validity tests (SVT) that is "significantly below chance." Yet, Boone (2011a) added that test-takers on such tests who are hypnotized and, therefore, whose behavior does not appear to be under conscious control, obtain scores below the 50 % level of success when they are instructed to display memory impairment (Spanos et al. 1990).

Although I agree that below-chance forced-choice testing performance is the best evidence available from testing about malingering, there are other factors to consider. It is fair to say that no test result on one test by itself, without considering the full reliable data set gathered in an evaluation, can be considered incontrovertible or gold-standard evidence of malingering. Moreover, failure to meet threshold or cut-scores on multiple SVTs narrows the nature of conclusions possible in an evaluation. However, it is notable that Boone underscored that multiple SVT failure refers to four to five such failures, rather than two of them.

Boone (2011a) concluded that the differential diagnosis of malingering versus factitious disorder or somatoform disorder is at present one of "art" and requires supplementary information about what evaluees believe with respect to the reality of their symptoms. Moreover, evaluees might express simultaneously both conscious and non-conscious symptom fabrication and, also, to different degrees rather than as absolute, all-or-none categories.

Note that Boone introduced the inclusion of "art" in the process of ruling in or out malingering and related biases, and referred to the process involved as "differential diagnosis." First, it is worth reminding that malingering is not a diagnosis, per se, but a class of behaviors that is given a V-code, according to the DSM-IV-TR. Second, in the scientific approach needed for conducting forensic mental health assessments (Heilbrun et al. 2009), the use of qualitative and idiographic data gathered from interviews of evaluees does not mean that "art" rather than science is being used. A scientific approach in this type of assessment means that (a) all the relevant data are gathered in a comprehensive manner, including from testing and interviews, (b) all possible hypotheses are considered for the conclusions, and (c) the final conclusions arrived at are supported by both the evidence gathered and the state-of-the-art science in the literature that is applicable to the case at hand. This understanding of the scientific nature of mental health assessments does not rule out the steps described by Boone (2011a) in gathering qualitative data, but

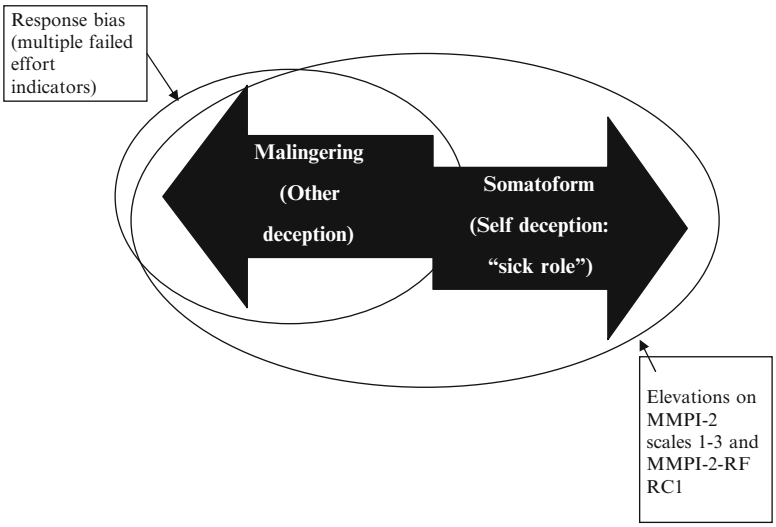

Fig. 2.2 Illustration for a conceptualization of somatoform disorders and malingering
The figure relates malingering and somatoform disorders to deception (other-deception for malingering, self-deception for somatoform disorder). Testing can help differentiate them, e.g., the MMPI test family
Abbreviations. MMPI-2 Minnesota Multiphasic Personality Disorder, Second Edition (Butcher et al. 1989, 2001), *MMPI-2-RF RC* Minnesota Multiphasic Personality Disorder, Second Edition, Restructured Form, Restructured Clinical Scales (Ben-Porath and Tellegen 2008/2011)
Adapted with permission of Springer Science + Business Media. Boone. (2011a); with kind permission from Springer Science + Business Media B. V. [Figure 18.1, Page. 560]

simply asks us to be careful in how it is described. That being said, in the present book, for heuristic reasons, I do refer at times to the detection of malingering as a diagnosis.

To conclude presentation of the Boone (2011a) work, I present her model of the relationship between malingering and somatization (see Fig. 2.2). It illustrates her theme that evaluees might exaggerate symptoms not only because of engaging in malingering and related response biases, that is, for external incentives, but also for other incentives, or internal ones, such as adopting the sick role, as happens in somatization. Moreover, it indicates that the family of MMPI personality tests can be used to indicate the presence of somatoform disorders via certain clinical patterns distinct from results deriving from tests' validity/effort scales. These themes in Boone are ones that I have incorporated in my own approach in the present book.

Rogers. Rogers and Granacher (2011) provided a review of the conceptualization and the assessment of malingering. They referred to the DSM-IV-TR approach and specified that the component of gross exaggeration in the definition of malingering is unlikely to involve "minor or isolated amplifications of symptoms." This is consistent with the present view that the DSM approach to defining malingering as involving only gross exaggerations is a valid one. Similarly, Rogers and Granacher

(2011) also addressed pitfalls in assessments. They introduced the useful concept of "construct drift," or that the term malingering is broadening in definition from more conservative approaches, such as that of the DSM.

Rogers and Granacher (2011) added that the concept of secondary gain cannot be measured directly and should never be used in assessments. The authors considered the concepts of overreporting and inadequate effort as vague. However, to me, overreporting appears a neutral term that accurately reflects the exaggerations in data that could be gathered in an assessment, although I would agree that use of the term "inadequate effort" might be vague for some assessments. They also argued that malingering should not be determined just on the basis of test data, which is a constant theme in the literature. In assessments, inconsistencies in the data gathered have been considered as important in deciding upon the presence of malingering, but in actuality the authors opined that they "are ineffective for the assessment of malingering" (p. 663). Note that, in contrast, the approach that I take is that compelling, gross, incontrovertible, substantial, or marked inconsistencies, in particular, might be quite revealing toward attributing malingering or related motivations.

Rogers and Granacher (2011) described detection strategies of possible malingering and feigning. These include use of: (a) rare symptoms; (b) symptom combinations; (c) indiscriminant symptom endorsement; (d) symptom severity; (e) magnitude of error; (f) violation of learning principles; (g) floor effect; and (h) use of SVTs. They described selected measures of feigned mental disorders, such as the MMPI-2 and the MMPI-2-RF. The MMPIs include evaluee validity scales or family scales. Rogers and Granacher noted that the initial research for those of the MMPI-2-RF has produced "promising yet disparate results." Therefore, according to Rogers and Granacher, the research has not yet justified using them in forensic cases in which malingering is suspected (Rogers et al. 2011; Sellbom et al. 2010). [However, see below for a description of recent research that is validating the use of the MMPI-2-RF in psychiatric/psychological injury contexts.]

Consensus Statement. The American Academy of Clinical Neuropsychology Consensus on the neuropsychological assessment of effort, response bias, and malingering (Heilbronner et al. 2009) stated that intentional exaggeration could be considered as evidence to support the diagnosis of malingering. No justification is provided for deviating from the DSM-IV-TR standard of having only gross exaggerations as indicative of malingering. This illustrates the concept of "construct drift" that Rogers and Granacher (2011) had described.

The committee noted that, unlike the case for Rogers and Granacher, the "term secondary gain" can be used in an assessment but should be limited to the context of the assessment and should never be used as a synonym for malingering. This raises the important point that assessments in the forensic disability and related contexts should address malingering and related motivations, but prudently, a point with which I agree. The committee noted that the best way to assess malingering is by ruling out intentions related to other possible conditions. However, on the one hand, I would add that there might be incontrovertible evidence for malingering and, on the other hand, intent is hard to assess with accuracy. Nevertheless, I agree

with Heilbronner et al. that malingering should be addressed in evaluations, in contrast to those who argue that such types of conclusions should be left to the province of the court or trier of fact. I add that a set of test data by itself, or inconsistencies/discrepancies, as well, or both, might rule in malingering to the needed level of certainty, everything else being considered and equal in the case at hand.

Others. Sollman and Berry (2011) took a more sanguine approach to describing the research by Mittenberg et al. (2002). They noted that the evidence of base rates for "suboptimal effort" in clinical practice is equal to or greater than 40 % in some settings, and they cited Mittenberg et al. as one authority. By using a more generic or global term than of malingering (suboptimal effort), Sollman and Berry afforded the possibility that such terms might involve even mild exaggeration. Their estimate that the percentage might be even higher than 40 % for the base rate of suboptimal effort makes sense if one includes all types of suboptimal effort and reasons for them.

In this regard, Merckelbach et al. (2011) demonstrated in analogue studies with undergraduate students that conscious feigning eventually could be forgotten and lead to symptom conviction and somatoform disorders. Further, Merckelbach and Merten (2012) elaborated a cognitive dissonance model of malingering. Conscious other-deception could turn into unconscious self-deception. The malingered symptoms become internalized and considered subjectively as genuine. The deceivers lose perspective on the origins of their fabrications, being convinced of their reality (e.g., Von Hippel and Trivers 2011). Or, also from a cognitive dissonance perspective, medically unexplained symptoms (MUS) might develop for reasons other than self-deception, such as escalating ambiguous or minor symptoms into more serious ones by anxiety and over-focus on them (e.g., Brown 2004; Suls and Howren 2012).

Therefore, to conclude, the work of Merckelbach and colleagues suggests that, on the one hand, malingering might be masked with time and, on the other hand, malingering, itself, is not the only way that evaluee validity can be compromised. This fits my emphasis that referring to lack of credibility should be used when the data in an assessment does not warrant a direct conclusion of malingering. Using the language of a lack of credibility should be sufficient for many court purposes. In Chap. 5, consistent with Merckelbach and colleagues, I refer to the process of conscious malingering leading to unconscious symptom conviction and symptom propagation.

2.3.3 Comment

This review of definitions and concepts related to malingering has indicated that there is no clear consensus on what it involves. The most striking difficulty relates to whether exaggeration should be included as a component of malingering and, if so, what degree of exaggeration constitutes an index of malingering. Another problem relates to the suggested prevalence or base rate of malingering, which has been estimated as well over 50 % in some forensic contexts, such as those related to

psychiatric/psychological injury. Indeed, Larrabee et al. (2009) have argued that the standard base rate in the field should be acknowledged as 40 % plus or minus 10. Further, Larrabee (2007) agreed with Mittenberg et al. that in neuropsychological evaluations in which there is persistent neuropsychological deficit in cases of MTBI, the malingering rate might be as high as 88 %!

Before estimates of base rate or prevalence of malingering in the forensic disability and related context can be considered this high, replication is needed. Moreover, careful analysis of terms and research might reveal a pattern different than those published. Moreover, addressing the inconsistencies in terminology and methods in the research might further lessen the estimates.

That being said, problematic presentations and performances of a type less prejudicial than malingering might be as widespread as the research suggests. For example, definite and probable response bias as opposed to malingering, per se, might be quite elevated. Terminology and research in the field needs an integrated schema of concepts, terms, and conditions for their attribution, such as I attempt to provide in the present work. It is important to note that diagnostic accuracy can be improved by having scientifically-validated knowledge of the prevalence of a psychiatric/psychological condition. However, it can become problematic when the prevalence estimates are inaccurate, especially if wildly so, due to inconsistencies in terminology and methods in the research.

Mittenberg et al. (2002) explained that the likelihood that a diagnosis is accurate is when the ratio of its base rate to the probability of not having the diagnosis exceeds the ratio of false to true positives for a given method (as per Meehl and Rosen 1955). Therefore, considering the estimates of prevalence of malingering in the literature cited by Mittenberg et al., according to them, in an MTBI case, the likelihood that a correct evaluation of "probable malingering" is higher when the test used in the assessment produces less than 39 % false positive outcomes and, conversely, more than 61 % true positive outcomes. For the test used to have diagnostic utility, it should yield a positive predictive value or accuracy (the proportion of accurate to total positive diagnoses) exceeding the proportion of the relevant population not having the diagnosis involved (i.e., above 61 %).

This psychometric logic indicates the reason that the percentage of 40 ± 10 for the base rate or prevalence of malingering in MTBI cases appears a benchmark that workers in the field are striving to reach. The closer the figure reaches 50 %, the easier it is to work with in establishing a test's predictive utility in diagnosing malingering. However, if the percentage is appreciably lower, such as less than 10 %, the test will err toward classifying non-malingerers as malingerers, which is clearly unacceptable. In this field, test constructors take care to avoid such mislabeling because of their unfair consequences, and they adopt conservative cut-offs. However, the more the base rate is toward 50 %, the less likely extreme conservative cut scores are needed.

Moreover, if the 50 % or so percentage estimates for the base rate of malingering were accurate and valid, this figure would indicate to individual evaluators that, for a particular evaluee, it is more likely than not before the person even begins the assessment that a conclusion of malingering to the assessment at hand is quite possible if not likely.

However, (a) if the basic definition of malingering is unclear, (b) if intent is hard to assess, (c) if the assessment instruments themselves have disparate even if relevant findings, and so on, any definitive estimate about the prevalence of malingering is premature. These and related arguments reinforce the conclusion that evaluators should be using alternative language to malingering to indicate doubt about the demonstrated veracity or truth-value of an evaluee's symptom presentation and performance (such as generic terms related to credibility, feigning, dissimulation, unfavorable self-presentation, etc.), except in cases with incontrovertible evidence.

The latter conclusion appears appropriate scientifically but it presents practical drawbacks in the field of psychiatric/psychological injury. If psychiatric/psychological evaluators are constrained in arriving at conclusions about malingering, stakeholders/institutions, such as the court and the third parties involved, might object or find that psychiatric/psychological testimony does not help as much as it should and even might be superfluous. Without a diagnosis of malingering itself, cases might not be won outright in court and, moreover, from their perspective, financial settlements or court-imposed compensation might be higher than should be the case.

That being said, absent incontrovertible evidence of malingering, mental health professionals, including psychiatrists and psychologists, should argue that the alternative ways of indicating doubt about the honesty of an examinee's symptom presentation (e.g., feigning, non-credible) is the most accurate possible in the circumstances and should be sufficient to satisfy court and related requirements. That is, given absent evidence of malingering, in most cases involving doubt about credibility in forensic and related determinations of disability due to psychiatric/psychological injury, mental health evaluators should indicate that they have provided sufficient evidence in their assessments related to response bias and to presentation and performance feigning/dissimulation, in general, but the evidence cannot address the presence or absence of malingering itself, so that conclusions related to but without over mention of malingering are best in the circumstances.

It is better that psychology and psychologists lobby for changes to tort thresholds, disability policies, and the like, related to malingering and the need of its imputation instead of forcing its methods and procedures to yield conclusions that malingering is present when the evidence does not support such conclusions. Moreover, astute stakeholders and attorneys who are presented with cases described in terms such as noncredible and feigning could argue that these terms could be taken to infer malingering-type motivations, which might play better in court and related venues. Of course, plaintiff might argue otherwise, but in such cases mental health professionals would be correctly left out of the legal fray and triers of fact would be left to decide on the issue. Furthermore, when a conclusion of malingering proffered to court or related venues (a) goes beyond the data gathered for a particular case, (b) goes beyond the applicable science, and (c) goes beyond the boundaries of professional regulations and competencies, the evaluator's practice might face close scrutiny by regulatory bodies.

To conclude, given the difficulties encountered in defining malingering and related terms and in determining its base rate or prevalence in forensic disability and related contexts, when evaluee presentation and performance casts notable doubt on

evaluee credibility, evaluators might be limited to using alternative terms other than malingering, itself, in order to express that doubt. The credibility of an evaluee's symptom presentation and performance could be described using language that, if phrased correctly, can be as equally effective as using the "M" word, but without the baggage that opens the conclusions to the assessment to the type of criticisms being made in the present work. Using the term "feigning" and referring to a clear lack of "credibility" in the presentation and performance of the evaluee should be sufficient to alert the court or trier of fact about the problematic veracity in the facts presented in the case at hand. Casting the net wider than this by attributing malingering even when unwarranted by the data at hand might lead to unexpected and quite negative practice outcomes.

2.4 Research on Prevalence of Malingering and Related Response Biases

2.4.1 Malingering Minimized

Gold and Shuman (2009) described in depth psychiatric assessment in the disability context. They devoted little space to the topic of malingering. They cited Tisza et al. (2003) as indicting that malingering was less common than exaggeration in evaluations in this setting. Reference to Tisza et al. (2003) reveals they cited an article by Eliashof and Streltzer (2003) indicating that malingering is likely "rare" among disability claimants. Other psychiatrists, such as Resnick, refer to psychological research in their publications and have a different perspective.

Soliman and Resnick (2010) presented the standard psychiatric perspective on evaluating feigning, and focused on malingering or feigned cognitive incompetence in adjudicative evaluations (the competence to stand trial). They suggested a stepwise approach, starting with clinical suspicion. In the next step of actually determining the presence of malingering, they included the use of psychological tests along with the assessment interview. The evaluator should then proceed to determine the presence of feigned cognitive incompetence. Some of the strategies and tests to use are psychological in nature, such as using Rogers and Correa's (2008) strategies for detecting feigned cognitive impairment, and also administering tests, such as personality inventories (e.g., the MMPI-2) and SVTs (e.g., the SIRS, Structured Interview of Reported Symptoms, Rogers et al. 1992). Note that psychiatrists need to be trained on using tests such as these before administering them to evaluees (Dattilio et al. 2011).

Chafetz (2010) explained that in Social Security Administration (SSA) Disability benefit assessments (psychological consultative examinations) validity tests are not commonly used, nor are the constructs of symptom validity and malingering emphasized. However, he noted the value of evidence-based practice both for SSA policy

and medical consultants. Similarly, Evans (2011) and Worthen and Moering (2011) pointed out that Compensation and Pension (C & P) examinations at the Department of Veterans Affairs (VA) do not normally include the use of psychological tests that can help in detecting malingering. Even though best practice at the VA recommends use of the MMPI-2 and also research has revealed "high" base rates of exaggeration of PTSD, assessments rarely are comprehensive enough to detect response bias.

Chafetz et al. (2011) showed that of three groups of low-IQ claimants (disability from work, rehabilitation to return to work, individuals seeking reunification with their children), only the first group failed SVTs at a high rate. They attributed the group difference to differences in claimants' intrinsic motivations. Moreover, the results suggest that failing SVTs does not reflect a low IQ, in particular. SVTs used in the study included the MSVT (Medical Symptom Validity Test), the RDS (Reliable Digit Span), and the A-Test (respectively, Green 2004; Greiffenstein et al. 1994; and Chafetz 2008).

However, it is noted that in these non-tort venues, the detection of malingering is not a priority. For example, in the military, there are political factors to consider. Nevertheless, practitioners such as Worthen and Moering and Chafetz realize the need for testing of malingered presentations. Worthen and Moering recommended use of tests such as the MMPI-2 and the SIRS.

2.4.2 Malingering Maximized

Reference to several of the more recent sources cited in the Mittenberg et al. (2002) article revealed that the percentages of malingering and related biases approached the 40 % level mentioned in the article. For example, Green et al. (2001) examined the relationship between failure on symptom validity testing and overall neuropsychological test battery mean in neurological patients, those with MTBI, and a miscellaneous group. They used the WMT (Word Memory Test), the CARB (Computerized Assessment of Response Bias Test), and the CVLT (California Verbal Learning Test) (Green 2005; Allen et al. 1997; Conder et al. 1992; and Delis et al. 1987 respectively). The failure rate on the SVT index used for purposes of establishing failure rate, the WMT, varied between 23 and 35 %.

Grote et al. (2000) used the VSVT (Victoria Symptom Validity Test; Slick et al. 1997/2005) to compare SVT performance in compensation-seeking (mostly TBI) and non-compensation seeking (intractable seizures) samples. For difficult memory items on the VSVT, the pass rate was 100 % for the former group but 58.5 % for the latter. That is, the failure rate using this test was in the 40 % range held as the norm by Mittenberg et al. (2002). Nevertheless, in both the Green et al. (2001) and Grote et al. (2000) studies, SVT failure rate was determined by using only one SVT test and not at the most stringent criteria.

Reference to recent research on the topic of base rate of malingering and related response biases involves research with better methodologies and it gives a mixed picture. Chafetz (2011) examined performance of social security disability claimants

using a score based on both embedded indicators of symptom validity and the RDS along with two other tests, the TOMM (Test of Memory Malingering; Tombaugh 1996) and the MSVT. Claimants were classified in the definite malingering group if they performed below chance on one SVT, and were classified as probable malingerers if they failed the A-Test and either the TOMM or the MSVT. Of 161 claimants in the sample, 38.5 % were classified as either probable or definite malingers. However, examination of the breakdown of the two categories reveals that only 15 % were classified as definite malingerers (n = 24). According to the author, there were no false positive errors in attributing malingering with three failed indicators from the scores used to develop a symptom validity index, consistent with the research of Victor et al. (2009) and of Larrabee (2003, 2008).

Greve et al. (2009) examined the prevalence of malingered disability in compensation-seeking chronic pain patients. They reviewed over 500 consecutive referrals to a private practice. They examined the battery of test scores and relevant clinical information according to the Slick et al. (1999) MND criteria, as well as a model derived from it for application to pain patients (MPRD, Malingered Pain-Related Disability; Bianchini et al. 2005). They noted that reliable empirical estimates of the base rates of malingered disability in pain patients have varied between 20 and 40 %, and the authors cited four studies to this effect. However, one of them is the survey authored by Mittenberg et al. (2002), which has the inconsistencies indicated in the present chapter.

In contrast to these various studies and reviews that suggest an elevated rate of malingering in the forensic disability and related context, Fishbain et al. (1999) provided an estimate as low as 1.25 % for malingered pain. However, Greve et al. (2009) undertook a recalculation of their data and arrived at a percentage of 23.5 %, aside from listing the study's methodological problems. In their research, Greve at al. undertook the first study of malingered disability in chronic pain patients (mostly back pain patients with no identifiable pathology related to their injuries) based on direct, individual evaluations using advanced psychometric indicators and formal diagnostic models.

The malingering indicators used in the study included all three major types of applicable measures – (a) indices from a personality inventory (MMPI-2); (b) stand-alone forced-choice symptom validity tests [the TOMM, the WMT, the PDRT (Portland Digit Recognition Test; Binder 1993; Binder and Willis 1991), the CARB] and (c) internal or embedded indicators taken from tests of cognitive ability [RDS and other WAIS-III intelligence test scores (Wechsler Adult Intelligence Scale, Third Edition; Wechsler 1997), and various CVLT scores; recognition hits, the Millis et al. (1995) formula, and the Millis and Volinsky (2001) linear shrinkage model].

The MPRD system is used to evaluate pain patients on five criteria; including presence of evidence from cognitive/perceptual (neuropsychological) testing and self-report (see Chap. 3). One method used only psychometric testing for determining the presence of MPRD whereas a second one included file inconsistencies (either two of them from their list or one compelling one for which two raters agreed). Patients were classified as probable or definite malingers if they reached

either of the diagnostic systems' criteria (MND or MPRD). The authors also used a statistical estimation method using cut-offs associated with a specificity of approximately 95 % in TBI populations for the PDRT, TOMM, WAIS-III, and MMPI-2 (e.g., for F, FBS) and using modeling based on three prevalence estimates for malingering (20, 30, 40 %).

Of the 508 patients, up to 36 % were classified as probable or definite malingerers, with 10.4 % as definite malingerers. As for the statistical method of classifying malingering in these pain patients, the figure rose to as much as 40 %. Note that Greve et al. discussed their results in varied ways. On the one hand, they justified combining patients who reach probable and definite malingering criteria based on their scoring methods because in medico-legal terms the level of certainty needed for conclusions proffered to court is "more probable than not" or "to a reasonable degree of scientific certainty." However, the actual terminology is "more likely than not" and it is a worthy question to ask whether a diagnostic system that includes the adjective of "probable" actually meets the legal criterion of "more likely" [equal to or greater than 50 % probability, preponderance of the evidence]. The authors gave the results for the prevalence of malingering as between 20 and 50 %, depending on the type of analysis undertaken. However, according to the authors' own data, the estimate is more toward 10 %. Aside from the question of the base rate or prevalence of malingering ascertained in Greve et al., they discussed other matters that are consistent with my approach taken in this chapter, as presented in the following.

2.4.3 Malingering Balanced

Greve et al. (2009) indicated in the discussion of their results that "nearly half" the sample in the study showed some evidence of "symptom magnification," a term which is broader than malingering and includes symptom exaggeration. Moreover, they indicated that about one third of the sample met the criteria for "possible" MPRD. Furthermore, according to the authors, as much as two thirds of their sample showed "some form of exaggeration." Finally, the authors cautioned that "not all exaggeration reflects malingering" (p. 1124). Greve et al. appear to imply that workers in the field should be cautious about conflating exaggeration with malingering both in their research and in their individual assessments. These final conclusions are quite consistent with those of the present work that exaggeration is not synonymous with malingering. Indeed, the estimate that up to 2/3 of pain patients will show some form of exaggeration makes sense in light of my discussion of problematic presentation and performances in forensic disability and related determinations, in general. The question becomes to what degree and for what reasons.

Wygant et al. (2011) examined the results of 251 individuals who had undergone compensation-seeking evaluations. The primary condition assessed was pain impairment (65 %), with head injury claimed in the remainder (four of these claimants presented with pain impairments, as well). A majority of the assessments were

conducted for the defense (57 %), with 40 % for the plaintiff (3 % were unknown). This archival study examined scores on both self-report measures and symptom validity tests/measures, focusing on the MMPI-2-RF and its family of over-reporting F tests, as well as the RDS, which was developed for the MMPI-2 but can be scored for the RF version, as well. The RF F-tests include four reduced versions of the MMPI-2 equivalents – the F-r, Fp-r, Fs, and FBS-r (Infrequent Responses, Infrequent Psychopathology Responses, Infrequent Somatic Responses, and Symptom Validity Scale, Revised, respectively).

Other tests/measures that had been administered included the self-reporting SIMS (Structured Inventory of Malingered Symptomology; Widows and Smith 2005), as well as the M-FAST (Miller Forensic Assessment of Symptoms Test; Miller 2001) and SIRS, which are two structured interview response bias measures. Finally, three symptom validity/tests measures were administered: the TOMM, VSVT, and LMT (Letter Memory Test; Inman et al. 1998).

Based on both performance on the various measures and file review for factors such as compelling inconsistencies, Wygant et al. (2011) applied both the MND and MPRD diagnostic systems to classify individuals in their sample as either: incentives only ($n=103$), possible malingering ($n=57$), probable malingering ($n=70$), and definite malingering ($n=21$). The authors did not calculate the percentages in the distribution of these four groups, but for the combined probable/definite malingering group, the total percentage is 30.7, which is consistent with prior estimates that malingering-related classifications should be in the 30–50 % range. However, the percentage of definite malingering was only 8 % in this study, which is consistent with other research that the figure for outright malingering should be about 10 %. About the remainder of the results, the various over-reporting measures distinguished the definite/probable malingering groups from the possible malingering/incentive only groups, especially for Fr and FBS.

Note that Wygant et al. did not undertake their study for the direct purpose of establishing malingering base rate or prevalence in relevant psychiatric/psychological injury populations, so their results are informative, and stand in contrast to higher percentages often cited in the literature, for example, the references to Mittenberg et al. (2002). The article reviewed next by Lee et al. (2012) also found results related to malingering base rates that run counter to the current emphasis on 40 % or so, and obtaining these results was not the primary objective of the study.

Lee et al. (2012) investigated gender differences on the FBS in claimants who had undergone non-neurological medico-legal disability assessments. Despite the presence of some gender differences in the results, the publisher-recommended cut scores (Ben-Porath et al. 2009) yielded classification accuracies that were similar for men and women. The results suggested that the FBS does not involve clinically meaningful gender bias in predicting SVT failure. Unreported findings with the FBS-r, part of the MMPI-2-RF, gave comparable results.

On the one hand, the results do not support criticisms of the FBS related to gender bias raised by Butcher et al. (2008) and Williams et al. (2009). On the other hand, the percentage of non-credible responders was calculated using the Slick et al. (1999) criteria as well as performance on SVTs (e.g., the WMT, the TOMM,

the CARB). The criteria for definite malingering involved scoring below chance on an SVT and, for probable malingering, it involved a below cut score on one or more SVTs. Of 1,209 patients who met inclusion criteria, over 30 % met the criteria for non-credible responders (definite, probable), but only 19 met the criteria for definite malingering. This works out to a percentage of about 1.5 %, which is the estimate of malingering provided in the much-criticized Fishbain et al. (1999) study for pain patients! These results were not the main ones to which the study was aimed, and I had to calculate the latter percentage myself. That such a low percentage is obtained in a study with a sample of disability claimants is telling, even if the overall percentage including definite and probable non-credible responders is over 30 %.

2.5 Chapter Conclusion

Rogers and Bender (2012) noted that although the base rates of malingering suggested by Mittenberg et al. (2002) and Larrabee (2003) "possibly" might be accurate (e.g., 38.5 % for mTBI, ±40 %, respectively), the publications contain conceptual and methodological limitations. For example, in their survey of National Academy of Neuropsychology (NAN) members, of the respondents, Sharland and Gfeller (2007) found that the median for definite malingering was only 1 % (in their Table 3). Similarly, Slick et al. (2004) surveyed published researchers on malingering. Only 12.5 % rated the prevalence of the category "definite" malingering at 30 % or more. Also, Rogers and Bender (2012) noted that in Larrabee (2003) some of the research cited used "deficient" designs.

In addition, Rogers and Bender (2012) described that there are multiple possible reasons for incomplete/suboptimal effort in testing other than the reason of malingering. These include pain, depression, stress, and expectation of failure on the part of the evaluee and reaction to evaluator factors. Also, Elhai et al. (2012) indicated that other evaluee factors, such as being ill, poor sleep, and medication side effects, might be involved.

Clearly, establishing the actual base rate or prevalence of malingering and related response biases in psychiatric/psychological injury populations remains an outstanding issue in the field. Moreover, the estimates in the literature on the base rates applicable to forensic disability and related contexts is much less than the 40–50 % level (or more), often touted as the appropriate level in the literature. That being said, the estimates of problematic presentations and performances to lesser degrees than outright malingering might be this high, and malingering itself might be as high as 10–15 %, although other researchers might dispute this figure, with estimates as low as 1–2 %.

Aside from definitional issues related to the terms and the question of base rate/prevalence, the research varies in methods and scope. For example, the classification of definite malingering might be determined based on failure on one forced-choice measure or it might derive from considering a "diagnostic" system such as the Slick et al. MND model. Mild or minimal exaggeration might be conflated with

frank malingering and, moreover, classifications of probable compared to definite response biases usually are lumped together. Further, any response bias could be considered equivalent to malingering Moreover, algorithms that integrate behavior on multiple symptom validity indicators suggest two to three failures on such tests but others indicate that four to five such failures are needed. Finally, perhaps the diagnostic systems and algorithms need revision before they are valid for individual assessments, as queried in the next chapter.

Just as the Slick et al. (1999) criteria for MND has the potential to become the gold standard in neuropsychological assessment in the psychiatric/psychological disability and related context, the same applies to the MPRD for pain-related disability assessments. However, just as Boone (2007, 2011b) has recommended that the MND diagnostic system should change its label to a more generic term involving non-credible presentation or feigning, instead of malingering, per se, I recommend that the MPRD criteria proposed by Bianchini et al. (2005) be given a more generic, non-credible label, such as "Feigned Pain-Related Disability" ("F-PR-D"). Moreover, neither the Bianchini et al. MPRD criteria nor the Slick et al. MND criteria should be considered "gold standard" until recommended changes are evaluated for their relevance. These types of issues might reveal the need for newer, integrated diagnostic systems on malingering and related response biases, such as I attempt to create in the next chapter.

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Chapter 3
Toward a Gold Standard in Malingering and Related Determinations

3.1 Introduction

This chapter begins with the exchange between Rogers et al. (2011a, b) and Boone (2011) on the Slick et al. (1999) criteria for Malingered Neurocognitive Dysfunction (MND). The latter represents a major advance in the field because it systematized the existing conceptualization and research on malingered disability and related response biases in neurocognitive and related disability assessments. Rogers and colleagues and Boone added important comments and criticisms of the model, calling for more research. The chapter also describes another exchange, that of McGrath et al. (2010, 2011), and Rohling et al. (2011). McGrath and colleagues had indicated that there is too little evidence to support use of symptom validity tests (SVTs) in neurocognitive and related assessments, but Rohling et al. pointed out research missed in their review and justified continued SVT use in forensic disability and related assessments. Recent research supports SVT use in such assessments, and this research is described in the chapter, including the work of Boone (2013). The chapter also examines the range of psychological instruments used in these types of assessments, including personality, stand-alone (forced-choice and interview), and neuropsychological indices. It includes a mention of the MMPI-2-RF (Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form; Ben-Porath and Tellegen 2008/2011), which is analyzed in depth in the next chapter. The chapter terminates with description of extant systems not only for detecting malingering in the neuropsychological context (MND) but also for pain-related presentations (the MPRD, Malingered Pain-Related Disability; Bianchini et al. 2005). Also, I list the tests recommended by Rubenzer (2009) for detecting malingering posttraumatic stress disorder (PTSD).

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Table of Terms and Sources

Abbreviation	Name	Source(s)
AVLT RMT	Rey Auditory Verbal Learning Test Recognition Memory Test	Binder et al. (1993)
BAI	Beck Anxiety Inventory	Beck and Steer (1993)
BDI-II	Beck Depression Inventory-II	Beck et al. (1996)
b-test	b-test	Boone et al. (2002c)
CTAM	Computerized Test of Attention and Memory	Fox (2009)
CVMT	Continuous Visual Memory Test	Trahan and Larrabee (1988)
CVLT	California Verbal Learning Test	Delis et al. (1987)
DAPS	Detailed Assessment of Posttraumatic Stress	Briere (2001)
DF	Discriminant Function	Mittenberg et al. (2003)
DR	Delayed Recognition	Green (2005)
Ds	Dissimulation Scale	Gough (1954)
DSM-IV-TR	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision	American Psychiatric Association (2000)
DSM-5	Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition	American Psychiatric Association (2013)
DTS	Davidson Trauma Scale	Davidson et al. (1997)
F	Infrequency Scale	Butcher et al. (1989)
Fb	Infrequent Responses, back	Ben-Porath and Tellegen (2008/2011)
FBS	Symptom Validity Scale (originally called Fake Bad Scale)	Ben-Porath and Tellegen (2008/2011), Lees-Haley et al. (1991)
Fp(-r)	Infrequent Psychopathology Responses	Ben-Porath and Tellegen (2008/2011)
F-r	Infrequent Responses	Ben-Porath and Tellegen (2008/2011)
Fs	Infrequent Somatic Responses	Ben-Porath and Tellegen (2008/2011)
FTT	Finger Tapping Test	Heaton et al. (1991)
HHI	Henry-Heilbronner Index	Henry et al. (2006)
HRB	Halstead-Reitan Battery	Reitan and Wolfson (1993)
IR	Immediate Recognition	Green (2005)
K(-r)	Adjustment Validity, Correction Scale	Bianchini et al. (2005)
L(-r)	Uncommon Virtues, Lie Scale	Bianchini et al. (2005)
LMR	Memory Recognition	Killgore and DellaPietra (2000)
MAL	Malingering Index	Morey (1991)
MCI	Memory Complaints Inventory	Green (2004a)
MCMI-III	Millon Clinical Multiaxial Inventory, Third Edition	Millon (1994), Millon et al. (1997)
Md	Malingering Depression Scale	Henry et al. (2006)
MENT	Morel Emotional Numbing Test	Morel (1995, 1998)
M-FAST	Miller Forensic Assessment of Symptoms Test	Miller (2001)
MHI	Multifactor Health Inventory	Hase (1996)
MMDS	Malingering Mood Disorder Scale	Henry et al. (2006)
MMPI	Minnesota Multiphasic Personality Inventory	Hathaway and McKinley (1943)

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Abbreviation	Name	Source(s)
MMPI-2	Minnesota Multiphasic Personality Inventory, Second Edition	Butcher et al. (1989, 2001)
MMPI-2-RF	Minnesota Multiphasic Personality Inventory, Second Edition Restructured Form	Ben-Porath and Tellegen (2008/2011)
MNB	Meyers Neuropsychological Battery	Meyers et al. (2011)
MND	Malingered Neurocognitive Dysfunction	Slick et al. (1999)
MPI	Multidimensional Pain Inventory	Kerns et al. (1985)
MPRD	Malingered Pain-Related Disability	Bianchini et al. (2005)
MSVT	Medical Symptom Validity Test	Green (2004b)
NIM	Negative Impression Management	Morey (1991)
NV-MSVT	Nonverbal Medical Symptom Validity Test	Green (2008)
PAI	Personality Assessment Inventory	Morey (1991, 2007)
-r	Revised (e.g., FBS-r)	Ben-Porath and Tellegen (2008/2011)
RAVLT	Rey Auditory Verbal Learning Test	Schmidt (1996)
RBS	Response Bias Scale	Gervais et al. (2007)
RC	Restructured Clinical Scale	Ben-Porath and Tellegen (2008/2011)
RCFT	Rey Complex Figure Test	Meyers and Volbrecht (1999)
RDCT	Rey Dot Counting Test	Rey (1941)
RDS	Reliable Digit Span	Babikian et al. (2006), Greiffenstein et al. (1994)
REIS	Revised Impact of Events Scale	Weiss and Marmar (1996)
RMFIT	Rey 15-Item Memory Test	Rey (1941)
RMT	Recognition Memory Test	Warrington (1984)
ROCFT	Rey-Osterrieth Complex Figure Test	Rey (1941)
RWRT	Rey Word Recognition Test	Rey (1964)
SIMS	Structured Inventory of Malingered Symptomology	Widows and Smith (2005)
SIRS	Structured Interview of Reported Symptoms	Rogers et al. (1992)
SIRS-2	Structured Interview of Reported Symptoms, Second Edition	Rogers et al. (2010)
SRT	Seashore Rhythm Test	Reitan and Wolfson (1993)
SSPT	Speech Sounds Perception Test	Reitan and Wolfson (1993)
TOMM	Test of Memory Malingering	Tombaugh (1996)
TSI	Trauma Symptom Inventory	Briere (1995)
TSI-2	Trauma Symptom Inventory, Second Edition	Briere (2011)
VSVT	Victoria Symptom Validity Test	Slick et al. (1997/2005)
WAIS-III	Wechsler Adult Intelligence Scale, Third Edition	Wechsler (1997a)
WAIS-IV	Wechsler Adult Intelligence Scale, Fourth Edition	Wechsler (2008a, b)
WAIS-R	Wechsler Adult Intelligence Scale, Revised	Wechsler (1981)
WCST	Wisconsin Card Sorting Test	Heaton (1981)
WCT	Word Choice Test, in the WMS-IV	Wechsler (2009)
WMS-III	Wechsler Memory Scale, Third Edition	Wechsler (1997b)
WMS-IV	Wechsler Memory Scale, Fourth Edition	Wechsler (2008c)
WMS-R	Wechsler Memory Scale, Revised	Wechsler (1987)
WMT	Word Memory Test	Green (2005)

3.2 The 2011 Rogers (and Colleagues) and Boone Exchange in *Psychological Injury and Law*

Table 3.1 Proposed definition and criteria for possible, probably, and definite Malingering of Neurocognitive Dysfunction (MND)

Definition

Malingering of Neurocognitive Dysfunction (MND) is the volitional exaggeration or fabrication of cognitive dysfunction for the purpose of obtaining substantial material gain, or avoiding or escaping formal duty or responsibility. Substantial material gain includes money, goods, or services of nontrivial value (e.g., financial compensation of personal injury). Formal duties are actions that people are legally obligated to perform (e.g., prison, military, or public service, or child support payments or other financial obligations). Formal responsibilities are those that involve accountability or liability in legal proceedings (e.g., competency to stand trial)

Diagnostic categories for Malingering Neurocognitive Dysfunction (MND)

Definite MND

This is indicated by the presence of clear and compelling evidence of volitional exaggeration or fabrication of cognitive dysfunction and the absence of plausible alternative explanations. The specific diagnostic criteria necessary for Definite MND are listed below:

1. Presence of a substantial external incentive [Criterion A]
2. Definite negative response bias [Criterion B1]
3. Behaviors meeting necessary criteria from group B are not fully accounted for by Psychiatric, Neurological, or Developmental Factors [Criterion D]

Probable MND

This is indicated by the presence of evidence strongly suggesting volitional exaggeration or fabrication of cognitive dysfunction and the absence of plausible alternative explanations. The specific diagnostic criteria necessary for Probably MND are listed below

1. Presence of a substantial external incentive [Criterion A]
2. Two or more types of evidence from neuropsychological testing, excluding definite negative response bias [two or more Criteria B2–B6]

   Or

   One type of evidence from neuropsychological testing, excluding definite negative response bias, and one or more types of evidence from Self-Report [one of Criteria B2–B6 and one or more of Criteria C1–C5]
3. Behaviors meeting necessary criteria from groups B and C are not fully accounted for by Psychiatric, Neurological, or Developmental Factors [Criterion D]

Possible MND

This is indicated by the presence of evidence suggesting volitional exaggeration or fabrication of cognitive dysfunction and the absence of plausible alternative explanations. Alternatively, possible MND is indicated by the presence of criteria necessary for Definite or Probably MND except that other primary etiologies cannot be ruled out. The specific diagnostic criteria for Possible MND are listed below

1. Presence of a substantial external incentive [Criterion A]
2. Evidence from Self-Report [one or more of Criteria C1–C5]
3. Behaviors meetings necessary criteria from group C are not fully accounted for by Psychiatric, Neurological, or Developmental Factors [Criterion D]

   Or

   Criteria for Definite or Probably MND are met except for Criterion D (i.e., primary psychiatric, neurological, or developmental etiologies cannot be ruled out). In such cases, the alternate etiologies that cannot be ruled out should be specified

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Explanation of Criteria

Criteria A: Presence of a substantial external incentive

At least one clearly identifiable and substantial external incentive for exaggeration or fabrication of symptoms (see definition) is present at the time of examination (e.g., personal injury settlement, disability pension, evasion of criminal prosecution, or release from military service)

Criteria B: Evidence from neuropsychological testing

Evidence of exaggeration or fabrication of cognitive dysfunction on neuropsychological tests, as demonstrated by at least one of the following

1. *Definite negative response bias.* Below chance performance ($p < .05$) on one or more forced-choice measures of cognitive function
2. *Probable response bias.* Performance on one or more *well-validated* psychometric tests or indices designed to measure exaggeration or fabrication of cognitive deficits is consistent with feigning
3. *Discrepancy between test data and known patterns of brain functioning.* A pattern of neuropsychological test performance that is markedly discrepant from currently accepted models of normal and abnormal central nervous system (CNS) function. The discrepancy must be consistent with an attempt to exaggerate or fabricate neuropsychological dysfunction (e.g., a patient performs in the severely impaired range on verbal attention measures but in the average range on memory testing; a patient misses items on recognition testing that were consistently provided on previous free recall trials, or misses many easy items when significantly harder items from the same test are passed)
4. *Discrepancy between test data and observed behavior.* Performance on two or more neuropsychological tests within a domain are discrepant with observed level of cognitive function in a way that suggests exaggeration or fabrication of dysfunction (e.g., a well-educated patient who presents with no significant visual-perceptual deficits or language disturbance in conversational speech performs in the severely impaired range on verbal fluency and confrontation naming tests)
5. *Discrepancy between test data and reliable collateral reports.* Performance on two or more neuropsychological tests within a domain are discrepant with day-to-day level of cognitive function described by at least one reliable collateral informant in a way that suggests exaggeration or fabrication of dysfunction (e.g., a patient handles all family finances but is unable to perform simple math problems in testing)
6. *Discrepancy between test data and documented background history.* Improbably poor performance on two or more standardized tests of cognitive function within a specific domain (e.g., memory) that is inconsistent with documented neurological or psychiatric history (e.g., a patient with no documented LOC or PTA, multiple negative neurological investigations, and no other history of CNS trauma or disease consistently obtains verbal memory scores in the severely impaired range after a motor vehicle accident)

Criteria C: Evidence from Self-Report

The following behaviors are indicators of possible malingering of cognitive deficits, but their presence is not sufficient for the diagnosis. However, presence of one or more of these criteria provides additional evidence in support of a diagnosis of malingering. These criteria involve significant inconsistencies or discrepancies in the patient's self-reported symptoms that suggest a deliberate attempt to exaggerate or fabricate cognitive deficits

1. *Self-reported history is discrepant with documented history.* Reported history is markedly discrepant with documented medical or psychosocial history and suggests attempts to exaggerate injury severity or deny premorbid neuropsychological dysfunction (e.g., exaggerated severity of physical injury or length of LOC/PTA; exaggerated premorbid educational or occupational achievement; denial of previous head injury or previous psychiatric history)

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2. *Self-reported symptoms are discrepant with known patterns of brain functioning.* Reported or endorsed symptoms are improbable in number, pattern, or severity; or markedly inconsistent with expectations for the type or severity of documented injury or pathology (e.g., claims of extended retrograde amnesia without loss of memory for the accident, or claims of loss of autobiographical information after mild head trauma without LOC)
3. *Self-reported symptoms are discrepant with behavioral observations.* Reported symptoms are markedly inconsistent with observed behavior (e.g., a patient complains of severe episodic memory deficits yet has little difficulty remembering names, events, or appointments; a patient complains of severe cognitive deficits yet has little difficulty driving independently and arrives on time for an appointment in an unfamiliar area; a patient complains of severely slowed mentation and concentration problems yet easily follows complex conversation)
4. *Self-reported symptoms are discrepant with information obtained from collateral informants.* Reported symptoms, history, or observed behavior is inconsistent with information obtained from other informants judged to be adequately reliable. The discrepancy must be consistent with an attempt to exaggerate injury severity or deny premorbid neuropsychological dysfunction (e.g., a patient reports severe memory impairment and/or behaves as if severely memory-impaired, but their spouse reports that the patient has minimal memory dysfunction at home)
5. *Evidence of exaggerated or fabricated psychological dysfunction.* Self-reported symptoms of psychological dysfunction are substantially contradicted by behavioral observation and/or reliable collateral information. *Well-validated* validity scales or indices on self-report measures of psychological adjustment (e.g., MMPI-2) are strongly suggestive of exaggerated or fabricated distress or dysfunction

Criteria D: Behaviors meeting necessary criteria from groups B or C are not fully accounted for by Psychiatric, Neurological, or Developmental Factors

Behaviors meeting necessary criteria from groups B and C are the product of an informed, rational, and volitional effort aimed at least in part toward acquiring or achieving external incentives as defined in Criteria A. As such, behaviors meeting criterion from groups B or C cannot be fully accounted for by psychiatric, developmental, or neurological disorders that result in significantly diminished capacity to appreciate laws or mores against malingering, or inability to conform behavior to such standards (e.g., psychological need to "play the sick role," or in response to command hallucinations)

Adapted with permission of Routledge. Slick et al. (1999). Reprinted by permission of the publisher (Taylor & Francis Ltd., http://www.tandf.co.uk/journals). [Table 2, Pages. 552–555; with some examples excluded]

Abbreviations. LOC loss of consciousness, *PTA* posttraumatic amnesia, *MMPI-2* Minnesota Multiphasic Personality Inventory, Second Edition (Butcher et al. 1989, 2001)

3.2.1 Rogers

In an exchange by leading workers in the field of malingering research, hosted by the journal *Psychological Injury and Law*, Rogers et al. (2011a) described and critically analyzed the Slick et al. (1999) diagnostic criteria for malingering of neurocognitive function ("malingered neurocognitive dysfunction," MND; see Table 3.1). The MND model proposes criteria for assessing different levels in certainty of response bias/malingering – possible, probable, and definite. According to Rogers et al. (2011a), the criteria lead to the over-classification of malingering.

The authors cited Larrabee (2003), who indicated that up to 64 % of patients with mild traumatic brain injury (MTBI) give test results that are "suggestive of malingering." They referred to the Mittenberg et al. (2002) study that leads to an estimate of 39 % (38.5 %) of litigating patients with MTBI engaging in "probable malingering or symptom exaggeration." Quite like myself, the authors argued that the base rate estimate of malingering in the cited research is probably inflated by the use of broad categories that includes suggestions of malingering and the probability of malingering, and even symptom exaggeration. Slick et al. had defined MND as "the volitional exaggeration or fabrication" in relation to their index behavior of cognitive dysfunction aimed at an external incentive. When the incentive is material gain, it has to be "substantial" but, at the same time, Rogers et al. pointed out that the criterion "substantial" means anything more than "non-trivial."

Rogers et al. (2011a) added that the criteria for probable malingering are low threshold or overly inclusive. For example, according to them, in the MND criteria there needs to be "some evidence of below-expected performance in at least two of ten domains" (p. 149). Rogers et al. noted that using the standard of 2/10 domains with relevant data does not consider the contrary evidence of evaluees putting forth "adequate effort on upwards of 80 % of the domains (p. 149)." Rogers et al. were referring to the 10 criteria in B2-B6 and C1-C5 in the MND criteria. Similarly, Young (2011) had pointed out that failing two tests of effort or symptom validity in a large battery of such tests should not ignore that most of the tests had been passed.

Rogers et al. (2011a) referred to other problems with the MND criteria, such as having problematic exclusion and inclusion criteria, and difficulties in evaluating incentive and motivation. For example, low thresholds for malingering are evident in the MND's minimal levels of certainty for criteria B4, B5, and B6 ("suggest"). Also, the criteria for probable MND are minimal (equal to or greater than two criteria of B2-B6, C1-C5). The criteria include "possible" incentive as sufficient for MND (in criteria A). Denial of past psychiatric history or premorbid dysfunction is taken as "proof" of MND (in criteria C1, C4). Also, feigning in any domain, including by exaggeration, "proves" MND (in criteria C5).

The arguments are nuanced and the criticisms not always as clearly appropriate as Rogers et al. (2011a) have indicated (e.g., the word "proof" does not appear in the criteria, although use of the quote marks by Rogers et al. in the criticisms might have served to indicate this). However, the general point being made is that the inclusion-exclusion criteria have to fit both science and fairness, and the criteria eventually adopted in any revision of the Slick et al. criteria might have to forego inclusion of motivational attributions, except where unequivocally evident.

Rogers et al. (2011a) conducted a literature review of MND using a PsycInfo search. They found 19 studies, almost all of which involved civil-forensic disability and compensation cases. First, in their review they found that the base rate for malingering over the studies was only 5.3 % on average. However, the rate for probable malingering was 21.2 % and, further, it was as high as 50 % in one study. As for the particular criteria of malingering, in general, little research had been undertaken on them in the 19 studies. To summarize, of the 19 studies, 15 did not test adequately more than 75 % of the MND criteria. Rogers et al. (2011a) noted that the

research using the MND might have found a high degree of specificity, but the research designs "are hopelessly confounded by criterion contamination" and implicit assumption about the equivalence of different measures of effort. In addition, different cut scores were used in tests of MND B2 indicators.

Other factors mentioned in Rogers et al.'s critique of the MND criteria included (a) lack of consideration of times when respondents score in the symptom minimization rather than exaggeration range and when they pass effort indicators (when they put forth adequate or maximum effort). (b) Also, the criteria lack appropriate consideration in the differential diagnosis of somatization factors and of alternate interpretations to malingering, such as feigning, as per Boone (2007). (c) The criteria fail to consider how evaluees might react to the "lexogenic" effects of insurance-related assessments. In addition, (d) Rogers et al. queried the validity of using certain inconsistencies in the data of an evaluee, such as those related to documents that might be unreliable.

Rogers et al. (2011a) concluded that all these difficulties with the MND criteria work against ever establishing the error rates of MND with relevant "criterion groups" having valid disorders. They added that poorer-than-expected performance on tests of effort should not lead to conclusions that malingering is present without ruling out other factors that might confound test results. Rogers et al. (2011a) ended by stating that "practitioners must decide for themselves" whether the MND criteria meet scientific admissibility standards for court. According to me, this latter conclusion is quite accurate. Experts present different arguments and data in the literature, and for controversial topics such as the validity of the MND criteria, each evaluator is responsible for decisions taken about assessments and for defending those decisions in court and related venues.

3.2.2 Boone

Boone (2011) responded to Rogers et al. (2011a) by arguing that they "overstated" the failings of the MND model and that it constitutes an accurate model for use in identifying non-credible evaluees. She cited Larrabee et al. (2009) and Mittenberg et al. (2002) as indicating that the rates of malingering in cases of MTBI in litigation are consistently at about 40 %. Boone did not address the rate of 5.3 % of definite malingering found in Rogers et al.'s literature review, and seems to be taking a broader perspective of the definition. However, she noted that in Victor et al.'s (2009) study, only 5 % failed two tests of effort, which is one preferred criterion for determining poor effort in the recent research on the matter.

In the end, however, Boone (2011) argued that consideration should be given to revising the B2 MND criterion to require failure on three or more SVTs (">2 SVTs"). Her rationale for this recommendation is that there is "imperfect specificity" in the case of failing one SVT. She also recommended that there might be redundancy between some B and C criteria that should be considered in the revision of the MND criteria. Finally, criterion C5 should be modified. She added that

the use of the term "malingering" to describe evaluees can be "problematic" (Boone 2007). She recommended that appropriate terminology should exclude inference of intent. Therefore, she recommended that the term MND be dropped in describing evaluees and it should be replaced by a term such as "noncredible neurocognitive dysfunction." She recommended that the scope of testing of effort be expanded beyond forced-choice measures, a point that is central to my proposed revisions of the MND model (see Chap. 5).

To conclude, this suite of recommendations by Rogers et al. and by Boone would go very far in improving the MND definition and criteria. Moreover, Young (2008) had written that in civil forensic settings pertaining to tort claims for personal injury and related litigation, the prevalence of wider noncredible neurocognitive dysfunction and related dissimulation about chronic pain, PTSD, and so on, should be considered instead of the narrow construct of malingering, and in so doing "the prevalence rate could be even higher than 50 %" (p. 90).

Finally, in determining MND or the equivalent, Boone (2011) referred to Larrabee et al. (2007), who among their other recommendations, suggested that the C criteria, which concern evidence from self-reports such as inconsistencies and discrepancies, be given equal weight to the B criteria, which are on testing. This suggestion by Larrabee et al. (2007) would allow for "determination of malingering in the absence of test data." However, the determination of the possibility of malingering should generally include testing, especially if psychologists are involved, as many others have argued. Only when testing is impossible to undertake should inconsistencies be given importance, and in such cases they will carry more weight when their degree is compelling, marked, and substantial.

Rogers et al. (2011b) noted that there is more agreement than disagreement between Rogers et al. (2011a) and Boone (2011) about the MND model. They acknowledged that she raised good points and that their respective critiques focused on different issues.

3.2.3 Comment

Aside from offering their cogent critiques, neither party in the Rogers et al. (2011a, b) – Boone (2011) exchange provided much practice recommendations about the MND model. It could be argued that the extent of the criticisms and recommendations made by Rogers et al. (2011a, b) and by Boone (2011) suggest that the MND model should be used extremely carefully, if at all, for particular neuropsychological and related assessments. If used, both the indicated criticisms of the model over the set of articles and the indicated recommendations for its revision point clearly to the need to tread carefully. Undoubtedly, further research will lead to a more useable version of the model, both for research and for clinical purposes, and will confirm the conclusion in Young (2008) that the model has the potential to become a "gold standard."

The work by Slick et al. (1999) on the MND model, as well as the recommendations for its revisions and needed research by Rogers et al. (2011a, b) and Boone (2011),

must be recognized as the most important work to date in the field. Slick et al. had the vision to develop an integrated model and Boone and Rogers and colleagues have suggested useful changes to it based on scientific grounds. The field owes these workers much gratitude.

As leaders in the field, and because of the expertise demonstrated in their research on malingering and related presentations and performances in psychiatric/psychological assessments, the work of Slick et al., Rogers and colleagues, and Boone meet the requirements that the expert in court is expected to be objective, and not an advocate (Cutler and Kovera 2011). At the same time, I would add that their models and recommendations are not yet definitive or gold standard, and should be subject to careful scientific scrutiny both in research and court.

3.3 Malingering/Feigning Detection Instruments and Related Tests and Scales in Psychiatric/Psychological Injury

3.3.1 Evidence for Malingering/Feigning and Related Testing

Controversy. McGrath et al. (2010) reviewed the literature on response bias as a source of error variance in applied assessment. The 41 investigations that met entry criteria for the review examined response bias indicators as suppressors or moderators of the validity of various substantive psychological indicators. Of the 44 sets of outcomes in the studies, only 12 gave evidence in support of the assumption of the effectiveness of response bias measurement. For any particular area, such as emotional disorders assessment, there were few studies. The authors concluded that for areas with enough studies to examine, the support for the use of bias indicators is weak. The authors noted the dangers of false positives as a result of using these indicators, and their costly effects. Another confound related to different results for minority groups. The authors indicated at one point that the defense of the use of response bias indicators in court could be difficult.

In response to the critique of measures of response bias in psychological assessments by McGrath et al. (2010), Rohling et al. (2011) referred to the review as "misleading." They argued that the research on response bias "substantiates" the validity of the tests. Moreover, they added that the methodology used in the literature review contained errors, including omission of relevant research. For example, McGrath et al. (2010) gave undue importance to studies on positive bias or symptom minimization and to studies that are not forensic in nature. Rohling et al. (2011) provided descriptions of five studies excluded in the review by McGrath et al. (2010) that demonstrated that inclusion of data on negative response bias improves prediction.

In response to Rohling et al. (2011), McGrath et al. (2011) argued that the additional research presented by Rohling et al. (2011) is not sufficient to alter the conclusions in McGrath et al. (2010). Nevertheless, they acknowledged that most of

the analyses in the additional research supported the hypothesis that response bias indicators can help in prediction. However, they noted that the studies generally are from "overlapping research teams" and that the type of research involved relies too heavily on analogue methods. They made the point that this type of research is easy to conduct but is "insufficient" because of the potential consequences for false positives that it promotes in real-world contexts.

Research. Other research has examined the number of invalidity indicators needed to support a conclusion that an evaluee is malingering in forensic disability and related contexts. Fox (2011) examined 220 archival neuropsychological assessment cases in which either the WMT (Word Memory Test; Green 2005) or the CTAM (Computerized Test of Attention and Memory; Fox 2009) were administered. Evaluees were administered a battery of 24 commonly used neuropsychological tests. About 18 % of the subjects had clear evidence of structural brain abnormality. About 35 % failed one or the other of the SVTs. Of those who passed SVTs, the neuropsychological test results correlated with brain damage indicators, but for those who failed an SVT, this relationship was not found. The author concluded that failure of even a single SVT is sufficient to invalidate test and brain measure relationships that underlie neuropsychological practice. In addition, for Fox, the results respond to the McGrath et al. (2010) challenge that SVTs in neuropsychology assessments cannot accurately measure a response bias that directly influences test validity.

More research is needed to replicate the finding and to determine whether one SVT is sufficient in neuropsychological and other assessment situations to indicate performance invalidity. Most algorithms in the field argue for at least two if not three testings of this nature. Also, in replicating the study, different SVTs should be used, given that the CTAM is an unpublished one constructed by the author of the study.

Moreover, the available evidence indicates that most of the tests used to identify neurocognitive feigning in evaluations possess "modest" sensitivity, or the ability to detect genuine feigners, so that clinicians should avoid using a single procedure for evaluating the presence or absence of feigned deficits (Sollman and Berry 2011; page 787 of their meta-analysis on the detection of inadequate effort in neuropsychological testing). However, Young (2011) noted that the McGrath et al. (2010) review might lead to the premature decision to not use SVTs in forensic disability and related evaluations. Taking a step such as this would remove objective measures from these evaluations, leading to more subjective and inaccurate conclusions than otherwise would be the case. For further research critical of the approach of McGrath and colleagues, see Chaps. 16 and 17.

Wiggins et al. (2012) arrived at similar conclusions critical of the approach of McGrath and colleagues based on their study of a forensic disability sample divided into over-reporting and normal reporting groups using the validity scales of the MMPI-2-RF (Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form; Ben-Porath and Tellegen 2008/2011). They examined 2, 163 litigants mostly in worker compensation claims. Common problems included depression, anxiety, and pain complaints. In determining the over-reporting group,

the cut-scores used for the validity scales involved: F-r>95, Fp-r>70, Fs>90, FBS-r>90, and RBS>90. The control group passed all five measures (n=1,297). The over-reporting group scored above the cut-scores for two or more of them (n=532). The third group, of those who failed one validity indicator, was excluded from the study (n=334; note 112 subjects were excluded for other reasons).

To verify criterion validity, the following tests were administered: BDI-II (Beck Depression Inventory-II; Beck et al. 1996); BAI (Beck Anxiety Inventory; Beck and Steer 1993); DTS (Davidson Trauma Scale; Davidson et al. 1997); DAPS (Detailed Assessment of Posttraumatic Stress; Briere 2001); REIS (Revised Impact of Events Scale; Weiss and Marmar 1996); MCI (Memory Complaints Inventory; Green 2004a); MPI (Multidimensional Pain Inventory; Kerns et al. 1985), and MHI (Multifactor Health Inventory; Hase 1996). Differential correlations were sought between the test results on these instruments and corresponding clinical, or restructured clinical (RC) scales, of the MMPI-2-RF.

As for the results of the study, which was uniquely based on instrument data, the over-reporting group scored significantly higher on all RC scales compared to the control group. In terms of criterion validity, of the 76 correlations examined, 40 % were attenuated at a conservative significant level ($p<0.001$).

Overall, the Wiggins et al. (2012) study supported the validity and value (and need) to verify response bias in forensic disability and related assessments. In addition, the MMPI-2-RF is clearly supported in these regards by the Wiggins et al. (2012) study. Finally, the McGrath et al. (2010, 2011) criticisms of bias indicators appear to have spurred careful research that invalidates their claim that evaluating response validity is not yet empirically supported and indeed may be harmful.

Note that Wiggins et al. (2012) found additional important results. They found that about 25 % of the sample of disability litigants that partook in their study exhibited "significant" evidence of negative response bias according to their results on the MMPI-2-RF validity scales (failing to arrive at threshold for four cut-scores). The most effective discriminating scales in the MMPI-2-RF in these regards were the RBS, F-r, Fs, and FBS-r (with the Fp-r less noteworthy). That 25 % of the litigating sample in Wiggins et al. (2012), the complaints of whom involved mostly depression, anxiety, and pain, expressed "significant" negative response bias addresses the issue of the prevalence or base rate of malingering in the forensic disability and related context. On the one hand, the percentage is greater than the low-end estimates of malingering in this context (e.g., 1 %, 10 %); however, on the other hand, it is lower than the high-end estimates (e.g., 30 %, 40 %, 50 %). Therefore, the 25 % level found in Wiggins et al. (2012) for significant negative response bias makes sense as a benchmark base rate of negative response bias in the field. Importantly, the 25 % level found constitutes a level that includes malingering, per se, as only one possibility.

Also, note that, aside from demonstrating the value of the MMPI-2-RF for this type of applied assessment, the Wiggins et al. (2012) study indicates that we need to consider four validity scales on the MMPI-2-RF as valuable in differentiating groups elevated and controlled for negative response bias. Moreover, that one primary test such as the MMPI-2-RF can provide up to four scales in these regards

seems supported by the results. Therefore, for the next chapter in which I describe my own diagnostic system for detecting malingering, the Wiggins et al. (2012) study described in this chapter supports my contention that any one instrument could contribute up to four results toward the determination.

3.4 Tests of Malingering/Feigning and Related Biases

Next, this chapter offers a survey of recent research on tests, measures, and scales used in detection of malingering, feigning, and related response biases. There are three classes of such instruments – personality tests, stand-alone tests (forced-choice tests, structured interviews, and others), and embedded neuropsychological tests. The review is not meant to be exhaustive of all available instruments, nor is it meant to endorse only the instruments mentioned.

Specifically, first, this section of the chapter reviews research on the most widely used personality tests in the field that have embedded client validity checks – (a) the MMPI-2 (Minnesota Multiphasic Personality Inventory, Second Edition; Butcher et al. 1989, 2001); (b) the MMPI-2-RF, and (c) the PAI (Personality Assessment Inventory; Morey 1991, 2007). Next, it examines recent research on stand-alone tests, but only briefly to highlight their availability, given the amount of tests and space limitations (e.g., the SIRS, Structured Interview of Reported Symptoms; Rogers et al. 1992, 2010, for the SIRS-2; and the forced choice-test, the TOMM, (Test of Memory Malingering; Tombaugh 1996). To conclude, it lists various embedded neuropsychological tests or measures, such as those related to the stable of Wechsler intelligence and memory tests. One more, the list is provided in a cursory manner simply to indicate which ones are available for use.

3.4.1 Personality Tests

The Symptom Validity Scale (FBS); formally, it was referred to as the Fake Bad Scale had been added to the MMPI-2 F-family stable. Kane and Dvoskin (2011) reviewed the exchange of arguments on its utility that took place in the journal *Psychological Injury and Law* by Butcher and colleagues and Ben-Porath and colleagues (Butcher et al. 2008; Gass et al. 2010; Williams et al. 2009; compared to Ben-Porath et al. 2009a, b). Nelson et al. (2010) conducted a meta-analysis of the FBS. They analyzed 32 FBS studies that met inclusion criteria, involving a pooled sample of 2,218 over-reporting subjects and 3,123 comparison subjects. The meta-analysis found large omnibus effect sizes for the FBS. There were larger effect sizes when participant effort was known to be insufficient and when assessments took place for traumatic brain injury (TBI). The results were considered to offer strong support for the use of the FBS in forensic neuropsychology practice. Grieffenstein (2010) and Lee et al. (2012) have conducted studies that support the FBS (in studies

of classification accuracy of medical in-patients undergoing sleep study and of a lack of gender bias in prediction of SVT test failure, respectively; see below for a description of Lee et al. 2012).

There have been other innovations related to the MMPI-2. In particular, Gervais and colleagues have developed a scale for detection of response bias (the RBS, Response Bias Scale; Gervais et al. 2007; and also Gervais et al. 2009a, b; Wygant et al. 2010). Using an analog simulation design, Sullivan and Elliot (2012) investigated the validity of the RBS in detecting negative response bias associated with exaggerated memory impairment. Of various MMPI-2 measures, the effect size for the simulators-control group comparison was largest for the RBS and also it added incrementally to other measures in predicting group membership. Young et al. (2011) conducted a validation study of the RBS of the MMPI-2, and a scale based in part on the FBS, the HHI (Henry-Heilbronner Index; Henry et al. 2006), The HHI fared better than the RBS in predicting compensation-context group membership among military veterans. However, RBS, HHI, and most F-family scale scores, including the FBS, were significantly higher in the WMT fail group. Dionysus et al. (2011) examined the utility of the RBS, HHI, and FBS to help discriminate a small sample of TBI litigants who had failed one or more effort indicators (including the TOMM and the WMT) compared to those who had not. The FBS and the RBS demonstrated "excellent" discriminant validity compared to the HHI, which was considered "adequate." In addition, the HHI did not fare as well as the FBS and the RBS on statistical evaluation of incremental validity.

The MMPI-2-RF is increasingly being subject to research by independent labs and generally is well-received, although areas of inconsistency and needed research are evident (Green 2011). Marion et al. (2011) examined the detection of feigned psychiatric disorders with it. Wygant et al. (2011) used it to discriminate a malinger group from controls. It has been used in research with cognitive impairments or disorders related to it (epilepsy) (Locke et al. 2010; Rogers et al. 2011c). It is being applied to differentiate valid and invalid somatic and pain complaints (Burchett and Ben-Porath 2010, 2011; McCord and Drerup 2011; Thomas and Locke 2010; Youngjohn et al. 2011). Harp et al. (2011) have used it to good effect in a study of Attention Deficit Hyperactivity Disorder (ADHD).

As for the PAI, Hopwood et al. (2010) showed its utility for a pain-related sample; Rogers et al. (2012) and Thomas et al. (2011) for PTSD ones; and Whiteside et al. 2010 for cognitive complaints. However, the amount of research on the PAI for psychological injury populations generally is considered much less substantive than for the MMPI family of tests and scales.

The third personality inventory that is used in the field is the MCMI-III (Millon Clinical Multiaxial Inventory, Third Edition; Millon 1994; Millon et al. 1997). Kane and Dvoskin (2011) recommended against its usage in the psychiatric/psychological injury context. However, Aguerrevere et al. (2011) demonstrated that the three modifier indices of the MCMI-III were useful in identifying intentional symptom exaggeration in TBI claimants. Clearly, the test should be used with caution, and some would argue, if at all, in the forensic disability and related context.

3.4.2 Stand-Alone Tests

For the SIRS, Rogers et al. (2009a, b) used it in studies of psychiatric/psychological injuries. The results are complicated to report, but indicate some utility with these populations. As for the SIRS-2, it has received mixed reviews, and requires further research and validation, although it holds promise (Green and Rosenfeld 2011; Kocsis 2011; Rubenzer 2010). Rogers and Bender (2012) responded to the negative review by Rubenzer (2010) by indicating that the SIRS-2 evidences "excellent" validity (convergent, discriminant). Research demonstrates its ability to differentiate feigned and genuine responding, with effect sizes being large to very large. When unclassified, indeterminate groups are excluded in utility estimates, the following statistics were obtained: sensitivity = 0.80; specificity = 0.975; positive predictive power (PPP) = 0.91; negative predictive power (NPP) = 0.91; overall correct classification (OCC) = 0.91; and false positives = 2.5 %. In addition, 95 % confidence intervals are "very small".

Research on the TOMM is proliferating. Brooks et al. (2012), Hilsabeck et al. (2011), and Wisdom et al. (2012) demonstrated the utility of the first TOMM trial as a valid indicator/screen of effort, although later trials appear to add incremental validity. Also see Jelicic et al. (2011), Lange et al. (2010), and Williams (2011) for further research with the TOMM.

Green has developed several SVTs, the utility of which is being demonstrated for cognitively-tested populations (the WMT; the MSVT, Medical Symptom Validity Test; Green 2004b; the NV-MSVT, Nonverbal Medical Symptom Validity Test; Green 2008). Respectively, they have been studied recently by Green et al. (2009), Armistead-Jehle and Gervais (2011), and Kirkwood and Kirk (2010)/ Green (2011).

Note that tests aimed at assessing PTSD that have been developed by Briere contain scales that evaluate respondent validity (the DAPS; the TSI-2, Trauma Symptom Inventory, Second Edition; Briere 2011). In addition, Gray et al. (2010) demonstrated that the Atypical Response Scale of the TSI-2 helped discriminate simulated and genuine PTSD. For comprehensive surveys of assessment of PTSD, refer to Demakis and Elhai (2011) and Rubenzer (2009), as well as the second part of the present book. Difficulties presented by PTSD-pain comorbidities can be found in Beck and Clapp (2011). To my knowledge, there is insufficient work on measuring psychometrically their mutual maintenance by which scores related to one type are exacerbated due to the effects on scores of the other, and vice versa.

For consideration of the DSM-5 (Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition; American Psychiatric Association 2013) in relation to PTSD, refer to Frueh et al. (2010) and Young and Johnson (2010). The various instruments related to PTSD will have to be revised because of changes in its criteria for the DSM-5. For court-related aspects of PTSD, also refer to Rubenzer (2009), and Young and Yehuda (2006), aside from the sources in the next part of the book (e.g., Lareau 2011).

3.4.3 *Embedded Neuropsychological Indices*

There are also various embedded neuropsychological indices that are used in neuropsychological assessments for determining examinee credibility. Jasinski et al. (2011) listed the following embedded indices in neuropsychological assessment that serve as malingering indices, including from the Wechslers: from the WAIS-R (Wechsler Memory Scale, Revised; Wechsler 1981) and the WAIS-III (Wechsler Adult Intelligence Scale, Third Edition; Wechsler 1997a), e.g., *Digit Span,* Trueblood and Schmidt (1993); *Vocabulary – Digit Span, WAIS Discriminant Function:* Mittenberg et al. (1995); from the WMS-R (Wechsler Memory Scale, Revised; Wechsler 1987) and the WMS-III (Wechsler Memory Scale, Third Edition; Wechsler 1997b), e.g., the RDS (*Reliable Digit Span;* Greiffenstein et al. 1994), the LMR (Logical Memory Recognition; Killgore and DellaPietra 2000); and DF (*Discriminant Function*; Mittenberg et al. 2003). Other indices derive from the HRB (Halstead-Reitan Battery Discriminant Function; Mittenberg et al. 1996). Aside from battery-related indices, there are individual ones that can be embedded: the WCST (Wisconsin Card Sorting Test; Heaton 1981); the AVLT RMT (Rey Auditory Verbal Learning Test Recognition Memory Test; Binder et al. 1993); the CVLT (California Verbal Learning Test; Delis et al. 1987), the FTT (Finger Tapping Test; Heaton et al. 1991), and the RCFT (Rey Complex Figure Test; Meyers and Volbrecht 1999).

Victor et al. (2009) listed the following indices in their study, some of which are modified versions from their lab of existing versions: *Free Standing (Criterion Variables in their study):* (a) Rey 15-Item Memory Test (RMFIT; Rey 1941) plus recognition combination score (Boone et al. 2002d); (b) Rey Dot Counting Test (RDCT) E-score (Boone et al. 2002a); (c) Warrington Recognition Memory Test – Words (RMT) (Iverson and Franzen 1994; Millis 1992, 2002); (d) b-test (Boone et al. 2000); and (e) Rey Word Recognition Test (RWRT) (Nitch et al. 2006); *Embedded (Predictor Variables):* (a) WAIS-III Reliable Digit Span (RDS) (Babikian et al. 2006; Greiffenstein et al. 1994); (b) Rey-Osterreith Complex Figure Test (ROCFT) effort equation (Lu et al. 2003); (c) Rey Auditory Verbal Learning Test (RAVLT) effort equation (Schmidt 1996); and (d) FTT.

Larrabee (2008) has developed the CVMT for neuropsychological evaluations (Continuous Visual Memory Test; Trahan and Larrabee 1988). Jasinski et al. (2011) undertook meta-analytic review of research on the Digit Span subtest of the Wechsler Adult Intelligence Scale (WAIS), including the RDS index. Reese et al. (2012) examined the effectiveness of the revised RDS in the WAIS-IV (Wechsler Adult Intelligence Scale, Fourth Edition; Wechsler 2008a, b). Miller et al. (2011) showed the value of the WCT (Word Choice Test, in the WMS-IV; Wechsler Memory Scale, Fourth Edition; Wechsler 2009). Other research has involved the SRT (Seashore Rhythm Test; Reitan and Wolfson 1993) and the SSPT (Speech Sounds Perception Test; Reitan and Wolfson 1993) of the HRB (Halstead-Reitan Battery; Reitan and Wolfson 1993) and the embedded SVTs of the MNB (Meyers Neuropsychological Battery) (Curtis et al. 2010; Meyers et al. 2011, respectively).

3.5 Malingering in the Forensic Neuropsychological Context

3.5.1 Introduction

Boone (2013) provided a comprehensive review of forensic neuropsychology that is consistent with the approach taken in the present book at several levels. Although there are many points of similarity between her approach and the one of the present book, I highlight three major ones. After discussing them, I move on to a more detailed analysis of Boone's book.

(a) In terms of the commonalities in Boone's (2013) approach and mine to the question of malingering and related response biases, first, Boone gave little importance to the Malingered Neurocognitive Dysfunction (MND) approach of Slick et al. (1999) for the detection of malingering. This contrasts with her approach in Boone (2011), in which she criticized Rogers et al. (2011a, b) for their critique of the MND model, despite having her own list of recommendations for its change. It would seem that she now agrees that the MND model has been important to the field, but the field has moved on [including use and incorporation of many of her concepts and her embedded tests (e.g., RDCT, Boone et al. 2002b, and Boone and Lu 2007; b-test, Boone et al. 2002c)].

(b) Also, Boone's (2013) literature review supported use of the MMPI-2-RF to help in malingering and related negative response bias detection in the forensic neuropsychological examination, which is a main point that I have made in this chapter. Indeed, in this regards, she described in detail in her book much of the same articles that I have in this present chapter of my book in support of the MMPI-2-RF.

(c) Third, Boone (2013) appeared to de-emphasize the specific calculation procedures promoted by Larrabee (2008) in combining SVTs to determine the probability of feigning. For example, according to Larrabee, in calculating techniques for determining probability of malingering in an assessment, such as predictive power and likelihood ratios, the validity indicators chosen in the assessment should have been shown to be independent statistically, or be uncorrelated, in research on the topic. However, although Boone (2013) did mention these approaches in her guides to test selection and their use in combinations, her only point about them is that failure on even two SVTs approaches 100 % specificity in feigning determination. Moreover, in choosing SVTs, evaluators are allowed to choose those that are correlated, as long as the correlations are not strong but only modest to moderate.

3.5.2 Explaining SVTs During Consent Seeking

Boone (2013) advised that evaluees should be given general and not specific information about SVTs and their goals. They should not be informed about the use in the evaluation of specific response bias tests because such instructions had not been

part of any such instrument's test validation and standardization process. Moreover, the measures are effective only when evaluees remain unaware of their particular use (e.g., Gervais et al. 2001). The informed consent form that she recommended includes a statement that the evaluator has explained to the evaluee the importance of trying one's best on any testing. She adds in her information presented to evaluees that, although exaggeration might seem a valid way to make sure problems are well-documented, it may actually make test profile results "more problematic" to interpret. In presenting her forms to evaluees, she explains that "clear-cut" patterns are easier to interpret, and by not performing to one's "true capability" it is harder to interpret test scores.

3.5.3 Defining Malingering and Its Prevalence

Boone (2013) referred to the approach of Heilbronner et al. (2009) to define malingering; accordingly, it is a conscious, deliberate feigning of symptoms in order to attain an external goal. She related malingering to "other-deception" rather than to "self-deception." Also, in arriving at conclusions in assessments, rather than stating that malingering is present, she suggested using less judgmental terms, such as noncredible performance and negative response bias. She questioned the validity of the DSM-IV-TR (Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision; American Psychiatric Association 2000) approach to defining malingering because it was developed for the 1994 edition and there are more recent and directly relevant forensic approaches to the question (such as Heilbronner et al. 2009). As for prevalence, among others, she referred to the work by Mittenberg et al. (2002) and Larrabee (2009), which support a prevalence of feigned impairment toward 40 %. Elsewhere in this book, I have questioned both this type of approach to the definition of malingering and the work on its prevalence.

3.5.4 How SVTs Work

Forced choice (two-alternative) SVTs, such as the TOMM, involve evaluees having a 50 % chance of selecting a correct answer on each of the trials. Scores significantly below chance indicate noncredible performance. However, up to 15 % of "real world" noncredible evaluees score in this range (e.g., Kim et al. 2010), so that two or more failures provide better specificity. Moreover, Boone noted that on such tests below-chance performance does not refer to scoring below the 50 % level, but below the probability level at $p = .05$, which translates to a score of <19/50 on the TOMM.

Merten and Merckelbach (2013) provided practical information on calculating the probability level of performance on two-alternative ($p = 0.5$) forced-choice SVTs, which will be helpful in assessments (Frederick and Speed 2007). The exact probability of obtaining a level of correct response can be calculated using binominal statistics. One tailed tests related to cumulative probability can be used when there are clear hypotheses relative to the evaluee's performance. There are several internet-posted binominal distribution calculators that can be used.

3.5.5 How SVTs are Validated

Boone (2013) noted that, for an SVT to be effective, it should have elevated sensitivity and specificity. If a test identifies all malingerers at a sensitivity level of 100 %, it still could be a poor measure if it misidentifies a high percentage of credible evaluees as noncredible (low specificity). [I would argue that an acceptable percentage of such misidentification of credible evaluees as noncredible on a test that is used for court and related purposes in this area should be conservative, given the injustice and harmful consequences of evaluating valid test performance as invalid.] Conversely, a test might not lead to this type of error but detect few genuine malingerers, so would be useless for court and related purposes. Sensitivity and specificity are in reciprocal balance (as one gets higher, the other gets lower), so that test cut-offs need to be selected that optimize a just level of error in specificity, which is generally set at ≥90 %, but with cut-offs also set at 100 % specificity, to help eliminate improper attribution of feigning.

Boone (2013) then argued that, according to the research, failing two or more SVTs is associated with a specificity of at least 95 %, which is a level that allows for few errors in attributing feigning to credible evaluees and "virtually guarantees" that evaluees designated as noncredible are indeed feigning. However, I note that the research to which she referred (e.g., Victor et al. 2009) involves a select sample of validity indicators and more research is needed on various test and measure validity indicator combinations that might be used in real-world contexts.

3.5.6 Considerations in Test Selection and Administration

Boone (2013) described factors to consider in SVT use. First, in test selection, test effectiveness is paramount, in terms of sensitivity and specificity. Specificity values have been discussed in the prior paragraph. As for sensitivity, values of <40 % are considered low, whereas those at 40–69 % are moderate, and those at or above 70 % are high. Second and third, in test selection, SVTs should be chosen to allow for repeated testing of response bias throughout the evaluation (Boone 2009). This helps to detect different strategies of feigning and helps to

sample or tap different types of negative response bias (related to different neurocognitive domains).

Fourth, in order to avoid redundancy, the SVTs could be minimally or moderately correlated with each other, but not strongly so. For example, Nelson et al. administered eight SVTs to a sample that included noncredible patients and, of the various correlations involved, only that involving the RDCT (Boone et al. 2002c; Boone and Lu 2007) and the WAIS-III Digit Span was correlated for failures at a high level ($r = -.75$).

Fifth, test selection should consider potential confound related to evaluee characteristics/diagnoses. For example, SVT test failure is associated with low intelligence (Dean et al. 2008).

Finally, some tests are easier to coach or are more readily available on the internet for self-coaching (Ruiz et al. 2002). According to Boone (2013), because of this, the field will be moving to more use of embedded as opposed to free-standing SVTs, in addition to more use of discriminant functions and logistic regression analyses related to them (e.g., Schutte et al. 2011; see Chap. 16 for a description of the latter study).

3.5.7 Discounting Failed and Passed SVTs

According to Boone (2013), failed SVTs might indicate lower intelligence, dementia, etc., rather than attempt to feign. Cultural factors might be involved. However, according to her, factors such as depression and pain do not influence SVT performance (e.g., Goldberg et al. 2007; Iverson et al. 2007; respectively). Conversely, some test patterns indicate that passed SVTs should be discounted, e.g., the remainder of the neuropsychological examination yields marked cognitive and related deficits inconsistent with the neurological event at claim.

3.5.8 Review of Select Tests

It is beyond the scope of the present book to review in depth the analyses of the major instruments in the field, as described in Boone (2013). However, I do point out the tests that she supports for use in forensic examinations in relation to feigning attribution. She found that the M Test (Beaber et al. 1985) demonstrates poor specificity. The SIRS is effective, but not as much as the validity indicators of the MMPI-2 (Green and Rosenfeld 2011). The sensitivity for the SIRS hovers at 50 %. The SIRS-2 has various concerns (e.g., Rubenzer 2010). The M-FAST (Miller Forensic Assessment of Symptoms Test; Miller 2001) appears ineffective. The SIMS (Structured Inventory of Malingered Symptomology; Widows and Smith 2005) has

unacceptable specificity. The MENT (Morel Emotional Numbing Test; Morel 1995, 1998) has not been adequately validated. The TSI (Trauma Symptom Inventory; Briere 1995) is problematic. The TSI-2 has unacceptable psychometric properties. The NB scale of the DAPS has not been empirically validated. The Rorschach (Rorschach 1921; Exner 1974) has not been properly validated. The relevant research results for the MCMI-III are contradictory. The PAI over-report/validity scales are not as effective as its Somatic Complaints scale.

In contrast to these telling criticisms of other tests, Boone (2013) found that the MMPI-2/MMPI-2-RF demonstrated utility in detecting negative response bias in cognitive impairment testing. In these regards, the original MMPI-2 F family of validity scales are minimally related to feigning (Greiffenstein et al. 2007), but subsequent scales that have been developed are deemed effective. For example, the FBS, now called the SVT, is supported in the research by Nelson et al. (2010), and the RBS in the research by Tsushima et al. (2011), although the HHI, Md (Malingering Depression Scale), and MMDS (Malingering Mood Disorder Scale) are questionable. As for the MMPI-2-RF, its scoring protocols include the FBS-r and the RBS, and the research supports its utility even compared to the MMPI-2 (e.g., Gervais et al. 2010; Schroeder et al. 2012; Wygant et al. 2009; for the F-r, Fp(-r), Fs, FBS-r). However, sensitivity rates have been modest (cut-scores set at ≥90 % specificity give 38–48 % sensitivity). Moreover, effect sizes for some substantive scales have been equal to or even higher than those for the overreport validity scales.

3.5.9 Comment

Therefore, even for the instrument that stands up best to the careful scrutiny of Boone (2013) for use in detecting negative response bias in forensic neuropsychology assessments, the MMPI-2-RF, she suggests that more research is needed. In contrast other workers who have analyzed these instruments recommend their use in the forensic disability and related contexts, as is shown elsewhere in this chapter of the present book, without denying the need for further research. Overall, the critical review by Boone of these tests should be considered by all evaluators in the area as i concur that they call for more research.

To conclude, I take issue with one conclusion of Boone (2013). She indicated that validity indicator failure, such as on an F scale, should not be considered a cry for help instead of feigning/exaggeration. However, there is no a priori reason not to consider such scores as a sign of catastrophizing or other signs of valid desperation and, therefore, as a cry for help in this sense. Moreover, Iverson's (2006) ethical stance about how to interpret failed SVTs does not necessarily exclude explaining them as a cry for help.

3.6 Toward New Malingering Diagnostic Systems

Table 3.2 Proposed criteria for the diagnosis of Malingered Pain-Related Disability

Criterion A: Evidence of significant external incentive. At least one clearly identified and substantial external incentive for exaggeration or fabrication of symptoms is present at the time of examination (e.g., personal injury settlement, disability pension, evasion of criminal prosecution, release from military service, obtaining drugs)

Criterion B: Evidence from physical evaluation. Evidence that the patient's physical abilities, capacities, and/or limitations as demonstrated in formal physical evaluation (e.g., medical physical examination, physical therapy/occupational therapy examination, Functional Capacity Evaluation) are consistent with exaggeration or feigning of physical disability

1. Probable effort bias. Performance on one or more well-validated measures of physical capacity (e.g., Jamar Grip Test) is consistent with exaggeration of diminished physical capacity
2. Discrepancy between subjective report of pain and known patterns of physiological reactivity (e.g., no heart-rate increase with significant change in subjective pain report)
3. Nonorganic findings. The presence on physical examination or functional capacity evaluation of signs or symptoms not consistent with known physiological mechanisms (e.g., Waddell's signs). Reported symptoms/complaints are substantially different than would be expected given the medical findings (clear nonorganic findings)
4. Discrepancy between the patient's physical presentation during formal evaluation and their physical capacities documented when they are not aware of being observed. Such observation may occur in the context of formal evaluation, be documented via surveillance videography, or derive from the report of reliable collateral informants (e.g., friends or relatives)

Criterion C: Evidence from cognitive/perceptual (neuropsychological) testing. Evidence that patient's cognitive capacities as indicated by formal cognitive testing (e.g., in the context of psychological or neuropsychological evaluation) are consistent with exaggeration or feigning of cognitive disability

1. Definite negative response bias. Below chance performance ($p < .05$) on one or more forced choice measures of cognitive or perceptual function
2. Probable response bias. Performance on one or more well-validated tests designed to measure exaggeration or fabrication of cognitive or perceptual symptoms is consistent with exaggeration of diminished cognitive capacity
3. Discrepancy between cognitive/neuropsychological test data and known patterns of brain functioning. A pattern of neuropsychological test performance is present that is discrepant from currently accepted models of normal and abnormal central nervous system function and the documented history of patient (e.g., no head injury associated with the injury in question; exceptions may include cervical injury patients with concussions or use of narcotic analgesics or other sedating medications). The discrepancy is consistent with an attempt to feign or exaggerate cognitive deficit
4. Discrepancy between test data and observed behavior. Performance on two or more neuropsychological tests is discrepant with observed levels of cognitive function in a way that suggests exaggeration of cognitive dysfunction (e.g., well-educated patient with no apparent expressive language deficit who scores in moderate or severely impaired range on measures of verbal fluency; patient who presents as globally impaired but drove self to the evaluation). Such observations may occur in the context of formal evaluation, be documented via surveillance videography, or derive from the report of reliable collateral informants (e.g., patient's friends or relatives)

(continued)

(continued)

Criterion D: Evidence from self-report. Evidence that the patient's self-reported symptoms, complaints, or limitations are consistent with exaggeration or feigning of physical, cognitive, or emotional/psychological disability

1. Compelling inconsistency. Compelling inconsistencies occur when the difference in the way a patient presents when being evaluated compared with when they are not aware of being evaluated is such that it is not reasonable to believe the patient is not purposely controlling the difference. (Note that it may be possible to document compelling inconsistencies related to physical examination or cognitive test data; such circumstances would meet this criterion. However, conservative application of these criteria suggests that many, if not most, of these inconsistencies would be best used to meet other criteria)
2. Self-reported history is discrepant with documented history. For example, minimization or denial of concurrent or prior illness/injury (broadly defined) in a manner that emphasizes the injury for which compensation is sought. Also included would be overstatement of academic, vocational, or other achievement in a way that exaggerates the magnitude of loss due to the injury in question
3. Self-reported symptoms are discrepant with known patterns of physiological or neurological functioning (e.g., whole body pain in a patient with small right-sided cervical disc bulge with no evidence of nerve root irritation; complaints of remote memory loss)
4. Self-reported symptoms are discrepant with observations of behavior. Reported symptoms in a given behavioral domain (i.e., physical, cognitive, emotional) are markedly inconsistent with behavioral observations (e.g., patient complains that he is unable to move extremity and is observed to do so when distracted). Such observation may occur in the context of formal evaluation, be documented via surveillance videography, or derive from the report of reliable collateral informants (e.g., patient's friends or relatives)
5. Evidence from formal psychological evaluation that the person has significantly misrepresented their current status (e.g., exaggerated physical symptoms or exaggerated or minimized psychological symptoms/distress) in a manner that emphasizes the injury for which compensation is sought. For example, responses during interview or on self-report measures of psychological or physical function suggest impairment in the context of elevations on well-validated validity scales or indices consistent with exaggeration of physical (e.g., MMPI-2 FBS) or emotional symptoms (e.g., MMPI-2 F, Fb, or Fp) or evidence of vehement denial of psychological problems in a manner consistent with extreme defensiveness regarding psychological symptoms in order to further emphasize physical complaints (e.g., MMPI-2 L or K)

Criterion E: Behavior meeting necessary criteria from groups B, C, and D are not fully accounted for by psychiatric, neurologic, or developmental factors. The behaviors meeting the above criteria represent a likely volitional act aimed at achieving some secondary gain and cannot be fully accounted for by other disorders that result in significantly diminished capacity to appreciate laws or mores against malingering or inability to conform behavior to such standards. The simple presence of objectively documented pathology, illness, or injury (including psychiatric illness) expressly does not preclude a diagnosis of MPRD

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Abbreviations. MMPI-2 Minnesota Multiphasic Personality Inventory, Second Edition (Butcher et al. 1989, 2001), *FBS* Symptom Validity Scale, originally called Fake Bad Scale (Ben-Porath and Tellegen 2008/2011; Lees-Haley et al. 1991), *F* Infrequency Scale (Ben-Porath and Tellegen 2008/2011), *Fb* Infrequent Responses, back (Ben-Porath and Tellegen 2008/2011), *Fp* Infrequent Psychopathology Responses (Ben-Porath and Tellegen 2008/2011), *L* Uncommon Virtues, Lie Scale (Bianchini et al. 2005), *K* Adjustment Validity, Correction Scale (Bianchini et al. 2005), *MPRD* Malingered Pain-Related Disability

Table 3.3 Selected psychometric indicators of PTSD feigning (along with suggested cutoff scores, associated false-positive rates, and a preliminary weighting system)

Indicator	Weight	Error rate	Primary source(s)
Personality			
MMPI F(p) 4–6	1	0.04–0.10	Greene (2008)
MMPI F(p) ≥ 7	2	0.02	Greene (2008), Rogers et al. (2003)
MMPI FBS = 27–28	1	0.05	Greiffenstein et al. (2004)
MMPI FBS > 28	2	0.01–0.03	Ben-Porath et al. (2009a, b)
MMPI Ds > 30	1	0.05	Greene (2008)
MMPI Ds > 35	2	0.02	Greene (2008), Rogers et al. (2003)
PAI NIM > 84	1[a]	0.00	Scragg et al. (2000)
PAI MI ≥ 3	1	0.06–0.08	Scragg et al. (2000), Liljequist et al. (1998)
PAI MI ≥ 5	2	0.00	Scragg et al. (2000); Morey (1991)
Stand-Alone (including forced-choice)			
SIRS one scale, *definite feigning* range	1	?[b]	Rogers et al. (1992)
SIRS, three scales in probable feigning range	2	0.005	Rogers et al. (1992)
SIRS Tot ≥ 76	2	0.00	Rogers et al. (1992)
WMT IR or DR = 83–89[c,d]	1	0.05	Green (2005)
WMT failure[d]	2	?[e]	Green (2005)
Any SVT significantly below chance (any trial or combination of trials)	5	0.05[f]	Pankratz et al. (1975)
TOMM failure on Trial 2 or retention trial	2	0.00[g]	Ashendorf et al. (2004)
MENT failure	2	0.00	Morel (1998, 2008)
Embedded Cognitive			
Digit span ACSS ≤ 5 or V_{ACSS}–DS_{ACSS} ≥ 5[d]	1	0.10[h]	Babikian and Boone (2007)

Adapted with permission of Springer Science + Business Media. Rubenzer (2009); with kind permission from Springer Science + Business Media B. V. [Table 9, Page. 133; slightly modified]

Abbreviations. MMPI Minnesota Multiphasic Personality Inventory (Hathaway and McKinley 1943), *PAI* Personality Assessment Inventory (Morey 1991, 2007), *SIRS* Structured Interview of Reported Symptoms (Rogers et al. 1992), *WMT* Word Memory Test (Green 2005), *TOMM* Test of Memory Malingering (Tombaugh 1996), *MENT* Morel Emotional Numbing Test (Morel 1995, 1998), *F(p)* Infrequent Psychopathology Responses (Ben-Porath and Tellegen 2008/2011), *FBS* Symptom Validity Scale, originally called Fake Bad Scale (Ben-Porath and Tellegen 2008/2011; Lees-Haley et al. 1991), *Ds* Dissimulation Scale (Gough 1954), *NIM* Negative Impression Management (Morey 1991), *MI* Motivational Interviewing (Morey 1991), *Tot* Total, *IR* Immediate Recognition (Green 2005), *DR* Delayed Recognition (Green 2005), *SVT* Symptom Validity Test, *ACSS* Age-Corrected Scale Score

[a]This score is given only one point, despite the high specificity, because it is based on only one study

[b]Unable to discern from manual, so rule is assigned only one point

[c]Range indicated is two SDs or more below the norm for 25 PTSD patients who passed the WMT

[d]Where no evidence of dementia, retardation, or moderate to severe head injury

[e]No specific data available. Error rate should be miniscule given high specificity among cases of neurological insult

[f]Although below-chance performance is often based on the 0.05 alpha level, this is not comparable to the other error rates in this table

[g]No Patient with severe anxiety or depression scored below the cut off on the TOMM

[h]Figure refers to highest error rate for the two indicators

This chapter has concentrated on the work of Slick et al. (1999) on the MND system for assessing possible malingering and related biases in neurocognitive evaluations (see Table 3.1). Bianchini et al. (2005) developed an equivalent system for the detection of malingered pain, basing themselves on Slick et al. system. Table 3.2 presents the Bianchini et al. MPRD system. Chapter 5 compares and contrasts the two systems, leading to the development of an equivalent one for PTSD, given that there is not one on PTSD that has been constructed to date in the field. In addition, I consulted the work of Rubenzer (2009) on tests that can be used in the detection of malingered PTSD (see Table 3.3). His work completes the troika of important sources that I used in the developing of my own diagnostic systems with respect to malingering and related biases, as presented in the next chapters. The work of Rogers et al. (2011a, b) and Boone (2011) also proved important in this regard, as emphasized throughout the present chapter.

3.7 Chapter Conclusion

The spurt of research on the various tests and scales that can help detect malingering, feigning, and other response biases is impressive. Whether involving personality tests, stand-alone tests, or embedded neuropsychological tests, there is a proliferation of reliable and valid instruments that are being applied to relevant psychiatric/psychological injury populations in forensic disability and related contexts.

Neuropsychological assessments should use multiple embedded effort indicators (e.g., Bush et al. 2005). The MND criteria mention these indicators as well as force-choice, stand-alone SVTs and relevant scales on personality inventories. Perhaps a diagnostic system can be developed that gives equal weight to all three types of measures related to malingering, feigning, and related response biases. Moreover, research is establishing their cross-context generality; for example, the TOMM is being researched for non-cognitive disability evaluations and also various MMPI F-family and newer scale scores are being researched in a variety of disability contexts.

However, this research must continue to establish the tests' adequate psychometric properties for practice and court purposes, especially for their sensitivity and specificity. The harm caused by their premature or inappropriate application in assessment to either claimants (in cases where genuine problems are considered feigned) or third parties, such as insurers (in cases where feigned disorders are considered genuine) and the court, risks that the tests lose credibility. Part of their problem derives from the imperfect science related to them, but that is constantly improving. The other major part of their problem is the way they might be used in reports and testimony; evaluators might rely too heavily on these instruments or, conversely, ignore much of them, instead of examining the full reliable data set gathered. Furthermore, reliable and valid integrative diagnostic systems of malingering and related negative response biases need to be developed for each of the major psychological injuries (TBI, pain, PTSD).

Note that the heart of all malingering diagnostic systems, including my own, concerns below-chance performance on forced-choice stand-alone measures of effort, such as the TOMM, WMT, and VSVT (Victoria Symptom Validity Test; Slick et al. 1997/2005). The pertinence of these types of tests for the task at hand are well-defended in Carone and Bush (2013a, b; see Chap. 16 of the present book on the chapters in Carone and Bush by Green and Merten 2013; Nelson and Doane 2013, and Guidotti Breting and Sweet 2013).

As for research on embedded neuropsychology measures, see the descriptions in Chap. 16 of the Carone-Bush chapters by Schutte and Axelrod (2013) and by Victor et al. (2013a, b). As for support for the value of personality inventories in forensic disability and related context, see the Carone-Bush chapter by Heilbronner and Henry (2013). In addition, Chap. 17 covers the most recent journal articles in 2012 on tests appropriate for use in forensic disability and related assessments. Some of the advances in this fast-developing field confirm existing approaches, while others give food for thought.

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Chapter 4
The MMPI-2-RF Personality Inventory in Psychological Injury Cases

4.1 Introduction

The MMPI-2-RF (Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form; Ben-Porath and Tellegen 2008/2011) is being used increasingly in the psychological injury context. It is a revised version of the MMPI-2 (Minnesota Multiphasic Personality Inventory, Second Edition; Butcher et al. 1989, 2001) that had an expanded family of F and related scales aimed at detecting negative response bias and malingering. In this chapter, I describe the test, describe in depth the research supportive of its use in psychological injury context, and indicate how it meets *Daubert* factors for court admissibility (Ben-Porath 2012a). Nevertheless, cautions in its use are provided.

Table of Terms and Sources

Abbreviation	Name	Source(s)
CAPS	Clinicians Administered PTSD Scale	Blake et al. (1995)
CARB	Computerized Assessment of Response Bias Test	Allen et al. (1997), Conder et al. (1992)
COG	Cognitive Complaints Scale	Ben-Porath and Tellegen (2008/2011)
DAPS	Detailed Assessment of Posttraumatic Stress	Briere (2001)
DTS	Davidson Trauma Scale	Davidson et al. 1997
F	Infrequency Scale	Butcher et al. (1989)
FBS	Symptom Validity Scale (originally called Fake Bad Scale)	Ben-Porath and Tellegen (2008/2011), Lees-Haley et al. (1991)
Fp(-r)	Infrequent Psychopathology Responses	Ben-Porath and Tellegen (2008/2011)
F-r	Infrequent Responses	Ben-Porath and Tellegen (2008/2011)

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Abbreviation	Name	Source(s)
Fs	Infrequent Somatic Responses	Ben-Porath and Tellegen (2008/2011)
GIC	Gastrointestinal Complaints Scale	Ben-Porath and Tellegen (2008/2011)
HHI	Henry-Heilbronner Index	Henry et al. (2006)
HHI-r	Henry-Heilbronner Index-r	Henry et al. (2012)
HPC	Head Pain Complaints Scale	Ben-Porath and Tellegen (2008/2011)
IES	Impact of Events Scale	Horowitz et al. (1979)
K(-r)	Adjustment Validity, Correction scale	Bianchini et al. (2005)
L(-r)	Uncommon Virtues, Lie scale	Bianchini et al. (2005)
MCMI-III	Millon Clinical Multiaxial Inventory, Third Edition	Millon (1994), Millon et al. (1997)
MENT	Morel Emotional Numbing Test	Morel (1995, 1998)
M-FAST	Miller Forensic Assessment of Symptoms	Miller (2001)
MLS	Malaise Scale	Ben-Porath and Tellegen (2008/2011)
MMPI	Minnesota Multiphasic Personality Inventory	Hathaway and McKinley (1943)
MMPI-2	Minnesota Multiphasic Personality Inventory, Second Edition	Butcher et al. (1989, 2001)
MMPI-2-RF	Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form	Ben-Porath and Tellegen (2008/2011)
MND	Malingered Neurocognitive Dysfunction	Slick et al. (1999)
MSVT	Medical Symptom Validity Test	Green (2004)
NUC	Neurological Complaints Scale	Ben-Porath and Tellegen (2008/2011)
NV-MSVT	Nonverbal Medical Symptom Validity Test	Green (2008)
ODA	Optimal Data Analysis	Jones and Ingram (2011)
PAI	Personality Assessment Inventory	Morey (1991, 2007)
Psy-5	Personality Psychopathology Five Scale	Ben-Porath and Tellegen (2008/2011)
-r	Revised (e.g., FBS-r)	Ben-Porath and Tellegen (2008/2011)
RBS	Response Bias Scale	Gervais et al. (2007)
RC	Restructured Clinical Scale	Ben-Porath and Tellegen (2008/2011)
RDS	Reliable Digit Span	Babikian et al. (2006), Greiffenstein et al. (1994)
RNBI	Ruff Neurobehavioral Inventory	Ruff and Hibbard (2003)
SIRS	Structured Interview of Reported Symptoms	Rogers et al. (1992)
SIRS-2	Structured Interview of Reported Symptoms, Second Edition	Rogers et al. (2010)
TOMM	Test of Memory Malingering	Tombaugh (1996)
TRIN-r	True Response Inconsistency, Fixed responding	Ben-Porath and Tellegen (2008/2011)

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Abbreviation	Name	Source(s)
TSI-2	Trauma Symptom Inventory-2	Briere (2011)
VIP	Validity Indicator Profile	Frederick (1997)
VRIN-r	Variable Response Inconsistency, Random responding	Ben-Porath and Tellegen (2008/2011)
VSVT	Victoria Symptom Validity Test	Slick et al. (1997/2005)
WMS-IV	Wechsler Memory Scale, Fourth Edition	Wechsler (2008)
WMT	Word Memory Test	Green (2005)

4.2 The MMPI-2-RF Personality Inventory

4.2.1 Description of the MMPI-2-RF

The MMPI-2-RF is a reduced, 338-item, version of the self-report personality inventory, the MMPI-2, which includes a number of scales designed to assess personality and psychopathology. As with the MMPI-2, the items are answered on a true-false basis. Normally, it takes 35–50 min to complete. The test is for individuals 18 years and older. The required reading level is at an average of 4th–5th grade. Greene (2011) described that the MMPI-2-RF is really a new test compared to the MMPI-2. The MMPI-2-RF normative sample consisted of 2,276 representative American men and women between the ages of 18 and 80. The MMPI-2-RF T scores derived from the normative sample are non-K-corrected.

The test includes nine validity indicators (over- or under-reporting indicators, as well as inconsistency indicators), three higher-order scales, nine RC (restructured clinical) scales, 23 specific problems scales, two interest scales, and revised Personality Psychopathology Five (Psy-5) scales. The RC scales constitute the primary clinical scales, but additional scales supplement them.

The three higher-order scales are: Emotional/Internalizing Dysfunction, Thought Dysfunction, and Behavioral/Externalizing Dysfunction. The nine scales are: Demoralization, Somatic Complaints, Low Positive Emotions, Cynicism, Antisocial Behavior, Ideas of Persecution, Dysfunctional Negative Emotions, Aberrant Experiences, and Hypomanic Activation.

The 23 specific problems scales include: Malaise, Gastrointestinal Complaints, Head Pain Complaints, Neurological Complaints, Cognitive Complaints, Suicidal/Death Ideation, Helplessness/Hopelessness, Self-Doubt, Inefficacy, Stress/Worry, Anxiety, Anger Proneness, Behavior-Restricting Fears, Multiple Specific Fears, Conduct Problems, Substance Abuse, Aggression, Activation, Family Problems, Interpersonal Passivity, Social Avoidance, Shyness, Disaffiliativeness, Aesthetic-Literary Interests, and Mechanical-Physical Interests.

The revised Personality Psychopathology Five scales involve: Aggressiveness, Psychoticism, Disconstraint, Negative Emotionality/Neuroticism, and Introversion/Low Positive Emotionality. Note that the terms used to qualify the scales reflect more contemporary understanding of personality and psychopathology.

The MMPI-2-RF provides four standard over-reporting scales (Greene 2011; Hoelzle et al. 2012). The Infrequent Responses (F-r) scale is a 32-item measure of general over-reporting that includes items that had been rarely endorsed in the MMPI-2-RF normative sample (10 % or less). The Infrequent Psychopathology Responses (Fp-r) scale includes 21 items of over-reported symptoms indicative of severe psychopathology. The Infrequent Somatic Responses (Fs) scale was constructed specifically for the MMPI-2-RF in order to measure over-reported somatic complaints. It consists of 16 items having somatic content that were rarely endorsed in large archival medical and chronic pain samples (less than 25 %). Greene (2011) noted that the samples of medical patients and contrasting groups used to develop the scale "have not been provided (p. 334)."

Finally, a revised version of the Symptom Validity Scale (FBS-r); originally referred to as the Fake Bad Scale was constructed for the MMPI-2-RF. It contains 30 items and assesses non-credible somatic and neurocognitive complaints, going beyond its original goal of serving as a validity scale in personal injury settings (Lees-Haley et al. 1991). Although the three infrequency scales do not have overlapping items, the FBS-r shares three items with Fs and one with Fp-r. Greene (2011) noted that the rationale for dropping the 13 items that had been in the original FBS scale but not in its reduced version "has not been provided" (p. 335). Furthermore, he analyzed FBS-r T scores for five samples used to develop the Fs scale, including samples of personal injury litigants, and found results that possibly suggested "some problem" with the scale, so that it should be used with "due diligence" (p. 335) until clarifying research is undertaken. In this regard, the evidence is accumulating favorably, but more research is needed. For example, Sellbom and Bagby (2010) found that F-r, Fp-r, Fs, FBS-r, and Fs were effective in detecting over-reporting of severe psychopathology even when participants are coached about the these four scales and the other respondent validity scales present on the test.

As a sample description of the specific problem scales, consider that the Cognitive Complaints Scale (COG) is comprised of ten items involving difficulty with memory, concentration, forgetfulness, reading comprehension, frustration, and poor stress tolerance. The MMPI-2-RF manual considers a T score $\geq$81 for an individual respondent as suggestive of endorsements of more pronounced cognitive problems, but recommends verification of FBS-r scale results with respect to credibility of response/report before interpreting COG results.

Aside from the validity scales exclusive to the MMPI-2-RF, two others can be used in conjunction with it, although they were developed for the MMPI-2. The RBS is an empirically-derived scale comprised of 28 MMPI-2 items. According to the authors, it is the only scale developed using SVT (symptom validity test) performance in a forensic disability sample, and the sample did not involve head injury. Respondent results in the validation sample predicted failure on three commonly-used SVTs – the CARB (Computerized Assessment of Response Bias Test; Allen et al. 1997; Conder et al. 1992), the WMT (Word Memory Test; Green 2005), and the TOMM (Test of Memory Malingering; Tombaugh 1996). The research indicated that the RBS (Response Bias Scale; Gervais et al. 2007) added incrementally to the F, Fp, and FBS scales in predicting WMT performance.

The HHI (Henry-Heilbronner Index; Henry et al. 2006) consists of 15 items taken from the original MMPI (Minnesota Multiphasic Personality Inventory; Hathaway and McKinley 1943) and the FBS. The items were chosen for their sensitivity to neurocognitive complaints, by comparing personal injury litigants and disability claimants to head-injured, non-litigating controls, who passed or failed SVTs. The HHI might be useful in the evaluation of head-injured personal litigants (Henry et al. 2008). A briefer version has been constructed for the MMPI-2-RF (HHI-r; Henry et al. 2012).

Other research has supported the utility of the RBS and the HHI. Peck et al. (2013) found that the use of the RBS in conjunction with the FBS could help differentiate "probable malingering" from cases of brain injury and of conversion disorder. The MND (Malingered Neurocognitive Dysfunction; Slick et al. 1999) helped classify probable malingerers and the SVTs used included the WMT, TOMM, VIP (Validity Indicator Profile, Frederick 1997), and RDS (Reliable Digit Span; Babikian et al. 2006; Greiffenstein et al. 1994). In Sullivan et al. (2013), the RBS and F were the best indicators of poor effort compared to genuine responding, in a sample that included known or suspected traumatic brain injury (TBI).

Whitney (2013) investigated whether different results are obtained with respect to the RBS and HHI when considered in relation to different SVTs. They examined compensation-seeking military veterans, many of whom had mild TBIs or memory or concentration problems of unknown etiology. The participants were administered the TOMM and MSVT (Medical Symptom Validity Test, Green 2004) in conjunction with the MMPI-2. The latter's validity indicators were scored (F, Fb, Fp, FBS, RBS, HHI) and found to predict differentially failure on the TOMM and MSVT.

The results showed that the RBS and HHI were superior to the other validity indicators in predicting SVT performance. However, for the TOMM, pass-fail differences were shown best by the RBS, and then the HHI and F. For the MSVT the HHI excelled, with RBS next. Regression analyses also supported that the RBS and HHI accounted differentially for SVT variance (the RBS better for the TOMM and the HHI for the MSVT). For both indicators, positive and negative predictive values were "unacceptably low," so they should not be used in isolation to predict performance invalidity.

4.2.2 Validating Research on Using the MMPI-2-RF with Psychological Injury Evaluees

Introduction. This section describes recent research using the MMPI-2-RF indicating its valid applicability in assessments of forensic disability and related contexts for psychological injury claimants. Three studies are described in depth because they add incremental knowledge about using the MMPI-2-RF in this type of assessment. For example, Gervais et al. (2011) conducted a study of the association between failure on SVTs and MMPI-2-RF performance in a forensic disability complainant sample. Jones and Ingram (2011) found that most MMPI-2-RF validity scales, as well as the RBS and HHI scales, were more effective than the F family of

scales in the MMPI-2 in predicting effort status on tests of cognitive functioning during neuropsychological assessment in military complainants with their modal complaint related to mTBI (mild TBI). Schroeder et al. (2012) examined the validity scale performance in multiple neuropsychological samples, some litigating, some who failed the Slick et al. (1999) criteria for negative response bias, with the modal condition in their samples being mTBI.

Disability. Gervais et al. (2011) examined the relationship between SVT failure and performance on the validity and clinical scales of the MMPI-2-RF in the forensic disability claimant samples described in the MMPI-2-RF Technical Manual. The participants involved 847 worker compensation cases and personal injury litigants (415 men, 332 women) from one practice setting, most of whom were not head-injured. Chronic pain, anxiety/PTSD, and depression constituted the primary diagnoses. Subjects were excluded if they scored either ≥18 on the Cannot Say scale or ≥80 T on VRINr (Variable Response Inconsistency, Random responding)/TRINr (True Response Inconsistency, Fixed responding).

Subjects were administered one to four SVTs, depending on when they were involved in data collection. About half of the original participants (1,003) were administered three SVTs, with one quarter having been administered four of them, but for the latter the results of one of the SVTs were removed randomly. Participants who had less than three SVTs administered were excluded in the final data analysis. The SVTs used included the WMT, the CARB, the MSVT, and the TOMM. The sample was divided into four groups according to the number of failed SVTs (0, 1, 2, 3).

Failure on SVTs by the participants was associated with "significant" scale elevations on both the MMPI-2-RF test's over-reporting validity scales and its substantive clinical scales. For the analyses conducted for both men and for women, the largest effect sizes were obtained for F-r and FBS-r. The smaller although significant effect sizes found for Fp-r and Fs are consistent with their focus on over-reported extreme psychopathology and infrequent somatic complaints, respectively.

When groups failing 0 and 3 SVTs were compared pairwise, the results revealed mostly large effect sizes for the over-reporting validity scales and many of the clinical scales, including the COG scale. The more SVTs failures by the subjects, the greater was the degree of over-reporting of symptoms obtained on the full MMPI-2-RF protocols.

Therefore, the authors concluded that exaggeration of cognitive symptoms as indicated by SVT failure goes hand-in-hand with over-reporting of emotional, somatic, and neurocognitive complaints on relevant scales of the MMPI-2-RF. The implication for practice is that when SVTs are failed and MMPI-2-RF scales are elevated, the evaluator should "strongly suspect non-credible symptom reporting." Moreover, as per the interpretive guidelines indicated in Ben-Porath and Tellegen (2008/2011), elevations on the validity indicators of the MMPI-2-RF should suggest to the evaluator that the protocol at hand is either invalid or requires cautious interpretation due to "distortion arising from exaggerated symptom reports."

Note that I conducted an auxiliary calculation of the percentage of subjects that failed one or more of the three SVTs in Gervais et al. (2011). It arrived at about half the sample (47.1 %), a figure consistent with the estimate found elsewhere in the present

work of negative response bias in the general population of psychological injury cases. In this regard, similarly, in a convenience sample investigated in Young et al. (2009), we administered the validity scales of the RNBI (Ruff Neurobehavioral Inventory; Ruff and Hibbard 2003), the MCMI-III (Millon Clinical Multiaxial Inventory, Third Edition; Millon 1994; Millon et al. 1997), and the DAPS (Detailed Assessment of Posttraumatic Stress; Briere 2001) to a litigating disability sample and exactly half the sample passed all three over-reporting scales (or sets of scales) within the instruments.

Tarescavage et al. (2012) studied the association between MMPI-2-RF protocol results and indices of symptom validity effort in a convenience sample of 863 disability claimants (mostly workers' compensation with pain, depression, and anxiety conditions). They addressed the MND criteria by administering the TOMM, WMT, MSVT, NV-MSVT (Nonverbal Medical Symptom Validity Test; Green 2008), and/or the CARB, in particular. The sample was divided into a probable/definite malingering group due to SVT failure, suspect malingering, and an SVT-pass group.

All MMPI-2-RF overreporting scales were higher in the first group, with the RBS providing the clearest results, along with F-r (Tarescavage et al. 2012). Moreover, specificity was increased by considering together the combination of validity indicators on the MMPI-2-RF. The authors called for replication of the findings.

In addition, I note that only 16 of the 863 subjects were classified as definite malingerers, according to SVT performance, or 1.9 %, with half the sample passing all SVTs (50.5 %). These results are consistent with my moderate view of the extent of malingering in forensic disability and related determinations.

Neurocognitive. Using ODA (Optimal Data Analysis), Jones and Ingram (2011; also see Jones et al. 2012, described in Chap. 17) investigated whether newer scales on the MMPI-2 and the MMPI-2-RF aimed at assessing over-reporting of cognitive and/or somatic symptoms administered to 288 military members (mostly male) are more effective than the original MMPI-2 F-family of scales in predicting effort status as indexed by tests of cognitive functioning. The subjects were administered a full neuropsychological battery and at least one SVT (TOMM, VSVT, Victoria Symptom Validity Test; Slick et al. 1997/2005), and then divided according to whether they passed all SVTs administered ($n=171$) or failed at least one ($n=117$). The relevant indices of the ODA statistic demonstrated that when all the scales studied were "performing at their theoretical maximum possible level of classification accuracy," the HHI, RBS, FBS, and FBS-r scales classified more accurately compared to the F-family of scales, especially in the case of HHI and RBS. Their effects sizes were moderate, whereas the ones for the F-family scales were weak to moderate. In addition, traditional analysis demonstrated that the HHI, RBS, FBS, and FBS-r scales had larger effect sizes relative to the F family scales for comparisons of mean scores of groups displaying adequate versus inadequate effort. However, one of the MMPI-2-RF scale, Fs, gave results that were similar to F, the best performing F-family scale. The latter result fits the purpose of Fs, which was designed as a measure of over-reporting of somatic complaints, in general, rather than specifically for litigating populations.

Schroeder et al. (2012) utilized multiple comparison neuropsychological samples, with each having different criteria of inclusion, to evaluate the utility of over-reporting and under-reporting MMPI-2-RF validity scales. Prior research had not

provided data that could be used directly in clinical practice. For example, Gervais et al. (2010) and Youngjohn et al. (2011) presented mean T scores, effect sizes, or both for clinical groups passing or failing SVTs, but did not provide useful cut-off scores or rates for sensitivity and specificity. Rogers et al. (2011) and Sellbom and Bagby (2010) reported sensitivity and specificity rates based on T-score ranges instead of the more optimal specific T-score cut-offs.

The five groups in the Schroeder et al. study included 147 patients divided into (a) litigating TBI patients who failed the Slick et al. (1999) criteria for probable malingering; (b) litigating TBI patients who passed the Slick et al. criteria; (c) mixed neuropsychological outpatients who passed SVTs and who were diagnosed with primary neurological conditions; (d) mixed neuropsychological outpatients who passed SVTs and who were diagnosed with primary psychiatric conditions; and (e) epileptic seizure-disorder inpatients who were diagnosed technologically with video-EEG.

Multiple SVTs were used: the WMT, the TOMM, the RDS, and the Logical Memory weighted combination score (Bortnik et al. 2010) from the WMS-III or the Verbal Paired Associates II Recognition Raw score from the WMS-IV (Wechsler Memory Scale, Fourth Edition; Wechsler 2008), as presented in Pearson (2009; the Advanced Clinical Solutions manual). The VIP was used occasionally.

The results of the investigation yielded cumulative percentages for all possible T-scores and sensitivity and specificity rates for optimal cut scores for the non-malingering neurological subjects in the study. For specificity rates at the optimal rate of 90 % for all "non-malingering" neurological condition groups, sensitivity rates ranged from 48 % (for FBS-r) and 43 % (for RBS, Fs) to 10 % (for K-r) and 14 % (for Fp-r, L-r). The particular T-score cut scores that gave these percentages for each of F-r, Fp-r, Fs, FBS-r, RBS, L-r, and K-r were, respectively, less than 88, 68, 83, 89, 92, 71, and 66, for identifying litigating TBI patients who had failed the Slick et al. criteria. The corresponding specificities were, in percentage, 93, 93, 96, 96, 92, 93, and 93. These figures are compatible with those presented in Wygant et al. (2009) for the first four indices. The results support the utility of the MMPI-2-RF over-reporting validity scales for clinical neuropsychological samples. They provide optimal cut scores for all the over-reporting validity scales in the MMPI-2-RF.

PTSD. Goodwin et al. (2013) studied disability-seeking veterans and found that Fp-r and Fr were especially useful in distinguishing overreporting of symptoms. In an interesting methodology, a control group consisted of simulating mental health professionals, (aside from a control of simulating veterans). The other group in the study consisted of "honest" respondents on the MMPI-2-RF. The validity indicators examined included the Fr, Fp-r, Fs, FBS-r, and RBS. The F-r and Fp-r yielded the largest effect size in the honest-simulator comparisons.

Marion et al. (2011) performed an analogous study, but with slightly different results. They used college students and individuals in PTSD remission, as well as PTSD patients. They found the Fp-r the best scale for the task of differentiating the groups.

Note that the optimal cut score in Marion et al. (2011) was consistent with the MMPI-2-RF manual for Fp-r, but it was lower in Goodwin et al. (2013). This calls for further work on cut-scores for forensic and disability samples in the MMPI-2-RF, at least for PTSD work.

Review. Ben-Porath (2012a) described the extent to which the MMPI-2-RF meets the *Daubert* (1993) factors for admissibility of evidence to court (also see Hoelzle et al. 2012). He arranged the criteria by the questions of: (a) has the technique been tested (and can it be tested) [falsifiability]; (b) has the technique been subjected to peer review; (c) what is the known or potential rate of error associated with the technique; (d) are there standards controlling the technique's operation; and (e) is the technique generally accepted?

With respect to the first criterion, Ben-Porath noted that the technique has been tested extensively. He referred to empirical findings on its psychometric properties that are reported in the test's technical manual (Tellegen and Ben-Porath 2008/2011). I would add that there are many studies referred to in the article that support these empirical findings. Ben-Porath (2012a) noted that the RF's technical manual is more extensive than that of any other personality inventory, including of the MMPI-2. As for the nature of the data reported with respect to testing the instrument, they concerned: booklet and normative comparability analyses; internal structural analyses; external correlates; and descriptive findings.

With respect to the criterion of peer review, Ben-Porath (2012a) noted that the literature on the test now includes over 150 articles published in peer review journals. I would add that many are by researchers working independently of Ben-Porath's research laboratory. He noted that about 25 % of the research is on the test's validity scales, and some are on civil litigants or populations relevant to work in the forensic area.

In terms of known or potential error rate, Ben-Porath (2012a) referred to data on reliability estimates and associated standard errors of measurement. For example, research using known-group designs reports estimates of sensitivity and specificity as well as positive and negative predictive powers at differing base rates of invalid responding (e.g., Schroeder et al. 2012).

As for standards controlling use of the test, the manual for administration, scoring and interpretation (Ben-Porath and Tellegen 2008/2011) provides detailed guidelines for all these aspects of test use. Relative to the MMPI-2, Ben-Porath noted that this manual is more comprehensive and minimizes subjective differences in opinion by experts in its use in the same case, assuming the interpretive guidelines are followed. That being said, I would add that no one test or scale should be taken as providing definite results toward detection and attributing malingering, and the full set of reliable data gathered in any one assessment needs to be considered in toto in malingering and related determinations. Nevertheless, the MMPI-2-RF should provide valuable results in these regards.

In terms of general acceptance, Ben-Porath (2012a) noted that indirect indicators suggest its acceptance. It is cited in court (e.g., *Michigan v. Esperanza* 2011; *Wood v. Thaler* 2011) and it has received relatively positive reviews (Graham 2012; Greene 2011). Moreover, according to Ben-Porath (2012a), criticisms can be countered (e.g., by available empirical data with respect to issues raised by Butcher 2011), and the concept of general acceptance does not preclude some criticism.

Ben-Porath's (2012a) defense of the MMPI-2-RF is of a general nature, and not limited to its use in the forensic disability and related context. Nevertheless, it buttresses the contention in the present chapter that it can be used with confidence not

only in assessments in the latter context because of its psychometric reliability and validity but also for subsequent court purposes.

Sellbom (2013) examined whether the MMPI-2-RF is ready for admissibility to court according to *Daubert* standards, in terms of its "general purposes" in forensic work. He focused on the substantive (or RC) scales. However, he did refer to research on validity indicators in civil forensic settings (Wygant et al. 2009). He concluded that the MMPI-2-RF does meet court admissibility thresholds. I would add that the current review highlights that the MMPI-2-RF's burgeoning research in forensic and disability work will help it meet admissibility challenges in this area.

My most recent work on the topic of the utility of the MMPI-2-RF (Young and Wang 2013; see Chap. 33) involved a comparison of the normative research on its psychometric properties and validity indicators and the degree to which the populations involved match the needs for cases of psychological injury and law (especially for PTSD). In this regard, we constructed tables not only for the MMPI-2-RF but also for each of the major tests in the area published recently, examining both their manuals and recent research, if any. The parameters in the tables included the source, populations studied, sample size, validity indicators, recommended cut-scores, and sensitivity and specificity values, if provided. Rubenzer (2009) had prepared an equivalent table, and we built on his work. He referred to the MMPI-2, M-FAST (Miller Forensic Assessment of Symptoms; Miller 2001), SIRS (Structured Interview of Reported Symptoms; Rogers et al. 1992), TOMM, WMT, and MENT (Morel Emotional Numbing Test; Morel 1995, 1998), in particular. The additional tests that we considered were the MMPI-2-RF, PAI, SIRS-2 (Structured Interview of Reported Symptoms, Second Edition; Rogers et al. 2010), TSI-2 (Trauma Symptom Inventory-2; Briere 2011), DAPS, and CAPS (Clinicians Administered PTSD Scale; Blake et al. 1995).

As for the results of the survey, the tables and review showed that, in general, there has not been much research directly related to the question at hand. Nevertheless, the omnibus personality tests do have a good start. However, even these tests have variable cut-score recommendations, in general, complicating their use for any one particular disorder, such as PTSD. Given the paucity of research in the area, all the tests should be used cautiously for malingering detection, but we noted that the research on the MMPI-2-RF is burgeoning.

4.3 MMPI-2-RF: More Details

The MMPI-2-RF has an extensive series of evaluee validity scales including revised F family scales, a revised FBS-r, another useful scale, the RBS, and a new scale, the Fs. Table 4.1 by Ben-Porath (2012b) lists these scales and the information they provide with respect to threats to protocol validity and confounds.

The FBS is a widely symptom validity indicator in the MMPI family, and meta-analyses have supported its use (Nelson et al. 2010) except for PTSD cases. Table 4.2 by Larrabee (2012) summarizes research that supports the value of using the FBS in

Table 4.1 MMPI-2-RF validity scales: threats to protocol validity and confounds

	Scale									
Threat	COG	VRIN-r	TRIN-r	F-r	Fp-r	Fs	FBS-r	RBS	L-r	K-r
Non-content based										
Nonresponding	x	–	–	–	–	–	–	–	–	–
Random responding		x		+	+	+	+	+	+	+
Fixed "true" responding			x	+	+	+	+	+	–	–
Fixed "false" responding			x	+	+	+	+	+	+	+
Content-based										
Overreporting				x	x	x	x	x		
Underreporting									x	x
Extra test confounds										
Psychopathology				+	+	+	+	+		
Medical conditions						+	+			
Traditional upbringing									+	
Good adjustment										+

Adapted with permission of University of Minnesota Press. Ben-Porath (2012b); with kind permission from University of Minnesota Press [Table 6–11, Page. 255]

Abbreviations. *MMPI-2-RF* Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form (Ben-Porath and Tellegen 2008/2011), *COG* Cognitive Complaint Scale, *VRIN-r* Variable Response Inconsistency, Random responding (Ben-Porath and Tellegen 2008/2011), *TRIN-r* True Response Inconsistency, Fixed responding (Ben-Porath and Tellegen 2008/2011), *F-r* Infrequent Responses (Ben-Porath and Tellegen 2008/2011), *Fp-r* Infrequent Psychopathology Responses (Ben-Porath and Tellegen 2008/2011), *Fs* Infrequent Somatic Responses (Ben-Porath and Tellegen 2008/2011), *FBS-r* Symptom Validity Scale, Revised (Ben-Porath and Tellegen 2008/2011; Lees-Haley et al. 1991), *RBS* Response Bias Scale (Gervais et al. 2007), *L-r* Uncommon Virtues, Lie scale (Bianchini et al. 2005), *K-r* Adjustment Validity, Correction scale (Bianchini et al. 2005)

Note. x = Scale designed to assess this threat, + = Confound artifactually increases score, – = Confound artifactually lowers score. Shaded area identifies confounds that can invalidate scores on the corresponding Validity Scales

Table 4.2 FBS-r symptom validity scale endorsement by clinical patients, simulators, and malingerers

	Subject group		
Study	Clinical patients	Simulators	Malingerers
Lees-Haley et al. (1991)[a]			
M	15.7	25.0	27.6
SD	(4.11)	(8.5)	(4.65)
Lees-Haley (1992)[b]			
M	18.2	_	27.2
SD	(5.3)	_	(5.2)
Larrabee (2003a, b, c, d)[c]			
M	15.67	_	26.15
SD	(6.02)	_	(5.41)
Ross et al. (2004)[d]			
M	14.61	_	28.61
SD	(4.65)	_	(5.12)

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Note:

[a]Lees-Haley, English, & Glenn: 25 Clinical Ss with emotional distress following personal injury; 67 noninjured Ss simulating emotional reaction to injury; 25 Ss malingering after personal injury

[b]Lees-Haley: 64 clinical Ss simulating emotional distress following injury; 55 Ss malingering PTSD

[c]Larrabee: 29 clinical patients with moderate/Severe TBI; 26 litigants with definite malingered neurocognitive dysfunction

[d]Ross, Millis, Krukowski, Putnam, & Adam: 59 Ss with moderate/severe TBI, and 59 litigants with probable malingered neurocognitive dysfunction

Abbreviations. *Ss* subjects, *M* median, *SD* standard deviation

detecting malingering, with clinical patients as control groups. The table refers to Lees-Haley's (1992) study that included evaluees judged to have malingered PTSD. However, as per Nelson et al. (2010), the use of the FBS with PTSD evaluees should be used with caution.

Tables 4.3 and 4.4 provide interpretative implications for various T score values of the FBS-r. Notice that the interpretative implications do not mention malingering, per se. This is consistent with typical recommendations for interpreting scales that deal with response style and bias, including malingering, in assessments. The scale results can never provide, by themselves, information that leads to definitive conclusions and, certainly, the same proviso applies to any single measure that addresses response bias and malingering.

4.4 Chapter Conclusion

Ben-Porath's (2013a) review of the utility of the MMPI-2-RF is largely consistent with the present review. He made several additional noteworthy points. First, the literature is finding that validity scale scores on the MMPI-2 validity scales,

Table 4.3 FBS-r interpretation

T Score	Protocol validity concerns	Possible reasons for score	Interpretive implications
≥100	Scores on the Somatic and Cognitive Scales may be invalid. Overreporting is indicated by a very unusual combination of responses that is associated with noncredible reporting of somatic and/or cognitive symptoms	Inconsistent responding Overreporting of somatic and/or cognitive symptoms	Inconsistent responding should be considered by examining the VRIN-r and TRIN-r scores. If it is ruled out, note that this combination of responses is very uncommon even in individuals with substantial medical problems who report credible symptoms. Scores on the Somatic and Cognitive Scales should be interpreted in light of this caution
80–99	Possible overreporting is indicated by an unusual combination of responses that is associated with non-credible reporting of somatic and/or cognitive symptoms	Inconsistent responding Significant and/or multiple medical conditions Overreporting of somatic and/or cognitive complaints	Inconsistent responding should be considered by examining the VRIN-r and TRIN-r scores. If it is ruled out, note that this combination of responses may occur in individuals with substantial medical problems who report credible symptoms, but it could also reflect exaggeration. Scores on the Somatic and Cognitive Scales should be interpreted in light of this caution
<80	There is no evidence of overreporting		The protocol is interpretable

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Abbreviations. FBS-r Symptom Validity Scale, Revised (Ben-Porath and Tellegen 2008/2011; Lees-Haley et al. 1991), *TRIN-r* True Response Inconsistency, Fixed responding (Ben-Porath and Tellegen 2008/2011), *VRIN-r* Variable Response Inconsistency, Random responding (Ben-Porath and Tellegen 2008/2011)

Table 4.4 Interpretation for symptom invalidity (FBS-r) scale score levels

T Score	Level	Interpretations
≥81	Marked	Endorsement of unusual/atypical somatic/cognitive items infrequently reported by patients with genuine illnesses. Any interpretation of somatic/cognitive (MLS; GIC; HPC; NUC) and COG scales should be undertaken with caution, if at all
58–80	Moderate	Endorsement of unusual/atypical somatic/cognitive items infrequently reported by patients with genuine illnesses. Any interpretation of somatic/cognitive (MLS; GIC; HPC; NUC) and COG scales should be undertaken with caution, if at all
45–57	Normal	None
≤44	Low	None

Adapted from Greene (2011)

Abbreviations for scales. COG Cognitive Complaints, *GIC* Gastrointestinal Complaints, *HPC* Head Pain Complaints, *MLS* Malaise, *NUC* Neurological Complaints

including the FBS, do not vary as a function of referral source (Greiffenstein et al. 2010; Meyers et al. 2011). Second, MMPI-2 validity scale findings, including the RC scales, which are part of the MMPI-2-RF, generalize to other measures (Garcia et al. 2010; Forbey and Lee 2011).

Collectively, the current research on the MMPI-2-RF serves to confirm and expand its utility in the forensic disability and related context, depending on the question of the study. The over-reporting scales (especially Fr, Fp-r, FBS-r) are quite useful in this regard, and the MMPI-2-RF scoring protocol includes two others compatible with this F family of indices that are also scored with the MMPI-2 (the RBS and the HHI). The data indicate that the scales function better for their intended purposes relative to the original F family of the MMPI-2. Moreover, the various scales provide valuable information beyond their stated purpose, such as providing a general picture of response bias that can give clues about malingering. The results also confirm the utility of administering multiple SVTs in assessments related to psychological injury, such as the TOMM and Green family of tests (e.g., the WMT). Nevertheless, assessors should be cautious in the batteries that they use in their assessments and the interpretations offered, assuring that a comprehensive assessment takes place and that an impartial interpretation using all the reliable data available concludes the assessment.

Note that recent research by Gass and Odland (2012) indicates that the FBS-r might be best conceived as having two negatively correlated factors, with the somatic-focused one being best for use in forensic disability and related contexts (see Chap. 14). Also, Rogers and Bender (2013) noted that the standard error of measurements (SEMs) are "substantial" for the MMPI-2-RF (data derived from Tellegen and Ben-Porath 2008/2011; e.g., for F-r = 10 T; 95 % confidence level = 19.6).

That being said, with respect to the MMPI-2-RF, I note that Sellbom et al. (2012a) conducted a study with a patient sample that demonstrated diagnostic construct validity (convergent and discriminant validity) of the test. The study did not address validity indicators but it did demonstrate that, compared to the MMPI-2, the hierarchical structure of the test offers an enhanced capacity for differential diagnosis. For example, when the scales were used simultaneously at all levels of the hierarchy, they did indicate meaningful patterns of scale elevation and, moreover, the profiles were consistent with evidence in the psychopathology literature. The authors concluded that clinicians should have increased confidence that the MMPI-2-RF clinical scales perform well and are "descriptively accurate."

Sellbom et al. (2012b) have conducted a study on differentiating PTSD symptomology using the MMPI-2-RF that is directly related to the main focus of the present work. They examined a forensic disability sample of evaluees who passed various validity indicators ($n = 159$, in medicolegal evaluations). They administered PTSD assessment instruments (DAPS; DTS (Davidson Trauma Scale; Davidson et al. 1997); IES (Impact of Event Scale; Horowitz et al. 1979)), as well as the MMPI-2, from which results related to the MMPI-2-RF were obtained. They excluded cases who failed the cut scores for any of three SVT tests (WMT, TOMM, CARB) or the MMPI-2-RF validity scales (e.g., F, Fp).

It is noteworthy that of the original 347 participants, only 8.9 % failed all three tests (and there was another 13 % who failed the MMPI-2-RF thresholds). The combined participant exclusion rate of 22 % is consistent with the ones found in Chap. 2 on the prevalence of malingering and related feigning and response bias in "problematic" forensic as well as disability cases (also see Merten et al. (2009), reviewed in Chap. 33). As for the other results of the study, the demoralization scale of the MMPI-2-RF was the best individual predictor of PTSD globally, while specific problem scales best differentially predicted the PTSD symptom clusters.

Sellbom et al. (2012c) examined a population more directly related to the present work. They administered the MMPI-2-RF to three groups – (a) undergraduates asked to feign health problems, (b) somatoform disorder patients, and (c) medical patients. Of the validity indicators, the Fs was the most sensitive to somatic (health) malingering simulation, and the Fp-r was the most specific. The FBS-r was the most sensitive in differentiating the groups (a) and (c), but was not for differentiating group (b) from (c). The authors concluded that when FBS-r is elevated, examining Fs and Fp-r results could help in ascertaining possible malingering. They called for more research on the matter, which is a good way to conclude the chapter on the MMPI-2-RF, in general.

Ben-Porath (2013b) reviewed the forensic applications of the MMPI-2-RF. In terms of the literature he cited for civil forensic/disability assessment, they included many of the ones described in this present chapter. He summarized the research on validity indicators for use in over-reporting of somatic and cognitive complaints. These indicators included the F-r, Fs, FBS-r, and RBS. For mTBI evaluations, he referred to the FBS-r and Fs, with the RBS also being helpful. He also referred to the MMPI-2-RF test's applicability in PTSD assessments.

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Chapter 5
New Models of Malingering and Related Biases, Presentations, and Performances

5.1 Introduction

This chapter presents the major conceptual contributions of the present book. In particular, it describes a diagnostic system for detecting malingered PTSD (posttraumatic stress disorder) in forensic disability and related evaluations that builds on prior models for neurocognitive and pain-related malingering diagnosis. The model especially builds on the work of Slick et al. (1999) on a system for MND (Malingered Neurocognitive Dysfunction) criteria, as well as the recommendations for their change by Rogers et al. (2011a, b) and Boone (2011). Also, the malingered PTSD system that I developed is based on the work of Bianchini et al. (2005) on a system for MPRD (Malingered Pain-Related Disability) criteria. Given the absence of an equivalent system for PTSD, in creating the system, I referred to the suggested test protocol of Rubenzer (2009) to detect malingered PTSD. All these contributions stand as important building blocks toward constructing the gold standard in this type of assessment, which is so badly needed by the field. Based on my particular model for the detection of malingered PTSD, I revised the ones already developed for the neurocognitive and pain domains (MND and MPRD, respectively).

The three models that I have constructed to help in the detection of malingering in forensic disability and related contexts are highly similar, just differing in some examples. Chapters 27, 28, and 29 consist of the tables presenting the systems for practical use. Together, the three systems help lead toward an efficacious integrated system for detecting malingering and related response biases.

Before presenting these proposed malingering detection systems, I present a model that illustrates that not only evaluees but also evaluators and other participants in the medicolegal process and industry, themselves, are subject to biases that need to be checked and moderated. In this regard, I provide a model of systemic biases that influence not only claimants but also evaluating professionals (including psychiatrists, psychologists, and other mental health professionals), treating professionals, insurers, and attorneys. Then, I return to evaluees and their biases that might be presented in forensic disability and related evaluations, including of malingering. In particular,

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I propose a model of seven different response biases that can be evidenced in such evaluations, including of frank malingering and of the indeterminate "gray zone." The heart of the malingering-detection systems that I have created is based on this seven-level rating system.

Next in the chapter, I present a questionnaire based on the seven-level model that, if used in a survey, could provide information on the prevalence or base rate of malingering/feigning and related response biases. The questionnaire is a modification of Mittenberg et al.'s (2002) classic one. If gathered, the data from the survey should give a realistic picture of the distribution of the different response biases in the relevant psychological/psychiatric injury populations. Although the data that it would gather could help understand the distribution and validity of the terms involved, it should be replicated with different samples.

As for the malingering-detection systems that I developed, they too need reliability and validity research before they can be used confidently in practice and court. However, if applied prudently, they could be used as guides in assessment before that happens.

Table of Terms and Sources

Abbreviation	Name	Source(s)
DAPS	Detailed Assessment of Posttraumatic Stress	Briere (2001)
DSM-IV	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition	American Psychiatric Association (1994)
DSM-IV-TR	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision	American Psychiatric Association (2000)
F-NCR-D	Feigned Neurocognitive Related Disability/ Dysfunction	Young (2014); present work
F-PR-D	Feigned Pain Related Disability/Dysfunction	Young (2014); present work
F-PTSDR-D	Feigned Posttraumatic Stress Disorder Disability/ Dysfunction	Young (2014); present work
MMPI	Minnesota Multiphasic Personality Inventory	Hathaway and McKinley (1943)
MMPI-2	Minnesota Multiphasic Personality Inventory, Second Edition	Butcher et al. (1989, 2001)
MMPI-2-RF	Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form	Ben-Porath and Tellegen (2008/2011)
MND	Malingered Neurocognitive Dysfunction	Slick et al. (1999)
MPRD	Malingered Pain-Related Disability	Bianchini et al. (2005)
PAI	Personality Assessment Inventory	Morey (1991, 2007)
PID-FMR-S	Psychological Injury Disability/Dysfunction – Feigning/Malingering/Response Bias System	Young (2014); present work
SIRS	Structured Interview of Reported Symptoms	Rogers et al. (1992)
SIRS-2	Structured Interview of Reported Symptoms, Second Edition	Rogers et al. (2010)
TSI-2	Trauma Symptom Inventory, Second Edition	Briere (2011)

5.2 Models Related to Systemic Influences and Surveys

5.2.1 Dimensions

Model. The present work focuses on malingering and related response biases in assessment. Figure 5.1 presents a model of the dimensions involved in understanding systemic influences on evaluees and their assessment. It concerns conscious influences for financial gain, in particular, in the tort and disability context, not only for evaluees but also for other systemic actors.

Recall that, for evaluees, the DSM-IV-TR (Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision; American Psychiatric Association 2000)/DSM-5 (Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition; American Psychiatric Association 2013) definition of malingering involves not only conscious fabrication of symptoms for incentives, such as financial gain, but also "gross exaggeration" for such purposes. However, as has been argued in Chap. 2, exaggeration to lesser degrees should not be considered part of malingering. Moreover, even gross exaggerations might be expressed for reasons other than malingering, such as a cry for help. That being said, Iverson (2006) correctly pointed out that inference of a cry for help in cases of symptom exaggeration should not be used indiscriminately.

As for other actors in the system, the top part of the Fig. 5.1a notes that treatment providers might be unduly influenced by the adversarial divide, and either support or deny inappropriately the veracity of a complainant's or plaintiff's symptom presentation. Therefore, the influence of bias on actors and agents in the system at issue needs to be understood as far-reaching and not just limited to evaluees.

The bottom part of the Fig. 5.1b adds the dimension that not only complainants and plaintiffs might engage in behavior for financial gain, whether conscious or unconscious. For example, insurers might also behave this way, for example, inappropriately denying valid claims. In addition, plaintiff lawyers might inappropriately coach plaintiffs how to cheat. Further, mental health assessors might lean too much toward the conclusions desired by the referral source.

Comment. This book is a middle-of-the-road one that examines dispassionately the various difficulties that the field evidences and the problems that confront patients and workers on all sides of the spectrum. Malingerers cost the system immensely, and the best methods and systems need to be constructed in order to arrive at optimal rates of its detection. At the same time, evaluees express other biases that might be more unconscious and not monetarily motivated, and factors other than malingering might explain their exaggerations (e.g., catastrophizing), etc.

That being said, even unconscious influences that at first appear distinct from motivations for monetary gain might come to reflect malingering, as when a survivor of an event as issue maintains that permanent harm has been incurred even though an initial injury has healed through adherence to treatment. For example, one might persist in seeking compensation despite symptom amelioration in the mistaken belief that the negligent party should pay for the transgression at issue no matter what is

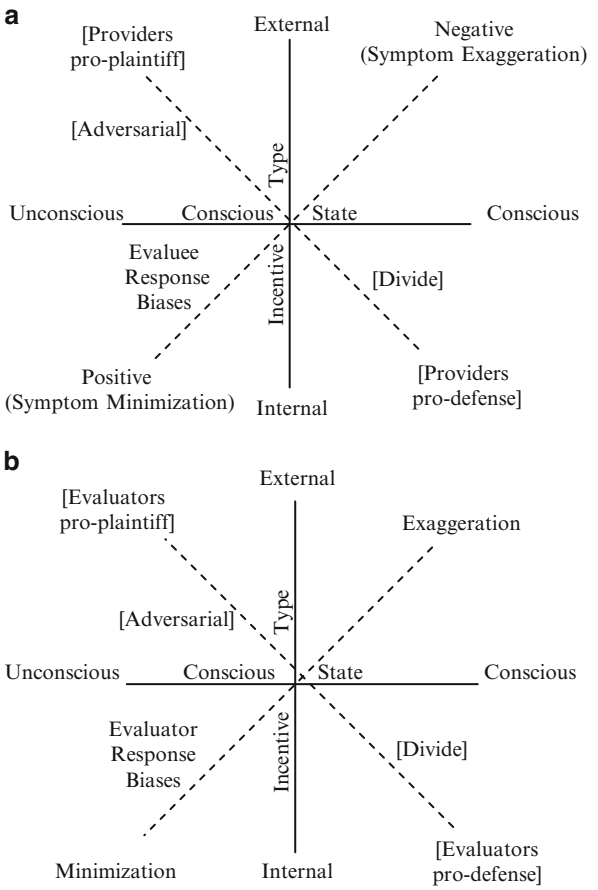

Fig. 5.1 Financial and psychological pressures influencing evaluees/clients and evaluators/treatment providers. (**a**) Evaluees (and treatment providers). (**b**) Claim evaluators (including psychiatrists, psychologists, attorneys; insurers)

(a) The figure illustrates the pressures on evaluees to malinger and engage in self-unfavorable, non-credible presentations. They might act consciously for external rewards/financial gains by expressing negative response bias or excessive symptom exaggeration, for example. Other types of symptom exaggeration might be unconscious and for internal incentives, for example, as might be found in factitious disorder. Evaluees might express symptom minimization in a positive response bias. The adversarial divide refers to whether evaluators fall on the plaintiff or defense side of the case at hand, but even treatment providers might be unduly influenced by it, e.g., with respect to either their patients' attorneys or their insurers

(b) The second part of the figure indicates that the same pressures apply to the full range of evaluating professionals on a case, including mental health professionals, and not only insurers and attorneys. Valid claims might be denied because of undue influence stemming from the adversarial divide or invalid claims might be supported

the course afterwards. Moreover, in this scenario, the belief becomes unconscious with time and couples with the opportunity for financial gain being presented. It is even possible that such consciously-driven beliefs could lead to unconscious processes that interfere with full recovery and a return functionality. Therefore, the subsequent

harm and disability that result from the rogue belief, even if conscious to begin with, could end up becoming unconscious and drive persistence of symptoms, impairments, and disability rather than a natural recovery, seeking their cure, or both. In the end, the harm that complainants sustain in such psychological processes might not be viewed by them as consciously-driven effects for monetary gain but, indeed, conscious awareness of monetary gain might have been a powerful driving force at one point in their symptomology.

Also, the biases in the system reach all workers in the field, and mental health professionals are not immune to the chasm of the plaintiff/defense or adversarial divide. That being said, it is inappropriate to place all biasing influences on evaluees and on mental health professionals, because third parties, attorneys, etc., express them, too.

The issue about these systemic biases in the field is whether they will be permanently insidious and endemic. In this regard, a science-first approach can provide some remedy to these diverse biasing influences, no matter the source, because it offers information that might neutralize these biases. A science-first approach gives an increased probability for evaluating effectively what are genuine injuries in evaluees and what are not. Therefore, the present work underscores both the nonconstructive biases in the field that might function at all levels and also the solutions that lie in a middle-of-the-road approach.

5.2.2 Curves

Model. In this part of the chapter, I present a model that helps define the range of response styles/biases that can be evident in forensic disability and related assessments and also a questionnaire survey based on it that can be used to determine the prevalence or base rates of the various styles/biases (see Fig. 5.2). The model is based on a 7-point sequence of response styles/biases in these regards, from absent bias to frank malingering. The seven specific categories involve the following terms: (a) definite malingering; (b–f) definite, probable, probable/possible (gray zone), possible, and minimal negative response bias; and (g) absent bias. These terms derive from the Slick et al. (1999) MND testing approach to malingering detection. In the model that I created, I incorporated terms equivalent to these so that the terms can generalize to different degrees of inconsistencies/discrepancies, e.g., in and between components of the data gathered in assessments. Specifically, the equivalent terms to those just given for inconsistencies/discrepancies relate to (a) overt malingering, (b) noncredible gross exaggeration/inconsistency, (c) noncredible moderate exaggeration/inconsistency, (d) indeterminate gray zone, (e) credible but possible moderate exaggeration/inconsistency, (f) credible but mild exaggeration/inconsistency, and (g) no exaggeration/inconsistency. Given these two seven-step sequences in malingering and related biases, I developed an integrated sequence as shown in Fig. 5.2.

Figure 5.2 not only presents an integrated model related to malingering and other response styles/biases and motivations, but also suggests the distribution that normatively it should take (normal curve or close). Also, the figure takes pains to

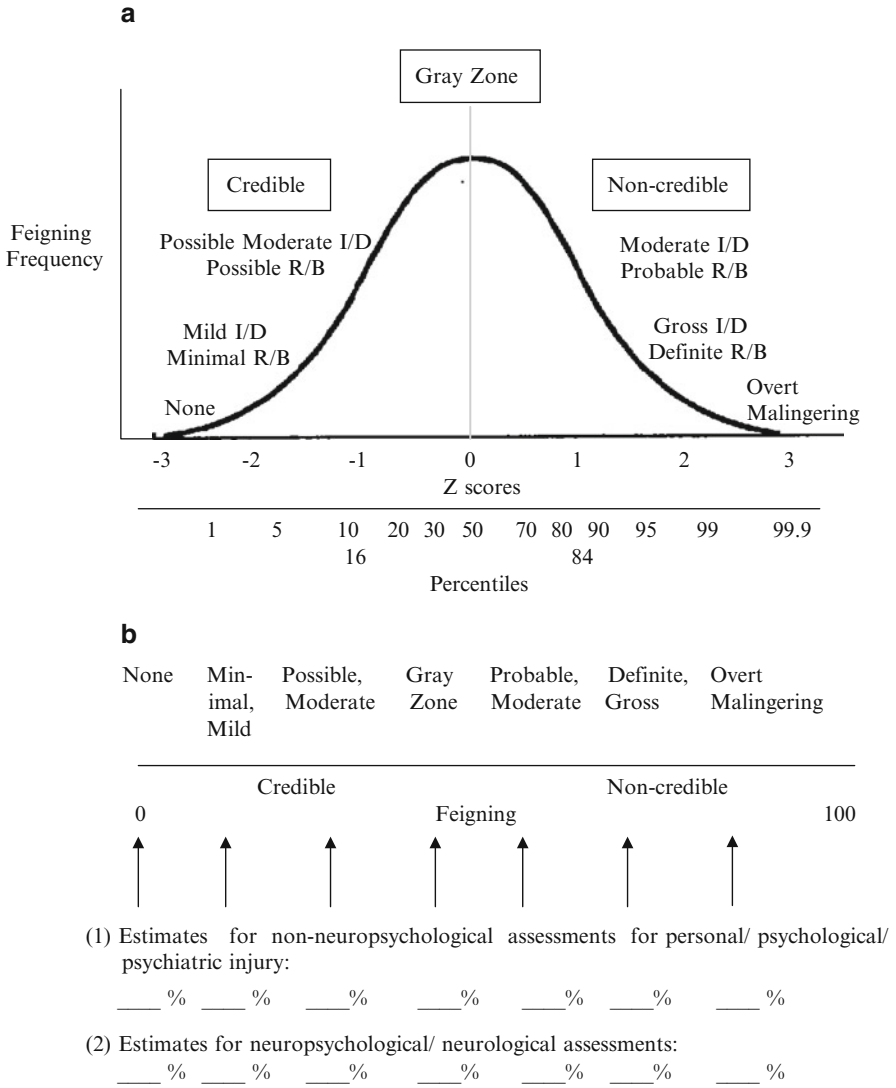

Fig. 5.2 Self-unfavorable presentations/performances (psychological, psychiatric) in evaluees according to response biases (R/B) in testing and/or inconsistencies/discrepancies (I/D). (**a**) General model. (**b**) Scale for survey

Instructions. Put in estimates, in percentage, of where the dividing lines fall between the categories for (1) non-neuropsychological personal/psychological/psychiatric injury: (2) neuropsychological [or neurological], or both. The percentages for the general model, according to the normal curve, are given above. They might not apply to your practice

Note. On tests, psychologists seek response biases, including that of malingering. However, we need a broader term to include inconsistencies/discrepancies in evaluee presentation and in documents. Moreover, the term should be neutral because the questionable test responses and inconsistencies in presentation might be taking place for either credible or non-credible reasons (at least to the degree that can be ascertained)

distinguish credible and non-credible presentations and performances. It points to the different degree possible in these regards. It uses neutral terms, for example, including mild exaggeration as still clearly credible. It acknowledges that many cases in this type of assessment involve indeterminate or gray-zone presentation and performance. Often, these cases are the most difficult to evaluate, given their ambiguity and how the range involved in the gray-zone should be large. Note that the latter might vary over practitioners in size and in ultimate direction taken about credibility, depending on plaintiff or defense source of referral. However, the leeway

Fig. 5.2 (continued) Moreover, there is a gray zone, in which the conclusions on evaluee credibility might be in dispute and the uncertainty either way leads to the types of disagreements that are prevalent in cases in the field. An adequate model of evaluee validity in presentation and performance should admit to the difficulties that we have in assessments for many evaluees, that is, where the evidence is not clear-cut either way

Therefore, the term of "Self-Unfavorable Presentations" is used to represent the range of negative response biases and presentations from malingering to minimal exaggeration. Greene (2011) used the term of "self-unfavorable" reporting or responses on psychological tests in order to avoid terms such as negative impression management [he also used the related term of self-favorable reporting or responses]. The use of the word "presentations" in the proposed term refers to how evaluees present behaviorally in interview, thereby permitting it to refer more than report/response on tests. The term "performance" is used to refer to testing results

Berry and Nelson (2010) suggested use of the term of "feigning" to indicate negative response biases, in general, and in this regard Rogers (2008) has used the term "dissimulation." In the present model, the term feigning is included on the vertical axis

Note that incontrovertible or indisputable evidence of malingering is placed at the extreme end of the distribution and, in contrast, the absence of any sign of non-credible presentation is placed at the other extreme. This fits the research findings that definite malingering or the like might be displayed in the contexts of personal injury and disability assessments at a percentage much lower than the common one given of around 40 % (see Rogers et al. 2011a), although other research supports this high percentage, too.

At the same time, because the figure includes gross exaggerations/inconsistencies and even moderate ones on the non-credible side, as well as the gray zone that theoretically stretches beyond even the 50 % or median mark, the model might accommodate to concerns that malingering and related motivations are quite prevalent in assessments, although not especially for malingering itself relative to other response biases

On the clearly credible (left) side of the curve, it is acknowledged that evaluees might exaggerate moderately or that inconsistencies/discrepancies might be found that are moderate, yet the evaluee is still judged to be expressing credible symptoms. For example, there might be a cry for help at play. It is conceivable that even gross exaggerations could reflect a cry for help (e.g., a desperate patient being consistently and unjustly denied treatment), but this type of conclusion should be well-justified

However, as a balance, one should note that even a mild or minimal exaggeration might be totally consciously fabricated for financial gain. In these cases, the evaluees should be construed as fitting into the gray zone or even higher, and explanations why they fall one way or the other on the credibility continuum should be offered

To remind, the DSM approach to defining malingering consists of two major components, (a) overt, outright, frank, and also conscious, intentional fabrication, feigning, or dissimulation of symptoms, disorders, disabilities, or functional impairments for external incentives such as financial gain, and for which there is incontrovertible, indisputable, or compelling evidence, and (b) conscious, intentional gross exaggerations of symptoms, disorders, disabilities, or functional impairments that clearly are greater than the moderate level for the same external incentives, and for which there is incontrovertible, indisputable evidence

in leaning one way or the other in gray-zone cases can be reduced by developing through research both rigorous models of and consequent detection systems for malingering and related response biases, as has been undertaken in the present work. The other half of the equation is to apply in practice such systems with equal rigor over different sources of referral. In both cases (practice and research), a comprehensive, impartial, scientifically-informed approach is necessary. I explain further the logic of the model and systems that I developed and some of the science behind it throughout this chapter, including in the figure note and in the instructions for the questionnaire based on it (see Table 5.1).

Table 5.1 Survey on percentage of non-credible or less credible presentations (from malingering to mild, minimal exaggeration), compared to credible ones, and cases in the gray zone

#	Question
1.	Professional designation _____ psychiatrist _____ psychologist _____ other mental health professional
2.	In which region do you practice? US: ____ West ____ Midwest ____ Northeast ____ South Canada: ____ West ____ Ontario ____ Quebec ____ East Other: ____ UK, Australia, NZ ____ Western Europe ____ Elsewhere
3.	Indicate one primary practice setting _____ private or group practice _____ rehabilitation hospital _____ university hospital or medical center _____ general hospital or medical center _____ veteran's affairs medical center _____ psychiatric hospital _____ university _____ other
4.	_____ Years of clinical practice
5.	Number of personal/psychological/psychiatric injury assessments conducted monthly: Non-neuropsychological _____ Neuropsychological [neurological] _____
6.	Percentage of total annual referrals involve: __ __ __ % personal injury litigation __ __ __ % disability or worker compensation claims __ __ __ % other related civil forensic __ __ __ % medical or psychiatric not involving litigation or seeking compensation
7.	Percentage of personal injury or disability cases referred __ __ __ % referred by treating doctor __ __ __ % referred by plaintiff's attorney __ __ __ % referred by defense attorney or insurer __ __ __ % self referred
8.	What percentage of your diagnoses in the assessments involve: __ __ % of mild head injury __ __ % of moderate or severe head injury __ __ % of anxiety disorder __ __ % of dissociative disorder __ __ % of PTSD __ __ % of adjustment disorder __ __ % of depressive disorder __ __ % of pain or somatoform (somatic symptom) disorder

(continued)

Table 5.1 (continued)

#	Question
	__ __ % of personality disorder
	__ __ % of factitious disorder
	__ __ % of conversion disorder
	__ __ % of other disorders
	__ __ % of no disorder
	Note. The percentages for this question might surpass the total of 100%
9.	(a) What percentage of your assessments involve non-credible presentations, or, involve cases in the gray zone that appear non-credible _____
	(b) What percentage of your assessments involve credible presentations, or, involve cases in the gray zone that appear credible _____
	Note. The percentages for "a" and "b" must sum to 100
	(c) Also, estimate the percentage of cases in the gray zone that, once assessments are completed, are judged to be non-credible (i) _____% or credible (ii) _____%.
	Note. The percentages for "i" and "ii" must sum to 100.
	If possible, answer below the equivalents of questions "a" and "b" for cognitive, PTSD, and pain-related assessments
	(d) What percentage of your cognitive-related assessments involve non-credible presentations, or, involve cases in the gray zone that appear non-credible _____
	(e) What percentage of your cognitive-related assessments involve credible presentations, or, involve cases in the gray zone that appear credible _____
	Note. The percentages for "d" and "e" must sum to 100
	(f) What percentage of your PTSD-related assessments involve non-credible presentations, or, involve cases in the gray zone that appear non-credible _____
	(g) What percentage of your PTSD-related assessments involve credible presentations, or, involve cases in the gray zone that appear credible _____
	Note. The percentages for "f" and "g" must sum to 100
	(h) What percentage of your pain-related assessments involve non-credible presentations, or, involve cases in the gray zone that appear non-credible _____
	(i) What percentage of your pain-related assessments involve credible presentations, or, involve cases in the gray zone that appear credible _____
	Note. The percentages for "h" and "i" must sum to 100
10.	In what percentage of your assessments do each of the following support your impression of any non-credible presentations or cases in the gray zone that appear non-credible
	__ __ % below-chance performance on forced-choice tests
	__ __ % below other empirical cutoff on forced-choice tests
	__ __ % below empirical cutoff on other feigning tests/scales
	__ __ % that do not meet validity scale cutoffs on objective personality tests
	__ __ % below empirical cutoff on other cognitive (neuropsychological) tests
	__ __ % pattern of test performance does not make psychological sense (inconsistent with condition)
	__ __ % severity of impairment inconsistent/discrepant with condition
	__ __ % implausible symptoms and related descriptors (e.g., bizarre)
	__ __ % inconsistencies/discrepancies related to self-report in interview
	__ __ % inconsistencies/discrepancies related to self-report tests
	__ __ % inconsistencies/discrepancies related to observed behaviors
	__ __ % inconsistencies/discrepancies related to documentation/records, collateral information, and other non-test, non-interview information
	__ __ % of other factors
	Note. The percentages for this question might surpass the total of 100%

(continued)

Table 5.1 (continued)

#	Question
11.	In what percentage of your assessments for cases that induce some suspicion or doubt about credibility, do each of the following support your impression of their credible presentation or cases in the gray zone that appear credible
	__ __ % cry for help
	__ __ % litigation distress induced by third parties
	__ __ % unnecessary denial of treatment
	__ __ % valid reasons for apparent non-credible presentations
	__ __ % personality tendencies, unconscious, beyond control
	__ __ % somatization tendencies, unconscious, beyond control
	__ __ % pre-existing psychiatric/psychological vulnerabilities, but insufficient as complete explanation of presentation, i.e., "thin skull" at most
	__ __ % valid material cause, with valid effects, despite other factors
	__ __ % good attempt to mitigate loss, e.g., compliant patient
	__ __ % of other factors
	Note. The percentages for this question might surpass the total of 100%

Please indicate the organization to which you belong, if any, through which you were contacted to respond to the survey

American _____

Canadian _____

Other _____

Adapted with permission of Routledge. Mittenberg et al. (2002), Reprinted by permission of the publisher (Taylor & Francis Ltd, http://www.tandf.co.uk/journals). [Excerpt of 732 words from Appendix, Pages. 1101–1102]

Note: Questions 9 and 11, in particular, are new to this work

Abbreviation. PTSD posttraumatic stress disorder

The questionnaire presented in Table 5.1 can be used to survey mental health professionals on the distribution of the different types of malingering and related response biases that they encounter in their practice. Note that the survey that could be conducted with the questionnaire aims to seek not only estimates of the relative frequency of different types of credible and non-credible presentations and performances in survey respondents but also the types of reasons used to justify their conclusions in assessments. If used to gather reliable and valid data with respect to malingering and related biases in the field, this proposed survey could be quite informative. The survey should be conducted for all types of psychiatric/psychological injury cases in tort, worker compensation, disability insurance, and other civil forensic assessments. The respondents should include various mental health professionals, focusing on psychologists and psychiatrists.

On the clearly credible (left) side of the curve of the model of different types of response bias as presented in Fig. 5.2, it is acknowledged that evaluees might exaggerate moderately or that inconsistencies/discrepancies might be found that are moderate, yet the evaluee is still judged to be expressing credible symptoms. For example, there might be a cry for help at play. It is conceivable that even gross exaggerations could reflect a cry for help (e.g., a desperate patient being consistently and unjustly denied treatment), but this type of conclusion should be well-justified.

Comment. The results of the proposed survey should provide a much clearer perception of the degree of malingering and related biases in this type of work compared to Mittenberg et al. (2002). The survey should be distributed to various academies and divisions involved in this type of assessment and the results compared for different parameters, such as defense or plaintiff work. By having a clear understanding of the definitions of the major terms, and approaching the issue with a broadened and more middle-of-the-road perspective, the data will have better reliability and validity compared to other studies to date of the base rates or prevalence involved. Moreover, the research in the field based on cut-scores on tests such as the MMPI-2 or MMPI-2-RF (Minnesota Multiphasic Personality Inventory, Second Edition; MMPI-2-Restructured Form), and the SIRS/SIRS-2 (Structured Interview of Reported Symptoms; SIRS-Second Edition) (respectively, Butcher et al. 2001; Ben-Porath and Tellegen 2008/2011; Rogers et al. 1992, 2010) need reliable and valid prevalence or base-rate information that would emerge from the proposed survey, and other related ones. In addition, the malingering diagnostic systems that require such information will be better informed and more appropriately modeled, permitting better diagnosis of malingering and related response biases.

To date, the Slick et al. (1999) MND criteria constitute a model of import, as do recent recommendations for their change (Boone 2011; Rogers et al. 2011a, b), as well as the MPRD criteria (Bianchini et al. 2005). However, without the type of clarifications and surveys recommended in the present work, and the absence of valid data on the distribution of malingering and related biases in the populations relevant to the field, the Slick et al., Bianchini et al., and any other model based on them risk becoming adopted prematurely as gold standards. Specifically, given the absence of clear base-rate or prevalence information on malingering and related response biases in the field, the Slick et al. model, or any revised one based on it, would need appropriate psychometric investigation before being judged to meet acceptable reliability and validity standards for forensic and court purposes, including in terms of sensitivity and specificity. The information gathered by the proposed survey can help in these specific regards.

5.3 Analyzing Existing Models and Criteria of Malingering and Related Response Biases

5.3.1 Introduction

In the following, I analyze in more depth the MND and MPRD models. First, I describe them, in general. Then, I examine the manner in which they deal with inconsistencies/discrepancies. Next, I compare the models. Then, I present the tests suggested by Rubenzer (2009) for detecting malingered PTSD, given that there has not been an equivalent model to the MND and MPRD models to detect malingered PTSD. Finally, I derive principles that were used in constructing the present malingered PTSD detection system.

With these introductory comments in place, I proceed to the presentation how I arrived at the development of the three malingering-detection models. After comparing and contrasting the extant models for diagnosing malingering related to neurocognitive dysfunction and to pain-related (MND and MPRD, respectively) disability, I developed a new diagnostic system related to the feigning/malingering of posttraumatic stress disorder (PTSD). The major innovations that I incorporated into the system to help in diagnosing PTSD malingering and related response biases concerned developing elaborate protocols of (a) rules for testing that integrated the different types of tests that can be used in the detecting of feigning/malingering, such as forced-choice tests, structured interview tests, embedded cognitive/neuropsychological tests/measures/scales, and validity indicators on personality tests, and (b) inconsistencies/discrepancies that might be evident in evaluations, such as compelling ones in and between testing, self-report, observations, collateral information, documents, and known brain function/psychology.

Using the new PTSD model as a base, I revised the extant MND and MPRD models related to neurocognition and pain. The three malingering-detection systems that I created are quite similar in structure and content, facilitating research on them and their usage. Furthermore, their elaborate description of types of inconsistencies/discrepancies facilitates their utility for use by psychiatrists and other mental health professionals who are not familiar with tests. The models are accompanied by detailed rules and scoring protocols, which helps in their practical application. Therefore, the three systems expand extensively (a) how tests are used in the extant models for neurocognition and pain, and (b) the range of inconsistencies and discrepancies that can be referred to in establishing non-credible presentation and performance.

To summarize, the three models for the detection of malingering and related response biases in psychological injury presentation and performances during forensic disability and related evaluations that have been developed are based on a model of seven levels of different malingering and related response styles and biases that I have developed for survey purposes, as presented toward the beginning of the chapter. Together, this work will facilitate assessments related to malingering and related response styles/biases, helping to arrive at conclusions consistent with requirements for impartial, comprehensive, and scientifically-informed practice. In addition, the work in this chapter will increase the likelihood that evaluation data analyzed with it will meet court and related requirements for good science as opposed to poor or junk science and, therefore, survive any challenges to evidence admissibility for court and related purposes. Finally, the work described in the present chapter should facilitate research on the prevalence or base rate not only of malingering but also the other styles/biases in psychological injury populations.

Note that Slick and Sherman (2012, 2013) modified extensively their 1999 MND model, as I describe in Chap. 15. After presentation of their revision in that chapter, I analyzed it for the quality of the changes to the MND model that they had instituted. I concluded that the revised model does not meet expected standards. In this

regard, there is no need to modify the present system based on any of the changes to the original MND model proposed by Slick and Sherman (2012, 2013).

5.3.2 *Details of the MND Model*

Slick et al. (1999) made a quantum leap in creating a system of diagnostic criteria for evaluating whether patients are expressing MND or related response biases (see Table 3.1 in Chap. 3). Instruments for the purpose of detecting exaggeration/fabrication had been developed, but the diagnosis of malingering had remained "difficult and largely idiosyncratic." The authors developed a system of "specific, clearly articulated" criteria for rating different degrees of dysfunction in clinical practice that could be used in research. Indeed, tens of studies have used the criteria to differentiate, in particular, definite, probable, and possible malingering. Slick et al. followed certain guidelines in developing their system: developing specific definitions of terms; using specific, unambiguous, and reliable criteria; requiring inclusion of all possible sources of evidence (e.g., test-performance, observations, collateral data); hierarchizing the relative importance of the criteria; establishing the nature and role of evaluator clinical judgment; specifying differential diagnosis, rule-out criteria, and exclusionary criteria; and indicating level of diagnostic certainty.

In their well-known table presenting the diagnostic system, first, they give a definition of malingering of neurocognitive dysfunction. Next, they proceed to the categories of definite, probable, and possible MND. Most of the table presents explanations of the criteria. There are four categories of criteria, numbered in capitalized letters: (A) presence of substantial external incentive; (B) evidence from neuropsychological testing; (C) evidence from self-report; and (D) exclusion criteria even if the evidence for (B) and (C) are present.

There are six criteria in B and five in C, and they are not uniform. The six criteria in B include elaboration of definite and probable response bias and the other four involve discrepancies between test data and other aspects (brain function, observed behavior, reliable collateral reports, documented background history). For C, there are four criteria related to discrepancies involving self-reported history (documented history, brain functioning, behavioral observation, information from collateral informants). The last criterion, criterion 5, concerns evidence of exaggerated or fabricated psychological function, for example, from testing, a criterion which appears qualitatively different from the other criteria in the section (see below for further analysis of the types of inconsistencies/discrepancies included in the system).

Although the MND system is ground-breaking, the system for MPRD developed by Bianchini et al. (2005) more than transposed the Slick et al. (1999) system. They introduced alterations that improved some of its structure. Nevertheless, as is shown below, even this revised system requires modification.

5.3.3 Details of the MPRD Model

Bianchini et al. (2005) adapted the Slick et al. criteria for their model of MPRD (see Chap. 3, Table 3.2). They developed a comprehensive, multidimensional system. They emphasized that future work should focus on the control of the false error rate related to specificity. For example, the use of multiple indicators can increase sensitivity while limiting false positive errors. Moreover, the use of multiple indicators in a system helps divide more accurately research populations based on it in terms of suspicion of malingering or its absence. The authors specified that pain malingering could be evident not only in physical symptoms but also in emotional and cognitive ones, thereby justifying using measures such as personality inventories and cognitive tests. [This innovation is an important one for the PTSD system that I developed based on the MPRD and MND models.]

In presenting their system, Bianchini et al. divided it into two tables, one for categories and one for criteria. Table 3.2, which gives the MPRD model, reveals that they kept the Slick et al. distinction of definite, probable, and possible malingering-related disability. Clinical criteria are included, but are relegated to lower levels of importance relative to data from metric indicators.

As for the criteria, they are grouped into the same four categories as found in Slick et al., and another one was added on evidence from physical evaluation, which consist of four criteria. The criteria in the critical categories were altered relative to the MND model. For evidence from testing, the last two discrepancies were removed. For self-report evidence, the discrepancy related to collateral information, which had been the last of the five in the MND system, was removed and replaced by a new one of compelling inconsistencies, which became the first one in the set.

5.3.4 Examples of Inconsistencies/Discrepancies

5.3.4.1 MND Model

Because the models for detecting malingering and related response biases in the MND and MPRD systems, to a major degree, are based on inconsistencies/discrepancies, I analyze more carefully the categories and examples provided by Slick et al. (1999) for MND and by Bianchini et al. (2005) for MPRD. This analysis led to a series of changes to the systems that they developed with respect to the inconsistencies/discrepancies that I included in my PTSD model.

The Slick et al. criteria of MND provide revealing examples of the types of inconsistencies/discrepancies in their system. For the category of *Discrepancy between test data and known patterns of brain functioning,* an evaluee might perform poorly on verbal attention measures but better on memory testing. Or, the evaluee might miss items on recognition testing that were given successfully on prior free recall trials. Or, the person might fail many easy items when much harder items from the same test had been passed.

As for *Discrepancy between test data and observed behavior,* performance within a particular cognitive domain might be discrepant with observed level of cognitive function. For example, in an evaluee, there might be either a lack of visual-perceptual deficits or language disturbance in conversational speech yet, respectively, impaired verbal fluency or impaired confrontation naming performance.

In the type of inconsistency termed *Discrepancy between test data and reliable collateral reports (informant),* performance within a particular cognitive domain might be discrepant with observed daily cognitive function as described by a reliable collateral informant. For example, an evaluee might handle financial matters but fail simple math problems on testing.

Next, in *Discrepancy between test data and documented background history,* test results for a specific domain are inconsistent with documented neurological or psychiatric information. For example, an evaluee who has no documented evidence of a TBI (traumatic brain injury) scores poorly on verbal memory.

There are four types of inconsistencies/discrepancies related to self-report and other sources of data in Slick et al.'s MND criteria. In *Self-reported history discrepant with documented history,* self-report contrasts with documented medical or psychosocial information. For example, the evaluee might exaggerate either post-event signs of TBI or pre-event educational or occupational achievement.

In the category of *Self-reported symptoms discrepant with known patterns of brain functioning,* self-reported symptoms are exaggerated in number, pattern, or severity. For example, an evaluee might report much retrograde amnesia but with good recall of the index event, or might report memory loss of autobiographical, personal information even after an MTBI (mild TBI).

In *Self-reported symptoms discrepant with behavioral observations,* self-described symptoms do not reflect observed behavior. For example, an evaluee complains of memory deficits yet recalls well any of names, events, or appointments. Or, the self-report is of severe cognitive deficits yet the evaluee drives well his/her vehicle and finds the way to the appointment. Or, the evaluee reports quite slowed mentation and concentration problems, yet she/he follows easily enough complex conversations.

In *Self-reported symptoms discrepant with information obtained from collateral informants,* the latter must be considered adequately reliable for use in the system. For example, a patient reports severe memory impairment but the spouse reports that at home he/she demonstrates little memory dysfunction.

5.3.4.2 MPRD Model

The Bianchini et al. criteria of MPRD build on the MND, and provide different examples for inconsistencies/discrepancies, where warranted, because of the shift in focus from malingered TBI-related behavior to pain ones. Bianchini et al. also add to test data and self-report criteria in the MND model a group of criteria related to physical examination.

Their group of categories related to the physical examination begins with *Discrepancy between self-report of pain and physiological reactivity*. For example, the evaluator might learn that there is an absence of heart-rate increase during

notable change in reported pain intensity. Or, findings on physical examination or functional capacity evaluation might reflect "nonorganic overlay." They might be inconsistent with known physiological mechanisms (e.g., "Waddell's signs") or otherwise different than would be expected from knowledge of the medical status. Importantly, there might be a contrast between the patient's physical presentation during formal physical evaluation and her or his physical capacities expressed when unaware of being observed, for example, in the formal evaluation, in surveillance videography, or as reported by reliable collateral informants.

In the group of categories on cognitive/perceptual (neuropsychological) testing, the first type *Discrepancy between cognitive/neuropsychological test data and known patterns of brain functioning* is similar to the one in Slick et al., as is the one that ensues (*Discrepancy between test data and observed behavior*).

In the group of categories related to self-report, the first category concerns *Compelling inconsistency*, which concerns evaluee presentation being different when aware and not aware. Next, there is the category of *Self-reported information discrepant with documented information*. For example, there might be minimization or denial of prior confounding illness/injury or overstatement of prior vocational achievement. Next, *Self-reported symptoms are reported discrepantly with known patterns of physiological/neurological functioning.* For example, a patient reports whole body pain despite a quite localized physical injury. In *Self-reported symptoms discrepant with observations of behavior,* self-reported symptoms (physical, cognitive, emotional) are inconsistent with behavioral observations of the evaluee. For example, the person complains of being unable to move an extremity but does so in observation when distracted.

5.3.4.3 Comment

As mentioned in the above analysis of the MND system, in the category *Evidence of exaggerated or fabricated psychological dysfunction,* Slick et al. seem to mixed different aspects. The category includes self-reported symptoms contradicted by behavioral observation or reliable collateral information. However, it also includes relevant information deriving from test data. Any system developed based on the MND or MPRD systems should avoid this mixture of types of inconsistencies/discrepancies in one criterion. Needless to say, I followed this advice in developing a malingering PTSD detection system based on the MND and MRPD.

As for the categories of Bianchini et al., for *Discrepancy between self-report of pain and physiological reactivity*, in developing my malingered PTSD detection system, aside from slightly altering the name of the category to reflect PTSD rather than pain, I provided equivalent examples related to PTSD rather than pain. For compelling inconsistencies, I considered that these could occur anywhere in the evaluation and not just in terms of behavioral observations. This led me to create the distinction between compelling/marked/substantial inconsistencies/discrepancies and moderate/nontrivial ones. Finally, for the examples Bianchini et al. provided that are more medically-based, such as the JAMAR test and the Waddell signs, I did

Table 5.2 Discrepancies in analyzing data in the MND model of Slick et al. (1999)

Source	Examples
Psychological testing	1. Discrepancy between test data and known patterns of brain functioning
	2. Discrepancy between test data and observed behavior
	3. Discrepancy between test data and reliable collateral reports
	4. Discrepancy between test data and documented background history
Self-report	1. Self-reported history is discrepant with documented history
	2. Self-reported symptoms are discrepant with known patterns of brain functioning
	3. Self-reported symptoms are discrepant with behavioral observations
	4. Self-reported symptoms are discrepant with information obtained from collateral informants
	5. Evidence of exaggerated or fabricated psychological dysfunction

Adapted from Slick et al. (1999)
Abbreviation. MND Malingered Neurocognitive Dysfunction

not include them directly in developing my own systems. However, I included categories related to examinations by other professionals in which examples such as these could be used.

In the systems that I developed for malingering detection for PTSD, like Bianchini et al. for their pain system, I expanded the category *Discrepancy between test data and known patterns of brain functioning*. Also, the examples provided go beyond cognitive ones for test data. In addition, I expanded examples for known brain patterns by adding examples for physiological knowns.

To review, Slick et al. had listed nine types of inconsistencies/discrepancies and most related to the two classes of (a) test data and (b) self-report in relation to other types. As for Bianchini et al., they had listed ten types of inconsistencies/discrepancies. They were divided into three categories, not two as in Slick et al., and half of them concerned self-report. Based on this framework, I proceeded to a compare/contrast format of the MND and MPRD systems in order to develop my own.

5.3.5 Comparing Inconsistencies/Discrepancies in the MND and MPRD Models

Although in their model Bianchini et al. (2005) altered and improved the inconsistencies and discrepancies that had been used by Slick et al. (1999) in theirs, there still remained room for improvement. In what follows, I offer some pertinent commentary on select issues related to the MND and MPRD approaches to inconsistencies/discrepancies. The inconsistencies/discrepancies included in their systems are reviewed in Tables 5.2 and 5.3. In their inconsistency/discrepancy systems, I note the following points that need clarification in any revised system of malingering detection.

(a) In the Slick et al. and Bianchini et al. MND and MPRD systems, self-report could refer to statements made either in interview or response to questionnaires This was duly noted.

Table 5.3 Discrepancies in analyzing data in the MPRD model of Bianchini et al. (2005)

Source	Examples
Evidence from physical evaluation	1. Discrepancy between subjective report of pain and known patterns of physiological reactivity
	2. Nonorganic finding different than would be expected given the medical findings
	3. Discrepancy between the patient's physical presentation during formal evaluation and their physical capacities documented when they are not aware of being observed
	4. Discrepancy between test data and documented background history
Evidence from cognitive/perceptual (neuropsychological) testing	1. Discrepancy between cognitive/neuropsychological test data and known patterns of brain functioning
	2. Discrepancy between test data and observed behavior
Evidence from self-report	1. Compelling inconsistency in the way a patient presents when being evaluated compared with when they are not aware of being evaluated
	2. Self-reported history is discrepant with documented history
	3. Self-reported symptoms are discrepant with known patterns of physiological or neurological functioning
	4. Self-reported symptoms are discrepant with observations of behavior
	5. Evidence from formal psychological evaluation that the person has significantly misrepresented their current status

Adapted with permission of Elsevier. Reprinted from Bianchini et al. (2005), Copyright (2005), with permission from Elsevier. [Excerpt of 119 words from Table 1, Page. 412]
Abbreviation. MPRD Malingered Pain-Related Disability

(b) The term "history" was used either for pre-event background or event/post-event information, and so appeared confusing at times.
(c) Collateral information could refer to either information provided by significant others, such as spouses, or information derived from documentation.
(d) Observed behavior could refer to what was seen either in session or extra-session, constituting a type of within-category inconsistency/discrepancy rather than the between-type on which they focused, but this was not acknowledged as such.
(e) The classic inconsistency/discrepancy in mental health assessments concerns differential information provided by verbal and nonverbal channels of communication. However, this type of inconsistency/discrepancy is not included in the category of inconsistencies/discrepancies related to observed behavior.
(f) Test data could refer to clinical data, such as in neuropsychological assessment, or validity/effort performance on tests/measures/scales. These different test data sets were placed in different parts of the present systems.
(g) Inconsistencies/discrepancies pertaining to known patterns in brain functioning as described in the MND system were augmented with ones related to known physiological patterns in the MPRD system; equivalent examples are needed for any PTSD system, and should be added to a revised MND system.

(h) Inconsistencies/discrepancies focused on either test data or self-report in comparison to other types, such as collateral information, but other types of combination among the various categories were ignored, e.g., collateral information compared to documentation.
(i) The category of compelling inconsistencies was created (in the MPRD system), but applied only to the within-observation inconsistency/discrepancy category, as described.
(j) Certain evidence is considered incontrovertible toward attributing malingering, such as videographic evidence. However, such evidence might give only less clear-cut or "suspect" information and not necessarily "compelling" information, so should not be emphasized as "incontrovertible" evidence in all cases.
(k) The systems do not clearly separate frank malingering from other response biases, which appear to be conflated in the extant systems; e.g., there appears to be little boundary between malingering and definite response bias.
(l) The systems mix in one section of criteria test and inconsistency/discrepancy criteria. [In contrast, in the model I constructed, I embedded two scales related to different degrees of response bias, one mostly for the testing criteria and one for the set of criteria on inconsistencies/discrepancies. This distinction is not categorical, though the scale for inconsistencies/discrepancies indicates either how the testing criteria are altered by any inconsistencies/discrepancies or the manner in which they can be used independently.]
(m) Finally, there is no category for miscellaneous or other inconsistencies/discrepancies that do not fit anywhere else and that the astute evaluator might notice.

Overall, then, the major conclusions about the inconsistencies/discrepancies presented in the MND and MPRD systems follow.

- First, the types of inconsistencies/discrepancies in the MND and MPRD systems need more clarity in definition/examples so that they represent distinct entities.
- Second, not all types of inconsistencies/discrepancies that are possible are listed in the extant systems.
- Third, not all of the combinations possible of the types of inconsistencies and discrepancies are listed.
- Fourth, the combined system should explicitly include within- and not only across-category inconsistencies/discrepancies.
- Fifth, in reviewing the various inconsistencies/discrepancies in detail used by Slick et al. and Bianchini et al., it appears there are multiple types that overlap the two systems. They are related to: (a) standard test data; (b) self-report; (c) observations; (d) known patterns of brain functioning; (e) known patterns of physiological functioning; (f) collateral information; and (g) documented information.
- Sixth, information in these inconsistency/discrepancy categories could be about pre-event, event, or post-event factors. It might refer to either pre-event history, such as prior police or criminal record, or event/post-event symptoms, impairments, dysfunctions, and disabilities, if any.
- Seventh, the inconsistencies/discrepancies could be compelling/marked/substantial or otherwise, but no clear guidelines are offered to help distinguish the compelling type.

- Eighth, test data for the systems derive from measures of exaggeration, fabrication, and suspected malingering, such as in SVTs (symptom validity tests), but also tests like the MMPIs, which include clinical scales, as well. Better ways of combining the different types of tests data in detecting malingering need to be created.

Note that the types of inconsistencies/discrepancies that I have distilled from the two extant MND and MPRD sources are standard ones in evaluations. However, I provide the following clarifications for purposes related to the development of my own systems. Self-report refers to verbal descriptions in interview. Responses to self-report inventories are subsumed in either of the test data categories, depending on their objectives. Observations refer to evaluator observations of the evaluee, whether in session or extra-session. They could include verbal behavior, nonverbal behavior, or both (Brodsky 2013). Patterns of physiology is a category that expands the focus on the brain, as per Bianchini et al. Collateral information refers to any information not in reports provided by reliable sources, such as might be the case with certain treatment providers, work supervisors, and spouses (perhaps inadvertently revealed in the latter case). Documented information refers to information gleaned from reliable written reports or records by other professionals or sources, in particular.

To conclude, in the malingering-detection systems that I developed, I moved well beyond the types of inconsistencies/discrepancies proposed by Slick et al. and Bianchini et al., especially in having more types and more combinations, as well as permitting notation of inconsistencies/discrepancies within categories.

Finally, I have taken care to define and clarify terminology, doing so not only in this chapter and the tables presenting the systems but also in the glossary chapter toward the end of the book. In particular, in defining inconsistencies/discrepancies, I adopt a three-level system – by dividing the first tier of compelling inconsistencies into less and more extreme versions (such as when there is frank admission of malingering or videographic evidence of working after the evalueee had denied working), and creating a second tier related to moderate, nontrivial inconsistencies/discrepancies.

5.3.6 Rubenzer's (2009) System for PTSD

Rubenzer (2009) did not create a diagnostic system related to malingering, but he developed a weighting scale for tests that can be used in the detection of malingering and other biases in PTSD assessment (see Table 3.3 in Chap. 3). He referred to the measures as psychometric indicators of feigning rather than of malingering. He considered the weighting system as preliminary. For each measure, he assigned a weight of either one or two, except for the case of failure of any SVT at a level below-chance, for which he assigned the weight of five. This decision is consistent with the importance given in the literature to below-chance level failure on forced-choice tests.

It is informative to see that Rubenzer listed tests from all the major categories in the literature – personality tests, stand-alone tests, and cognitive tests as might be used in neuropsychological evaluation. He had not organized the tests in these categories, but I arranged them this way in the table. It is also informative to see that he allowed several indicators/scales/measures to be taken for weighting from one instrument, such as was the case for each of the personality tests listed, as well as the SIRS. In the diagnostic system that I developed, I followed the same procedures of integrating the different types of feigning-detection instruments and allowing more than one index from critical tests, such as the MMPIs.

5.4 Creating a New Malingering Detection System for PTSD

5.4.1 Principles

The model proposed in the present work for evaluating whether there is non-credible, feigned, or malingered PTSD-related presentation or performance response bias is called the Feigned Posttraumatic Stress Disorder Disability/Dysfunction system (F-PTSDR-D). It was constructed with certain scientifically-informed principles derived from: (a) the analyses above pertaining to the MND and MPRD systems; (b) supporting conceptualization or research presented in this monograph; or (c) logical procedures to fill gaps in the extant systems. The principles used in its construction have included the following.

(a) The F-PTSDR-D model expands the range of malingering and related biases by placing them on a continuum of seven categories – from the categories of definite malingering to absent response bias, while placing the definite, probable, and possible negative response bias categories between these extremes, and adding another one of minimal negative bias. In addition, there is an intermediate point between the probable and possible negative bias points related to the so-called gray zone. These categories are consistent with the categories contained in the normative model of malingering and related biases that has been presented in this chapter for purposes of a proposed survey of malingering and related response biases.
(b) The F-PTSDR-D system clarifies how not only test results related to failing/missing critical thresholds but also inconsistencies/discrepancies in evaluee presentation and performance can be used in determining whether malingering and related biases should be attributed. The extent of types of inconsistencies/discrepancies that I have used in the system created, as per the analysis above, as well as their combinations and within-type inconsistencies/discrepancies, indicates that they can even be used to specify compelling, marked, substantial inconsistencies/discrepancies as primary indices of malingering and related biases when psychological tests have not or cannot be used for that purpose.

This careful approach to defining the inconsistencies/discrepancies will help psychiatrists and other mental health professionals use the system, given their lack of knowledge of and training in using psychometric, psychological tests.

I created a model of inconsistencies/discrepancies that was the same for PTSD, pain, and TBI, but I had to create some examples that were PTSD-specific, just as Bianchini et al. had created some pain-specific examples for the MPRD. These examples concerned response to psychological and pharmacological interventions, in particular. I also used them in the revised MND model that I developed after creating the F-PTSDR-D system.

(c) The F-PTSDR-D system includes in one rating scheme various types of psychological tests, for example: (i) personality inventories, such as the MMPI family ones; (ii) stand-alone validity/effort tests, including forced-choice ones that have two relevant criteria – at or below-chance accuracy level (e.g., in a two-alternative test) and a less rigorous pass-fail level (related to cut scores), and (iii) embedded measures in cognitive/neurological tests, such as those related to digit span. Other malingering diagnostic systems include all these types of measures, but not in the comprehensive, scaled ways indicated.

(d) The present system provides a comprehensive list of 60 rules for weighting the tests/measures/scales/indicators so that they are used effectively. Moreover, I make recommendations for which ones to use, based on Rubenzer (2009) and other pertinent literature. Aside from forced-choice measures, cognitive/neuropsychological ones, specialized, dedicated ones for PTSD (and pain), they include the MMPI family and the SIRS family, in particular.

Research is needed to establish which combinations of instruments provide the best data for the question at hand, and are independent to the needed degree (normally, have little correlation), so that they reflect evaluation of different psychological and cognitive domains.

However, when tests/measures/scales/indicators demonstrate moderate correlations, I contend that they still can be used in the present diagnostic system. Although it can be inferred that they might tap some common construct if moderately correlated, this degree of correlation still allows for them to represent somewhat independent constructs. Moreover, in terms of using a multitrait-multimethod approach in the forensic disability and related context, it is appropriate to administer more than one test/measure/scale/indicator related to any one psychological domain being tested, assuming the correlations involved are not excessively high.

(e) The cautions given at the end of the new system are elaborate, and are meant to assure the reliability and validity in the application of the system and its fairness. For example, I qualify the inclusion and exclusion rules and refer to alternate explanations, cultural factors, etc.

(f) As an introduction to the specifics of the new system and in order to reinforce the notion that it respects and builds on the work of Larrabee (2012), in the following, the diverse ways that the levels in the system related to definite malingering, definite response bias, and probable response bias are summarized briefly.

Normally, 5–8 failed test results are needed for malingering and related attributions when there is nothing else in the assessment at hand, such as no forced-choice test failures, no extremely high scores on validity indicators, no inconsistencies/discrepancies in the file, no overall impression indicative of feigning in the file, etc. However, personality inventories, such as the MMPI-2-RF, can contribute up to four of the five validity indicator failures. Moreover, even clinical patterns on them can be used in system ratings.

Aside from cases with extremely compelling evidence, such as frank admission or indisputable videographic evidence, definite malingering can be attributed in cases in which (a) two or more forced-choice measures are failed at the below-chance level, or (b) there are five or more test failures on other valid psychometric measures, or (c) there are three or more compelling inconsistencies, (d) any combinations of these types of evidence are found, or (e) other evidence replaces the weighting of these three types of evidence, such as extreme scores on valid psychometric tests or an overall judgment of the file that adds weight. When the latter obtains then, when numerical data can be gathered, three test failures could be sufficient to attribute malingering, everything else being equal. These decisions render the present system equivalent to a degree to Larrabee's (2012).

As for assigning definite response bias, the criteria above apply, except that they involve one-forced choice test, not two, four other tests, not five or more, and two compelling inconsistencies, not three or more, with none of the extreme nature involved. In terms of probable response bias, the criteria exclude forced-choice test failure, but consider three other test failures, not four, and one compelling inconsistency, not two.

To conclude, the reader will note that Larrabee (2012) emphasized three if not two failures on relevant tests as very strong evidence of malingering., All things considered, the present system arrives at a protocol that might give a comparable weighting to such test failures.

(g) For inconsistencies/discrepancies, the system includes a three-level system of degree, with the first two constituting the compelling first tier, and the last one constituting the second lesser tier; The levels of inconsistencies/discrepancies in the present system then are: (a) most or extremely compelling, as per frank admission, videographic evidence, etc.; (b) compelling with respect to other file material that is to the level of a marked/substantial inconsistency/discrepancy; and (c) moderate/nontrivial ones.

After establishing these general considerations, I made the following specific changes to the MND and MPRD systems in developing the F-PTSDR-D model.

5.4.2 Specific Changes to the MND/MPRD Systems

1. Aside from below-chance performance on a forced-choice measure, definite negative response bias can be assigned based on performing below cut-off on

five or more well-validated tests designed to measure psychiatric/psychological exaggeration or fabrication.
2. The sequence of definite, probable, and possible response bias involves failing four, three, and two such tests, respectively.
3. The measures to detect feigning/malingering and related biases might derive from any of personality inventories, stand-alone tests, and those aimed at detecting improbable symptoms and the like (e.g., SIRS-2).
4. Other measures might be informative in this regard, such as PTSD-dedicated ones (DAPS, Detailed Assessment of Posttraumatic Stress; Briere 2001) and embedded cognitive (neuropsychological) indices.
5. Where warranted, and if properly validated for the question at hand, the most recent, valid tests should be used, such as the MMPI-2-RF, the SIRS-2, and the TSI-2 (Trauma Symptom Inventory, Second Edition; Briere 2011). [Note. As of 2014, the evidence supports use of the MMPI-2-RF in the present system but not yet the SIRS-2 or the TSI-2.]
6. Inconsistencies/discrepancies in self-report, reliable documents, collateral information, behavioral observations, etc., that are compelling, marked, and substantial, in particular, are adjunct sources of valid data in malingering determinations. When psychological testing is impossible, inconsistencies/discrepancies can be used by themselves to determine malingering and other response bias. This would allow psychiatrists and other mental health workers to use the system, albeit with less data available.
7. Causality needs to be considered, as well, as part of non-testing factors; for example, pre-existing and/or extraneous, nonevent-related concurrent causal factors could fully explain an evaluee's presentation and performance after an index event.
8. Provisos are added that the diagnostic system should be used prudently and conservatively because of the harm that could be caused by false attributions of malingering and related biases.
9. The data set gathered should be comprehensive, scientifically-informed, and impartial, and interpretations should consider all the reliable data from a scientific reasoning basis.
10. Motivation should not be imputed, for example, that malingering is present, without irrefutable or incontrovertible evidence. However, the astute assessor will know how to use language that denies the credibility of the patient, and even to significant degrees, when the data warrant this conclusion. In this regard, the system is meant to cover the full range of response biases, from mild exaggeration to clearly malingered, so that unlike the case for MND and MPRD, its title involves the word "feigned" instead of "malinger."

Given these principles in construction, the F-PTSDR-D model of trauma-related response bias determination that has been proposed in Table 3.2 adds to the models needed to cover the three major psychological injuries – TBI (with the MND), pain (with the MPRD), and PTSD. Moreover, in what follows, I show how the PTSD system that I developed can be modified to replace those for neurocognitive and pain disability/dysfunction (to replace the MND and MPRD – the F-NCR-D and the F-PR-D systems, respectively).

All relevant changes from the pain-related MPRD system of Bianchini et al. (2005) are italicized in the research version in Table 6.1 for the present application to malingered PTSD and related presentations and performances. These italics reveal the scope of the changes that I instituted and the careful, scientific approach used. The F-NCR-D and the F-PR-D systems are presented in Chaps. 28 and 29, with a user version without italics of the P-PTSDR-D in Chap. 27.

5.5 Criteria for a System of Detecting Non-credible, Feigned, or Malingered Posttraumatic Stress Disorder Related Disability/Dysfunction (F-PTSDR-D)

5.5.1 The F-PTSDR-D Model

Although "diagnostic" systems have been developed for feigned neurocognitive dysfunction and for pain-related disability (respectively; MND, Slick et al. 1999; MPRD, Bianchini et al. 2005), an equivalent system has not been developed for PTSD-related symptoms, disorders, dysfunctions, and disabilities. Therefore, based on the MND and MPRD models, in particular, and as outlined in Table 5.4, I propose in Table 27.1 in Chap. 27 a model of (F-PTSDR-D; as indicated, Table 6.1 in Chap. 6 presents the research version that indicates in italics changes to the MPRD system that served as a basis for developing the system, and Table 27.1 in Chap. 27 presents a user's version with the italics removed). In developing the model, I considered the criticisms and recommendations of the MND model presented in the exchange by Rogers, Boone, and colleagues (Boone 2011; Rogers et al. 2011a, b), as well as my analysis of the two systems as presented in this chapter and the work of Rubenzer (2009) on testing for malingered PTSD. Moreover, I worked from the framework of creating scientifically-based systems that would be equally acceptable to plaintiff and defense, or all sides and workers/stakeholders in the adversarial divide and the legal oppositions that characterize the field.

In the following, I describe in more detail some of the specific details included in the PTSD malingering detection model that I developed.

5.5.2 Major Parameters of the F-PTSDR-D Model

(a) The F-PTSDR-D model includes four major criteria – (A) evidence of significant external incentive, (B) evidence from psychological testing, (C) evidence from inconsistencies/discrepancies, and (D) supplemental considerations. The evidence for external incentive does not have to be directly ascertained but can be inferred from context. In the forensic disability and psychological injury context, it is fair to assume that the motivation to malinger for financial gain is

Table 5.4 Outline of proposed criteria for non-credible Feigned Posttraumatic Stress Disorder and Related Disability/Dysfunction (F-PTSDR-D)

Criterion A: Evidence of significant external incentive

Criterion B: Evidence from psychological testing

A. Different Degrees of Certainty of Response Bias, According to Psychological Testing

(A1) Definite Malingering

The evidence is incontrovertible

(A2) Definite negative response bias

e.g., Below chance performance ($p < .05$) on one forced choice measure

(A3) Probable negative response bias

(A3-4) Intermediate (Probable to possible, gray zone) negative response bias

(A4) Possible negative response bias

(A5) Minimal negative response bias

(A6) No evident response bias

Weighting Rules for Test Batteries

60 rules are quite explicit:

Rule 1: Two pathways; Rule 2: Forced-choice; Rule 3: Tests; Rule 4: MMPI family; Rule 5: Other tests needed; Rule 6: Improbable symptoms, etc.; Rule 7: PTSD; Rule 8: Pain; Rule 9: Cognitive (embedded); Rule 10: 10–15 Primary; Rule 11: 5–8 Critical; Rule 12: Not at cut-off; Rule 13: Neuropsychology; Rule 14: Supplementary tests; Rule 15: Secondary information; Rule 16: Pattern analysis; Rule 17: Limited cognitive testing; Rule 18: Neuropsychological path; Rule 19: Test independence; Rule 20: Prioritizing; Rule 21: Exception 1; Rule 22: Exception 2; Rule 23: Exception 3; Rule 24: Exception 4; Rule 25: Maximum use 1; Rule 26: Omnibus tests; Rule 27: Dedicated tests; Rule 28: Nondedicated tests; Rule 29: Maximum use 2; Rule 30: Adjusted rating, lowering it; Rule 31: Adjusted rating, raising it; Rule 32: Patterns; Rule 33: Preselection; Rule 34: Fishing expeditions; Rule 35: No exceptions; Rule 36: Ecological validity; Rule 37: Warnings; Rule 38: Qualifications; Rule 39: State-of-the-art; Rule 40: No harm; Rule 41: Cognitive/Neuropsychological testing; Rule 42: Rating cognitive/neuropsychological tests; Rule 43: Cognitive/Neuropsychological and Regular rating; Rule 44: Positive results for only one of the two paths; Rule 45: Cognitive/Neuropsychological path alone; Rule 46: Test selection; Rule 47: Minimal testing; Rule 48: Less than minimal testing; Rule 49: Less testing yet doing enough; Rule 50: Larrabee (2012); Rule 51: Justify less testing; Rule 52: Supplementary evaluators; Rule 53: Seconding team work; Rule 54: Leading team work; Rule 55: Interdisciplinary assessments; Rule 56: Specific dedicated tests; Rule 57: Altering rules on testing and test battery; Rule 58: Special populations; Rule 59: Consider whole file; Rule 60: Combining test data with inconsistencies/discrepancies

Criterion C: Evidence from Inconsistencies/Discrepancies

(a) Inconsistencies/Discrepancies in Conjunction with Testing

(a1) Inconsistency/Discrepancy between cognitive/neurocognitive test data and known patterns of brain functioning. (Inconsistency #1)

(a2) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of PTSD-related symptoms after event at claim and known patterns of physiological reactivity. (Inconsistency #2)

(a3) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data and self-report. (Inconsistency #3)

(a4) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of PTSD-related symptoms after event at claim and verbal and/or nonverbal observed behavior/symptoms/complaints/limitations/functions. (Inconsistency #4)

(continued)

Table 5.4 (continued)

(a5) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data and information reported by reliable informants/collaterals. (Inconsistency #5)
(a6) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of PTSD-related symptoms after event at claim and information reported in reliable documents. (Inconsistency #6)
(b) Inconsistencies/Discrepancies in Conjunction with Self-Report (other than with testing)
Inconsistency/Discrepancy between such self-report and any of the following:
(b1) Known patterns of brain function. (Inconsistency #7)
(b2) Known patterns of physiological function. (Inconsistency #8)
(b3) Observed behavior/symptoms/complaints/limitations/functions. (Inconsistency #9)
(b4) Information reported by reliable informants/collaterals, such as primary care physicians and spouses. (Inconsistency #10)
(b5) Information reported in reliable documents, such as by primary care physicians and other mental health professionals. (Inconsistency #11)
(c) Inconsistencies/Discrepancies in Conjunction with Observations (other than with testing and with self-report)
Inconsistency/Discrepancy between such observations and any of the following:
(c1) Known patterns of brain function. (Inconsistency #12)
(c2) Known patterns of physiological function. (Inconsistency #13)
(c3) Information reported by reliable informants/collaterals. (Inconsistency #14)
(c4) Information reported in reliable documents. (Inconsistency #15)
(d) Inconsistencies/Discrepancies in Conjunction with Collateral Information (other than with testing, self-report, and observations)
Inconsistency/Discrepancy between such information and any of the following:
(d1) Known patterns of brain function. (Inconsistency #16)
(d2) Known patterns of physiological function. (Inconsistency #17)
(d3) Information reported in reliable documents. (Inconsistency #18)
(e) Inconsistencies/Discrepancies in Conjunction with Documentation (other than with testing, self-report, observations, and collateral information)
Inconsistency/Discrepancy between such documentation and any of the following:
(e1) Known patterns of brain function. (Inconsistency #19)
(e2) Known patterns of physiological function. (Inconsistency #20)
(f) Inconsistencies/Discrepancies Within Major Data Sources (not between them which are scored above)
(f1) Known patterns of brain function (Inconsistency #21)
(f2) Known patterns of physiological function. (Inconsistency #22)
(f3) Self-report. (Inconsistency #23)
(f4) Observed behavior/symptoms/complaints/limitations/functions. (Inconsistency #24)
(f5) Information reported by reliable informants/collaterals. (Inconsistency #25)
(f6) Information reported in reliable documents. (Inconsistency #26)
(g) Other, Miscellaneous Inconsistencies/Discrepancies
(g1) No causality attributable to the event at claim, despite the evaluee's insistence. (Inconsistency #27)
(g2) Only minimal causality attributable. (Inconsistency #28)
(g3) Material-level causality but not to the degree insisted. (Inconsistency #29)
(g4) Other. (Inconsistency #30)

(continued)

Table 5.4 (continued)

B. Different Degrees of Certainty of Response Bias, According to Inconsistencies/ Discrepancies
(B1) Definite Malingering
(B2) Definite negative response bias
(B3) Probable negative response bias
(B3–4) Intermediate (Probable to possible, gray zone) negative response bias
This list can be used in Intermediate Negative Response Bias
(a) Personality disorder of a problematic nature
(b) Blaming everyone and anything, overly suspicious
(c) Not trying to mitigate loss
(d) Unduly adopting the sick role
(e) Somatization
(f) Failure to treat substance abuse impeding progress
(g) Failure to take recommended medications
(h) Refusing a work-hardening trial, modified duties, retraining
(i) Catastrophizing/crying out for help
(j) Any other confound that is documentable, such as attorney or similar coaching
As well, five factors derived from the pre-event:
(k) Psychiatric/self harm/substance abuse history
(l) Criminal/legal/problematic military history; history of deceit/fraud
(m) History of irregularity in/dissatisfaction with work or other role at issue
(n) History of irregularity in/dissatisfaction with family, partners
(o) History of financial stresses/bankruptcies/unsupported claims
(B4) Possible negative response bias
(B5) Minimal negative response bias
(B6) No evident response bias
Criterion D: Behaviors meeting necessary criteria from groups B and C are not fully accounted for by psychiatric, neurologic, developmental, or other factors

Adapted from Bianchini et al. (2005), which in turn was adapted from Slick et al. (1999)
Abbreviations. PTSD posttraumatic stress disorder

possible. Evidence from psychological testing includes test/measure/scale/indicator data (a) directly relating to response validity/effort, as well as (b) patterns of scores on clinical aspects of testing that might be problematic. The evidence might be incontrovertible for the presence of malingering, or indicate different degrees of lesser response bias. Failing at below-chance levels on forced-choice testing is powerful evidence. As for evidence from inconsistencies/discrepancies, it might be compelling/marked/substantial or moderate/nontrivial, with the former level more powerful. Supplemental considerations include whether alternate explanations for the data obtained are evident, such as the presence of factitious disorder.

(b) The model has embedded in it two scales related to different degrees of response bias, one for the testing criteria and one for the inconsistencies/discrepancies set. They range from definite malingering to no evident response bias, but use different content as indices. This approach differs from the extant ones, where only one such sequence is provided and, in them, there are mixed test and inconsistency/discrepancy criteria.

(c) The model includes elaborate weighting rules (60 of them) for the tests/measures/scales/indicators that could be used in batteries administered in evaluations. The tests/measures/scales/indicators that could be included relate to stand-alone and embedded instruments, symptom validity tests, including forced-choice ones, and personality and dedicated tests. The rules indicate appropriate test usage, pass/fail, and other decision rules, etc.

(d) The list of inconsistencies/discrepancies is elaborate and clearly surpasses in amount those listed in the MND and MPRD models. This adds to the utility of the system and further helps evaluators not trained in testing to use it.

(e) Note that these various malingering diagnostic systems, including my own, incorporate clinical judgment in arriving at system ratings. Given that the rules for its use are clearly specified, and even carefully rated in the present system, they fit development towards acceptable actuarial methods in forensic and related malingering and disability determinations (Faust et al. 2012).

(f) The ratings of the degree of malingering or related response bias in each of the three systems that have been developed in the present work are exactly the same, and they involve seven levels, consistent with the normative model presented for the survey that I had developed. The extant MND and MPRD models had only three levels, with an absence of any bias being understood as the fourth. The three levels in those systems involve definite, probable and possible negative bias, but malingering, per se, is not included directly in their nomenclature. In the present model, I added overt malingering and minimal negative response bias, as well as an intermediate, gray zone point between probable and possible bias, thereby filling out the continuum to allow for seven levels in the ratings.

This decision is consistent with the notion that overt malingering shown by indisputable or incontrovertible evidence is one step removed from evidence for definite negative response bias. Also, it is consistent with the DSM approach to defining malingering in that it involves frank fabrication or gross exaggeration.

In this sense, in my approach I consider the level of definite negative response bias in the way it is described in the MND and the MPRD systems as akin to the level of gross exaggeration in the DSM-IV (Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition; American Psychiatric Association 1994)/DMS-5 (Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition; American Psychiatric Association 2013) definition. That is, definite response bias, as defined in extant systems should not be equated with frank malingering, because the level is test-based, in particular, and in making malingering

determinations from test data, normally only clearly incontrovertible evidence should be the criterion. However, this perspective does not deny that ratings of either definite or probable negative response bias could be frequent and represent problematic ratings that might be emphasized to a degree as clearly non-credible in conclusions to evaluations, nor that all the evidence in an evaluation might lead the evaluator to conclude that malingering has taken place.

Further, the category of intermediate, gray zone response bias between possible and probable response bias that I have added to the system gives it increased flexibility. It allows for indeterminate, ambiguous profiles to be judged as likely problematic and non-credible, depending on the nature of the evidence gathered in a case.

(g) The innovation of the model to specify that gray zone, or intermediate, indeterminate classification is possible corresponds to the real world of evaluees and evaluators, giving the system ecological and face validity. It is often difficult to decide where evaluees rate with respect to response bias. The list of indices that can be used to attribute gray zone status to evaluees includes multiple factors, and is extensive enough to facilitate broad use of this category.

In research, the standard has been to combine definite and probable negative response bias into one category labeled malingering and to distinguish results pertaining to the combined category with the remainder of the participants in the study. However, if used in equivalent research, the present ratings system would not lead to dichotomous groups of malingerers and non-malingerers. There would be groups of malingering and definite/probable negative response bias but also others, such as a group of intermediate, gray zone, or probable/possible negative response bias evaluees. In the real word of forensic disability and related evaluations, this latter type of evaluee is probably quite frequent, yet not enough is known about them in terms of relevant research. By adding this type of category to the present system, it opens important avenues in research on indeterminate cases of malingering.

(h) The key terms in the model are defined/described in the glossary chapter and elsewhere in the book. These definitions and their discussion, as well as the comprehensive and rigorous manner in which the system was constructed, allows for careful training of professionals wishing to use the system and of students wishing to learn it.

(i) Some of the critical recommendations made to improve the MND and MPRD systems have been incorporated in the present PTSD model. Other relevant modifications have been added. This makes the system likely to obtain superior psychometric properties related to reliability and validity, aside from the goal of leading the way in utility.

(j) The F-PTSDR-D model includes conceptual changes and innovations that permitted the proposed revisions of the MND and MPRD models so that the three systems appear uniform in structure, categories, criteria, etc. Therefore, the three models (F-NCR-D, F-PR-D, F-PTSDR-D) avoid inconsistencies in their use that might arise in the case of polytrauma and co-morbidities. Below, I provide tentative guidelines along these lines, for example, relating to the

order in which the systems should be used in cases of polytrauma/co-morbidities and how to avoid unnecessary overlap or duplication.

(k) Although the present PTSD model for malingering detection is much more comprehensive than the MND and MPRD models, and has many specific rules in its use with multiple examples provided, it must be emphasized that it could not have been developed without the excellent models and criteria for malingering and related biases that had been developed in the prior work [by Slick et al. (1999; for the MND), Bianchini et al. (2005; for the MPRD), and Rubenzer (2009) on tests for malingered PTSD].

5.5.3 The 60 Testing Rules of the Present System

As for the nature of the 60 rules included in the present system for test use, they have been constructed to apply equally to the system developed for PTSD and its alteration for conditions of pain and TBI. The rules were constructed according to ten pertinent principles and parameters, as specified in the following.

(a) There are two tracks in the system, Regular (for PTSD, pain) and Neuropsychological/Cognitive.

(b) There are multiple test types, including forced-choice, personality, and dedicated. They can be used in the system if scientifically supported for the question at hand.

(c–e) Some test types are more critical than others, e.g., forced-choice; some criteria more critical than others, e.g., below-chance performance; and some tests more reliable and valid than others for the purposes at hand, e.g., the MMPI-2-RF.

(f) Any one test can provide one to several validity indicators, depending on the research findings in the area.

(g) The tests should include 10–15 primary measures specified beforehand, with 5–8 positive findings, and at most 3–4 from any one instrument, needed to conclude significant feigning or related response bias, including of malingering.

(h) Tests that are correlated can be used within specified limits and their acknowledgment.

(i) Malingering can be concluded only when there is incontrovertible evidence after examination of the full reliable data set gathered.

(j) In general, test selection and score interpretations must be undertaken scientifically, impartially, and comprehensively, while considering the limits of the evaluees.

In terms of the categories within which the 60 rules fall, they group in the following ways. (a) Pathways/tracks in the system: 1, 13, 17, 18; (b) Testing/tests: 2–9, 26–28, 56: (c) Criteria: 10–12, 25, 29; (d) Supplementary/secondary factors: 14–16; (e) Independence/correlation: 19–24; (f) Rating adjustment: 30–32; (g) Test preselection:

33–35; (h) Administration: 36–40; (i) Cognitive/Neuropsychological: 41–45; (j) Less testing: 46–50; (k) Comparison with Larrabee: 51; (l) Evaluators: 52–55; (m) Altering system: 57–58; (n) Using all the data: 59–60.

5.5.4 Integrating the Ratings of the Models

When there is claimed co-morbidity or polytrauma that is being evaluated for malingering or related bias, two to three of the present systems might be used simultaneously. Priority rules are provided, as well as how to handle overlap.

First, given the complexity of cognitive-neuropsychological assessment relative to PTSD and pain-related assessment, the mental health evaluator should start with establishing standing on the F-NCR-D model. Cognitive/neuropsychological assessments might use many of the tests required to assess malingering and related biases with respect to PTSD and/or pain, as well.

Second, even if the evaluee does poorly according to these criteria for F-NCR-D, a second system related to detecting malingering and related bias should be applied. If there are just two of the three systems at issue, the choice of the second one is straightforward. However, if there is both PTSD and pain-related ratings required, the evaluator should start with the pain one because it is more complex than the one for PTSD, given the physical symptom and limitations involved. The second system used might require just a bit of extra testing relative to that already administered for the cognitive-neuropsychological assessment.

Third, the pain system will require access to medical records, or working with assessors such as pain specialists or chiropractors. In this regard, if there are two sets of records, one from plaintiff and one from defense–oriented assessors, and their results and conclusions are in opposition, the mental health professional must tread carefully.

Fourth, tests/measures/scales/indicators used to arrive at ratings in one system or the other should not be duplicated. The scores from the evaluation in one system can be transferred to another. However, when the different evaluations are conducted at separate time periods, for example, if different evaluators are involved, the lapse of time involved might require some duplicate testing, especially if test results are unavailable to the second assessor.

When the ratings for two or three systems reach the threshold of probable negative response bias or higher, overall conclusions about the co-morbidities/polytrauma involved might be easier to arrive at. However, when only one of the two or three ratings involved reach that threshold, the evaluator should examine the full data gathered before deciding on the general conclusions. It is possible that the partial non-credible, feigned ratings involved indicate a partial malingering or negative response bias in one domain. However, the assessor might want to use language that casts some doubt on the findings for the other domain(s), as well. Nevertheless, in such cases, the evaluator should be careful to avoid overemphasizing a general non-credibility or feigning.

5.6 Chapter Conclusion

I have developed a system to detect feigning, malingering, gross exaggerations, and different degrees of response bias for each of the major psychological injuries (PTSD, pain, TBI) that are subject to assessment in forensic psychiatric/psychological disability and related contexts (respectively, F-PTSDR-D, F-NCR-D, and F-PR-D, with the latter system being applicable to cases other than TBI that involve primarily a cognitive component). See the next chapter for the research version of the system for PTSD and see Chaps. 27, 28, and 29 for the specific tables presenting the system for practical use and Chap. 30 for a glossary of terms presenting key terms used in the tables.

Because the three systems that I have developed are meant to represent a unified model of feigning/malingering and response bias that covers the major psychological injuries, and because they are quite similar in content and structure, I suggest that they be given an integrating name, such as the Psychological Injury Disability/Dysfunction – Feigning/Malingering/Response Bias System (PID-FMR-S).

The three systems have been rationally derived without empirical confirmation of their reliability or validity. However, in this regard, the systems to which they are aimed at replacing or complementing (i.e., the MPRD and MND systems) were initially presented without reliability and validity data in their support, and research undertaken with them since then in these regards has been scattered and limited to only certain of its criteria (Rogers et al. 2011a). Moreover, the three systems that I have proposed have certain advantages – on the one hand, they are built on the other systems, so account for their limitations, while adding other valid aspects and, on the other hand, they have been constructed to be scientifically-informed and comprehensive yet user-friendly, so are likely to yield research results supporting their reliability, validity, and utility.

Note that users of the present malingering diagnostic systems might focus on one of the three in their practice. Moreover, by learning one of them well, to note that only a few specific examples differentiate the three systems. In this regard, Table 5.5 provides the examples used to specify how the systems can be used for cases of detecting malingering and related negative response biases for each of neurocognition/neuropsychology/TBI, pain, and PTSD.

In addition, aside from the issue of differing examples, in developing the systems, there were other minor but relevant changes in the text that were made related to keeping the terms of cognition, PTSD, and pain specific to the diagnostic system involved. Note that there are too many of these to put in tabular format.

Finally, the malingering detection systems that have been developed can be used by mental health professionals without competence in administering, scoring, and interpreting psychological tests, such as psychiatrists. The latter will find inclusion of clear procedures related to clinical judgment particularly useful. Note that the proposed systems include detailed procedures relating to rating clinical judgment. In this regard, they complement the rules on test usage in the system, and help in their development toward reliable, valid, and useful actuarial systems that are more accurate than use of clinical judgment alone in clinical psychology (Faust et al. 2012).

Table 5.5 Specific examples that distinguish the systems in Feigned Neurocognitive Related Disability/Dysfunction (F-NCR-D), Feigned Pain Related Disability/Dysfunction (F-PR-D), and Feigned Posttraumatic Stress Disorder Disability/Dysfunction (F-PTSDR-D)

System	Item	Example
F-NCR-D	a2i	That are associated with cognitive interference
	a2ii	No increase in fatigue signs during extensive cognitive tasks
	a4ii	A well-educated patient who presents with no significant visual-perceptual deficits or language disturbance in conversational speech performs in the severely impaired range on verbal fluency and confrontation naming tests
	a5i	A patient handles all family finances but is unable to perform simple math problems in testing
	a6ii	A patient with no documented history of CNS trauma or disease consistently obtains verbal memory scores in severely impaired range after a motor vehicle accident
	b2	Extensive fatigue during easiest of cognitive tasks despite no reported sleep loss and no sign of even the claimed MTBI
F-PR-D	a2i	Endorses items related to extreme pain but there is no report of pain expressions/need for analgesic medications in the ambulance, at the hospital, or shortly thereafter
	a2ii	Evaluee endorses items related to extreme pain but there is no postural adjustment at all in a one-hour psychotherapy session
	a4ii	Evaluee endorses items indicating extreme pain in driving yet is observed to/indicates that driving to and from the session was okay
	a5i	Evaluee endorses items indicating extreme pain in driving yet is reported by spouse to drive without a problem
	a6ii	There is no documented history of psychological trauma in the ambulance or ER reports yet the evaluee consistently endorses items of extreme pain in the ambulance, at the hospital, pr shortly thereafter
	b2	Pain complaints by themselves should not be able to elicit marked/substantial or moderate/nontrivial complaints of remote memory loss
		Pain complaints should not be able to elicit repetitive nightmares that exactly repeat the traumatic event and no other nightmares
F-PTSDR-D	a2i	No heart-rate increase with significant change in subjective traumatic reaction report
	a2ii	No increase in neurovegetative signs during exposure therapy or systematic desensitization
	a4ii	Evaluee endorses items indicating extreme fear in driving yet is observed to/indicates that driving to and from the session was okay
	a5i	Evaluee endorses items indicating extreme fear in driving yet is reported by spouse to drive without a problem
	a6ii	There is no documented history of psychological trauma in the ambulance or ER reports, yet the evaluee consistently endorses extreme traumatic reactions in the ambulance, at the hospital, or shortly thereafter
	b2	PTSD complaints by themselves should not be able to elicit marked/substantial or moderate/nontrivial complaints of remote memory loss
		PTSD complaints should not be able to elicit repetitive nightmares that exactly repeat the traumatic event and no other nightmares

Note. Refer to Tables 27.1, 28.1, and 29.1 for presentation of full systems

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Chapter 6
Diagnostic System for Malingered PTSD and Related Response Biases: Details in Tabular Format

6.1 Introduction and Conclusion

This chapter consists of one long table on the F-PTSDR-D (Feigned Posttraumatic Stress Disorder Disability/Dysfunction) for the detection of feigned/malingered PTSD that was described in Chap. 5. It incorporates multiple corrections and additions relative to the extant systems on which it is based (MND, Malingered Neurocognitive Dysfunction; MPRD, Malingered Pain-Related Disability; respectively, Slick et al. 1999; Bianchini et al. 2005). It considers all possible contingencies and includes very specific rules and procedures both for testing and considering inconsistencies/discrepancies in the file. Therefore, it is about 10 times as long as the MND and MPRD systems, which will facilitate determining that it is both reliable and valid, as well as useful.

It constitutes the first diagnostic system applicable to the detection of feigned/malingered PTSD, in that the MND and MPRD systems concern neurocognition and pain, respectively. It was constructed to permit easily its revision for cases of neurocognition and pain, and Chaps. 28 and 29 present the revised systems for use in these areas (see Tables 28.1 and 29.1, respectively). This chapter presents the research version of the system, in which changes to the MPRD system on which it is directly based are indicated in italics. A user's version without italics is presented in Table 27.1 of Chap. 27.

The systems have been created to be useful to mental health professionals who are not competent in psychological testing. In this regard, psychiatrists and other workers in the field can use the systems. I inclusion of extensive procedures in evaluating inconsistencies/discrepancies in evaluee files will especially help in these regards.

G. Young, *Malingering, Feigning, and Response Bias in Psychiatric/Psychological Injury*, International Library of Ethics, Law, and the New Medicine 56,
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Table of Terms and Sources

Abbreviation	Name	Source(s)
BASC-2	Behavior Assessment System for Children, Second Edition	Reynolds and Kamphaus (2004)
BBHI-2	Brief Battery for Health Improvement, Second Edition	Disorbio and Bruns (2002)
BHI-2	Battery for Health Improvement, Second Edition	Bruns and Disorbio (2003)
DAPS	Detailed Assessment of Posttraumatic Stress	Briere (2001)
DSM-IV-TR	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision	American Psychiatric Association (2000)
Fb	Infrequent Responses, back	Ben-Porath and Tellegen (2008/2011)
FBS	Symptom Validity Scale (originally called Fake Bad Scale)	Ben-Porath and Tellegen (2008/2011), Lees-Haley et al. (1991)
F-NCR-D	Feigned Neurocognitive Related Disability/Dysfunction	Young (2014); present work
Fp(-r)	Infrequent Psychopathology Responses	Ben-Porath and Tellegen (2008/2011)
F-PR-D	Feigned Pain Related Disability/Dysfunction	Young (2014); present work
F-PTSDR-D	Feigned Posttraumatic Stress Disorder Disability/Dysfunction	Young (2014); present work
HHI	Henry-Heilbronner Index	Henry et al. (2006)
K	Adjustment Validity, Correction scale	Bianchini et al. (2005)
L	Uncommon Virtues, Lie scale	Bianchini et al. (2005)
MENT	Morel Emotional Numbing Test	Morel (1995, 1998)
M-FAST	Miller Forensic Assessment of Symptoms Test	Miller (2001)
MMPI	Minnesota Multiphasic Personality Inventory	Hathaway and McKinley (1943)
MMPI-2	Minnesota Multiphasic Personality Inventory, Second Edition	Butcher et al. (1989, 2001)
MMPI-2-RF	Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form	Ben-Porath and Tellegen (2008/2011)
MND	Malingered Neurocognitive Dysfunction	Slick et al. (1999)
MPRD	Malingered Pain-Related Disability	Bianchini et al. (2005)
PAI	Personality Assessment Inventory	Morey (1991, 2007)
PID-FMR-S	Psychological Injury Disability/Dysfunction – Feigning/Malingering/Response Bias System	Young (2014); present work
-r	Revised (e.g., FBS-r)	Ben-Porath and Tellegen (2008/2011)
RBS	Response Bias Scale	Gervais et al. (2007)
RNBI	Ruff Neurobehavioral Inventory	Ruff and Hibbard (2003)
SIRS	Structured Interview of Reported Symptoms	Rogers et al. (1992)
SIRS-2	Structured Interview of Reported Symptoms, Second Edition	Rogers et al. (2010)
TOMM	Test of Memory Malingering	Tombaugh (1996)
TSI-2	Trauma Symptom Inventory, Second Edition	Briere (2011)
VIP	Validity Indicator Profile	Frederick (1997)
VSVT	Victoria Symptom Validity Test	Slick et al. (1997/2005)
WMT	Word Memory Test	Green (2005)

Table 6.1 Proposed Criteria for Non-Credible Feigned Posttraumatic Stress Disorder and Related Disability/Dysfunction (F-PTSDR-D): Research Version

Introduction

The present system has been developed to help in detection of malingering and related response bias in forensic disability and related evaluations. The system is referred to as the Psychological Injury Disability/Dysfunction – Feigning/Malingering/Response Bias System (PID-FMR-S). It is composed of three systems that are quite uniform – the Feigned Posttraumatic Stress Disorder Disability/Dysfunction (F-PTSDR-D), the Feigned Neurocognitive Related Disability/Dysfunction (F-NCR-D), and the Feigned Pain Related Disability/Dysfunction (F-PR-D) systems. These three systems cover the major psychological injuries of PTSD, pain, and TBI, respectively. The systems should be used as part of comprehensive evaluations that use state-of-the-art testing and search for inconsistencies/discrepancies. The overall system has been constructed as an impartial, middle-of-the-road one that is scientifically-informed. It is published in the book by the system's author, Gerald Young (Malingering, Feigning, and Response Bias in Psychiatric/Psychological Injury: Implications for Practice and Court; Springer Science + Business Media, 2014). In the book, Young considers alternate systems and builds on them (for neurocognition, the Malingered Neurocognitive Dysfunction, MND, Slick et al. 1999; for pain, the Malingered Pain-Related Disability, MPRD, Bianchini et al. 2005). In addition, the book reviews the literature on malingering, especially in Larrabee (2012b) and Reynolds and Horton (2012).

Aside from examining the MND and MPRD systems, the Young book considers the work of Larrabee (2012a), in particular. The proposals that (a) even one below-chance performance on a forced-choice test and (b) below cut-off performance on three or perhaps two validity indicators from a battery is sufficient to attribute malingering are analyzed carefully. This has led to a more conservative, middle-of-the-road approach for testing criteria in the present system. At the same time, the inconsistency/discrepancy criteria are greatly elaborated in the present system compared to other systems. Moreover, there are other checks and balances that have been included. Therefore, in many ways the present system has aspects that are comparable to the proposals by Larrabee. To conclude, even for its testing criteria, the present system does not simply dismiss the prior work but builds on it.

As an introduction to the specifics of the system and in order to reinforce the notion that it respects and builds on the work of Larrabee (2012a), in the following, the diverse ways that the levels in the system related to definite malingering, definite response bias, and probable response bias are summarized briefly.

Aside from cases with extremely compelling evidence, such as frank admission or indisputable videographic evidence, definite malingering can be attributed in cases in which: (a) two or more forced-choice measures are failed at the below-chance level; or (b) there are five or more test failures on other valid psychometric measures; or (c) there are three or more compelling inconsistencies; (d) any combinations of these types of evidence are found; or (e) other evidence replaces the weighting of these three types of evidence, such as extreme scores on valid psychometric tests or an overall judgment of the file that adds weight. When the latter obtains then, when numerical data can be gathered, three test failures could be sufficient to attribute malingering, everything else being equal.

As for assigning definite response bias, the criteria above apply, except that they involve one-forced choice test, not two, four other tests, not five or more, and two compelling inconsistencies, not three or more, with none of the extreme nature involved. In terms of probable response bias, the criteria exclude forced-choice test failure, but consider three other test failures, not four, and one compelling inconsistency, not two.

The reader will note that Larrabee (2012a) emphasized three if not two failures on relevant tests as very strong evidence of malingering. All things considered, the present system arrives at a protocol that might give a comparable weighting to such test failures.

(continued)

Table 6.1 (continued)

Overall, those who had hoped for a system that catches either most evaluees or almost no evaluees in its malingering net will be disappointed, but those who adhere to a science-first approach will find the system rational and balanced. In this regard, the system has been constructed so that its application should yield similar ratings by different raters, or good inter-rater reliability. In addition, the system appears to have the elements needed for adequate validity (e.g., construct, content, criterion). Its state-of-the-art and middle-of-the-road approach constitute important principles underlying validity.

Given these considerations, use of the present system in practice has the potential to meet admissibility criteria in court, perhaps moreso than other systems, and should serve one's practice growth in good stead. A worksheet has been developed to accompany its use. Note that through its inconsistencies/discrepancies criteria, the system should be quite helpful to mental health professionals who are not trained in psychological testing, such as psychiatrists.

Criteria

Criterion A: Evidence of significant external incentive. At least one clearly identified and substantial external incentive for *conscious* exaggeration or fabrication of symptoms is present at the time of examination (e.g., personal injury *litigation*, *workers compensation benefits*, *psychiatric/psychological* disability pension).

Criterion B: Evidence from *psychological* testing. Evidence that evaluee's *psychiatric, psychological, emotional, coping, and related* capacities as indicated by formal *psychometric* testing (e.g., in the context of psychological or neuropsychological evaluation) are consistent with exaggeration or feigning of *functional psychiatric/psychological* disability.

A. Different Degrees of Certainty of Response Bias, According to Psychological Testing

(A1) *Definite Malingering.*

(i) *The evidence is incontrovertible, even when the rest of the data gathered is considered.* Below-chance performance ($p < .05$) on two or more forced-choice measures of *psychiatric/psychological* (e.g., cognitive or perceptual) function, *e.g., below-chance performance on the TOMM [scores below tests' clinical/threshold cut scores but that are higher than chance performance are dealt with in the next level], the VSVT, and the WMT. Also consider the VIP*.

Or,

(ii) Performance on *five* or more well-validated tests designed to measure exaggeration or fabrication of *psychiatric/psychological* (e.g., cognitive or perceptual) symptoms, *including forced-choice measures*, is consistent with exaggeration of diminished *functional psychiatric/psychological* capacity.

(A2) Definite negative response bias.

(i) Below-chance performance ($p < .05$) on one forced-choice measure of *psychiatric/psychological* (e.g., cognitive or perceptual) function, *e.g., below-chance performance on the TOMM [scores below tests' clinical/threshold cut scores but that are higher than chance performance are dealt with in the next level]*

Note. If only one forced-choice test is administered and the evaluee fails at the below-chance level, a second one is administered to determine whether the person reaches the definite malingering rating.

Or,

(ii) Performance on *four* well-validated tests designed to measure exaggeration or fabrication of *psychiatric/psychological* (e.g., cognitive or perceptual) symptoms, *including forced-choice measures*, is consistent with exaggeration of diminished *functional psychiatric/psychological* capacity.

(continued)

Table 6.1 (continued)

Note. Failure on forced-choice measures that is not below-chance but does meet pass-fail thresholds according to normative cut-scores are considered for this criterion; i.e., failure to reach critical thresholds based on normative or otherwise validly-selected and justified cut-scores. That is, forced-choice test results at the latter level as opposed to the below-chance level could be included among the "well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms." Note that the same rule applies in the next categories.

(A3) Probable *negative* response bias.
Performance on *three* well-validated tests designed to measure exaggeration or fabrication of *psychiatric/psychological* (e.g., cognitive or perceptual) symptoms, *including forced-choice measures*, is consistent with exaggeration of diminished *functional psychiatric/psychological* capacity.

(A3–4) *Intermediate (Probable to possible, gray zone) negative response bias*

(i) The data meet the requirements for classification of possible negative response bias but not the classification of probable negative response bias. Nevertheless, there are supplementary data available about the evaluee that raises the ratings to the intermediate level.

For test data, this would refer to results for extra tests that had not used for the primary ratings because of the scoring rules described below, such as on a second personality test with numerous effort/validity detector scales not all of which had been used for the primary rating, and one or two indicating performance below accepted criteria for lack of effort/validity. That is, *in addition to meeting criteria for A4, there is* performance on *two* well-validated *supplementary and not primary* tests designed to measure exaggeration or fabrication of *psychiatric/psychological* (e.g., cognitive or perceptual) symptoms, *including forced-choice measures*, *which* is consistent with exaggeration of diminished *functional psychiatric/psychological* capacity.

Or,

(ii) *The data do not even meet the requirements for classification of possible negative response bias. Nevertheless, there are supplementary data available about the evaluee that raises the ratings to this intermediate level. For test data, this would refer to results for extra tests that had not been used for the primary ratings because of the scoring rules described below, such as on a second personality test with numerous effort/validity detector scales not all of which had been used for the primary rating, and three or more indicate performance below accepted criteria for lack of effort/validity.* That is, performance on *three or more* well-validated *supplementary and not primary* tests designed to measure exaggeration or fabrication of *psychiatric/psychological* (e.g., cognitive or perceptual) symptoms, *including forced-choice measures*, is consistent with exaggeration of diminished *functional psychiatric/psychological* capacity.

(A4) *Possible negative response bias.*

(i) Performance on *two* well-validated tests designed to measure exaggeration or fabrication of *psychiatric/psychological* (e.g., cognitive or perceptual) symptoms, *including forced-choice measures*, is consistent with exaggeration of diminished *functional psychiatric/psychological* capacity.

Or

(ii) Criteria for Definite or Probable *Response Bias* are met except for Criterion D (i.e., primary psychiatric, neurological, or developmental, *or other* etiologies cannot be fully ruled out). In such cases, the alternate etiologies that cannot be ruled out should be specified.

(continued)

Table 6.1 (continued)

(A5) *Minimal negative response bias.*

(i) Performance on *one* well-validated test designed to measure exaggeration or fabrication of *psychiatric/psychological* (e.g., cognitive or perceptual) symptoms, *including forced-choice measures*, is consistent with exaggeration of diminished *functional psychiatric/psychological* capacity. *When only one instrument is used, and the evaluee does not reach acceptable criteria, a second one should be used to establish by performance whether the response bias is classifiable as possible or minimal.*

Or,

(ii) *Just-below cut score performance on two well-validated tests so that performance is at most partially consistent with exaggeration of diminished functional psychiatric/psychological capacity.*

(A6) *No evident response bias.*

(i) Performance on *not even one* well-validated test designed to measure exaggeration or fabrication of *psychiatric/psychological* (e.g., cognitive or perceptual) symptoms, *including forced-choice measures*, is consistent with exaggeration of diminished *functional psychiatric/psychological* capacity.

(ii) *There might be just-below cut score performance on one well-validated test but, despite this, performance is not even partially consistent with exaggeration of diminished functional psychiatric/psychological capacity.*

Weighting Rules for Test Batteries

As for the nature of the 60 rules included in the present system for test use, they have been constructed to apply equally to the system developed for PTSD and its alteration for conditions of pain and TBI. The rules were constructed according to 10 pertinent principles and parameters, as specified in the following.

(a) *There are two tracks in the system, Regular (for PTSD, pain) and Neuropsychological/Cognitive.*

(b) *There are multiple test types, including forced-choice, personality, and dedicated. They can be used in the system if scientifically supported for the question at hand.*

(c–e) *Some test types are more critical than others, e.g., forced-choice; some criteria more critical than others, e.g., below-chance performance; and some tests more reliable and valid than others for the purposes at hand, e.g., the MMPI-2-RF.*

(f) *Any one test can provide one to several validity indicators, depending on the research findings in the area.*

(g) *The tests should include 10–15 primary measures specified beforehand, with 5–8 positive findings, and at most 3–4 from any one instrument, needed to conclude significant feigning or related response bias, including of malingering.*

(h) *Tests that are correlated can be used within specified limits and their acknowledgment.*

(i) *Malingering can be concluded only when there is incontrovertible evidence after examination of the full reliable data set gathered.*

(j) *In general, test selection and score interpretations must be undertaken scientifically, impartially, and comprehensively, while considering the limits of the evaluees.*

In terms of the categories within which the 60 rules fall, they group in the following ways. (a) Pathways/tracks in the system: 1, 13, 17, 18; (b) Testing/tests: 2–9, 26–28, 56: (c) Criteria: 10–12, 25, 29; (d) Supplementary/secondary factors: 14–16; (e) Independence/correlation: 19–24; (f) Rating adjustment: 30–32; (g) Test preselection: 33–35; (h) Administration: 36–40; (i) Cognitive/Neuropsychological: 41–45; (j) Less testing: 46–50; (k) Comparison with Larrabee: 51; (l) Evaluators: 52–55; (m) Altering system: 57–58; (n) Using all the data: 59–60.

(continued)

Table 6.1 (continued)

These 60 rules are quite explicit, and qualify how to obtain and use all needed validity measures to detect malingering and related response biases in the present system. However, the rules should not be used in a box score fashion to arrive at conclusions about malingering and related response biases. The evaluator needs to examine the full data set gathered in comprehensive, scientifically-informed, impartial ways. The ratings are only a guide toward this end, albeit objective ones to the degree possible.

Rule 1: Two pathways. Note that the present rating system is sufficiently flexible to accommodate (a) a Regular pathway/system in the rating without cognitive/neuropsychological testing and (b) a second pathway of cognitive/neuropsychological testing. The rules provide clear instructions on how to use one pathway, the other, or both. That being said, most of the following rules apply to the Regular system and extra ones for the cognitive/neuropsychological system are given toward the end.

Rule 2: Forced-choice. With respect to forced-choice measures, evaluators are advised to include in their assessments "well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms," and criteria have been described above for determining the level of malingering/response bias according to the results obtained on forced-choice tests. Essentially, there are two levels to consider: (a) below-chance performance, considered more problematic, and (b) failing to reach critical thresholds based on normative or otherwise validly-selected and justified cut-scores.

Rule 3: Tests. The inclusion in the criteria of "well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms" includes psychological tests other than forced-choice ones that might provide evidence in formal psychological evaluation that the person has significantly misrepresented current status (e.g., exaggerated or minimized psychological symptoms/distress) in a manner that emphasizes the injury for which compensation is sought.

Rule 4: MMPI family. For example, responses on self-report measures of psychological function suggest impairment in the context of elevations on well-validated validity scales or indices consistent with exaggeration of physical/*somatic* (e.g., MMPI-2 FBS, *MMPI-2-RF FBS-r or SVT-r*) or emotional symptoms (e.g., MMPI-2 F, Fb, or Fp, *or related MMPI-2-RF scales), or newer effort detection scales (e.g., RBS, HHI);* or, *on these measures, as well,* evidence of vehement denial of psychological problems in a manner consistent with extreme defensiveness regarding psychological symptoms in order to further emphasize *psychological* complaints (e.g., MMPI-2 L or K *at noted cutoffs, or their MMPI-2-RF equivalents).*

Rule 5: Other tests needed. The underlying assumption in listing all these instruments is that they provide relevant information for the present ratings; but they do vary in the information that they provide, the levels of the cut-offs used, etc. Therefore, evaluators need to be aware of further tests that could be used in evaluations; these are described below and scoring rules for them are listed.

Rule 6: Improbable symptoms, etc. Well-validated instruments might include structured interview ones that aim to detect improbable symptoms, or extreme, too frequent, or otherwise non-credible ones, such as detected on the SIRS/SIRS-2 and the M-FAST.

Rule 7: PTSD. In addition, tests might include dedicated PTSD ones, such as the DAPS or perhaps the TSI-2, that have embedded evaluee validity scales for under- and over-reporting.

Rule 8: Pain. Tests aimed at other types of disability determinations, such as the BBHI-2 for pain and the RNBI for neurobehavioral symptoms, might be applicable, depending on the nature of the evaluee's assessment taking place, given the equivalent embedded evaluee validity scales in these instruments, for under- and over-reporting.

Rule 9: Cognitive (embedded). Further, even when an assessment is not neuropsychological, good use could be made of embedded cognitive measures of invalidity/poor effort, such as for digit span.

(continued)

Table 6.1 (continued)

Rule 10: 10–15 Primary. Of all the tests/measures/scales/indicators administered that are not forced-choice tests or embedded neuropsychological/cognitive measures, 10–15 should be considered primary, or as the ones designated to furnish for the present system critical information needed for assessing malingering and related response biases.

Rule 11: 5–8 Critical. The criteria of the present system indicate that, aside from below-chance results from forced-choice and neuropsychological/cognitive testing, 5–8 invalidity results, at most, are needed from among the 10–15 primary measures to obtain maximal scores/levels in the system. Note that because there are 10–15 primary indices and doing poorly on 5–8 of them indicates significant doubt about the credibility of the evaluee, this suggests that doing poorly on about 50 % (or more) of the primary indices is critical in establishing the evaluee's performance/effort quality. This rule has face validity.

Rule 12: Not at cut-off. Note that below-chance performance on forced-choice testing is not counted in the primary indices, given its use elsewhere in the system. However, performance on these tests that do not meet cut-offs (even if higher than below-chance performance) can count as among the 10–15 primary indices of the system, if specified beforehand.

Rule 13: Neuropsychology. Aside from stand-alone forced-choice tests such as the VSVT, structured interviews such as the SIRS/SIRS-2, and tests such as the MMPI family ones, when the assessment is neurocognitive or neuropsychological, many different embedded validity/effort detector tests/measures/scales can be used, given the tens of domains tested and the utility of having more than one for each domain, as needed.

Rule 14: Supplementary tests. However, the data obtained from these instruments should not be used as part of the 10–15 primary ones needed for purposes of obtaining ratings in the present system. That is, essentially, they should be used separately from the Regular system, and stand apart from them for use in the cognitive/neuropsychological one.

Rule 15: Secondary information. That is, these extra data sources might contribute secondary information to the Regular rating system, at best, aside from any data that they furnish for purposes outside the Regular rating system to the cognitive/neuropsychological one.

Rule 16: Pattern analysis. The same applies for neurocognitive/neuropsychological test pattern analysis deriving from these tests; normally, they should not be considered for use in the Regular system.

Rule 17: Limited cognitive testing. Note that if limited cognitive testing is given, rather than full-blown cognitive/neuropsychological testing, and there are not many validity indicators/tests/measures/scales available because of this decision, it might be best to consider them for rating of the Regular and not cognitive/neuropsychological path.

Rule 18: Neuropsychological path. That being said, there are rules given below (see Rules 41 to 44) that apply to rating the present system for the second path when full-blown cognitive/neurocognitive testing is administered.

Rule 19: Test independence. The selection of instruments chosen in an assessment must be carefully organized so that, to the degree possible, they are relatively independent and tapping different aspects of psychological function/response bias.

Rule 20: Prioritizing. For example, if two similar results are obtained for two tests that are aimed at measuring the same type of response bias, they should not both be considered as primary in the present rating system and both used to inflate the ratings.

Rule 21: Exception 1. One exception to this rule is when the better measure of the two yields negative results and the second one yields positive results; perhaps valid arguments are possible to justify using the secondary measure as the primary one.

Rule 22: Exception 2. Moreover, tests are never perfectly correlated, and even if they are substantially correlated, they might reflect different constructs to a degree. Therefore, consistent with the multitrait-multimethod approach, two very similar tests having positive results could be used in the ratings with the present system, if this decision can be appropriately justified.

(continued)

Table 6.1 (continued)

Rule 23: Exception 3. Nevertheless, in general, to repeat, evaluators should avoid such reduplication in obtaining scores from tests administered in their batteries for rating purposes. They can accomplish this by selecting measures that are relatively independent and aimed at different categories of psychological function/response bias. For example, if the MMPI-2-RF is administered, any scores from another personality inventory that might be administered should not be considered as primary in calculating level of response bias in the present system. That being said, if a secondary omnibus instrument, such as a personality inventory, has a useful scale that is considered better for the purposes of the evaluation relative to those in the primary one, that scale in the secondary one can be used in ratings with the present system.

Rule 24: Exception 4. Note that this rule about generally trying to avoid duplication/overlap/correlated tests in establishing ratings with the present system does not apply to the needed use of several stand-alone, forced-choice tests, because they are cardinal in determining the presence of malingering.

Rule 25: Maximum use 1. For instruments that have more than one scale aimed at detecting effort or feigning, such as the MMPI family of tests, or in cognitive evaluation, the rule should be that any instrument of this type should contribute at most 3–4 primary measures among the 10–15 maximum that are needed in the present system to arrive at ratings, even if there are more than 3–4 of them that are included in the instrument and that have been scored. This rule needs implementation to avoid using only one of these instruments to obtain the needed results for all of the 5 primary validity indicators among the 10–15 required for obtaining results that can be used for a maximum rating in the present system.

Rule 26: Omnibus tests. In cases where assessors use two or more omnibus instruments with more than one relevant validity measure, as mentioned, one must be considered primary, with its validity scores used rather than any of the others. For this rule, everything else being equal, the MMPI family of tests is considered primary in such cases for rating with the present system.

Rule 27: Dedicated Tests. For PTSD or pain assessments, when two or more dedicated tests, such as the DAPS for PTSD, are used, normally only one should provide scores as primary measures for purposes of the present ratings.

Rule 28: Nondedicated tests. When validity indicators of feigning are used in tests that do not directly apply to PTSD or pain, or when they do not have associated with them research showing their applicability to the population at hand, their use must be justified. Moreover, for any one assessment, only one test from among them and, further, only one score from it should be used in the ratings.

Rule 29: Maximum use 2. If these tests are dedicated ones to detecting feigning, such as the SIRS, as long as they are validated for the population at hand, weighting of 2–3 of their measures could be used as part of the 10–15 primary ones for rating in the present system.

Rule 30: Adjusted rating, lowering it. When evaluees (a) score in the superior range for good effort on a validity indicator, if applicable, and/or (b) pass a majority of the validity tests/measures/scales given in the full battery, and/or (c) score positive for measures related to symptom minimization or underreporting of post-event symptoms at claim, they should be credited a half-level for each case in the reverse direction on the rating scale, up to a maximum of one full level in the reverse direction on the scale.

Rule 31: Adjusted rating, raising it. When evaluees (a) score in the superior range (e.g., 98th percentile) for poor effort on a validity indicator, if applicable, and/or (b) fail a majority of the validity tests/measures/scales given in the full battery, and/or (c) score positive for measures related to symptom minimization or underreporting of pre-event symptoms at claim, they should be credited a half-level for each case in the higher direction on the rating scale, up to a maximum of one full level in the higher direction on the scale.

(continued)

Table 6.1 (continued)

Rule 32: Patterns. Clinical scales might prove informative for their patterns, such as on personality inventories. For example, in the MMPI family of tests, certain codes are associated with problematic clinical presentations with respect to effort and evaluee validity. Patterns such as this should be considered for half-level adjustment (lower, higher), as part of the prior two rules.

Rule 33: Preselection. In choosing usable measures from batteries that had been administered for rating purposes, decisions about which measures to use should be made beforehand, including the weightings involved, as justified and based on the scientific literature.

Rule 34: Fishing expeditions. Evaluators should avoid fishing expeditions of selecting just-right tests, and once the data are gathered, just-right scores, in order to get just-right conclusions to assessments, thereby lacking impartiality, comprehensiveness, and scientific underpinnings.

Rule 35: No exceptions. Evaluators should not ignore pre-selected measures, ones chosen for use beforehand according to the requirements of the present system, and they should not avoid administering obvious ones to use for rating in the battery, such as the MMPI family ones.

Rule 36: Ecological validity. Evaluators should administer the tests in a way that has ecological validity, e.g., spreading them out and not giving one after the other.

Rule 37: Warnings. Evaluators should consider the issue of advising evaluees about tests, especially forced-choice ones, according to prevailing professional guidelines.

Rule 38: Qualifications. Only mental health professionals who are professionally qualified should select, administer, and interpret psychological tests.

Rule 39: State-of-the-art. It is important to note that the evaluator needs to use the most current, psychometrically and forensically valid instruments available, and not just the ones mentioned in this version of the F-PTSDR-D written in 2014.

Rule 40: No harm. In short, aside from using an appropriate battery of measures for the ratings that can be derived from the present system, each instrument selected should be administered in a way that does not harm the evaluee, while still permitting that the information required is gathered.

Rule 41: Cognitive/Neuropsychological testing. When an evaluation includes cognitive/neuropsychological testing, the procedures described in the present system can be complemented by a second path or track. Typically, in cognitive/neuropsychological testing, there are tens of evaluee validity indicators/tests/measures/scales that might be administered. The present system allows for 10–15 primary measures outside of cognitive/neuropsychological testing and, from among these, 5–8 critical validity indicators/tests/measures/scales with (positive) data are selected. In this regard, from among the cognitive/neuropsychological tests administered, an additional 10–15 primary measures and 5–8 critical validity indicators/tests/measures/scales can be selected from among the cognitive/neuropsychological tests administered.

Rule 42: Rating cognitive/neuropsychological tests. The rules of the present system should be applied to the cognitive/neuropsychological primary measures and critical results that are derived from application of Rule 41. That is, they will help arrive at evaluations of Definite to Probable Response Bias, in particular.

Rule 43: Cognitive/Neuropsychological and Regular rating. When both the Regular path in using the present rating system and the supplementary cognitive/neuropsychological one are both positive and lead to high ratings of response bias for an evaluee, this should be indicated.

Rule 44: Positive results for only one of the two paths. When either cognitive/neuropsychological or Regular rating leads to high ratings of response bias for an evaluee, but not both, this should be indicated. Conclusions to evaluations should note the difference in the two ratings and its implications.

Rule 45: Cognitive/Neuropsychological path alone. Of course, evaluators might want to proceed with just cognitive/neuropsychological testing in the second pathway of the system, and not use at all the Regular pathway. In this regard, they would use simply the embedded cognitive/neuropsychological validity indicators/tests/measures/scales with forced-choice measures, and none of the personality, structured interviews, and specific dedicated measures.

(continued)

Table 6.1 (continued)

Rule 46: Test selection. The system is very flexible and, when testing is involved, the amount of tests/measures/scales administered can be as low as several to as high as multiples of 10.

Rule 47: Minimal testing. Minimally, at least when the Regular path or track is taken, appropriate use of the system requires a good omnibus personality test, such as the MMPI-2-RF or the PAI, a good feigning detection interview instrument, such as the SIRS/SIRS-2 or M-FAST, a specific, dedicated test, and one or more stand-alone forced-choice measures, such as the VSVT or the TOMM. (Recommendations for 2014.)

Rule 48: Less than minimal testing. If evaluators choose to administer even less testing than this, they risk not having the option of getting sufficient critical tests/measures/scales/indicators that can be used to rate the upper levels of the rating system.

Rule 49: Less testing yet doing enough. That being said, there are both testing and non-testing rules that could be used to supplement below-minimum test use, for example, the one concerning especially high failure performance on tests (98 % percentile or more; see above) and the one for the whole file (see below).

Rule 50: Justify less testing. A problematic practice is that evaluators who are trained in psychological testing use less testing in assessments than the recommended minimum even when more testing can be administered. For example, it is conceivable that partially sufficient information can be gathered just in administering an MMPI family test, a structured interview one, or one forced-choice test. However, this option is strongly recommended against, unless it can be clearly justified, e.g., due to the level of concomitant physical or brain injuries, language barriers, etc. In such cases, it might be sufficient to use less that the recommended minimum of tests.

Rule 51: Larrabee (2012a)*. As an aside, it is noted that the structure established in the present system through its rules enables evaluators to arrive at high ratings on the present rating system in terms of malingering and definite response bias. For example, the system enables high ratings when there are positive results or performance on three or even two tests/measures/scales/validity indicators, which is consistent with the spirit of the work of Larrabee* (2012a)*. Indeed, the system created might even be more sensitive to obtaining results at these higher levels compared to Larrabee's procedures, given the rules developed. That being said, consideration of the whole file and alternative explanations, such as a cry for help, might render it less sensitive. This illustrates perfectly the middle-of-the-road, balanced approach that characterizes the present system. It was constructed with good rationale and logical perspectives, good scientific and practical ones, and consideration of other systems, published recommendations for their change, and other state-of-the-art literature. Evaluators should function from the same middle-of-the-road and state-of-the-art perspective in applying the system to their evaluees. Evaluators might want to check the conclusions derived from using the present system with those of Larrabee (e.g., likelihood ratios, positive predictive power, probability of multiple positive findings), or any other system of an actuarial, algorithmic nature for malingering detection, assuming the literature supports their use, using a compare-contrast format to help justify the use of the present system and the conclusions it allows for any assessment at hand.*

Rule 52: Supplementary evaluators. Evaluators not trained in testing can acquire the services of those trained and competent to administer the types of tests recommended for use in the present system.

Rule 53: Seconding team work. Note that the evaluator who acquires such testing services is responsible for applying the present system to the case at hand, but only the testing evaluator can be responsible for interpreting the test data portion of the evaluation.

Rule 54: Leading team work. Or, evaluators might be trained and competent in testing, but prefer to have a second evaluator (help) seek inconsistencies/discrepancies in the file. The testing evaluator would be responsible for the inconsistencies/discrepancies noted and for combining all the information gathered for present rating purposes.

(continued)

Table 6.1 (continued)

Rule 55: Interdisciplinary assessments. Evaluators using the present system might be functioning within the context of interdisciplinary teams of assessors. In contributing to and/or signing any executive summary, they are responsible as much as the others for how the ratings are used and for any overall alterations in equivalent ratings by the team.

Rule 56: Specific dedicated tests. [As of 2014.] If tests dedicated to specific psychological injuries are administered, such as in the Regular track, the DAPS and perhaps the TSI-2 make sense for PTSD, and the BBHI-2 or BHI-2 would be good for pain. In this regard, there are multiple cognitive or related measures that could be used. Other tests. Some other relevant instruments include the RNBI, the VIP, the WMT, and the MENT.

Rule 57: Altering rules on testing and test battery. As of 2014, the test battery rules and the testing procedures and tests indicated in the present system are the ones that can be scientifically and practically justified. However, as concepts and research accumulate, recommendations to change the present system might appear in the scientific literature and research that are both reliable and valid. Or, assessors might alter a rule or rules or use of the present system and its proposed testing battery in a way that is scientifically and practically justified. For example, the number of primary and critical tests and measures, presently are set at 10–15 and 5–8, respectively, but slight variations in these amounts might be acceptable at the scientific and practical levels.

Rule 58: Special populations. The usual cautions about using the correct norms for scoring and being sensitive to gender, minorities, age, and related differences apply to testing for the present system. Note that for children, the BASC-2 has appropriate validity checks.

Rule 59: Consider whole file. The rating of any level of negative response bias that is attributed to an evaluee according to the present system can be adjusted higher or lower by one-half to one full rating level on the scale depending on any additional reliable information in the assessment that is not considered elsewhere. These factors might include evaluator ones, evaluee ones, or systemic ones. The rationale for this decision must be documented. For example, litigation distress might be evident, but that could reflect either (a) non-merited factors, such as apprehension at continued evaluations that have reliably found difficulties with presentation/performance in the evaluee, or (b) genuine externally-generated stress related to the case, e.g., by third parties.

Rule 60: Combining test data with inconsistencies/discrepancies. Criterion C elaborates rules for combining test data with inconsistencies/discrepancies, after presentation of 30 possible inconsistencies/discrepancies.

Criterion C: Evidence from Inconsistencies/Discrepancies, With or Without Test Data Considered.

Inconsistency/discrepancy criteria can be used separately from those of the B set, or in conjunction with them, as presented in the second part of the C criteria. Inconsistencies/discrepancies can be found at two levels. Either marked/substantial or moderate/nontrivial evidence of inconsistency/discrepancy is possible. Moreover, marked/substantial inconsistencies/discrepancies can be divided into those that are less or most extremely compelling, such as in cases of frank admission, videographic evidence of working after being at work has been denied, and frank evidence elsewhere in the file, e.g., related to collateral information. Trivial evidence in these regards should be ignored. For the two levels of inconsistencies/discrepancies possible, with the more blatant ones receiving the highest rating, there is a subjective element in classifying them. Therefore, evaluators should be conservative when characterizing them as marked or substantial relative to moderate or nontrivial, and justify all classifications in these regards with clear material from the file and careful argument. Note that in section B3-4ii below, 15 examples are provided of possible inconsistencies/discrepancies, aside from the few examples provided in the sections that follow.

(continued)

Table 6.1 (continued)

(a) *Inconsistencies/Discrepancies in Conjunction with Testing*

(a1) *Inconsistency/*Discrepancy between cognitive/neurocognitive test data and known patterns of brain functioning *(e.g., as related to PTSD). In this regard*, a pattern of test performance that is *either markedly/substantially or moderately/nontrivially inconsistent/*discrepant from currently accepted models of normal and abnormal central nervous system (CNS) function. *The inconsistency/discrepancy must be consistent with an attempt to exaggerate or fabricate psychological dysfunction in testing (e.g., patient reports that she/he does not sleep at all). (Inconsistency #1)*

(a2) *Inconsistency/*Discrepancy, either marked/substantial or moderate/nontrivial, between test data of PTSD-related symptoms after event at claim and known patterns of physiological reactivity. (Inconsistency #2)

(a2i) *Inconsistency/*Discrepancy, either marked/substantial or moderate/nontrivial, between test data of PTSD-related symptoms after event at claim and known patterns of physiological reactivity in the ambulance, at hospital, or shortly thereafter (e.g., no heart-rate increase with significant change in subjective traumatic reaction report). *(Inconsistency #2, first example)*

(a2ii) Inconsistency/*Discrepancy, either marked/substantial or moderate/nontrivial, between test data of PTSD-related symptoms after event at claim and known patterns of physiological reactivity in psychotherapy (e.g., no increase in neurovegetative signs during exposure therapy or systematic desensitization).*

(a2iii) *Inconsistency/*Discrepancy, either marked/substantial or moderate/nontrivial, between test data of PTSD-related symptoms after event at claim and known patterns of physiological reactivity to psychotropic medication (e.g., no decrease in neurovegetative signs to symptom-relevant medication).

(a3) *Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data and self-report. (Inconsistency #3)*

(a3i) *Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data on psychological status prior to event at claim and self-reported background history in interview. (Inconsistency #3, first example)*

(a3ii) *Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of PTSD-related symptoms after event at claim and self-reported behavior/symptoms/complaints/limitations/functions in interview.*

(a4) *Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of PTSD-related symptoms after event at claim and verbal and/or nonverbal observed behavior/symptoms/complaints/limitations/functions. (Inconsistency #4)*

(a4i) *Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of PTSD-related symptoms after event at claim and observed behavior/symptoms/complaints/limitations/functions while unaware of being observed. (Inconsistency #4, first example)*

(a4ii) *Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of PTSD-related symptoms after event at claim and observed behavior/symptoms/complaints/limitations/functions while aware of being observed (e.g., evaluee endorses items indicating extreme fear in driving yet is observed to/ indicates that driving to and from the session was okay).*

(a5) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data and information reported by reliable informants/collaterals. (Inconsistency #5)

(continued)

Table 6.1 (continued)

(a5i) *Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of PTSD-related symptoms on psychological status prior to event at claim and information reported by reliable informants/collaterals, such as primary care physicians and spouses, about background history. (Inconsistency #5, first example)*

(a5ii) *Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of PTSD-related symptoms after event at claim and information reported by reliable informants/collaterals, such as primary care physicians and spouses, about behavior/symptoms/complaints/limitations/functions (e.g., evaluee endorses items indicating extreme fear in driving yet is reported by spouse to drive without a problem).*

(a6) *Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data and information reported in reliable documents. (Inconsistency #6)*

(a6i) *Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data on psychological status prior to event at claim and information reported in reliable documents, such as by primary care physicians and other mental health professionals, about background history. (Inconsistency #6, first example)*

(a6ii) *Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of PTSD-related symptoms after event at claim and information reported in reliable documents, such as by primary care physicians and other mental health professionals, about behavior/symptoms/complaints/limitations/functions (e.g., there is no documented history of psychological trauma in the ambulance or ER reports, yet the evaluee consistently endorses extreme traumatic reactions in the ambulance, at the hospital, or shortly thereafter).*

(b) <u>*Inconsistencies/Discrepancies in Conjunction with Self-Report (other than with testing)*</u>
Evidence that the evaluee's self-reported *behaviors*, symptoms, complaints, or limitations *and functions related to PTSD and related disorder/dysfunction* are *clearly* consistent with exaggeration or feigning of physical, cognitive, or emotional/psychological *components of the PTSD-related* disability in that there is *either a marked/substantial or moderate/nontrivial inconsistency/discrepancy between such self-report and any of the following:*

(b1) *Known patterns of brain function. (Inconsistency #7)*

(b2) *Known patterns of physiological function. (Inconsistency #8)*

[Self-reported *PTSD-related* symptoms are *clearly* discrepant with known patterns of physiological or neurological functioning (e.g., *PTSD complaints by themselves should not be able to elicit marked/substantial, or moderate/nontrivial* complaints of remote memory loss**;** *PTSD complaints should not be able to elicit repetitive nightmares that exactly repeat the traumatic event and no other nightmares*).]

(b3) *Observed behavior/symptoms/complaints/limitations/functions. (Inconsistency #9)*

(b3i) *Observed behavior/symptoms/complaints/limitations/functions while unaware of being observed. (Inconsistency #9, first example)*

(b3ii) *Observed behavior/symptoms/complaints/limitations/functions while aware of being observed.*

[Self-reported *PTSD-related* symptoms are *clearly inconsistent*/discrepant with *reliable* observations of behavior. Reported symptoms in a given behavioral domain (i.e., physical, cognitive, emotional; *PTSD-related*) are markedly/*substantially or moderately/nontrivially* inconsistent/*discrepant* with behavioral observations (e.g., patient complains of *being unable to sleep well but appears quite alert*). Such observation may occur in the context of formal evaluation.]

(b4) *Information reported by reliable informants/collaterals, such as primary care physicians and spouses. (Inconsistency #10)*

(continued)

Table 6.1 (continued)

(b4i) *Information reported by reliable informants/collaterals, such as primary care physicians and spouses, about background history. (Inconsistency #10, first example)*

(b4ii) Information reported by reliable informants/collaterals, such as primary care physicians and spouses, about behavior/symptoms/complaints/limitations/functions.

[Self-reported *PTSD-related* symptoms are *clearly* discrepant with *reliable* observations of behavior. Reported symptoms in a given behavioral domain (i.e., physical, cognitive, emotional; *PTSD-related*) are markedly/*substantially or moderately/nontrivially* inconsistent/*discrepant* with behavioral observations (e.g., patient complains of *being unable to sleep well but appears quite alert*). Such observation may derive from the report of reliable collateral informants (e.g., evaluee's friends or relatives).]

(b5) *Information reported in reliable documents, such as by primary care physicians and other mental health professionals. (Inconsistency #11)*

(b5i) *Information reported in reliable documents, such as by primary care physicians and other mental health professionals, about background history. (Inconsistency #11, first example)*

(b5ii) *Information reported in reliable documents, such as primary care physicians and other mental health professionals, about behavior/symptoms/complaints/limitations/functions.*

[Self-reported history is *clearly* inconsistent/discrepant with documented history, *the evidence for which is reliable*. For example, minimization or denial of *marked/substantial or moderate/nontrivial* concurrent or prior illness/injury (broadly defined) in a manner that emphasizes the injury for which compensation is sought. Also included would be *marked/substantial or moderate/nontrivial* overstatement of academic, vocational, or other achievement in a way that exaggerates the magnitude of loss due to the injury in question.]

(c) <u>*Inconsistencies/Discrepancies in Conjunction with Observations (other than with testing and with self-report)*</u>

Evidence that the evaluee's verbal and/or nonverbal *observed* behaviors*, symptoms, complaints, or limitations* and functions related to PTSD and related disorder/dysfunction *are* clearly *consistent with exaggeration or feigning of physical, cognitive, or emotional/psychological* components of the PTSD-related *disability in that there is* either a marked/substantial or moderate/nontrivial inconsistency/discrepancy between such observations and any of the following:

(c1) *Known patterns of brain function. (Inconsistency #12)*

(c2) *Known patterns of physiological function. (Inconsistency #13)*

(c3) *Information reported by reliable informants/collaterals, such as primary care physicians and spouses. (Inconsistency #14)*

(c3i) *Information reported by reliable informants/collaterals, such as primary care physicians and spouses, about background history. (Inconsistency #14, first example)*

(c3ii) *Information reported by reliable informants/collaterals, such as primary care physicians and spouses, about behavior/symptoms/complaints/limitations/functions.*

(c4) *Information reported in reliable documents, such as by primary care physicians and other mental health professionals. (Inconsistency #15)*

(c4i) *Information reported in reliable documents, such as by primary care physicians and other mental health professionals, about background history. (Inconsistency #15, first example)*

(c4ii) *Information reported in reliable documents, such as by primary care physicians and other mental health professionals, about behavior/symptoms/complaints/limitations/functions.*

(continued)

Table 6.1 (continued)

(d) *Inconsistencies/Discrepancies in Conjunction with Collateral Information (other than with testing, self-report, and observations)*
Evidence that the evaluee's collaterally reported behaviors*, symptoms, complaints, or limitations* and functions related to PTSD and related disorder/dysfunction *are* clearly *consistent with exaggeration or feigning of physical, cognitive, or emotional/psychological* components of the PTSD-related *disability in that there is* either a marked/substantial or moderate/nontrivial inconsistency/discrepancy between such reports and any of the following:
(d1) *Known patterns of brain function. (Inconsistency #16)*
(d2) *Known patterns of physiological function. (Inconsistency #17)*
(d3) *Information reported in reliable documents, such as by primary care physicians and other mental health professionals. (Inconsistency #18)*
(d3i) *Information reported in reliable documents, such as by primary care physicians and other mental health professionals, about background history. (Inconsistency #18, first example)*
(d3ii) *Information reported in reliable documents, such as by primary care physicians and other mental health professionals, about behavior/symptoms/complaints/limitations/functions.*

(e) Inconsistencies/Discrepancies in Conjunction with Documentation (other than with testing, self-report, observations, and collateral information)
Evidence that the evaluee's documented *behaviors*, symptoms, complaints, or limitations *and functions related to PTSD and related disorder/dysfunction* are *clearly* consistent with exaggeration or feigning of physical, cognitive, or emotional/psychological *components of the PTSD-related* disability in that there is *either a marked/substantial or moderate/nontrivial inconsistency/discrepancy between such documentation and any of the following:*
(e1) *Known patterns of brain function. (Inconsistency #19)*
(e2) *Known patterns of physiological function. (Inconsistency #20)*

(f) *Inconsistencies/Discrepancies Within Major Data Sources (not between them, which are scored above)*
(f1) *Known patterns of brain function. (Inconsistency #21)*
(f2) *Known patterns of physiological function. (Inconsistency #22)*
(f3) *Self-report. (Inconsistency #23)*
(f3i) *Self-report of background history. (Inconsistency #23, first example)*
(f3ii) *Self-report of behavior/symptoms/complaints/limitations/functions.*
(f4) *Observed behavior/symptoms/complaints/limitations/functions. (Inconsistency #24)*
(f4i) Observed behavior/symptoms/complaints/limitations/functions while unaware of being observed. (Inconsistency #24, first example)
[Compelling *self-presentation* inconsistency/*discrepancy.* Compelling *self-presentation* inconsistencies/*discrepancies* occur when the difference in the way an evaluee presents *verbally and/or nonverbally* when being evaluated compared with when not aware of being evaluated is *marked/substantial or moderate/non-trivial and* such that it is not reasonable to believe the evaluee is not purposely controlling the difference *and other explanations do not readily apply*.]
(f4ii) *Observed behavior/symptoms/complaints/limitations/functions while aware of being observed.*
(f5) *Information reported by reliable informants/collaterals. (Inconsistency #25)*
(f5i) *Information reported by reliable informants/collaterals, such as primary care physicians and spouses, about background history. (Inconsistency #25, first example)*
(f5ii) *Information reported by reliable informants/collaterals, such as primary care physicians and spouses, about behavior/symptoms/complaints/limitations/functions.*

(continued)

Table 6.1 (continued)

(f6) *Information reported in reliable documents. (Inconsistency #26)*

(f6i) *Information reported in reliable documents, such as by primary care physicians and other mental health professionals, about background history. (Inconsistency #26, first example)*

(f6ii) *Information reported in reliable documents, such as primary care physicians and other mental health professionals, about behavior/symptoms/complaints/limitations/functions.*

(g) Other, Miscellaneous Inconsistencies/Discrepancies (e.g., there is evidence of no material causation for alleged psychological/psychiatric effects of event at claim)

[Self-reported symptoms are clearly discrepant with claimed causal factors, such as an index event. There are marked/substantial or moderate/nontrivial multiple pre-existing and concurrent, but incidental, extraneous factors, reliably ascertained, that can clearly account for the evaluee's presentation pertaining to the diagnosis and disorder/disability at issue much more than an event at claim or even fully, but the evaluee keeps insisting that the event at claim explains all of or a good portion of the sequelae to the event in his/her presentation. Arguments of this nature must be made clearly by the evaluator, given the confounding counter-arguments possible.]

(g1) *No causality attributable to the event at claim, despite the evaluee's insistence. (Inconsistency #27)*

(g2) *Only minimal causality attributable, and out of the material range, despite the evaluee's insistence. (Inconsistency #28)*

(g3) *Material-level causality attributable to the event at claim, but not to the degree insisted by the evaluee. (Inconsistency #29)*

(g4) *Other. (Inconsistency #30)*

B. Different Degrees of Certainty of Response Bias, According to Inconsistencies/Discrepancies

(B1) Definite Malingering.

(i) *One extremely compelling inconsistency/discrepancy that takes the form of (a) outright admission, (b) incontrovertible evidence on videographic surveillance, such as working after denial that it is taking place, or (c) or reliable collateral information in these regards. Other compelling inconsistencies of a less red-handed, extreme nature require three pieces of evidence for consideration at this level.*

Or,

(ii) *The evidence is incontrovertible (blatant, indisputable) when all the data gathered are considered. Three or more marked/substantial inconsistencies/discrepancies from items a–g above,*

Or,

(iii)

(a) *One marked/substantial inconsistency/discrepancy from items a–g, and*

(b) *Performance on four (not five) well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced-choice measures, is consistent with exaggeration of diminished functional psychiatric/psychological capacity.*

Or,

(iv)

(a) *Two marked/substantial inconsistencies/discrepancies from items a–g, and*

(b) *Performance on three (not five) well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced-choice measures, is consistent with exaggeration of diminished functional psychiatric/psychological capacity.*

(continued)

Table 6.1 (continued)

(B2) *Definite negative response bias.*

(i) *Two marked/substantial inconsistencies/discrepancies from items a–g,*

Or,

(ii)

(a) *One marked/substantial inconsistency/discrepancy from items a–g, and*

(b) *Performance on three (not four) well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced-choice measures, is consistent with exaggeration of diminished functional psychiatric/psychological capacity.*

(B3) *Probable negative response bias.*

(i) *One marked/substantial inconsistency/discrepancy from items a–g,*

Or,

(ii)

(a) *Five moderate/nontrivial inconsistencies/discrepancies from items a–g, and*

(b) *Performance on two (not three) well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced-choice measures, is consistent with exaggeration of diminished functional psychiatric/psychological capacity.*

(B3-4) *Intermediate (Probable to possible, gray zone) negative response bias.*

The data meet the requirements for classification of possible negative response bias but not the classification of probable negative response bias. Nevertheless, there are supplementary data available about the evaluee that raises the ratings. For inconsistencies/discrepancies that have not been considered elsewhere in the system rating as marked/substantial or moderate/nontrivial, this could refer to:

(i) *Inconsistencies/discrepancies are reliably found in other assessments, such as different specialists in a multidisciplinary assessment of the evaluee that address pertinent mental health issues.*

Or,

(ii) *There is clear evidence of or other confounding factors that might cast doubt on the validity of either the evaluee's presentation on performance validity, although this would have to be clearly documented. In this regard, the evaluee would have to show five or more of the following 15 factors, as supported by clear evidence (five of these are needed because often they are hard to determine, so that even with some evidence in their support, five is considered the minimum needed to use this option in the present scoring system).*

That being said, when one to four of these criteria are evident instead of five or more, and so they cannot be used as part of the data for rating Probable Response Bias, as per the above, the evaluator should use these as part of the ratings for Possible Negative Response bias, as per below, including them with the other inconsistencies/discrepancies in items a–g therein. Also, if the rating of Probable Negative Response Bias is almost attained but one or more moderate/nontrivial inconsistencies/discrepancies from items a–g are lacking, the ones from this list for Intermediate Negative Response Bias can be used.

(a) *Personality disorder of a problematic nature, e.g., (i) antisocial personality disorder according to the DSM, or (ii) features of/subsyndromal expressions of one, or (iii) confrontational/uncooperative, resisting/refusing, without clear signs that the behavior is related to the claimed injury or other conditions such as schizophrenia, etc.*

(continued)

Table 6.1 (continued)

(b) *Blaming everyone and anything, overly suspicious, etc., without clear signs that the behavior is related to the claimed injury or other conditions, such as schizophrenia, etc.*

(c) *Not trying to mitigate loss; not being active in recommended therapy; not being a compliant patient adhering to treatment regimens, etc.*

(d) *Unduly adopting the sick role, accepting overly solicitious behavior, etc.*

(e) *Somatization effects not related to the influences of the claimed psychiatric/psychological injury.*

(f) *Failure to treat substance abuse impeding progress, whether pre-event or post-event related, including of abuse of prescribed event-related medications.*

(g) *Failure to take recommended medications, such as anti-depressants or needed pain medications, if applicable, for invalid medical reasons.*

(h) *Refusing a work-hardening trial, refusing modified duties, refusing training for new work within residual capacities and transferable skills, etc., as long as these options are psychiatrically/psychologically (and medically) indicated.*

(i) *Catastrophizing/crying out for help at a level clearly beyond the nature of the injuries, even after education about it (if not used elsewhere).*

(j) *Any other confound that is documentable, such as attorney or similar coaching.*

As well, five factors derived from the pre-event background are considered as possible confounding factors that might cast doubt on the validity of the evaluee, although resilience to these stressors should be considered in balance:

(k) *Psychiatric/self harm/substance abuse history.*

(l) *Criminal/legal/problematic military history; history of deceit/fraud.*

(m) *History of, irregularity in/dissatisfaction with work or other role at issue.*

(n) *History of, irregularity in/dissatisfaction with family, partners, friends, social life.*

(o) *History of, financial stresses/bankruptcies/unsupported claims.*

(B4) *Possible negative response bias.*

(i) *Four moderate, non-trivial inconsistencies/discrepancies from items a–g,*

Or,

(ii)

(a) *Three moderate, nontrivial inconsistencies/discrepancies from items a–g, and*

(b) *Performance on one (not two) well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced-choice measures, is consistent with exaggeration of diminished functional psychiatric/psychological capacity.*

(B5) *Minimal negative response bias.*

(i) *Two moderate, nontrivial inconsistencies/discrepancies from items a–g*

Or,

(ii)

(a) *One moderate, nontrivial inconsistency/discrepancy from items a–g, and*

(b) *Just-below cut score performance on one (not two or more) well-validated tests so that performance is at most partially consistent with exaggeration of diminished functional psychiatric/psychological capacity.*

B6) *No evident response bias.*

Not even one moderate, nontrivial inconsistency/discrepancy from items a–g.

Criterion D: Behaviors meeting necessary criteria from groups B and C are not fully accounted for by psychiatric, neurologic, or developmental, *or other* factors.

(continued)

Table 6.1 (continued)

The behaviors meeting the above criteria represent a likely (*inferred but evident*) volitional act aimed at achieving some secondary gain and cannot be fully accounted for by other disorders that result in significantly diminished capacity to appreciate laws or mores against malingering or inability to conform behavior to such standards. The simple presence of objectively documented pathology, illness, or injury (including psychiatric illness) expressly does not preclude a diagnosis of *malingering. However, the "diagnostic" system presented should be used conservatively and prudently, especially because of the harm to evaluees that can be caused by false attributions of malingering and related presentation/performance response biases. For example, the options of probable, intermediate, and possible levels of response bias expressly do not preclude validity of the evaluee's presentation, at least in part. Moreover, in arriving at conclusions about definite response bias, the evaluator is reminded (a) to evaluate the full data gathered for the evaluee and not just scores on one or more psychometric measures or computer interpretations of test results, and (b) the data must be gathered comprehensively, scientifically, and impartially. For example, an evaluee failing according to cut-off on three validity indicators might pass many more in the full battery administered and allowances could be made for these credible results, depending on other factors, such as their pattern. Importantly, attributions of overt malingering must especially take these factors and other relevant ones into account before concluding that malingering is present with incontrovertible evidence, or that other high ratings in the system are present at the level of "more likely than not" in the evaluee. That being said, when warranted, the astute evaluator can use language that clearly denies the credibility of the evaluee, even to significant degrees (despite having a lack of clear evidence about or knowledge of underlying motivation, and therefore without imputing directly motivation).*

Note. This present rating system to evaluate non-credible, feigning/malingering and other response biases and presentations/performances in the psychiatric/psychological injury context is meant to be applicable to adult evaluees, in particular. It can be used with adolescents, though, but with caution, e.g., in terms of using different tests/measures/scales of validity/effort. An important general reminder is that any assessment and interpretation of instrument results need to be sensitive to relevant age, gender, cultural/minority, and related differences.

Note: All relevant changes from the pain-related "diagnostic" system (MPRD) of Bianchini et al. (2005) are italicized for the present application to PTSD and related presentations

Note for practice use of the table. The F-PTSDR-D rating system allows for evaluation of non-credible, feigned, or malingered evaluee presentation/performance by either (a) psychometric testing, (b) finding major inconsistencies/discrepancies in an evaluee's data, or both. As such, **the present F-PTSDR-D system is a malingering-related "diagnostic" system, or classificatory model, that is usable by psychiatrists, psychologists, and other mental health professionals**

Also, for evaluees presenting with simultaneous neuropsychological/cognitive, pain-related, and/or polytrauma disorder/disability/dysfunction in conjunction with PTSD claims, aside from the present PTSD-related system, the assessor should consult the revised systems have been developed to replace the MND (Malingered Neurocognitive Dysfunction) and MPRD (Malingered Pain-Related Disability)

systems of Slick et al. (1999) and Bianchini et al. (2005), respectively. See tables on the F-NCR-D and F-PR-D systems, respectively, and the recommendations for their simultaneous use

Abbreviations. PTSD Posttraumatic Stress Disorder, *TBI* traumatic brain injury, *TOMM* Test of Memory Malingering (Tombaugh 1996), *VSVT* Victoria Symptom Validity Test (Slick et al. 1997/2005), *WMT* Word Memory Test (Green 2005), *VIP* Validity Indicator Profile (Frederick 1997), *MMPI* Minnesota Multiphasic Personality Inventory (Hathaway and McKinley 1943), *MMPI-2* Minnesota Multiphasic Personality Inventory, Second Edition (Butcher et al. 1989, 2001), *FBS (SVS)* Fake Bad Scale (Symptom Validity Scale) (Ben-Porath and Tellegen 2008/2011; Lees-Haley et al. 1991); *MMPI-2-RF* Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form (Ben-Porath and Tellegen 2008/2011), *r* revised (Ben-Porath and Tellegen 2008/2011), *Fb* Infrequent Responses, back (Ben-Porath and Tellegen 2008/2011), *Fp* Infrequent Psychopathology Responses (Ben-Porath and Tellegen 2008/2011), *RBS* Response Bias Scale (Gervais et al. 2007), *HHI* Henry Heilbronner Index (Henry et al. 2006), *L* Uncommon Virtues, Lie scale (Bianchini et al. 2005), *K* Adjustment Validity, Correction scale (Bianchini et al. 2005), *SIRS* Structured Inventory for Reported Symptoms (Rogers et al. 1992), *SIRS-2* Structured Inventory of Reported Symptoms, Second Edition; Rogers et al. 2010), *M-FAST* Miller Forensic Assessment of Symptoms Test (Miller 2001), *PTSD* posttraumatic stress disorder, *DAPS* Detailed Assessment of Posttraumatic Stress (Briere 2001), *TSI-2* Trauma Symptom Inventory, Second Edition (Briere 2011), *BBHI-2* Brief Battery for Health Improvement, Second Edition (Disorbio and Bruns 2002), *RNBI* Ruff Neurobehavioral Inventory (Ruff and Hibbard 2003), *PAI* Personality Assessment Inventory (Morey 1991, 2007), *BHI-2* Battery for Health Improvement, Second Edition (Bruns and Disorbio 2003), *MENT* Morel Emotional Numbing Test (Morel 1995, 1998), *BASC-2* Behavior Assessment System for Children, Second Edition (Reynolds and Kamphaus 2004)

Adapted from Bianchini et al. (2005), which in turn was adapted from Slick et al. (1999)

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Part II
Malingering Detection, Law, Causality

Chapter 7
Deconstructing Favorable and Unfavorable Malingering-Attribution Perspectives

7.1 Introduction

The present chapter examines two works that appear to represent opposite perspectives in the area of psychological injury and law – (a) favorable malingering-attribution and (b) unfavorable malingering-attribution perspectives in forensic and related disability assessments (Larrabee 2012a; Drob et al. 2009, respectively). They are consistent with arguments that might be made in court by plaintiff and defense experts, respectively, although both views are based on scientific perspectives. However, in both cases, there are subtle turns, inconsistencies, and exploitation of the gray zone that help lead to the divergent opinions expressed. Therefore, I conduct an examination and deconstruction of the major points in both sources and conclude that both perspectives are not as consistent and clear as they would like to present to the reader. In analyzing the sources, I present them as making a series of arguments for their preferred points of view, and then comment on each point as they are made. However, note that the arguments were not presented so clearly as successive, enumerated points, as in the manner in which I have presented them. In analyzing Larrabee (2012b), I refer to some of the arguments made in the first part of the present book on confusions and gaps in the literature with respect to both the conceptual and empirical bases for understanding and researching malingering in the forensic disability and related contexts. Adapting a middle-of-the-road, science-first perspective, as presented earlier in the book, would help in improving research in the field.

Table of Terms and Sources

Abbreviation	Name	Source(s)
ACS	Advanced Clinical Solutions	Holdnack and Drozdick (2009)
CARB	Computerized Assessment of Response Bias Test	Allen et al. (1997), Conder et al. (1992)
CRM	Continuous Recognition Memory Test	Hannay et al. (1979)

(continued)

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(continued)

Abbreviation	Name	Source(s)
CT	Category Test	Tenhula and Sweet (1996)
CVLT-II	California Verbal Learning Test, Second Edition	Delis et al. (2000)
CVMT	Continual Visual Memory Test	Trahan and Larrabee (1988)
DMT	Digit Memory Test	Hiscock and Hiscock (1989)
DSM	Diagnostic and Statistical Manual of Mental Disorders	American Psychiatric Association (2000)
DSM-IV	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition	American Psychiatric Association (1994)
DSM-IV-TR	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision	American Psychiatric Association (2000)
FBS	Symptom Validity Scale (originally called Fake Bad Scale)	Ben-Porath and Tellegen (2008/2011), Lees-Haley et al. (1991)
FMS	Failure-to-Maintain Set Score (on WCST)	Suhr and Boyer (1999)
Fp(-r)	Infrequent Psychopathology Responses	Ben-Porath and Tellegen (2008/2011)
FTT	Finger Tapping Test	Heaton et al. (1991)
HHI	Henry-Heilbronner Index	Henry et al. (2006)
LMT	Letter Memory Test	Inman et al. (1998)
M-FAST	Miller Forensic Assessment of Symptoms Test	Miller (2001)
MMPI-2	Minnesota Multiphasic Personality Inventory, Second Edition	Butcher et al. (1989, 2001)
MMPI-2-RF	Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form	Ben-Porath and Tellegen (2008/2011)
MND	Malingered Neurocognitive Dysfunction	Slick et al. (1999)
MPRD	Malingered Pain-Related Disability	Bianchini et al. (2005)
MSVT	Medical Symptom Validity Test	Green (2004)
NV-MSVT	Nonverbal Medical Symptom Validity Test	Green (2008)
PAI	Personality Assessment Inventory	Morey (1991, 2007)
PDRT	Portland Digit Recognition Test	Binder (1993), Binder and Willis (1991)
-r	Revised (e.g., FBS-r)	Ben-Porath and Tellegen (2008/2011)
RAVLT	Rey Auditory Verbal Learning Test	Schmidt (1996)
RBS	Response Bias Scale	Gervais et al. (2007)
RDS	Reliable Digit Span	Greiffenstein et al. (1994)
RMFIT	Rey 15-Item Memory Test	Rey (1941)
ROCFT	Rey-Osterreith Complex Figure Test	Rey (1941)
SIRS	Structured Interview of Reported Symptoms	Rogers et al. (1992)
TOMM	Test of Memory Malingering	Tombaugh (1996)
VFDT	Visual Form Discrimination Test	Benton et al. (1983, 1994)
VIP	Validity Indicator Profile	Frederick (1997), Frederick et al. (2000)
VSVT	Victoria Symptom Validity Test	Slick et al. (1997/2005)
WAIS-IV	Wechsler Adult Intelligence Scale, Fourth Edition	Wechsler (2008a)
WCST	Wisconsin Card Sorting Test	Suhr and Boyer (1999)
WMS-IV	Wechsler Memory Scale, Fourth Edition	Wechsler (2008b)
WMT	Word Memory Test	Green (2005)

7.2 Malingering Unfavorable Perspectives

7.2.1 Initial Issues

Drob et al. (2009) argued that there are clinical and conceptual problems related to malingering attribution in forensic-type assessments. I analyze each major argument that they had presented for its validity and scientific basis.

Argument (a). Unlike the case for clinical disorders, which have pre-set lists of defining criteria that are relatively enduring, malingering is context-specific, or externally-motivated, as well as being intentional. The implication is that it can be short-lived for personal gain.

Comment (a). The opposition between clinical disorders and malingering in terms of being enduring and short-lived phenomena, respectively, is tangential to the search for malingering in evaluations. Just because malingering might be situational and non-enduring does not disqualify it as a legitimate object of psychiatric/psychological determination. Moreover, the presented opposition does not consider that clinical disorders might be short-lived and also that malingering might reflect an underlying enduring personality characteristic or disorder.

Argument (b). By definition, malingering evaluation involves determination of intent, which is difficult to evaluate (tests cannot reveal whether an individual is intentionally lying, or malingering, p. 99). Needing to know intent is not a sufficient basis for developing psychological tests to ascertain it. For example, analogously, the courts do not have tests for determining whether witnesses are truthful. All that tests can do is indicate whether a clinical presentation is likely (or "unlikely") to be a "true" deficit, or valid.

Comment (b). Absent incontrovertible evidence of malingering, such as video surveillance showing a return to work when a total work disability has been claimed, malingering is determined partly on a rule-out basis in which intent is inferred. To argue that psychological tests cannot be constructed that clearly imply intent to lie casts doubt on the whole testing enterprise in the field. When appropriately constructed and standardized, tests in many areas provide valid scores and lead to valid comparisons with normative groups on which the tests have been standardized and to which an individual's scores can be compared to get at conclusions relative to the issues and questions to which the tests have been aimed. Tests always require inference in interpretation. Also, statistics always have an element of doubt attached to them, but they allow for statements of probability of doubt (e.g., percentiles associated with T scores in tests). Also, in the civil arena, some probability of doubt in conclusions is acceptable (e.g., the accepted degree of certainty for conclusions in civil court is referred to as "more likely than not").

Finally, establishment of intent does not take place just on the basis of test results, or at least it should not. The evaluator needs to examine the whole reliable data set gathered, including in interview and from collateral sources. To diminish the importance of psychological tests in disability and malingering determinations gives too much weight to the tests and attributes too little weight to the notion that comprehensive, impartial, and scientifically-informed data-gathering in evaluations can

effectively narrow down whether malingering had been a factor in an individual's presentation and performance. Evaluators are capable of coherent clinical integration of the whole set of reliable data gathered, thereby permitting valid inferences made and conclusions drawn.

Argument (c). Research has shown that psychologists are only slightly more accurate in detecting deception than are student research participants (Aamodt and Custer 2006). The detection of lying generally is subject to many vagaries.

Comment (c). The study by Aamodt and Custer illustrates the difficulties facing psychologists untrained in forensic-type assessments to detect deception compared to the general population, but it does not address how and to what degree well-trained forensic experts using the best psychometric tests, interview methods, and comprehensive approaches to detect malingering in forensic and related disability contexts succeed in their task. That the detection of lying is not easy and is subject to multiple vagaries does not mean that scientifically-based malingering detection efforts are unsuccessful, cannot be improved, and should be abandoned.

Argument (d). Instruments such as the SIRS (Structured Interview of Reported Symptoms; Rogers et al. 1992) cannot identify an individual's motivation for scores that reach thresholds for suspected feigning; therefore, the instruments should not be used in isolation to attribute malingering. In these regards, by making judgments about malingering and its presumed motives and intentions, psychologists "are venturing outside the normal bounds of the science of psychology" (p. 99).

Comment (d). Although the first part of the argument is valid, the second is a non-sequitur and, moreover, by itself is not supported by science. Psychologists and other mental health professionals study motivations and intentions quite frequently, and attempt to discern these inferred states in individual cases, even for legal proceedings. That psychological instruments cannot provide data directly on the question in such legal proceedings should not disqualify application of scientific-based procedures aimed at doing so. Heilbrun et al. (2009) described the need for scientific procedures and reasoning in forensic mental health assessments, and, moreover, detection of possible malingering is now considered at the forefront in accepted neuropsychological and forensic psychological practice (Heilbronner et al. 2009; Kane and Dvoskin 2011).

Argument (e). Clinicians who fail to undertake comprehensive assessments "run a high risk of false-positive attributions" (p. 100). For example, the authors described a patient with amnestic symptoms assessed as a malingerer but who was later shown to express these symptoms due to a pre-existing paranoia.

Comment (e). The argument is consistent with accepted standards in the field. However, the example provided runs the risk of leading the reader to consider that alternative explanations readily can be found in patient history for cases where malingering seems evident. The notion of comprehensive assessment also refers to (a) using a full range of relevant psychological instruments to ascertain the presence of malingering and (b) the careful search for gross or compelling inconsistencies in the record, or factors that cast doubt on the patient presentation and statements in the interview. By adopting an approach such as this, the risk of ending up with the types of cases offered by the authors is greatly minimized.

Argument (f). Drob et al. acknowledged that judgments about intentions are made in court, but query whether the judgments have a "sound theoretical or empirical basis" (p. 100). Further, because psychiatry and psychology are natural sciences having "deterministic" presumptions, it is contradictory to argue that a scientific test or technique can "penetrate" the question of "free will."

Comment (f). Although the first part of the argument is phrased in a way that speaks to a possible legitimacy in cases when prudent, comprehensive assessment and inference-making procedures are not adopted, the second part conflates judging intentions as going against the accepted grain or zeitgeist that there is uniquely determinism in the natural sciences. On the one hand, a deterministic perspective does not deny that motivations and intentions influence behavior. On the other hand, the argument is made in the extreme – that because no test can "penetrate" free will then all efforts to ascertain intentionality, such as in judgments about malingering, should be abandoned. Moreover, in formulating their argument, they repeat the extreme notion that such judgments are not "scientific."

Argument (g). The authors dispute the notion that malingering should be diagnosed when a patient's symptoms do not correspond to any known illness (no reference is given for this statement). For example, the diagnostic manuals add new diagnoses from one edition to the next. For instance, patients now diagnosed with somatoform (psychosomatic), hysterical, and PTSD (posttraumatic stress disorder) disorders would have been considered as malingerers in prior times. Also, "odd" physical symptoms might develop in patients for "unconscious and semi-conscious processes," as happens in conversion, somatization, trauma reactions, and so on (Brown 2004).

Comment (g). This argument can be deconstructed at many levels. It is important to underscore the following. Note that the authors admit that unconscious/semi-conscious processes are valid psychological processes in psychiatry/psychology, despite their prior arguments that making inferences about them is not scientific. Also, the assertion that the presence of unexplainable symptoms might lead clinicians to diagnose malingering and that other explanations might be valid instead, such as somatization, could be taken to mean that any unexplained symptom should not be judged as indicative of possible malingering. On the one hand, there are instruments that examine improbable symptoms, such as the SIRS, in terms of their frequency in relation to normative samples, so that arguing that any one odd behavior does not necessarily imply malingering should not be taken to mean that these cues cannot be used in psychiatric/psychological determinations of malingering. On the other hand, the argument that a symptom that does not correspond to a known illness might not mean that malingering should be suspected opens the door to denying any and every case involving such odd symptoms, because one could always argue in court for any and every case that what is odd one day could be part of an accepted diagnosis on another.

Argument (h). Next, Drob et al. carry further the argument that unconscious processes are relevant in certain disorders and processes in psychiatry/psychology, but that forensic practitioners avoid them because they are possible options that can replace the attribution of malingering intentions to patients. Forensic examiners avoid the labels of hysteria and dissociation because they imply that distortions in

unconscious processes can even "dominate consciousness and will" (p. 101). Also, hysteria and dissociation, (which are related to unconscious defensive processes/splitting into consciousness), have theoretical and empirical problems associated with them.

Comment (h). There are several fallacies with the arguments made. First, in the argument presented, forensic psychiatrists and psychologists are associated with assessments that are oriented toward being malingering-favorable. However, forensic evaluators might work with plaintiff as much as defense. Being a forensic evaluator is not a reason to suspect neither an evaluee's intentions about seeking malingering nor any conclusions when it is attributed. Second, unconscious processes such as somatization and consciously motivated malingering are placed at opposite ends of the spectrum, but there is no reason why unconscious processes cannot be at work to create symptoms for financial gain. The process of somatization, for example, might take place unconsciously to magnify or even create symptoms for financial gain in a process out of awareness of the patient, which would be one akin to malingering (Young 2008, 2011).

Argument (i). Drob et al. continued that "pseudo-symptoms" might be produced in a patient due to unconscious processes, such as in factitious disorder or Ganser syndrome. Therefore, it becomes "highly questionable" that malingering can be detected on the basis of finding inconsistencies or absurdities, and especially through psychological tests such as the SIRS and the MMPI-2 (Minnesota Multiphasic Personality Inventory, Second Edition; Butcher et al. 1989, 2001). Critics of the validity of factitious disorder and Ganser syndrome include the developers of tests such as the SIRS, who even suggest "legislating it out of existence." Moreover, there is little difference in symptom presentation and in instrument responses in conscious and unconscious feigners, and indeed the latter might score higher on malingering detection scales than the former (no reference provided).

Comment (i). Once more, inappropriate non-sequitors are used. Just because there might be pseudo-symptoms in some patients does not mean that any or all cases of inconsistencies and absurdities cannot represent malingering. Just because there have been criticisms of the validity of factitious disorder by malingering detection test developers (even though others consider it valid, such as the authors), this does not invalidate their tests. Moreover, there is sufficient literature to indicate that in many studies using different populations and measures, feigners and non-feigners can be distinguished, at least on the basis of group norms (see Larrabee 2012b). Finally, to devalue the role of widely-used psychological instruments, such as the SIRS and the MMPI-2, the scales of which can be important parts of comprehensive assessments in forensic disability and related evaluations and help rule in or out malingering along with other data sources, does not meet with the general acceptance of such instruments in the field according to their scientific basis.

Argument (j). How can malingering be attributed when (a) it is not defined by a set of criteria, (b) there is no known base rate for it, (c) it does not follow a predictable course, and (d) the motivation required to attribute it might not be evident, (e) aside from the fact that its putative expression might mask or take place in the context of genuine psychopathology?

Comment (j). These points are all true. However, malingering is well-defined in the DSM-IV-TR (Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision; American Psychiatric Association 2000); even if its suspected features are not supported. Also, estimates of its base rate have been established in different contexts, although as has been shown in the first part of the book, there are confusions when it is conflated with simple exaggeration of symptoms. Finally, malingering is not a diagnosis, per se, so does not require a set of polythetic criteria like clinical disorders in the DSM (e.g., the DSM-5; Diagnostic and Statistical Manual of Mental Disorders, fifth edition; Association American Psychiatric 2013); similarly, to speak of questions about its course is misleading because it is not a diagnosis, per se.

Argument (k). Some have claimed that malingering is too difficult to attribute so that the concept of feigning should be used instead, because it does not connote motivation. Moreover, in this approach, even a single test of feigning has been used to detect it, such as the SIRS (no reference provided).

Comment (k). This logic is difficult to follow. Although efforts to replace the concept of malingering with that of feigning are increasing, as far as is known, no test developer has suggested that the findings of a single test can help define malingering/feigning. Perhaps the authors meant that there are forensic evaluators who use one test result to attribute malingering/feigning. However, forensic and test-user guidelines all suggest that no one test result should be used by itself in such determinations. The field should not be diminished, in general, because some practitioners specifically might not follow suggested protocols.

Argument (l). People are rarely if ever fully rational, volitional, conflict-free, aware, and willing, because they are not fully unitary in purpose, clear in mind, consciously acting toward chosen ends, and cooperative in evaluations. Therefore, how can malingering be attributed when it assumes "the unity of the willing subject?"

Comment (l). Although the first part of the argument might be true, this does not deny that there can be focused, single-reason, and clear intentional lying for purposes of financial gain or other external incentives, without any unity in the ego, the subject, the mind, or the motivation-intention of the fabricator. Also, malingering has never been defined or discussed in the sense of the unity of the self that has been mentioned in this argument. Creating "straw men" is easy to do, but straw men are subject to fire that might cause blow back, as in the present comment.

Argument (m). In simulation research, subjects can be successfully instructed to simulate malingering. However, this type of research is artificial and should not lead to the conclusion that the subjects modeled accurately the thought processes and behaviors of actual malingerers.

Comment (m). Although simulation research has its limitations, as discussed in the next section of the chapter on the work of Larrabee (2012b), it can contribute some relevant data to the question of malingering. Studies of actual malingerers defined as such by incontrovertible evidence are almost impossible to conduct for obvious reasons. However, there are several research designs that allow for investigation of suspected malingerers or of those who present as feigners, and cumulatively the research can help define the characteristics of this population to a degree.

Argument (n). An attribution of malingering suggests that the patient cannot have genuine psychopathology. However, consider that someone with manic symptoms or actual pathological lying (*pseudologia fantasitica*) might have a condition that fuels lying and, therefore, inadvertently suggests malingering. Also, consider that, in PTSD, legitimate symptoms include lack of cooperation and poor test performance, among others.

Comment (n). Once more, the authors imply from isolated examples of confounds in lying and psychopathology that malingering should never be attributed. Moreover, their understanding of PTSD does not fit with scientific knowledge and DSM definition of the disorder nor its associated features.

Argument (o). In cases where malingering is suspected, evaluees might have an acquiescent response style or interrogatory suggestibility. They might present as individuals consistent with malingering due to limited intelligence, personality characteristics, or other personal characteristics. Or, racial, cultural, and language differences might be at play in their presentation.

Comment (o). All points are quite true. Malingering should be attributed on a rule-out basis, and that includes examining multiple possible response styles, such as acquiescence, careless responding, effect of race/culture and personality on presentation, effect of not being a native English speaker when instruments are administered in English, influence of ongoing symptoms on responses and presentation, such as pain and distress/depression, and poor understanding of the assessment protocol and tests because of limited intelligence. That being said, this does not mean that malingering can never be attributed because there are always alternate explanations that need to be considered, nor that testing for possible malingering should not be undertaken [or if it is, that when one particular research study points out the limits of any one deception detection instrument it should never be used]. Rather, the full scientific data should be examined toward these ends – in establishing the best instruments to use in individual assessments, including of test revisions, and in using them as part of a comprehensive data gathering strategy that considers multiple reasons for any exaggeration or indications of feigning that might be found and then rules out all others before attributing malingering.

Argument (p). The field has not and perhaps cannot specify clear-cut inclusion and exclusion criteria of malingering. The difficulty in establishing its content validity is confounding – given the difficulty in finding samples of genuine malingerers, the ultimate criterion for establishing its validity is in research relating results on index instruments to results on other ones or to clinical judgments. There is no litmus test to detect it. Moreover, its attribution is always based on idiosyncratic interpretations so is debatable. Confidence that one has detected it does not indicate accuracy in its detection.

Comment (p). All these points are quite true. However, as mentioned, malingering can be attributed on a rule-out basis, especially when together the reliable evidence clearly suggests it and other possible interpretations have been ruled out. Given its status as a V-code in the DSM and the critique of its criteria, it does not have clear-cut inclusion and exclusion criteria in the sense one finds with clinical diagnoses. However, malingering detection systems include inclusion and exclusion criteria

(e.g., Bianchini et al. 2005; Slick et al. 1999), even if the systems require change (Boone 2011; Rogers et al. 2011a, b). Moreover, the research base is improving even though its nature will never permit multiple studies of known malingerers. Moreover, the field does arrive at conclusions that are scientifically-informed, as Larrabee (2012b) shows. He has the same difficulties found for Drob et al. in justifying some of his conclusions about the detection and attribution of malingering, as shown later in the chapter, but this does not deny that the research is improving in methods and the results are helping differentiate malingerers, feigners, and other responding styles, and response-biases. There might not be a gold standard or litmus test in malingering and related detection, but this does not mean that instruments cannot be used in comprehensive assessments in individuals suspected of malingering to narrow focus toward a conclusion that they are feigning to a degree of uncertainty that is more likely than not. Malingering determination does not have to be idiosyncratic, whether for plaintiff or defense, especially when comprehensive, impartial, and scientifically-informed methods and tests are used. Confidence that malingering has been detected has no place to play when such an approach is used – the confidence should be that the methods and tests used were the best available for the question at hand, and that the results were fair either way, whether malingering was attributed or not.

7.2.2 Critical Issues

Argument (q). The base rate for malingering has not been established – for example, if it is high, such as 50 % in the population at issue, for a test that presumably detects malingering with an accuracy of 90 %, this could lead to incorrect identification of 50 individuals with genuine disorder out of every 1,000, attributing to them malingering when it is unwarranted. That is, the test would classify as malingerers 500 of each 1,000 patients, but would be inaccurate for 50 of the 500 so classified. If the base rate for malingering turns out to be low for a population of concern, for example, 10 % and not 50 %, for each 1,000 examinees, the test being discussed would accurately identify as malingerers 90 % (90) of the 100 genuine malingerers but also inaccurately identify as malingerers 10 % (90) of the 900 genuine patients with disorders. Therefore, the result of having administered the test for malingering detection with this level of accuracy for this amount of patients would be that on the test exactly half of the total identified as malingerers would be false positives or in error. Should the base rate of malingering turn out to be lower than 10 % for the particular population of concern, given the instrument accuracy detection rate of 90 % for malingering, more than half of the population tested with the instrument discussed will be incorrectly classified as malingering.

Aside from these statistics, for Drob et al. there are the issues of whether: (i) it is even possible to create an instrument with such accuracy (90 %); (ii) it is acceptable to misclassify individuals at the frequencies given (e.g., half or more of those to whom malingering had been attributed if the base rate levels of malingering in the

population are 10 % or lower); (iii) it is workable that base rates vary over settings and even examiners or types of examiners (e.g., plaintiff vs. defense); and (iv) it is appropriate that it has been suggested that tests should have different cut-scores for different populations or settings.

Comment (q). Drob et al. (2009) have raised the critical issues about malingering detection with these points. Unless they are answered to sufficient degrees of confidence for court purposes, malingering detection will not meet admissibility requirements for court and related venues, and conclusions on the matter in reports and testimony on this ultimate issue should be excluded and relegated to triers of fact in court and related venues. Overall, one way of summarizing these concerns raised by Drob et al. is to state that they are implying that that there is too much variability in malingering definition, base rate, detection instruments, and assessment determination procedures to propose use of both uniform assessment and test methods in its detection and rules for its determination in conclusions in assessments.

Argument (r). Examiners vary in the instruments used in their assessments to detect malingering. Moreover, they have "personal equations" in attributing malingering.

Comment (r). Quite true. This is why Slick et al. (1999) have proposed a diagnostic system for Malingered Neurocognitive Dysfunction (MND) and Bianchini et al. (2005) developed a revised system of the MND that is applicable to pain. In addition, I have proposed revised malingering-detection systems applicable TBI (traumatic brain injury), chronic pain, and also PTSD (posttraumatic stress disorder), as presented in Chap. 5. Once more, the lack of a complete and universally effective protocol in malingering detection with a set of valid evidence for its use in the field should not be the basis for rejecting the practice of trying to detect malingering. Rather, the problems with extant systems and tests should be the basis for suggesting more careful application of existing methods and procedures and even ways of improving them.

Argument (s). Typically, forensic examiners are subject to "considerable pressure" to attribute malingering and also to avoid "being fooled" by a malingerer. Students learn that it is safer and more respectable to "over-diagnose" malingering compared to under-diagnosing it, and this leads to pride in ferreting out malingerers "by almost any means." Forensic evaluees are assumed to be probable malingerers. This creates a self-fulfilling prophecy, because evaluees react to the malingering hypervigilance, attitudes, and expectations of the evaluators by becoming uncooperative, which in turn is taken as a sign of possible malingering. In effect, the evaluee, who has been a victim, ends up being blamed (and labeled as a malingerer) for an attitude created by the interaction with the evaluator.

Comment (s). Granted, evaluators and the assessment process might affect evaluee presentation and lead to inappropriate attribution of malingering. However, it could work the other way – forensic evaluators for the plaintiff might be too lenient and accommodating. Moreover, uncooperativeness might derive from defensiveness about malingering intent that the evaluee is trying to hide. Rather than approaching assessments with one goal of ferreting out genuine malingering, in contrast, some

evaluators might be prone to blame the system in all cases for their evaluees' misfortunes and inadvertently, or perhaps purposefully, let genuine malingerers escape through the cracks. That is, Drob et al. present a one-sided perspective on the biases that characterize the adversarial divide, criticizing the malingering-favorable approach by defense-oriented practitioners. They should have equally described the biases that affect plaintiff-oriented practitioners. The lack of balance in this aspect of their arguments might have infiltrated their other arguments. Nevertheless, they have provided a balance to the field because the pro-defense position dominates in the literature. That being said, balanced workers in the field should look at both sides of the area logically and dispassionately, as I have attempted to do.

Argument (t). Drob et al. end their presentation of clinical and conceptual problems in the attribution of malingering that is found in forensic and related disability evaluations by stating that evaluators should decline to proffer judgments in the legal system on intentional lying. Instead, they should contribute data to the legal system pertaining to the broader behavioral and situational context.

Comment (t). If Drob et al. are referring to contributing valid data after comprehensive, impartial, scientifically-informed evaluations that consider the possibility of malingering, and rule out all other possible explanations when it is attributed, this is a conclusion to which I would heartily agree. However, if they are arguing that the science behind malingering determination cannot lead to such conclusions or that the role of forensic and related evaluators should never involve such conclusions, I would heartily disagree.

In the next section of the chapter, I review the work of Larrabee (2012b), which is more defense- compared to plaintiff-oriented. His work indicates that much progress has been made in the science behind malingering detection and attribution, despite the criticisms that I raise.

7.3 Malingering Favorable Perspectives

7.3.1 Initial Issues

Larrabee (2012b) has expounded much of the scientific basis for the detection of malingering and related biases in forensic disability and related assessments. In the following, I review in depth the validity of the arguments that he has raised and their scientific basis, but without centering only on (in)validity of performance in neuropsychological assessment, the subject matter of his chapter and the book that he edited. After reviewing his chapter, I turn to other relevant research.

Point (1). Larrabee (2012b) explains that the American Academy of Clinical Neuropsychology has produced a consensus statement on the need for assessment of effort, response bias, and malingering in neuropsychological assessments (Heilbronner et al. 2009). Test results might not reflect accuracy in test ability because of evaluee suboptimal effort, malingering, etc. Inconsistencies in the evaluee's data might reveal reasons for performance invalidity, such as (a) inconsistency

across neuropsychological domains tested; (b) inconsistencies between obtained scores and the putative etiology of the performance deficits; (c) inconsistencies between test results and the severity of the alleged injury, as per medical documents in the file; and (d) inconsistencies in scores and behavioral presentation (Iverson and Binder 2000). Inconsistencies might derive either from legitimate factors, such as depression, or illegitimate ones, such as malingering.

Comment (1). Note that other types of inconsistencies are possible. For example, the documentation on file might reveal inconsistencies from one category to the next, as pointed out, but also within a category for example, for the same topic/symptom, the patient could report one account to one evaluator but a different version to another. Also, with respect to other possible within-category inconsistencies, neuropsychological test performance might be at odds with similar performance on other tests in the battery administered, e.g., with cognitive aspects of a putative comorbid PTSD.

Point (2). The definition of malingering provided by Larrabee (2012b) is the classic one of the DSM, which involved intentionally producing false or grossly exaggerated symptoms for purposes of obtaining an external incentive, such as financial compensation for claimed injury.

Comment. (2). Note that, despite its universal use, this DSM definition is problematic. This comment is not a criticism of Larrabee, but constitutes an innovation for the field. First, in malingering, unlike what is specified in the DSM definition, the intention is not to *produce* false or exaggerated symptoms but to clinically *present* with them. There might be no symptoms produced, per se. Second, even if there were, the process of somatization could be in play. Moreover, even in the case of somatization, the symptoms produced might be on purpose for financial gain, or malingered, as when firmly believing that one has been injured (although one has not) and the stress, lack of sleep, anger against the insurance process, etc., all could conspire to produce pain and related claimable symptoms.

In addition, in creating an appropriate DSM definition, one should add a qualifier that the malingering could be partial rather than full, and mild rather than moderate or severe, but no less in need of detection. That is, once malingering is judged to have taken place, it should be specified for certain relevant attributes, such as the extent of its range and degree of its intensity. Note that inclusion of partial and mild malingering in the definition should not obscure neither that some malingering took place nor that there might be valid aspects of the evaluee's presentation and performance that require regular assessment for diagnosis, functional deficit and disability, recommendations, and prognosis. Take note also that a definition of malingering that includes the requirement of specification of degree to the point that it might be mild should not be conflated with including mild or minimal exaggeration as part of the definition or with inclusion of mild exaggeration as an example of mild malingering.

In short, an improved definition of malingering would involve: the intentional *presentation with* false or grossly exaggerated symptoms [physical, mental health, or both; full or partial; mild, moderate, or severe], for purposes of obtaining an external incentive, such as monetary compensation for an injury and/or avoiding/

evading work, military duty, or criminal prosecution. Other advantages of the new definition to note is that the use of the word "presentation" instead of "production" covers negative symptoms as well as positive ones, such as failing to present capable of work when that is not the case. Moreover, other changes that I made to the definition (a) allow for combined physical and psychological symptoms, (b) value all mental health perspectives, and (c) allow for both trying to obtain financial compensation and avoiding work, "double dipping" if you will.

It is important to note that Larrabee (2012b) presented the official definition of malingering as per the DSM at the outset, on the first page of his chapter. He is well aware then that it pertains to clearly to either false or exaggerated symptoms of a "gross" nature, and therefore does not include mild exaggeration in its definition or a definition that allows for exaggeration of any intensity.

Point (3). Larrabee (2012b) then presented Rogers' (1990a, b, 1997a, 2008) adaptational model of malingering. An adaptational model of malingering involves a cost/ benefit analysis and is contrasted with explanations that it is pathological and antisocial/criminological. According to the adaptational model, malingerers engage in their behavior because the adversarial process aimed at denying their claim/ position, for which the stakes are quite high, is in opposition to their needs and the person cannot perceive any other way to deal with the matter.

Comment (3). Larrabee raises the good point that the adaptational model allows for judging potential malingerers less pejoratively than do the other models available to explain it. The assessor is less likely to ignore evidence of malingering when using this framework. At the same time, in the first part of the book, I noted that, reading between the lines, an adaptational model permits the inference that malingering is more likely. Given the model's cost/benefit component, malingering can be considered to take place because of a calculated, utilitarian framework rather than taking place because of personal deficits. Assessors need to be aware that in forensic disability assessments for court or related purposes, (a) receiving the referral should not be considered tantamount to branding evaluees before they enter the assessment process as likely malingerers and, (b) in assessing for possible malingering, the adaptational model that is applicable to the process should not be taken to inevitably help confirm the diagnosis. Risk factors never guarantee outcome in any area. That an assessment for forensic disability and related purposes is taking place is an important component in considering the possibility of malingering, but it is only an entry level component that allows other aspects of a full-scale assessment to proceed. In this regard, given the likelihood according to base rate data on malingering in such evaluations, it is more likely than not there might be problematic presentations and performances. However, it is also more likely than not that the evaluee will fail to meet criteria for frank malingering. Therefore, by definition, malingering should never be considered the sine qua none outcome of a valid forensic approach in disability and related determinations.

Point (4). At this juncture, Larrabee noted that the cost/benefit analysis at the core of the adaptational model of malingering is consistent with the approach ("better fits the definition") that malingering involves "either fabricated or exaggerated deficits." Note the change in defining the key components of malingering that has

taken place a this juncture in Larrabee's treatise – unlike what is found in the DSM, which, to recall, considers only gross exaggeration as part of its definition, and how he defined it earlier in his chapter, exaggeration and frank malingering are now conflated together. Larrabee proceeds to consider malingering as either fabrication or exaggeration for the remainder of the chapter, and no explanation is provided for altering the classic approach to the definition as found in the DSM.

Comment (4). In this regard, in the next section of his chapter, Larrabee refers to three patterns of malingering in neuropsychological assessments – false or exaggerated symptom reports, intentionally poor performance on neuropsychological tests, and a combination of "symptom exaggeration and intentional performance deficit" (Iverson and Binder 2000; Larrabee 2000). Note how the criteria of malingering involving exaggeration become more problematic as the section proceeds in Larrabee – first, the notion that it involves fabrication or exaggeration is repeated; then, when one or the other component is chosen for the combined criterion with testing, the one chosen is exaggeration rather than fabrication. In the next part of his chapter, Larrabee describes the Slick et al. (1999) MND criteria of malingering, which I have described in detail in the first part of the book, and consistent with his new approach to defining malingering, they are described as involving effort to detect volitional "exaggeration or fabrication."

Note that in the first part of the book, I have pointed out how this broadening bracket change in the definition of malingering (a) acts to cast a wider net on who is considered a malingerer, (b) that even mild exaggeration might qualify as malingering, and (c) that based on this revised definition the accepted base rate for malingering has become about 40 % or more (Larrabee et al. 2009). At the same time, I noted that evaluees might express problematic response styles, in general, inclusive of malingering but not limited to it, at a percentage that might be even more than 50 %.

In the end, Larrabee (2012b) represents the predominant point of view in psychology with respect to the question of malingering in forensic disability and related contexts. My criticisms of Larrabee and others who add to and support his views are not aimed so much at the detection and attribution methods of malingering and related biases and presentations/performances but, rather, they are aimed at some of the definitions and research procedures in the field, and also the practice or assessment conclusions that are based on them. That being said, as indicated by the equivalent criticisms of a malingering-unfavorable perspective by Drob et al. that began this chapter, a middle-of-the-road approach queries not just one adversarial side compared to the other but queries any perspective that does not fully stem from a balanced, scientific-based one; that is, a science-first approach should not be taken as targeting one side or the other but contributing and improving both toward the valid middle to which both should aspire.

Point (5). Larrabee (2012b) indicates next that the MND system has been generalized to assessment of pain presentations by Bianchini et al. (2005). They developed a malingered pain-related disability system (MPRD), as described in detail in the first part of the book. Larrabee indicated that they innovated in describing inconsistencies found in assessments as "compelling" or not. Specifically, for Bianchini et al., a compelling inconsistency refers to differences in evaluee

presentation when the person is aware and unaware of being evaluated, such that it appears that the evaluee is purposefully responsible for producing the difference.

Comment (5). Note that in the new system that I developed to improve the MND and MPRD systems, as described in the first part of the book, I used the term compelling inconsistency in a different way. First, differences between aware and unaware presentations could be minor so that the inconsistency might not be compelling in a more generic sense of the word. This led me to distinguish between compelling, marked, and substantial inconsistencies and less compelling, moderate, and nontrivial ones.

Second, inconsistencies that are compelling might be found in other areas in an evaluation, not just in observations. Third, using the term compelling more widely in any malingering detection system has other advantages. In this regard, the DSM definition of malingering includes "gross" exaggerations as well as frank fabrications, so that referring to compelling inconsistencies generally allowed me to use a term in my system equivalent to "gross" that is applicable to all areas of assessment, including inconsistencies in both psychometric testing and areas other than psychometric testing. Therefore, in developing the system, I referred to compelling inconsistencies between testing and any other area of assessment, and also between any of the other areas other than testing and, moreover, within any one area, too. This innovation allowed consistent usage in terminology with respect to inconsistency across and within the different system areas. Moreover, by expanding the range of compelling inconsistencies possible in a malingering-detection system over non-test as well as test areas of assessments, psychiatrists and other mental health professionals not versed in testing could acquire more latitude using the system, although in using the system psychologists should be searching for non-test related compelling inconsistencies, as well.

Point (6). Larrabee (2012b) concludes the section of his chapter on the MND and MPRD by indicating that they share many similarities. The crux of the matter in their use is whether they can support malingering attributions. In this regard, Larrabee indicated that when (a) an evaluee's findings are "improbable," (b) there are external incentives, and (c) no other possible interpretation of the findings makes as much sense, the "intent" component of an evaluee's intent to malingerer is established.

Comment (6). This conclusion makes eminent sense, because malingerers are rarely caught red-handed on the basis of incontrovertible evidence. Therefore, "diagnostic" systems need to consider improbable findings and compelling inconsistencies. Nevertheless, the evidence needs to go beyond a "reasonable doubt" before the attribution can be made. Moreover, the evidence that malingering has not taken place needs to be considered equally. For example, the mathematical systems used in the field, as presented below, to rule in malingering, are susceptible to Type I error, or unduly obtaining false positive errors, and moreover, they do not consider the face validity of the issue – that an evaluee might pass most validity performance indicators in an assessment yet still be labeled a malingerer because of a statistical algorithm that does not consider the Type 1 error possible over a battery of test results.

Point (7). In the next part of his chapter, Larrabee addresses the research designs in use for investigating malingering. The four designs involve: case studies, simulation, differential prevalence, and known-groups (Rogers 1997b, 2008). Case studies provide limited information, simulation designs do not allow for much generalization, and the differential prevalence design does not consider individual subjects in each group. However, the known-groups design has been improved by use of the Slick et al. (1999) criteria for MND because they help specify malingerers compared to genuine patients; the latter group must exclude by careful screening malingerers for the design to work. Once the criterion groups are designated, the research proceeds to the second phase of study – systematic analysis of group similarities and differences in assessment results.

Comment (7). The difficulty in this type of research is that true malingerers do not volunteer or are easily recruited to this type of study, so that to call the types of groups assembled in the typical research as known malingerers is not accurate. Indeed, in Roger's description of the types of designs that can be used in researching response styles, he makes a distinction between known-groups designs and "boot-strapped" ones, in which known-group assignment is based on multiple detection strategies, stringent cut scores, and careful application of external indicators with well-established validity estimates to the degree possible. However, these various testing and statistical parameters need to improve before the validity of any boot-strap design study is clearly established. It is notable that Larrabee (2012b) does not even mention the boot-strap design and, in his summary of research methods on malingering, he seems to collapse this design with the known-groups one, implying that the typical research in the field is conducted with known malingerers when this is far from the case.

7.3.2 Testing Issues

Point (8). Next, in a section that comprises much of his chapter, Larrabee (2012b) discussed the specialized and omnibus tests available for the detection of response bias and malingered neurocognitive deficits. He divided them into (a) simpler symptom validity tests (SVTs) performed normally by brain-injured persons, (b) measures of response bias and symptom validity based on two-alternative forced choice testing, and (c) assessment of malingering using atypical performance patterns on standard neuropsychological tests. This is a comprehensive section, and I list the major instruments indicated.

For simplistic tests, there are modifications of the Rey 15-Item Memory Test (RMFIT; Rey 1941; Boone et al. 2002c) and Rey's Dot Counting Test (RDCT; Boone et al. 2002a). The b Test was also developed in Boone's laboratory (Boone et al. 2000, 2002b).

For two-alternative forced-choice tests, there are digit tests (DMT, PDRT, VSVT, CARB; respectively, Digit Memory Test, Portland Digit Recognition Test, Victoria Symptom Validity Test, Computerized Assessment of Response Bias Test;

respectively, by Hiscock and Hiscock 1989; Binder 1993, and Binder and Willis 1991; Slick et al. 1997/2005; Allen et al. 1997, and Conder et al. 1992). Other tests involve words as stimuli (21-item test; WMT, TOMM, LMT; Word Memory Test, Test of Memory Malingering, and Letter Memory Test, respectively; by Green 2005; Tombaugh 1996; and Inman et al. 1998, respectively). Frederick (1997; Frederick et al. 2000) developed a forced-choice measure using verbal and nonverbal abilities (VIP, Validity Indicator Profile).

Few litigants suspected of malingering perform below-chance. For example, in a study by Greve et al. (2009a), only 2.6–7.1 % of the sample tested failed at a level below-chance on any of the trials of the PDRT, WMT, or TOMM. For these tests, most are easy enough that for those non-litigating neurological patients tested in the tests' normative populations, the typical success rate on the trials is well over 90 %. Studies of the comparative sensitivities of the tests support the efficacy of the DMT, the PDRT, the TOMM, and the WMT [Vickery et al. (2001); as well as Bianchini et al. (2001) and Greve et al. (2008), although no study has compared all the tests.]

As for using the strategy of discerning atypical performance patterns on standard neuropsychological tests, Larrabee (2012b) lists poor recognition memory on the RAVLT (Rey Auditory Verbal Learning Test; Schmidt 1996; Boone et al. 2005) and the CVLT-II (California Verbal Learning Test, Second Edition; Delis et al. 2000; Wolfe et al. 2010) and atypical error patterns on the WCST and the CT (Wisconsin Card Sorting Test and Category Test; Suhr and Boyer 1999; Tenhula and Sweet 1996, respectively). Larrabee (2003a) found that the following tests were useful in discriminating litigants with MND from control groups: VFDT (Visual Form Discrimination Test; Benton et al. 1983, 1994), FTT (Finger Tapping Test; Heaton et al. 1991), RDS (Reliable Digit Span; Greiffenstein et al. 1994), the FMS (Failure-to-Maintain Set Score) on the WCST, and the FBS (Symptom Validity Scale; Ben-Porath and Tellegen 2008/2011; Lees-Haley et al. 1991) on the MMPI-2. The Advanced Clinical Solutions set (ACS; Holdnack and Drozdick 2009) of the WAIS-IV (Wechsler Adult Intelligence Scale, Fourth Edition; Wechsler 2008a) and the WMS-IV (Wechsler Memory Scale, Fourth Edition; Wechsler 2008b) includes a set of five symptom validity scales and Miller et al. (2011) demonstrated testing yields excellent group discrimination (over simulators, genuine, nonlitigating TBI patients), or sensitivity.

For motor function tests, finger tapping speed appears the measure of choice (Greiffenstein 2007), and Arnold and Boone (2007) compared performance on several measures, including Finger Tapping Test (FTT), grip strength, and grooved pegboard tasks. For digit span and memory, results with the Digit Span (DS) measure and the Reliable Digit Span (RDS) measure of the Wechsler tests were provided by Larrabee (2012b; in this regard he cited, in particular, Babikian and Boone 2007; Greve et al. 2007b; and Suhr and Barrash 2007).

As for recognition memory, Larrabee referred to Binder et al. (2003), who showed that the RAVLT has discriminatory efficacy. Wolfe et al. (2010) found the same for the CVLT-II, although Donders and Strong (2011) recommended a more conservative cut-off than Wolfe et al. Meyers and Volbrecht (1999) and Lu et al. (2003) worked with the Rey-Osterreith Complex Figure Test (ROCFT). Kim et al. (2010)

reported good results with the Warrington Word measure. Larrabee (2008a) developed embedded SVT measures for the CVMT and the CRM (Continual Visual Memory Test; Trahan and Larrabee 1988; Continuous Recognition Memory Test; Hannay et al. 1979; respectively).

For problem solving, Larrabee (2012b) reported work with the WCST (Heaton et al. 1993), such as Greve et al.'s (2002), King et al.'s (2002), and Greve et al.'s (2009b) research on combined multiple indicators. For the Category Test of the HRB, Larrabee described the research by Sweet and King (2002) and Greve et al. (2007a).

In terms of omnibus tests for detecting symptom exaggeration, Larrabee (2012b) focused on the MMPI-2. Berry and Schipper (2007) reviewed various measures for the detection of feigned psychiatric symptoms, and the MMPI-2 was the only omnibus test that met the criteria for "quality control," as did the structured interview test, the SIRS. Client validity checks on the PAI (Personality Assessment Inventory; Morey 1991, 2007) fell just one indicator short among the omnibus tests, as did the M-FAST (Miller Forensic Assessment of Symptoms Test; Miller 2001), a reduced version of the SIRS.

Arbisi and Ben-Porath (1995) and Lees-Haley et al. (1991) developed symptom exaggeration detection scales not in the usual family of F tests [the Fp-r and the FBS scales, respectively, or the Infrequent Psychopathology Responses and Symptom Validity Scale (Ben-Porath and Tellegen 2008/2011)], with the FBS scale of Lees-Haley et al. supported in the research, as per (listed here in the order in Larrabee) Larrabee (2003b), Miller and Donders (2001), Martens et al. (2001), Greiffenstein et al. (2002), Larrabee (2003a, c, d), Griefenstein et al. (2004), Nelson et al. (2010), Wygant et al. (2007), Sharland and Gfeller (2007), Greiffenstein et al. (2007), and Ben-Porath et al. (2009), but only if examined in the context of other data gathered in assessments.

Other MMPI-2 related scales include the RBS (Response Bias Scale, Gervais et al. 2007) and the HHI (Henry et al. 2006). The MMPI-2-RF (Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form; Ben-Porath and Tellegen 2008/2011) contains a new Fs scale and a reduced FBS scale. Research by Wygant et al. (2010), Smart et al. (2008), Whitney et al. (2008), and Larrabee (2008c) support the validity of the RBS. The research also points to the value of MMPI-2 clinical scales elevations for scales 1, 2, 3, 7, and 8.

Comment (8). The increased amount of validating research on measures of invalidity performance, malingering, symptom exaggeration, feigning, and other response biases augurs well for the future of the field, and the chapter by Larrabee (2012b) provides a comprehensive review of the measures. However, the degree to which they can detect actual malingering compared to more generic response bias or feigning needs to be established by careful research, that starts with (a) the appropriate definition of malingering, (b) use of the best measures for the task, and (c) selecting the correct comparison groups. These and other informed decisions will better assure generalizability of the results and their appropriate interpretation. This type of approach to the research will also better assure that assessments that are partly based in a science-first scope of procedure and logic in conclusions are more valid. Individual assessments need to be interpreted with care and only after

consideration of a comprehensive reliable data set that had been gathered. In assessments, conclusions can be only as strong as the tests used, and when these are lacking in the ways indicated, assessors who use them without acknowledging their imperfections and limits might find the conclusions based in part on the tests contested in court and related venues.

7.3.3 Critical Issues

Point (9). Larrabee (2012b) then turns to statistical issues, such as the base rate of malingering and aggregating multiple SVT results. He referred to his first chapter in his book for further details (Larrabee 2012c). Psychometric measures aim to maximize the statistics of *sensitivity* and *specificity* (defined as the proportion of true presence of response bias [or true positives/ (true positives + false negatives)] and the proportion of population of concern for which there has been accurate detection of an absence of response bias [or true negatives/(true negatives + false positives)], respectively). The higher the sensitivity for a test cut-off score, the more likely a negative test result rules out the diagnosis. In contrast, the higher the specificity for a test cut-off score, the more likely a positive test result rules in the diagnosis. The *hit rate* is an index of the proportion of cases that are accurately classified using a particular metric [(true positives + true negatives)/N number of cases]. *Positive predictive power* (PPP) is the ratio of true positive to total positive scores [true positives/(true positives and false positives)]. *Negative predictive power* (NPP) refers to the ratio of true negative to total negative scores [true negatives/ (true negatives + false negatives). At low prevalence or base rate for a particular condition of interest, a negative test result compared to a positive one is more likely to be true. In contrast, with a high prevalence/base rate, a positive rather than a negative test result is more likely to be true.

Comment (9). This statistical effect means that, for something like the detection of malingering, it is advantageous to work with a high base rate because, in this scenario, positive test results are more likely to be true. Therefore, the search for and use of definitions, tests, and procedures that maximize the estimate of its presence might be facilitated, at least for those seeking its detection. In the first part of the book, I go to great length to show how the typical research in the field has used inconsistent definitions of malingering, leading to inconsistent estimates of its prevalence/base rate.

Point (10). The *likelihood ratio* (LR), defined as sensitivity/(1 – specificity), concerns the probability of having a particular diagnosis, and is useful for individual diagnosis determinations. Another related statistic, the *odds ratio* (OR), is best for group comparisons. If there is more than one test involved in an assessment, and they are independent, LRs can be chained (Larrabee 2008b). If the tests are dependent, logistic regression procedures can be used (Millis 2009). ROC (receiving operating characteristic) graphs can be calculated by plotting true and false positive rates for all possible cut scores for a test. The magnitude of ROC *area under curve*

(AUC) can provide the overall diagnostic efficiency of a test (e.g., Larrabee and Berry 2007).

The results of Larrabee (2003a) and Victor et al. (2009) revealed that failure on combinations of any two of several (five, four, respectively) SVTs helped to diagnostically discriminate criterion and control groups for malingering [also see Vickery et al. 2001, 2004). Larrabee (2008a, b) argued that LR chaining of odds in multiple SVT testing can effectively add post-test probabilities in malingering detection. Boone and Lu (2003) showed how testing for multiple scores that exceed cut-off for malingering can help increase diagnostic accuracy.

Comment (10). Larrabee (2012b) needs to consider that the calculation of likelihood ratios and regression statistics for detecting malingering in research using multiple detection instruments raises certain questions. In the following, I raise issues related both to individual assessments and research in the area.

First, the statistics obtained in multiple SVT testing might inflate Type I error in the aggregations undertaken. Rather than multiplying the possibility of detecting malingering, each additional test might dilute it in the sense that the statistics mentioned do not accommodate for extreme multiple SVT testing undertaken just to find some failures. There is a large difference between failing two of four tests and two of ten, with the likelihood of artificially generating a failure just due to chance increasing with each SVT added to the test battery, assuming statistical adjustments are not put into effect. In terms of face validity of the statistical procedures described, for example, it would be hard to convince a trier of fact that an individual who has passed eight out of ten SVTs is likely a malingerer.

Second, the research is only as good as the validity of the concepts and definitions underlying the studies; the SVT tests used; how the groups involved are defined; the designs, other measures, and statistics employed; and the interpretations of the results. If these are skewed, they might evoke a degree of skepticism.

Third, even if it is shown that an evaluee obtains scores that indicate feigning, improbable presentation, performance invalidity, symptom exaggeration, malingering, or other response bias, the correct interpretation might gravitate toward calling the behavior a cry for help or related motivation rather than anything like malingering. To my knowledge, there has been no research on known patients who cry for help, catastrophize, somatize through unconscious mechanisms, express litigation distress for reasons related to the insurer side of the equation, etc., in comparison to known or presumably known malingerers and the usual control groups. Until this type of research is undertaken, the research on putative known malingerers relative to other control groups would seem to be missing critical groups to enable more accurate interpretations of the results in this type of research.

This being said, evaluees who fail a series of symptom validity and related tests are prime suspects for untoward motivations or other threats to validity that compromise their presentation and performance and merit corresponding conclusions. The question is to not go on unrestricted fishing expeditions, but to function from the right balance, choose appropriate instruments, consider alternatives in evaluating the results, and arrive at fair conclusions whatever their direction. For example, the full pattern of data acquired in an assessment could always lead to conclusions that

malingering has taken place even without failure at a chance level on a two-alternative forced choice measure or, as an example at the other extreme, that malingering has not taken place despite a pattern on other types of multiple feigning detection tests of failing to reach cut-offs. Only a comprehensive analysis of all the reliable data gathered instead of analysis of only one test or several tests can help to arrive at valid conclusions in such cases.

Point (11). Larrabee continues that the practice implication of the discrimination research undertaken is that assessors should not "merely tally" the number of fail and pass SVT results, determining which is higher and then concluding whether malingering is present or absent on that basis. There is sufficient research showing that two and especially three test failures cumulatively provide confidence about the presence of malingering, even when the estimated base rate for malingering is low. However, the multiple SVTs administered must express statistical independence for the research to be valid, as well as its consequent application in assessment.

Comment (11). The issue of test independence might be a critical sticking point in this approach to multiple SVT testing in malingering detection and its aggregating procedures. First, the few studies on the topic might have demonstrated nonsignificant average correlations among the measures, thereby indicating their statistical independence. However, only a few studies have been conducted on the topic, only a few tests were used in each study, and not all the possible ones that might be used in valid assessments have been tested together in this type of research. Further replications and extensions of the research are needed with the variety of populations that are involved in forensic disability psychological injury cases before the aggregating algorithms can be fully accepted in practice and in court. Moreover, whenever they are used in the latter or former, aside from the prudence that is needed in their application and interpretation, the relevant provisos and limitations in their use should be made explicit.

Does this hesitation about malingering-detection algorithms in the ongoing research mean that evaluators should revert to counting positive and negative results for SVTs to see which number predominates and using the result to help arrive at malingering attributions? Taking such a decision would be premature. The assessor should carefully evaluate the ongoing research and apply it judiciously. For example, the ongoing research indicates that multiple tests can be cumulated, they should be independent to the degree possible, and failing two and especially three of them is problematic, although other factors need to be considered, such as the amount of tests administered.

Note that in the malingering diagnostic system that I developed in Chap. 5, I considered the gist of Larrabee's work and the directions taken in his work and mine are similar. Moreover, in my approach, I did not consider critical that the validity indicators have to be statistically independent to the degree underscored by Larrabee, because the types of indicators that I suggest for use in this regard cover the spectrum of ones available. That being said, analyses in other chapters in the present book (e.g., Chap. 10) do not support Larrabee's conclusion that the research he cites demonstrates validity indicator independence. In the end, the system I propose is compatible with his model that about three validity indicator test failures

is suggestive of excessive negative response bias, especially when other factors are considered like extreme scores and the evaluation of the assessment file as a whole.

Point (12). Larrabee (2012b) describes his review of the research (Larrabee et al. 2007) on probable compared to definite malingering in litigants/ claimants, as determined according to the Slick et al. (1999) criteria for MND. In these groups, Heinly et al. (2005) found no difference in digit span scores, Greve et al. (2006) found no difference in various MMPI-2 validity scales, and Larrabee (2003a) found no difference on multiple measures, including those related to digit span, the MMPI-2, and the CVMT.

Comment (12). There has been insufficient research establishing the equivalence of probable and definite malingering according to the MND criteria. Researchers are collapsing the two categories together based on the presumption that test performance in the two groups is identical except for the two-alternative forced choice test results that classify them as probable or definite in malingering. Moreover, assessors might consider possible malingerers according to the MND criteria as definite ones because of this collapsing process. A legal argument that justifies the combination in practice is that according to the legal test of "more likely than not," "probable" malingering is a category that meets the criterion so that it is justifiable to treat the two groups as the same in these regards. The danger is that because of the legal need and because of the uniform direction of the results in the first few studies that have been conducted, further research is prematurely undercut and the presumed equivalence between the two groups goes unchallenged. Moreover, the legal test is insufficient reason to collapse the two groups; psychologists are scientists who should want to investigate the subtleties of behavior in different groups and not conduct research only to meet legal needs (e.g., collapsing groups in this case).

Point (13). Larrabee (2012b) repeats the importance of evaluees failing three two-alternative forced choice tests, as per the research of Boone (2007), Larrabee (2003a), Vickery et al. (2004), and Victor et al. (2009). He notes that, "failure of three independent SVTs is essentially associated with zero false positives and a 1.00 probability of malingering" (p. 145), and is diagnostically equivalent even if not conceptually equivalent to failed two-alternative forced choice tests according to the MND criteria. Note at this point, Larrabee is emphasizing three SVT failures as especially relevant, whereas he had referred to two or three previously. Also, the implication is that in assessments involving failure on three SVTs, the assessor "does not need to make an inference of intent" (p. 146) relative to the basis for malingering. That the evaluee expressed a test pattern of "highly improbable events" is sufficient evidence of intent and inference of intent is not required.

Comment (13). Once more, I agree that three such failures are telling, but not automatically definitive of malingering. The astute assessor might have to find alternative ways of casting clear doubt on the credibility of the evaluee or, indeed, less damaging interpretations might make sense when all the reliable data are considered. Note that in the MND criteria, two failed SVT results are considered especially relevant, in contrast to Larrabee's emphasis on three of them. Larrabee's emphasis on especially three failed SVTs suggests a modification to the MND criteria. I agree that the MND criteria should be more conservative in this regard.

However, failing two such tests could still be revealing of malingering, everything else being considered. There should be no hard and fast rule about two or even three failed SVT tests by themselves, as I have argued throughout.

Point (14). Larrabee (2012b) described that in the Larrabee et al. (2007) chapter, he and his colleagues had recommended changes to the MND criteria. In particular, they had argued that criteria C on subjective complaints be given equal weight to other criteria in determining probable malingering and not just possible malingering, thus permitting, for example, consultation of tests based on self-report, such as the MMPI-2. The need for independence of the measures means that the multiple validity indicators of such instruments could count only as one indicator.

Comment (14). In the diagnostic system that I developed (in the first part of the book), tests such as the MMPI-2 could contribute up to four validity scale scores. This decision is consistent with the work of Rubenzer (2009) on whom the new system is partly based. Tests such as the MMPI-2 and MMPI-2-RF have multiple validity indicators because they reveal different aspects of invalidity in performance/presentation. In this sense, they should be treated together in determining malingering and related attributions, at least for those indices applicable to the case at hand, as is the classic and ongoing practice with these instruments. That the MND approach and its derivatives run counter to this tradition suggests that they should be used with caution relative to more rational procedures for malingering attribution detection in regards to these matters.

Point (15). Larrabee (2012b) suggests that "[d]escribing malingering as exaggeration and/or fabrication" of deficits relative to the case at hand is "preferable" to the DSM-IV (Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition; American Psychiatric Association 1994) definition, which involves the intentional production of symptoms that are "*false*" (italics added by Larrabee) or "grossly exaggerated." Then, he argues that if ever testifying in court, opposing counsel might try to have the evaluator use terms such as "lying" and "false," but that these terms should be "avoided" and the evaluator should "refer" back to the "original" definition.

Comment (15). Once more, it is evident that Larrabee is using a definition of malingering that includes any degree of exaggeration rather than uniquely gross exaggeration, as found in the DSM. Moreover, instead of just repeating this approach to the definition of malingering, at this point in the chapter he adds that his definition should supplant the DSM one. Also, we learn that he rejects use of the term "false" to characterize malingered behavior, preferring the term "fabrication." In this chapter, I have also suggested revisions to the DSM definition of malingering, but am not sure whether "fabrication" is a better term compared to "false." Perhaps the definition should involve an inclusive term, such as "false/fabricated/feigned."

Point (16). Larrabee (2012b) presents his research indicating that there are subtypes of malingering involving different combinations of deficits in memory, perception, motor function, and problem solving (Larrabee 2004a, b). In addition, his research revealed two patterns of MMPI-2 profiles in patients meeting MND criteria, related to somatoform and severe psychopathology exaggerations. Finally, on this topic, he reports that the evidence is inconsistent about whether there are

discrete categories or taxa about malingering compared to its existence along a continuum (e.g., Walters et al. 2009).

Comment (16). Larrabee indicates a need for research on this issue, which is a standard one in psychology – are categories discernable in psychological phenomena or does the behavior involved reflect dimensional properties? I would add that for malingering, can we identify subtypes related to possible, probable, and definite kinds, the partial and full kinds, and the mild, moderate and serious kinds, or do these characteristics reflect dimensional rather than prototypical categories that can be carved at the joints? The court might prefer that the research demonstrates two categories – malingerers and others, and that the evidence can clearly distinguish the two both at the nomothetic, population level and the idiographic, individual level. However, more likely than not, these categories will be imposed on dimensional data, and end up somewhat artificial but no less useful should all the necessary research be conducted.

Point (17). Another research issue raised by Larrabee (2012b) concerns "clinical and individual difference variables" that are related to finding false positive scores on SVTs. He relates the issue to specifying better ("determining the features") the MND criteria.

Comment (17). I would add that establishing the clinical and individual difference variables that relate to presentation and performance in civil, forensic, disability and related evaluations can help understand all types of response biases evident in assessments, not only malingering. Moreover, they can help specify what factors lead not only to increased suspicion of malingering but also increased chances of other pertinent aspects of assessment in the field, such as patient compliance with therapy regimens, good effort, nonconscious reasons for exaggeration, and so on.

7.4 Chapter Conclusion

A study that came out at press time has supported my comments and criticisms of validity indicators. Berthelson et al. (2013) conducted a meta-analysis indicating that, in prior research on multiple tests of efforts to detect possible malingering, the measures used correlated on average at 0.31. According to the authors, the algorithms used to calculate the probability of malingering over combined tests of effort or invalidity normally should be independent, or with zero correlation. Moreover, they noted that the mathematics used to calculate probability in these algorithms reveals a "misunderstanding" of the mathematics of probability, leading to "pervasive error" in the literature on the topic, and incorrect identification at unacceptable levels of healthy evaluees as malingerers, or unacceptable Type I error, i.e., high false positive rates.

In their study, Berthelson et al. (2013) identified 22 independent samples having 3,564 participants, involving 407 correlations over 31 effort tests. The participants included neurological and psychiatric patients, as well as healthy controls. The tests included the TOMM, WMT, MSVT (Medical Symptom Validity Test; Green 2004), NV-MSVT (Nonverbal Medical Symptom Validity Test; Green 2008), RDS, and

ACS measures. The statistics included probability calculations and Monte Carlo simulations.

As for the results, the rate of specificity tested focused on 0.90, which refers to 10 % or fewer cases being characterized as inadequate in effort despite having been actually adequate (false positives). Normally, each invalidity indicator used should reach this rate and, therefore, by combining indicators, the procedure's power should be amplified. However, this is true only if the correct algorithms are used. In this regard, the intra-test correlations of 0.31 on average in the studies constitute one major complication. Another is not accounting for the total number of tests used. It is not simply that if one test has a false positive rate of 0.10, then two of them have a rate of $0.10 \times 0.10 = 0.01$, and so on.

The data of the study revealed that, at a false positive rate of 0.10, 35.3 % of the population would be misclassified as malingering should 15 tests be used and one finds failure on two or more of them. To reach the 90 % level for specificity, rather, 5 of the 15 would need to be failed. For ten tests, the misclassification rate is 20.2 % for two or more test failures, with four being required to meet the required specificity.

If the tests are correlated, which is almost inevitable, Monte Carlo simulations can adjust the calculations. The failure rates for 15, 10, and 5 tests at a specificity of 90 % are 5, 4, and 3 tests, respectively for inter-measure correlations between 0.2 and 0.5. For 85 % specificities, the misclassification rate rises to 37.9 % for two test failures. The authors concluded that false positive rates for validity indicators increase "significantly" with increasing test administration.

I conclude that both the plaintiff- and defense-oriented perspectives on malingering ask that both researchers and evaluators in the area proceed with caution, but that some of their arguments do not pass critical examination. A middle-of-the-road perspective, as presented in the first part of the book, seems required. In addition, the very definition of malingering has been questioned by Larrabee (2012b), and I have done the same in this chapter. Until we have a better handle on what it is, the research might continue to be beset by conceptual and empirical difficulties. I also suggest a research design to differentiate putatively known malingerers from those judged to be catastrophizing, crying out for help, somaticizing through unconscious processes, etc. This type of research might help clarify the intent issue and whether malingering can be genuinely differentiated from other validity-threatening, confounding presentations and performances.

For further exchange across the adversarial divide with respect to SVTs and how I analyze it, refer to Chap. 17 in which I present the 2012 exchange by Bigler (2012a, b) and Larrabee (2012d, e).

Martelli et al. (2012) summarized their view of some of the major limitations with respect to response bias procedures. Among other factors, they referred to (a) an inadequate psychometric research base; (b) questionable generalizability from research to practice; (c) not considering that poor effort can take place in evaluees with "real" disorders; (d) questionable specificity; (e) frequently found "high" misclassifying (false positives and negatives); and (f) "incautious" use/interpretation of SVTs. For example, factors that contribute to poor SVT scores other than malingering might include fatigue, pain, or disinterest. Also, poor SVT scores might be

found even in the research on neurological disorders or populations without external incentive. Finally, the "true" base rates for SVTs have yet to be established.

In the interest of balance, I note that workers in the field might contest each of Martelli et al.'s (2012) conclusions. Ultimately, only rigorous research can address their concerns and also others by workers on both sides of the adversarial divide.

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Chapter 8
Other Contrasting Approaches to Malingering Detection

8.1 Introduction

In the first part of the chapter, I show how the Slick et al. (1999) criteria for Malingered Neurocognitive Dysfunction (MND) are considered in Reynolds and Horton (2012a). In the prior chapter of this present monograph, I showed that the chapter by Larrabee (2012a) had considered the Slick et al. criteria as a central nexus of his approach to researching malingering and to its detection in practice. Much to my surprise, in contrast, in the book by Reynolds and Horton (2012a), these criteria were hardly mentioned (only in two pages in one chapter). In particular, Pella et al. (2012) described well the criteria, noted the attempts to change them (Boone 2007; Larrabee et al. 2007), and indicated that it might be premature to implement the recommendations made. In addition, they indicated that the criteria represent a "crude decision-making scheme" that appears to limit the "nuanced scientist-practitioner" model needed in evaluations.

In the remainder of the chapter, I analyze the material on malingering and related response biases as presented in other chapters in Reynolds and Horton (2012a). These chapters include two chapters by Faust et al. (2012a, b), in particular, and a good portion of the present chapter is based on their exposition and my commentary.

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Table of Terms and Sources

Abbreviation	Name	Source(s)
CARB	Computerized Assessment of Response Bias Test	Allen et al. (1997), Conder et al. (1992)
DSM	Diagnostic and Statistical Manual of Mental Disorders	American Psychiatric Association (2000)
DSM-IV-TR	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision	American Psychiatric Association (2000)
DSM-5	Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition	American Psychiatric Association (2013)
FBS	Symptom Validity Scale (originally called Fake Bad Scale)	Ben-Porath and Tellegen (2008/2011), Lees-Haley et al. (1991)
LMT	Letter Memory Test	Inman et al. (1998)
MCMI-III	Millon Clinical Multiaxial Inventory, Third Edition	Millon (1994), Millon et al. (1997)
M-FAST	Miller Forensic Assessment of Symptoms Test	Miller (2001)
MMPI-2	Minnesota Multiphasic Personality Inventory, Second Edition	Butcher et al. (1989, 2001)
MMPI-2-RF	Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form	Ben-Porath and Tellegen (2008/2011)
MND	Malingered Neurocognitive Dysfunction	Slick et al. (1999)
MPRD	Malingered Pain-Related Disability	Bianchini et al. (2005)
PDRT	Portland Digit Recognition Test	Binder (1993), Binder and Willis (1991)
-r	Revised (e.g., FBS-r)	Ben-Porath and Tellegen (2008/2011)
RDCT	Rey Dot Counting Test	Rey (1941)
RMFIT	Rey 15-Item Memory Test	Rey (1941)
RWRT	Rey Word Recognition Test	Rey (1964)
SIRS	Structured Interview of Reported Symptoms	Rogers et al. (1992)
SIRS-2	Structured Interview of Reported Symptoms, Second Edition	Rogers et al. (2010)
TOMM	Test of Memory Malingering	Tombaugh (1996)
VIP	Validity Indicator Profile	Frederick (1997)
VSVT	Victoria Symptom Validity Test	Slick et al. (1997/2005)
WMT	Word Memory Test	Green (2005)

8.2 The Ambiguity of Malingering

8.2.1 Factors Influencing Malingering Determinations in Faust et al. (2012a)

Argument (a). The Reynolds and Horton (2012a) book begins with excellent chapters by Faust et al. (2012a, b). Their main argument is that there is not enough understanding and research of ambiguous cases of malingering relative to definitive

or near definitive cases. They described that the typical approach in the research in the field uses extreme groups – groups defined as known malingerers as compared to non-malingerers. According to the authors, the research does not go far enough in clarifying ambiguous cases and, therefore, "may even produce the opposite result" of what is required to clarify correct identification of cases. The goal of the research is to find potential valid indicators of malingering but the danger is that the research yields results that are not applicable to ambiguous cases, and so lack representativeness and generalization. Faust et al. (2012a) noted that in much contemporary research, one cannot really determine the true status of members in the groups studied "with even near certainty;" for example, are subjects in the malingering groups in these studies "really malingering?"

Given that evaluators will use the results of the research in their assessments, it should be clear that this type of criticism on this known-groups design research does not justify taking the opposite tack in assessments that solely clinical judgment or practice experience should be the basis for arriving at malingering determinations. The shortcomings in adopting such a clinical judgment/practice experience approach in malingering attribution would be "far greater" than the alternative of using known-groups research as a basis for assessment procedures and formulations. That being said, Faust et al. (2012a) noted that there is still potential benefit for the role of clinical experience and case study in formulating neuropsychological conclusions in assessments. For example, they can help in "discovery" rather than "verification," per se.

According to Faust et al. (2012a), malingering is a hypothetical construct that is inferred from data rather than being directly observed. The field needs clear definitions. However, at the same time, operational definitions should not be overvalued nor should "diagnostic" criteria for identifying malingering be prematurely created, given the deficiencies in the scientific basis available, especially for their application in legal settings.

Comment (a). Faust et al. (2012a) raised important points at the beginning of their first article, such as (a) the need for more research on ambiguous cases of malingering, (b) problems with the extreme-group approach in the research because even supposedly known malingering groups might not be clearly defined, and (c) doubts that diagnostic systems for identifying malingering in legal-related settings might have a sufficient scientific knowledge base. Although the authors do not refer to the Slick et al. (1999) MND criteria directly, it would appear that this commentary is related to those criteria and their premature use in forensic assessments in the neuropsychological arena.

Argument (b). With respect to the nature of malingering, Faust et al. (2012a) indicated that its nature might be categorical and also dimensional and, moreover, it might be full or partial. As for sources of inaccuracy in assessment, evaluators might be completely accurate or completely inaccurate but most likely in between. For example, evaluators might obtain inaccurate information because of measurement error or the evaluee might not have slept well the night before the evaluation. Therefore, Faust et al. concluded that it would be "outrageous" that any one particular unintentional inaccuracy or "misrepresentation" should be taken to clearly provide

evidence of malingering. As for intentional inaccuracies or misrepresentations by evaluees, an evaluator might obtain evidence of "suboptimal performance" on one particular measure, and end up concluding that the evaluation results are invalid. Conversely, an evaluator might find unremarkable results on one to several tests of "malingering" and conclude that there had been good effort. However, in this case, as well, the evaluator might be arriving at premature conclusions, depending on other factors in the case. We need to obtain a much better understanding of the interrelationships between results on tests of malingering and effort and measures of neuropsychological functioning in clinical and forensic neuropsychological work. Moreover, the evaluators need to consider all sources of inaccuracy, misrepresentation, and their intentional or non-intentional bases.

Comment (b). Clearly, Faust et al. (2012a) are pointing out the difficulties in both defining and assessing malingering. There are inaccuracies related both to the evaluator and the evaluee. These confounding factors impact the ability to undertake comprehensive, impartial, and scientifically-informed assessments.

Argument (c). Faust et al. (2012a) reviewed factors that could contribute to case difficulty and ambiguity. They presented a comprehensive table for sources of false-positive and false-negative errors in cases. The factors were divided according to whether they were evaluator factors or evaluee factors. In addition, Faust et al. listed factors related to "high priority research needs." The former were divided into sources of error relating to both data gathering and procedures selected compared to interpretive approaches or functions. For evaluator factors, they maintained that most of the error sources are avoidable and reflect "underutilization" of available scientific knowledge. For example, one procedural misstep is to test evaluees excessively, thereby lowering their motivation and effort in a manner that could be construed mistakenly as malingering. As for interpretation, Faust et al. noted that common errors include trying to combine all the information into a whole and not grasping that validity is cumulative.

Comment (c). The remainder of the first Faust et al. chapter elaborates the multiple factors that contribute to difficulty in assessment and the false-positive and false-negative errors that might obtain. In surveying their review of the factors, the reader is left with the impression that a careful assessment of malingering attribution is fraught with excessive difficulties that might even compromise the ability of assessors to arrive at conclusions about malingering that satisfy the legal test of "more likely than not." In the ensuing review of these factors, I will try to qualify them in a constructive manner.

Argument (d). Faust et al. (2012a) examined closely data gathering and procedure selection in assessment. In terms of the topic of weak/poor test/methods, they cited the research by Sharland and Gfeller (2007) and Slick et al. (2004), who surveyed practitioners with respect to their preferred means of deception detection. Faust et al. concluded that the research is not "reassuring" because some of the tests used are not especially valid (e.g., the Rey 15-Item Memory Test, RMFIT; Rey 1941; e.g., Vallabhajosula and van Gorp 2001; see also, Pella et al. 2012).

Faust et al. made additional important points, such as the following. First, they advised evaluators to use a relatively small set of "properly selected" measures

as predictors, "perhaps 3–5." By using this limited number of reliable and valid measures, the ceiling in predictive accuracy will be reached more easily. In addition, if the predictors chosen are relatively weak compared to better predictors, the impact on predictive accuracy might be quite sizeable and negative.

Another point made by Faust et al. is that effort tests to detect deception should not be administered either very early or very late in an assessment. This is because some evaluees might express too much anxiety or discomfort at the beginning of an assessment or their performance might be too severely compromised at the end. Some other factors that compromise assessment of validity related to data gathering and procedure selection include the following: the testing is not comprehensive or there is too much testing; the tests do not consider necessary sociodemographics; and testing continues even when the examinee is fluctuating in state, expressing comorbid or associated conditions, revealing that she or he has a headache, and so on.

Comment (d). All the factors listed by Faust et al. (2012a) in terms of data gathering and procedure selection can be accommodated by appropriate assessment methodology. It is the obligation of evaluators undertaking examinations in which malingering and falsification might be a factor to use only appropriate data gathering and selection procedures that the scientific literature supports that education and training the scientific literature supports and their professional regulations and guidelines would inform all practitioners that appropriate assessment methodology is crucial.

Argument (e). A second class of evaluator factors examined by Faust et al. (2012a) relates to interpretative approaches by evaluators. They described biasing factors in undertaking assessments and arriving at conclusions, such as: confirmatory bias, premature closure, illusory correlation, and overconfidence. Confirmatory bias refers to the tendency for an evaluator to maintain a belief despite "convincing" counter-evidence. Premature closure refers to arriving at first conclusions too rapidly. Evaluators might become channeled toward self-fulfilling prophecies. For example, they might select instruments having either lesser or greater trends in producing false-positive or false-negative errors. Or, assessors might behave in a manner with evaluees that shape their presentation in ways that "seem to confirm their hypotheses." Faust et al. noted that the best manner to protect against biases in assessment includes use of "systematic procedures" that are less likely to be affected by such biases and, moreover, in arriving at conclusions in assessments all the relevant evidence should be actively considered. About illusory correlation, Faust et al. provided an example worth considering. An evaluator might believe that an evaluee is nervous because he or she is malingering. However, they point out this presentation might reflect an ordinary reaction to an assessment in which much is at stake. Similarly, in terms of potential malingering indicators, assessors might apply them before they have undergone the appropriate scientific appraisal or even use them in place of well-validated indicators or methods related to deception detection. As for evaluator overconfidence, Faust et al. referred to its dangers in the assessment context as "pernicious."

Comment (e). Faust et al. (2012a) are pointing out that it is not just the evaluee that is liable to minimize or exaggerate in their behavior. The list of biases that they

present to which evaluators are subject indicate that in their assessments, evaluators might equally minimize or exaggerate in their behavior (writing reports, testifying). In the first part of the monograph, I presented a model clearly indicating the dual nature of biases in the forensic disability and related evaluation context. Just as evaluators need to use appropriate deception detection methods and interpretative procedures, so do they need to use appropriate personal bias detection methods and procedures in controlling them.

Argument (f). In discussing inappropriate disjunctive or conjunctive strategies in attributing malingering, Faust et al. (2012a) indicated that the "most concerning" element of evaluations is when evaluators use a greater number of malingering measures than is appropriate because the more measures used, the greater the possibility that errors across the tests will be compounded. Faust et al. referred to this type of assessment strategy as "an arbitrary or inconsistent" procedure for malingering determination. Another assessment error in this regard is to give more tests than is appropriate and then counterbalance that decision by setting "high cut-offs" for each of the tests. Then, the evaluator would indicate that even when one test result among the several exceeds the specified high cut-off level, the evaluee's validity is questionable. In general, Faust et al. indicated that appropriate disjunctive strategies are "psychometrically nonoptimal." They added that the tests have not been studied in combination, so by combining tests in an assessment the evaluator is not working with a "known accuracy rate." As for conjunctive strategies in assessments, the errors that assessors might make in these regards could even be worse than those for disjunctive approaches. For example, some evaluators will not identify malingering unless all relevant results are above a specified level. Other evaluators might take the tack that all relevant results must be below a certain level before malingering can be ruled out.

Comment (f). Faust et al. (2012a) are making the critical point relative to malingering determinations that assessors (a) should use the appropriate number of tests or detection methods, (b) should use the appropriate cut-offs, (c) should combine them appropriately, and (d) should not have arbitrary rules for how combined results should be interpreted. That being said, the authors do not specify (a) which tests might be most appropriate, (b) what are their appropriate cut-offs, (c) how to combine them, and (d) how to interpret variable results. Research in the area must continue to specify these types of needs for valid assessments in the field. Moreover, evaluators must proceed with caution in undertaking assessments, for example, by consulting test manuals, appropriate research, and professional guidelines related to testing.

Argument (g). The next point raised by Faust et al. (2012a) considers the dictum that evaluators should try to integrate all the data at arriving at their conclusions. They argued that the danger is that this advice leads evaluators to include weak predictors, consider validity as cumulative, and not consider validity as incremental. They argued that the approach of trying to integrate all available information might cause more harm than good. In essence, evaluators should only include the available information that increases accuracy and should exclude any information that does not.

Comment (g). Faust et al. (2012a) have raised a valid point. Evaluators in this field need to pay more attention to nonbiasing, accurate, and contributory information compared to biasing, inaccurate, and noncontributory information.

Argument (h). In their next major point related to malingering determination, Faust et al. extolled the advantages of formal decision-making methods. Research consistently shows that statistical procedures outperform clinical methods in arriving at diagnostic information and predictions in the mental health field. In terms of areas related to malingering, the same results have been found for neuropsychological assessment. The authors stated that, "the prediction of outcomes or conditions is best accomplished overall through the use of formalized (statically, actuarial) procedures for combining information" (p. 36). The procedures in actuarial methods are predetermined and based on empirical findings. The authors noted that computer-based interpretations are not actuarial because they are programmed in a manner that reproduces how clinicians establish judgments. They also noted that subjective impressions might be part of actuarial methods; for example, a qualitative judgment about level of effort can be rated quantitatively as present or absent. Faust et al. argued that combining clinical and actuarial methods is not more accurate than using actuarial methods alone. The authors concluded by stating that there is limited comparative research on clinical compared to actuarial methods in the area of malingering detection but, nevertheless, the research indicates "trends seen in the general literature." They added that once developed properly in the area of malingering detection, the probability that the methods will be as good or better than decision-making by clinical judgment will be "high or very high." Because this research has yet to be undertaken, the authors argued that the counter option to use clinical judgment in decision-making is not justified. Rather, evaluators should "depend instead on the method that research has almost always shown to be as good or better" (p. 44). Finally, they noted that in order to develop accurate actuarial methods for malingering detection, researchers need a highly accurate method for identifying that it has taken place.

Comment (h). Faust et al. (2012a) have adopted a strict approach to the question of actuarial vs. clinical methods, and maintain that the research is sufficient to support the use of actuarial methods in malingering detection. However, because there has been insufficient research with only a few studies in neuropsychology and none on malingering, per se, it is difficult to accept any conclusion that the research unequivocally demonstrates the superiority of actuarial methods in malingering attribution. Moreover, Faust et al. do not point to or illustrate the use of appropriate actuarial methods in malingering detection, perhaps aside from raising the issue of using base rates, where appropriate, and referring to the availability of some formal measures and decision procedures, but without giving references, so the reader is left uncertain about how to proceed.

Although the research might end up supporting their conclusions, it has to be undertaken before any proposed actuarial method is applied in practice. Moreover, it has already been noted that various test combinations have not been studied for their accuracy in the field of forensic disability and related determinations, i.e., for the typical person and for any individual and group differences impacting the

typical referral question at hand. It is doubtful that sufficient research can be conducted to account for all these various contingencies. In my opinion, there will always be need for scientifically-informed evaluator procedures and judgment in arriving at valid and defensible conclusions about malingering. Moreover, this approach is consistent with that of Heilbrun et al. (2009) on scientifically-informed forensic mental health assessment. Finally, in a similar vein, others have noted that the state-of-the-art in the area of personal injury practice supports use of clinical assessment methods relative to actuarial ones in a "significant portion" of evaluations (Kane and Dvoskin 2011).

Argument (i). Faust et al. (2012a) addressed whether new malingering measures that are developed add anything useful to malingering detection assessments. They noted that there are numerous malingering detection indicators available and that simply to show that a new indicator has "discriminating power" helps negligibly. That is, for any variable in the field, it needs to be shown that the variable will alter predictive accuracy when combined with other variables.

Comment (i). Although reasonable statements, the argument just raised might imply that research on new malingering detection instruments and variables is premature because they are unlikely to add incremental validity. Yet consider that Faust et al. (2012a) also wrote that studies addressing combined variables have not been "comprehensive" so that in choosing the variables, one is making "educated selections and formulating judgments about their joint properties." Therefore, in terms of the state of the science in the field, it would appear that to date the research is not extensive enough to preclude the development of further malingering detection tests, measures, or scales, as well as their optimal cut-offs for populations at hand, and that further research is required to statistically establish their optimal combination and actuarial use in evaluations. There is an absence of a gold standard in malingering detection, and improvement in deception detection at any level is welcome.

Argument (j). Faust et al. continued that data combination, in general, for the purpose of establishing actuarial methods in malingering detection should not simply involve division according to a few ("couple of") variables, and then adding up the scores without considering interrelations in order to arrive at a dichotomous cut-off score. Complex pattern analysis in psychology and neuropsychology, including in malingering detection, might "fall short," with the biggest drawback in such an approach related to the "reliability" of the purported useful patterns; that is, the reliability involved might be poor and grossly eroded, having factors present that lead to distorted test score patterns. That being said, research in psychology and neuropsychology have developed "formal" measures for the assessment of malingering that are "remarkable," as well as having created and "refining" other "helpful" decision procedures for malingering detection. More research is needed on tests that have not been sufficiently validated and on indicators that might be helpful, as well, so they can be added to the "pool" of validated methods.

Comment (j). Faust et al. (2012a) make cogent points, but without referral to specific tests and procedures, it is difficult for the reader to decide which tests and procedures to use in malingering detection when considering their point of view.

It appears that they favor certain formal instruments and procedures but not others. In this regard, the notable absence of reference to the Slick et al. (1999) criteria on MND is telling. As mentioned at the outset, the differing importance given to the MND (a) in the chapters in Reynolds and Horton, which mention the MND criteria just once on two pages, (b) and in the chapters in Larrabee (2012b), where it receives much positive focus, despite both books being on the topic of malingering detection in neuropsychology, is striking. There appears to be a disjoint in the field about the value of these MND criteria, with Faust et al. (2012a) appearing to indicate that the MND system, or any system equivalent to it, simply divides malingerers from non-malingerers based on a couple of variables, which is not a sufficient metric. This contrast in these different professional evaluations of the Slick et al. criteria serves to support the recommendations for changing the MND criteria suggested by Rogers et al. (2011a, b) and Boone (2011), as well as my own in the first part of the present book.

Argument (k). According to Faust et al., evaluations of malingering might involve multiple valid tests and variables, but if the tests/variables do not surpass in accuracy that provided by the base rate of malingering in the population at hand, they do not add incremental validity, and might even not help ("or worse"). Moreover, there are usually "legitimate reasons" to query the "quality" of the information about base rates on malingering.

Comment (k). Faust et al. (2012a) are pointing out the importance of base rate estimates, even compared to more formal testing, in determining probability of correct malingering attributions. However, they question whether the information on base rates for the population at hand is sufficiently known. I have made the same point throughout the first part of the monograph.

Argument (l). False positive and false negative errors in malingering attribution could result from using tests that are not sensitive enough to different degrees of injury severity. For example, the TOMM (Test of Memory Malingering; Tombaugh 1996) produces results that greatly differ across those with true injuries and those who engage in suboptimal effort. Also, a test's cut-off scores might have been established with controls and cases of mild TBI (traumatic brain injury), so that someone with moderate-to-severe TBI might exert a best effort that is insufficient to reach criteria and the person would then be classified inappropriately as a "falsifier."

Comment (l). It would be helpful for someone to produce a compendium of all malingering detection tests and variables, indicating their reliability, validity, sensitivity, specificity, etc., for the relevant populations in the psychological injury field. Moreover, constraints and limitations in use of the tests and variables should be listed, with clear practice guidelines. As Faust et al. point out, evaluators should know the different groups on which a test has been standardized, how different groups might have been tested beyond the establishment of the test, and how different types of evaluees should score on the instrument relative to the norms for the different groups. The compendium should be updated periodically, to keep it state-of-the-art and continually useful to practitioners.

Argument (m). Faust et al. continued that empirical research study needs to include samples that are representative of the populations that are the object of

generalization of the research findings. However, genuine malingerers might be quite skillful, leading to questionable findings in this regard. If used in practice, the results might lead to unacceptable errors, such as false ascription errors. Moreover, the results might not help with ambiguous cases with respect to the issue of possible malingering. However, the authors maintained that research can be undertaken with proper methods that lead to practical findings.

Another related issue concerns evaluee knowledge of and coaching on malingering and its detection, including of the tests involved, e.g., through study of available internet resources or through attorney coaching. In this regard, Faust et al. (2012a) recommended the use of at least one measure that is less susceptible to obtaining knowledge about or even coaching on malingering, such as the VIP malingering detection instrument (Validity Indicator Profile; Frederick 1997).

Comment (m). This is a welcome suggestion, but it is presented with little supportive evidence. Faust et al. (2012a) did not even describe the VIP, so I provide the following (after Frederick 2012). The VIP involves the performance curve strategy. A performance curve includes average response on items varying in difficulty. The VIP presents to the evaluee a large amount of forced-choice trials involving two alternatives, as with the TOMM, but they have differing degrees of difficulty (moreover, they are not presented from easiest to hardest, but variably). The instrument allows identification of when evaluees perform "worse than they should" and "worse than chance." The protocols are scored for patterns that indicate whether response styles are cooperative, low in effort, random, or malingering (indicated by consistently choosing incorrect answers). A crucial variable to consider in determining active malingering is whether the test-taker scores "much better" on harder compared to easier items.

Frederick (2012) offered careful criticism of other malingering detection tests, measures, and scales. For example, for the MMPI-2 (Minnesota Multiphasic Personality Inventory, Second Edition; Butcher et al. 1989, 2001), the F family of validity indicators provides relevant information. Frederick included guidelines for their interpretation, but, without being specific, he indicated that there are "quibbles" about interpreting them with respect to malingering and exaggeration. As for the MCMI-III (Millon Clinical Multiaxial Inventory, Third Edition; Millon 1994; Millon et al. 1997), Schoenberg et al. (2003) indicated that its validity scales are ineffective, and that "substantial" evidence supports this conclusion, so that it should not be used in forensic evaluations. Nevertheless, according to Frederick, it is used frequently. Frederick continued that the SIRS and SIRS-2 (Structured Interview of Reported Symptoms; Rogers et al. 1992; Structured Interview of Reported Symptoms, Second Edition; Rogers et al. 2010; respectively) are "sufficiently compromised" and "insufficiently" validated for use in forensic evaluations (e.g., with respect to false positives). Similarly, the briefer M-FAST (Miller Forensic Assessment of Symptoms Test; Miller 2001) provides scores that are overestimated for evidence of "faking." Moreover, on all these structured interview tests of malingering, there is little way of distinguishing a response bias to consistently assent to the items from genuine malingering.

For feigned cognitive impairment, the RMFIT (see Frederick 2002 for a translation) should not be used "seriously." The TOMM is widely used, but has "no interpretive value." For example, passing it does not necessarily mean that the evaluee is not a malingerer. The WMT (Word Memory Test; Green 2005) apparently does not obtain results in validity studies commensurate with claims in its manual. For example, Frederick noted that Bowden et al. (2006) found that the research on the WMT has an "appreciable" false positive rate among patients who have been genuinely severely injured. One test that meets with Frederick's approval is the revision of the LMT (Letter Memory Test; Inman et al. 1998; Vagnini et al. 2006). The test has shown "excellent" identification rates for malingering while minimizing false positive rates.

According to the test development section of the Pearson Assessments website for the VIP test, which I downloaded and examined on May 6, 2012, in the validation and cross-validation work on the VIP, clinical patients were considered "suspected" malingerers by using older tests of malingering detection for the most part – (specifically the Rey 15-Item Memory Test, the Rey Word Recognition Test (RWRT; Rey 1964), and the Rey Dot Counting Test (RDCT; Rey 1941; Lezak 1995). In addition, the studies used "a priori clinician ratings" related to the probability of malingering tests results, which were based on "subjective clinician evaluation" of the potential for malingering. Patients were classified as "suspected" malingerers if either the clinician's evaluations or the classification from the screening tests were invalid (classification details unspecified).

The field needs to consider to what extent further and better validation studies are needed on the VIP based on more rigorous procedures. It appears that typical research on the Slick et al. criteria use tests such as the TOMM and not the VIP, for example. Nevertheless, in terms of how the VIP test is described, and its careful methodology, it appears to have much potential relative to all the various malingering detection instruments, tests, measures, and scales available for forensic and related disability determinations.

Argument (n). Returning to Faust et al. (2012a), the authors stated that there is insufficient research on testing differences in ethnic, cultural, and linguistic minorities. For example, according to Sbordone et al. (2000), the nature of the four DSM-IV-TR criteria for malingering (Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision; American Psychiatric Association 2000) lead to the over-representation of minorities in suspicion for malingering. Further in this regard, Heilbronner et al. and Conference Participants (2009) argued that an SVT (Symptom Validity Test) that might be valid for the majority culture might not be for a minority one.

Comment (n). This concludes presentation of the first chapter by Faust et al. (2012a). The sister chapter (Faust et al. 2012b) concentrates especially on needed research on ambiguous cases in forensic work, which happens to be the modal presentation in assessments where malingering might be an issue to consider. Reflection on the first article of the two leaves much to ponder about assessments related to malingering attribution, such as: (a) which and how many tests, measures, scales,

and their combinations should be used in assessments in which the issue of malingering needs consideration, and which cut-off scores to use; (b) whether proposed diagnostic systems of malingering are valid (the primary one in the field, the MND Slick et al. (1999) criteria or diagnostic system, is not even mentioned in the chapter); (c) the role for clinical judgment compared to actuarial decision procedures in arriving at conclusions (although (i) none of the latter decision procedures are actually specified in the chapter and (ii) the test especially supported in the chapter, the VIP, used extensive clinical judgments in differentiating suspected malingers in its validation samples; note that in the actuarial approach, subjective, qualitative clinical data can be quantified in decision-procedure algorithms); and (d) the use of base rate information (although the base rate for malingering is far from clear; as described in the first part of the monograph).

8.2.2 Factors Influencing Malingering Determinations in Faust et al. (2012b)

In their second chapter in Reynolds and Horton (2012a), Faust et al. (2012b) continued their analysis of assessment of malingering and falsification with recommendations for research with respect to ambiguous, subtle, challenging, or mixed cases (not clear cut, close calls, suspected, less than near or definitive). These types of cases constitute the great majority in this type in practice.

Argument (1). A patient might be genuinely injured but embellish or exaggerate even just a little when confronted by an evaluator known to "underestimate" loss due to events at claim. Not all forms of response bias merit total denial of claims, especially if the malingering is partial or mixed with genuine injury.

Comment (1). About the first point, Faust et al. are referring to litigation distress as a factor in this type of evaluation. About the second point, the issue is not whether there is genuine injury but whether the psychological effects are still ongoing in a genuine fashion at the time of the evaluation.

Argument (2). The research on malingering detection takes place with known groups (malingering, not), but these are oversimplified extreme groups relative to all those possible and they do not correspond to the typical real-world practice case, in which there may be a half-dozen causal factors to consider. Therefore, the empirical findings, which are distorted in these studies, lack generalizability and end up systematically misleading, thereby diminishing accuracy and creating errors when applied directly to cases. For example, the effect sizes in the studies are extreme, and we learn little because the groups are defined extremely. Moreover, the results are circular, and might even be opposite in the real world compared to what the research finds. For example, gross failure on malingering instruments might be common in known groups but should be rare in real-world ambiguous ones.

Comment (2). Known group designs in malingering research might be constructed by criteria that split the sample in question in half rather than selecting portions of the population at the extreme ends of any distribution at issue. In this regard, the

extreme group criticism does not apply fully. Moreover, even when used, the extreme-group design could provide useful information through taxonometric or prototypical analysis; for example, for any individual evaluee, to what extent does the profile match either of the extreme group profiles. In this regard, consider the following hypothetical comparison of idiographic and nomothetic data. A case that is ambiguous might match more the profile of the extreme malingering group compared to the honest responding control group, thereby revealing important information about the ambiguous case. Researchers have begun to assess the nature of taxons in this field (Walters et al. 2009a, b). That said, (a) one better research design approach to malingering detection would be to create (and then compare by multiple analysis of covariance) multiple groups, such as mild, moderate, and severe degrees of suspected malingerers, with additional comparison to known groups (malingering, not), where possible. Another better research design would be to keep the data on malingering in a continuous format and investigate by multiple regression analysis the relationship between predictors and outcomes. In addition, factor analysis or related grouping procedures can be undertaken to create complexes of data in which patterns of different behavioral strategies related to different degrees of suspected malingering might be found.

Aside from improving existing designs and refining statistical analyses in the area of malingering detection, a new strategy has been developed related to the Bayesian probability statistical framework. In the present comment and in the next one, I present current research by Mossman et al. (2012) and by Ortega et al. (2012) on Bayesian approaches to malingering detection.

Mossman et al. (2012) have articulated a statistical strategy to use in estimating the accuracy of neurocognitive effort indices. They employed LCM (Latent Class Modeling) that was implemented within a Bayesian probability statistical framework to estimate the classification accuracy of three SVTs based on a sample of outpatient forensic disability claimants and counseling clients. They were assessed using the CARB, TOMM, and WMT (Computerized Assessment of Response Bias Test, Test of Memory Malingering, and Word Memory Test, respectively; by Allen et al. 1997, and Conder et al. 1992; Tombaugh 1996; and Green 2005, respectively), with total scores used for the CARB and WMT and Trial 2 scores for the TOMM. In interim analyses, the group "definitely not responding validly" was defined in terms of failures on two or more of the SVTs or below chance on one or more of them, in contrast to the definitely not malingering group, which was defined by passing all three SVTs. In the context of the statistical methods used, at decision procedures using thresholds holding the rate of false positives at 0.02, the three SVTs would detect invalid or true positive responses at rates between 35 and 65 %. The WMT proved the more sensitive of the three measures in the calculations undertaken. The study demonstrated the value of using the LCM statistical method to estimate effort accuracy in forensic disability claimants tested on SVTs. Limits of the study that were mentioned included having obtained variable findings with different methods, using a dichotomous, categorical approach rather than a dimensional one, and lack of consideration of data from testing other than SVTs.

Argument (3). Faust et al. (2012b) noted that some malingering measures are "deceptively easy," with a high-percentage accuracy as a cut-off, and so are insensitive to the effects of genuine injury. Also, they are greatly compromised as malingering detection measures in cases of less extreme malingering. Further, some of them produce absurdly extreme deviations from normality due to methodological artifacts, are not "just," and cannot be taken seriously. Moreover, "dozens" of factors outside of malingering can affect performance on neuropsychological tests. As for traditional personality tests that have respondent validity indicators, only the MMPI-2 has been studied adequately (according to a citation to Rogers 2008).

Comment (3). Different authors give different lists of the best tests to use in malingering detection, so that without a consensus, those who offer criticisms of these types of tests should be specific. The TOMM appears to be the instrument that is being criticized by Faust et al. (2012b), but other research is being conducted that even one of the three trials of the test is sufficient to indicate the presence of malingering. One main concern with these types of tests/scales is that although they indicate that test results should not be used in isolation to attribute malingering, the very title of the tests/scales include the term malingering (e.g., the TOMM, and a scale in the PAI; or include related concepts such as "fake bad;" to the credit of the authors of the MMPI-2/MMPI-2-RF (Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form; Ben-Porath and Tellegen 2008/2011), the FBS/FBS-r (Fake Bad) scale has been renamed the Symptom Validity Test).

In addition, the Bayesian approach to symptom validity testing has potential to revise how these tests are used to detect poor effort. Works such as those of Mossman et al. (2012) and Ortega et al. (2012) could lead to radical transformation of SVT research and practice. To be more specific, Ortega et al. (2012) analyzed the sensitivity problem of SVT detection approaches to malingering. The conservative approach to SVT use is based on the below-chance criterion. However, the approach can only identify a small subset of malingerers because it seeks high specificity at the expense of high sensitivity, given the goal of reducing the rate of false positives. Because of this conservative approach in the use of the below-chance criterion in SVT instruments, test makers have used a less stringent criterion to increase the sensitivity of SVT. Specifically, the tests include empirically-derived cutoff scores as decision rules for determining effort or response validity. Although the second criterion used to detect malingering has disadvantages, such as reducing the rate of false positives, it presents other difficulties. First, the tests have to be normed on the different populations or settings to which they are applied. Second, the criteria need to be recalibrated for different populations with different characteristics. Third, ongoing research might lead to the need for further cut-score criteria changes.

In response to these limitations in SVT testing, Ortega et al. (2012) developed a user-friendly Bayesian latent group analysis approach to detect poor effort in assessing malingering. They conducted two experiments to compare the accuracy of their approach and the below-chance criterion in SVT instruments. The first experiment used the simulation research design and the second used stroke patients

and coached malingerers. Both studies indicated that higher levels of sensitivity are evident for the Bayesian method compared to the below-chance method. The authors mentioned that the research in this area is in the early stage of development and needs replication. Moreover, Bayesian methods should not be used in isolation but only as complements to other methods. The approach has much potential because it can attach to each evaluee a probability of malingering.

Argument (4). Faust et al. (2012b) noted that the typical research dichotomizes malingering behavior, but it really exists on a continuum, with the most ambiguous cases placed in the middle of the distribution. Moreover, even the definition of malingering varies and can include any form of exaggeration or, conversely, can be based on strict standards, so one can find estimates of "extraordinary" base rates or ones that decline "sharply."

Comment (4). In the first part of the monograph, I anticipated these comments by Faust et al. (2012b). First, I created a system related to detection of response biases that reflects a continuum with a large zone for gray zone cases in the middle of the distribution. Second, a major criticism I had was related to inconsistencies in the definition of malingering such that it could include even mild exaggeration. Moreover, there are multiple reasons for exaggeration, and clear proof must be brought to bear before malingering can be attributed. That being said, as emphasized throughout the present book, close to a majority or perhaps even a majority of cases in this type of work involve problematic presentations of one sort or another, and appropriate wording can be chosen to cast doubt to differing degrees on evaluee credibility.

Argument (5). Faust et al. (2012b) argued that, for malingering, one way to get a viable estimate of base rate is to use the criterion of "well-below chance" performance on a two-alternative forced choice test given to disability applicants. The criteria that have been developed to identify malingering are "clearly experimental" or tentative, and have been published with cautionary statements about their legal usage but, nevertheless, are used inappropriately for court. "A questionable set of criteria based on insufficient knowledge can lead to nonproductive research efforts and misleading results" (p. 113).

Comment (5). Well-below chance performance on malingering detection tests is considered one of the best ways to detect malingering. However, in the Slick et al. criteria, such test failure is taken as evidence of definite response bias rather than malingering, per se, given the cautionary advice to ascribe malingering only after examining the full data gathered in a case and not to use one test result in isolation. That being said, even Slick et al. and those who refer to the criteria refer to definite malingering, as well, e.g., for assessment or research purposes.

The second point raised by Faust et al. (2012b) appears to refer to the Slick et al. MND criteria. The system was rationally created, which might be at the heart of the criticisms of Faust et al., given their emphasis on actuarial methods of prediction. However, the MND system is scientifically-informed, there have been good suggestions made to revise it (e.g., by, Rogers et al. 2011a, b; Boone 2011), it has been modified in the MPRD (Malingered Pain-Related Disability; Bianchini et al. 2005),

and I have further modified it in the systems that I developed. In these senses, it is indeed tentative and experimental. However, with further research, it or the other systems that have been developed based on it can still be used for court purposes, as long as their limitations are made clear and they are defended properly compared to other systems and procedures that could be used instead.

Faust et al. (2012b) argued similarly for the issue of altering cut-off scores, which affect the probabilities for obtaining false positive and false negative outcomes. They wrote that it might be better to report probabilities related to both options, "instead of merely classifying the results one way or the other or providing an interpretation that is likely to cause misperceptions" (p. 114). That is, by using a careful approach to the question of determining which system/procedure/approach to use in malingering detection, evaluators who are properly educated, trained, and up-to-date on the state-of-the-art in the field will be able to arrive at defensible options and conclusions, selecting the best one among them from a scientific point of view, and thereby pass any challenge in court to their approach to malingering detection.

Argument (6). In practice, Faust et al. (2012b) noted that results on malingering tests might be ignored, either (a) emphasizing only strong results indicative of malingering or (b) not emphasizing that results that meet criteria of malingering might have just made the cut-off or even might have been inconsistent. Or, in assessments cut scores are chosen that alter false positives or false negatives to unacceptable levels. Or, a poor result on an effort test is taken as unequivocal evidence that other test results are poor estimates of actual test-taking ability and actual real-life functioning.

Comment (6). The competent evaluator will try to avoid these mistakes. However, some of the examples provided are subtle and not as amenable to clear dividing lines of correct and incorrect procedures. For example, a test result that meets threshold, but just above it, should not be diminished in importance. However, an evaluee's performance might be several standard deviations over threshold and so extreme and such results should indeed be pointed out. As for another example provided in the argument above, one effort test might be failed and generally might be correlated with other test results, so that an evaluee failing it might have the other test results justifiably considered suspect. However, this type of SVT inter-test correlational research is only beginning in the field, so that in some senses the comment is premature.

Argument (7). Finally, for Faust et al. (2012b), the best way to study malingering would be to study "caught-by-chance" subjects, but only a nationwide search for them would collect enough to study. Moreover, the research should include groups with positive and not only negative incentives, such as from a population of individuals applying for financial aid to study.

Comment (7). The first of the two suggestions for future research is important, but it is doubtful that such a nation-wide effort can be accomplished. There might be better research approaches from a practical point of view. The second research suggestion seems quite relevant.

8.2.3 Conclusion

In general, Faust et al. (2012b) are asking us to avoid becoming doctrinaire in our research and follow only the predominant viewpoints. The authors appear to be against using extant malingering-detection systems, such as the Slick et al. one, and warn of their premature use for court. They indicate that research should continue in the area, which is the pathway to its improvement in practice and for court.

8.3 Further Contrasts on Malingering Detection

The next part of the present chapter analyzes the remainder of the relevant chapters in Reynolds and Horton (2012a) with respect to malingering detection. I concentrate on chapters that have import for forensic disability and related assessments, in general. However, the chapter by Howe (2012) on PTSD is presented and analyzed in the next chapter on PTSD.

Argument (i). Pella et al. (2012) took a position on malingering detection in cases of MTBI that is at times comparable to the one of Larrabee (2012a) but, mostly, it differs notably from it. In terms of some similarities with the work of Larrabee (2012a), they presented the DSM (Diagnostic and Statistical Manual of Mental Disorders; American Psychiatric Association 2000) approach to malingering and then described the Slick et al. criteria as an effort to create "a more comprehensive operationalized" system for the detection of malingering. In terms of base rate, they referred to the now classic Mittenberg et al. (2002) study.

Comment (i). With respect to these surface similarities in the chapter by Pella et al. and the chapter by Larrabee (2012a), I note that, unlike Larrabee, Pella et al. do not deviate from the DSM definition of malingering. Also, they describe the Slick et al. criteria but indicate its limitations and even refer to it as "crude." Finally, they do not subscribe to the high base rate for malingering in the forensic disability context, and indeed refer to it as "rare."

Argument (ii). Pella et al. described possible indicators of malingering taken from Pankratz and Binder (1997), Faust and Ackley (1998), and Rogers et al. (1993). They noted that their guidelines are not comprehensive and are open to different interpretations.

Comment (ii). Pella et al. raise a good point – that there should be a comprehensive list of malingering indicators. Like these authors, I find that it is not possible to construct a single list of indicators and their interpretations.

Argument (iii). Pella et al. described four patterns of malingering, as presented by Hebben and Milberg (2002): (a) complete; (b) claiming symptoms as present after their resolution; (c) discounting the presence of pre-existing symptoms/complaints/deficits/disability in order to favor a role for the event at claim; and (d) exaggerating present symptoms/deficits (or pre-existing abilities in order to maximize impression of loss).

Comment (iv). Other workers have elaborated similar schemes. It is important to note that a mild exaggeration might take place for reasons other than malingering, as emphasized throughout the first part of the monograph.

Argument (v). Pella et al. acknowledged that ruling out all legitimate pathologies in the differential diagnosis is "daunting." However, the more evidence gathered that indicates malingering, the more likely it applies in the differential diagnosis. Moreover, evaluators should not ignore individual case complexities.

Comment (v). Here, Pella et al. are arriving at an important point. In forensic work, evaluators should gather comprehensively idiographic data related to the individual and should use comprehensively the available state-of-the-art scientific, nomothetic data. That is, decisions and conclusions should be made about the individual rather than how the individual fits the pattern in the literature. By adopting such an approach, the daunting task of differential diagnosis might become easier and more accurate.

Argument (vi). Some tests mentioned by Pella et al. as effective in malingering detection include the TOMM, VSVT, and PDRT (Test of Memory Malingering, Victoria Symptom Validity Test, and Portland Digit Recognition Test, respectively; by Tombaugh 1996; Slick et al. 1997/2005; Binder 1993, and Binder and Willis 1991, respectively). They provided comprehensive tables of tests and measures that can be used to detect malingering. In addition, Pella et al. noted that these tests are susceptible to coaching (e.g., Brennan et al. 2008). They advocated use of the multitrait-multimethod approach because the effort of evaluees might vary over an assessment and also measures vary in sensitivity as well as the construct being assessed (Gervais et al. 2004). Pella et al. warned about the dangers of multiple testing in malingering detection. The more tests are used, the more the possibility of positive results being found just by chance, which means that the chance of getting Type I error rises in the battery – that is, malingerers would be positively identified but falsely so.

Comment (vi). Pella et al. have raised an important point about the dangers of not accounting for the effect of using multiple malingering detectors in evaluations. The approach by Larrabee (2012b) had underscored that poor performance on three validity indicators is highly suspect of malingering. However, like Pella et al., I had noted in the first part of the monograph the danger of Type I error and false attribution of malingering in such cases. That being said, consideration of the full reliable data set in an assessment might very well lead to conclusions that malingering is present even with less than three detection instruments being positive and not three.

Argument (vii). In addition, the authors advised against "cherry picking" indices and, indirectly, against going on fishing expeditions. For example, in a test battery, it is conceivable that up to 30 or more measures that could be indicative of malingering are used and the evaluee fails just one of them. Nevertheless, according to the Slick et al. criteria, Pella et al. indicated that, in such a scenario, the evaluee would be judged to be a "probable malingerer."

Comment (vii). Workers such as Rogers et al. (2011a, b) and Boone (2011) have made recommendations on how the Slick et al. criteria can be improved. The need for revising Slick et al. is underscored by the point raised by Pella

et al., that in Slick et al., even doing poorly on one of tens of measures related to malingering detection is sufficient to qualify the evaluee as a "probable malingerer." This point indicates the extent of the need to revise the Slick et al. criteria if it is to be fair.

Argument (viii). Pella et al. even indicated that use of the qualification "possible" or "probable" malingering could unduly influence triers of fact toward determining that full-scale malingering has been involved in the case at hand (Nisbett and Ross 1980).

Comment (viii). Although this point is true, I do not believe it is a reason to deny use of the phrases "possible" or "probable" malingering in court. It would be up to the attorneys involved to clarify appropriately the nature of the terms if the psychologists involved had not done so. The court needs to arrive at fair determinations and it is inappropriate to anticipate problems in these regards and, in consequence, alter appropriate conclusions from a psychological point of view that are presented to court.

Argument (ix). Pella et al. noted the emerging consensus that failure on more than two indices in a particular evaluation is needed toward indicating malingering (Larrabee 2007; Meyers and Volbrecht 2003; Victor et al. 2009).

Comment (ix). However, Larrabee (2012a) oscillated between mentioning the need of two or two to three such validity test failures before malingering could be attributed.

Argument (x). Pella et al. advised that to truly inform triers of fact, evaluators should report all the results obtained on indicators of validity found for the evaluee at hand and also in the research.

Comment (x). The first part of the argument is clear. Pella et al. have added that triers of fact should be informed of all relevant research results related to validity indicators. The implication is that experts in court should be up to date in their knowledge of the current research on testing and tests.

Argument (xi). Pella et al. next examined the nature of malingering research, and indicated that it is "plagued by methodological issues." For example, in seeking high specificity, the classification accuracy might be falsely inflated. Also, in using known-groups designs, application of the results to clinical practice might be limited. There is a large grey area in the continuum of credibility that the known-groups design ignores. The known-groups design approach might "contaminate" research on the base rate of malingering.

Comment (xi). Pella et al. cited the work of Faust et al. in addressing these problems in malingering research. That work has been described in depth in the first part of this chapter.

Argument (xii). Given the problems in the research, practice should integrate empirical evidence and clinical expertise. It is inappropriate to use results from research that differs in context from the assessment situation at hand. Moreover, the evaluator should not "blindly" yoke decisions about clinical classification to research results.

Comment (xii). Pella et al. are arguing that in forensic evaluations, the evaluator cannot go beyond the nature of the existing research to the case at hand. Moreover, the evaluator could use clinical judgment in determinations and should not use

"blindly" research in making decisions. Their approach runs counter to the arguments by Faust et al. about actuarial compared to clinical judgment in arriving at decisions. In the first part of the chapter, I have discussed this issue and arrived at conclusions consistent with Pella et al.

Argument (xiii). By avoiding blind application of empirical results and diagnostic systems related to malingering detection, and by considering the individual evaluee for his or her various complexities, in many cases the evaluator will not arrive at a conclusion that malingering has been definite. Pella et al. indicated that "pure malingering is rare" (p. 141).

Comment (xiii). This comments first appears to be critique of blind application of extant malingering diagnostic systems, such as the Slick et al. In addition, the opinion of Pella et al. that malingering is "rare" is consistent with the analysis of the malingering base rate research that I undertook in the first part of the monograph. Recall that, nevertheless, I had indicated that close to or even a majority of presentations and performances in forensic disability and related assessments should be problematic.

Argument (xiv). Pella et al. even questioned whether malingering should be placed in the DSM-5 (Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, American Psychiatric Association 2013). Pella et al. favor the approach of Boone (2007) to conclude that poor performance validity should be referred to as "non-credible" rather than as malingering.

Comment (xiv). This conclusion is consistent with that of Berry and Nelson (2010). They argued that the DSM-5 should use the term "feigning" rather than malingering, per se. Nevertheless, when the evidence is incontrovertible, it is appropriate to attribute malingering. It might be inappropriate to discard the malingering concept in the DSM instead of addressing the problems that its inclusion presents.

Argument (xv). Malingering is an important concept to consider, but the question of its presence in a particular case at hand should be left to the triers of fact in court and related legal venues rather than to evaluators themselves. That is, according to Pella et al., the ultimate decision about its presence or absence should be left to the triers of fact rather than evaluators.

Comment (xv). However, to repeat, when there is incontrovertible evidence of malingering, evaluators should be able to use the term in their conclusions. Second, when there is evidence of clear feigning, but without enough evidence to infer outright malingering, evaluators should be able to indicate that this is the case, for example, by specifying the presence problematic, non-credible presentation and performance.

Argument (xvi). In the next chapter in Reynolds and Horton (2012a), Gutiérrez and Gur (2012) described malingering detection using SVTs. However, they did not have one reference in the years 2000–2012.

Comment (xvi). The chapter by Guttierez and Gur (2012) should have had an up-to-date literature review.

Argument (xvii). McCaffrey et al. (2012) reminded that only below-chance performance on SVTs equates with malingering. The lesser criterion of failure relative to cut scores does not necessarily mean that malingering is taking place.

The evaluator's scientific knowledge base helps determine the reason for SVT failure. For example, genuine cognitive impairment might still be present despite SVT failure. However, SVT failure might not reflect the effects of mood or other symptoms beyond any TBI, as some contend. For example, performance on the TOMM is not affected by depression, anxiety, or pain (e.g., Ashendorf et al. 2004; Etherton et al. 2005; Yanez et al. 2006).

Comment (xvii). This chapter on presentation of SVT evidence to court explains well basic concepts to triers of fact.

Argument (xviii). Hartlage (2012) presented an important counterweight to the emphasis on testing that predominates in the area of malingering detection. He defined clinical approaches to the question of malingering detection as primarily nonactuarial, nonstatistical approaches that involve clinical observation, evaluation of congruence or consistency in ability and test results, and consideration of contextual factors related to both evaluator and evaluee. The advantage of the clinical approach is that it is unique to particular evaluees, and so has ecological validity, and it is not subject to the influences found for tests, such as coaching and learning about them on the internet. When neuropsychologists use psychometric technicians, they lose opportunity to observe first-hand evaluee behavior. Both verbal and nonverbal behavior can provide relevant, important, and crucial cues in the detection of malingering.

Comment (xviii). Hartlage (2012) raised interesting points about the value of the clinical approach to malingering detection. Algorithms for malingering detection do include aspects of the clinical approach in combination with the psychometric one, such as in the Slick et al. MND criteria.

Argument (xix). Reynolds and Horton (2012b) ended their book with a chapter that revisited definitions and approaches to malingering, and they concluded by calling for clinical acumen, use of test data, and an approach informed by common sense in malingering determinations. The DSM approach to defining malingering is the one most often used, but malingering is seen increasingly as residing on a continuum from slight exaggeration to complete fabrication (Iverson 2008). However, it is quite difficult to distinguish between its different degrees (Boyd et al. 2007), but the legal or related forensic question posed about it requires a dichotomous judgment (present, not). Malingering is difficult to prove and, moreover, given that it represents "perjury and/or fraud," the criterion related to decisions about it relate to the higher standard of "beyond a reasonable doubt" rather than simply "preponderance of the evidence." To evaluate it, a combination of clinical and actuarial methods should be used, yoking analytic reasoning to multiple data sources. Below-chance performance on two-alternative forced choice tests should lead to malingering attribution (Iverson 2008). Or, combined data from the assessment might lead to the same conclusion. The evaluator should use an intelligent testing approach in arriving at conclusions. Moreover, perhaps attributions of malingering should not be attempted; rather, the assessment outcome should be reported, including use of "conservative or liberal" cut scores and any biases at play, leaving the triers of fact to arrive at ultimate decisions [although the authors do mention incontrovertible evidence, such as obtained through videographic evidence].

Comment (xix). The concluding chapter by Reynolds and Horton makes eminent sense, and touches some of the most controversial points in the area of malingering detection. First, conclusions in evaluations on malingering should examine multiple data sources, including those related to clinical judgment. They should not only be actuarial, statistical, and algorithmic, or without use of any of common sense, clinical acumen, intelligent application, or interpretation. Second, malingering attribution is not just a dichotomous decision, because malingering lies on a continuum, despite difficulties in deciding on what is involved in the continuum. In attributing malingering, it might require an elevated standard akin to the criminal one of being beyond a reasonable doubt, which might be one more reason to let the trier of fact decide on this ultimate issue. However, I have argued that when the evidence is incontrovertible, such as on failed SVTs at the chance-related level, the attribution of malingering is valid, everything else being considered. Finally, in presenting evidence to court or related venues, the authors make the fine suggestion to describe all cut scores used, indicating the different options available. In general, I conclude that in forensic disability and related work, evaluators should be fully transparent in describing procedures used in reports and in testimony, reasons for using the ones chosen, and the reasons the alternatives had not been chosen, as well as the reasons for the conclusions arrived at and why alternative conclusions are not valid (with all such arguments made at the standard of "more likely than not").

Finally, the chapter by Reynolds and Horton is important for what it does not say. The MND diagnostic system proposed by Slick et al. (1999) is a widespread one that is used either directly in research or with modifications, and has the potential to become the gold standard in the field not only in research but in practice (at least with appropriate modifications according to recommendations that have been made, such as by Rogers et al. (2011a, b) and Boone (2011). That this Slick et al. system for malingering detection has been given silent treatment in the book as a whole and in the concluding chapter, as well, suggests that Reynolds and Horton advocate the use of a less rigid system, one that leaves more room for clinical judgment but still in combination with relevant test data gathered in the evaluation at hand.

Their approach is scientifically-informed, and has to be considered. It might be best to conclude that (a) all the malingering-detection systems and recommended changes that have been proposed are tentative, (b) the field does not yet have one best system that approaches the gold standard, (c) comparative research should continue with all of them, and (d) in practice, the one used in an evaluation should be differentially defended on conceptual and empirical grounds, while acknowledging the others and pointing out their limits and problems that justify their exclusion in the assessment.

8.4 Chapter Conclusion

The present chapter reviews the approach taken in Reynolds and Horton (2012a) on malingering detection in neuropsychological assessment, but describes mostly the parts of the book that have general messages for malingering detection in forensic

disability and related contexts by mental health evaluators. Most of the commentary is on the first two chapters in the book, by Faust et al. These authors emphasized the actuarial approach relative to the clinical approach. Actuarial methods do not simply mean empirical, objective rather than subjective, clinical procedures, because clinical judgment can be quantified and incorporated into predictive algorithms. There is a paucity of research on such actuarial procedures in the area of malingering detection, so that the authors' confidence that they can be developed and would be effective seems premature. That being said, I agree that this does not mean that wholesale use of clinical judgment in this area is warranted. This seems to be the approach in the remainder of the Reynolds-Horton book, in which chapters recommend gathering both test and clinical data and combining them well in forensic disability and related determinations. That is, even though the Reynolds-Horton book consists of chapters that essentially agree on one theme – that the Slick et al. criteria on MND have difficulties or should be treated with benign neglect, the authors express an essential divide on the role of clinical judgment and acumen in malingering detection and attribution evaluation methodology.

One point on which all authors in the Reynolds-Horton book would agree is that more research is needed – the call by Faust et al. for more research on the ambiguous case resonates with the needs of the field. In the present chapter, I have made suggestions on how such research might proceed. This is one more contribution at the conceptual level in my work. Without continual evolution, the field risks stagnating prematurely in limited methodologies, measures, procedures, and systems that can be readily refuted in court, do not serve fairness, are not probative or helpful, could lead to inadmissibility of evidence proffered, and even reduction of the reputation of and referrals to the experts who continue to use them.

Note that several chapters in Carone and Bush (2013) support the value of clinical judgement in forensic disability and related assessments, and their use adjunctively in assessments (Carone 2013; Guilmette 2013).

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Chapter 9
Posttraumatic Stress Disorder: Controversies, Diagnosis, and Malingering

9.1 Introduction

This chapter is exclusively on PTSD (posttraumatic stress disorder). I compare and contrast four recent chapters written simultaneously on the topic of PTSD and its assessment in relation to malingering: in order, (a) Andrikopoulos and Greiffenstein (2012), (b) Rosen and Grunert (2012), (c) Lareau (2011), and (d) Howe (2012). The four works raise both general points and issues related to testing. Three of the four chapters involve assessment of PTSD in the neuropsychological context, but I focus mainly on their presentation of PTSD rather than on their treatment of TBI (traumatic brain injury) and of neuropsychology. There is much agreement over the four sources that I review, and I try not to be redundant in describing them; however, for psychological assessment of PTSD there is disagreement among them on what is effective in detecting malingering. Briefly, for PTSD assessment and the issue of malingering, Andrikopoulos and Greiffenstein (2012) valued the interview process, in particular; Lareau (2011) preferred psychophysiological testing as a quality indicator; and both Howe (2012) and Rosen and Grunert (2012) emphasized the use of several psychological tests in PTSD assessment, although they did not provide identical tests among their lists of recommended instruments.

Aside from using these four sources for the present chapter, I provide information from the book by Morel (2010) on the differential diagnosis of PTSD and malingering. He focused on the military context but, as well, he provided general information and civilian-specific information that is valuable. Other articles are included, as needed, in the present chapter, but the best source remains Rubenzer (2009) on testing for malingered PTSD, and I describe it in depth.

In what follows, for the first part of the chapter, I organize it around general themes and, within each, I describe in succession the four major sources that have been used [Andrikopoulos and Greiffenstein (2012), Rosen and Grunert (2012),

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Lareau (2011), and Howe (2012)]. However, for my review of the assessment portions of these four sources, because of their different conclusions about testing, I do not use themes that cut across the sources. Rather, I describe the sources one after the other and then comment on them. With this approach, I highlight their differing perspectives on clinical interviews and judgment, psychophysiological tests, structured interviews on response bias, structured instruments on diagnosis of PTSD, more general personality inventories, self-report inventories of PTSD, embedded intellectual/neurological tests, and two-alternative forced choice symptom validity tests, including a variation found in the MENT (Morel Emotional Numbing Test; Morel 1995, 1998). Therefore, the specific nature of their different perspectives on tests become evident as the chapter proceeds.

Table of Terms and Sources

Abbreviation	Name	Source(s)
ARD-T	Traumatic Stress Subscale of the Anxiety Related Disorders Scale	Morey (1991)
ATR	Atypical Response Scale	Briere (1995)
BAI	Beck Anxiety Inventory	Beck and Steer (1993)
BDI	Beck Depression Index	Beck et al. (1961)
CAPS	Clinician-Administered PTSD Scale	Blake et al. (1995)
CARB	Computerized Assessment of Response Bias Test	Allen et al. (1997), Conder et al. (1992)
DAPS	Detailed Assessment of Posttraumatic Stress	Briere (2001)
Ds	Dissimulation Scale	Gough (1954)
DSM-III	Diagnostic and Statistical Manual of Mental Disorders, Third Edition	American Psychiatric Association (1980)
DSM-III-R	Diagnostic and Statistical Manual of Mental Disorders; Third Edition, Revised	American Psychiatric Association (1987)
DSM-IV	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition	American Psychiatric Association (1994)
DSM-IV-TR	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision	American Psychiatric Association (2000)
Ds-r	Dissimulation Scale, Revised	Gough (1957)
DSS	Digit Span Scale	Babikian and Boone (2007)
DTS	Davidson Trauma Scale	Davidson (1996)
ES	Ego-Strength Scale	Barron (1953)
F	Infrequency Scale	Butcher et al. (1989)
FBS	Symptom Validity Scale (originally called Fake Bad Scale)	Ben-Porath and Tellegen (2008/2011), Lees-Haley et al. (1991)
F-K	Dissimulation Index	(Gough 1950)
Fp	Infrequent Psychopathology Responses	Ben-Porath and Tellegen (2008/2011)
Fptsd	Infrequency-Posttraumatic Stress Disorder	Elhai et al. (2002)
GAD-7	Generalized Anxiety Disorder 7-Item Scale	Spitzer et al. (2006)
ICD-10	The International Statistical Classification of Diseases and Related Health Problems, Tenth Revision	World Organization (2007)

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Abbreviation	Name	Source(s)
IES	Impact of Event Scale	Horowitz et al. (1979)
IES-R	Impact of Event Scale, Revised	Weiss and Marmar (1996)
K(-r)	Adjustment Validity, Correction Scale	Bianchini et al. (2005)
L(-r)	Uncommon Virtues, Lie Scale	Bianchini et al. (2005)
MCI	Memory Complaints Inventory	Green (2004b)
MCMI-III	Millon Clinical Multiaxial Inventory, Third Edition	Millon (1994), Millon et al. (1997)
MENT	Morel Emotional Numbing Test	Morel (1995, 1998)
M-FAST	Miller Forensic Assessment of Symptoms	Miller (2001)
MMPI-2	Minnesota Multiphasic Personality Inventory, Second Edition	Butcher et al. (1989, 2001)
MMPI-2-RF	Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form	Ben-Porath and Tellegen (2008/2011)
MSVT	Medical Symptom Validity Test	Green (2004a)
NBS	Negative Bias Scale	Briere (2001)
NIM	Negative Impression Management	Morey (1991)
NV-MSVT	Nonverbal Medical Symptom Validity Test	Green (2008)
PAI	Personality Assessment Inventory	Morey (1991, 2007)
PCL	PTSD (Posttraumatic Stress Disorder) Checklist	Weathers et al. (1993)
PCL-C	PTSD Checklist, Civilian Version	Blanchard et al. (1996b)
PCL-R	Hare's Psychopathy Checklist, Revised	Hare (1991)
PDEQ	Peritraumatic Dissociative Experiences Questionnaire	Marmar et al. (1997)
PDRT	Portland Digit Recognition Test	Binder (1993), Binder and Willis (1991)
PDS	Paulhus Deception Scales	Paulhus (1998)
PHQ-9	Patient Health Questionnaire 9-Item Depression Scale	Kroenke et al. (2001)
PK	Keane Posttraumatic Stress Disorder Scale	Keane et al. (1984)
PS	Schlenger Posttraumatic Stress Disorder Scale	Schlenger and Kulka (1989)
-r	Revised (e.g., FBS-r)	Ben-Porath and Tellegen (2008/2011)
RBS	Response Bias Scale	Gervais et al. (2007)
RDS	Reliable Digit Span	Babikian et al. (2006), Greiffenstein et al. (1994)
RMFIT	Rey 15-Item Memory Test	Rey (1941)
SCID	Structured Clinical Interview for DSM-IV Axis I Disorders	First et al. (1997)
SIMS	Structured Inventory of Malingered Symptomology	Smith and Burger (1997)
SIRS	Structured Interview of Reported Symptoms	Rogers et al. (1992)
SIRS-2	Structured Interview of Reported Symptoms, Second Edition	Rogers et al. (2010)
STAI	State Trait Anxiety Inventory	Spielberger (1983)
TSI	Trauma Symptom Inventory	Briere (1995)

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Abbreviation	Name	Source(s)
TSI-2	Trauma Symptom Inventory-2	Briere (2011)
TOMM	Test of Memory Malingering	Tombaugh (1996)
VOCss – DSss	Vocabulary and Digit Span Age-Corrected Scale Scores	Babikian and Boone (2007)
WHODAS-II	World Health Organization Disability Assessment Schedule, Second Edition	World Health Organization (2001)
WMT	Word Memory Test	Green (2005)

9.2 PTSD: Issues and Assessment

9.2.1 Issues

9.2.1.1 General Introduction

Andrikopoulos and Greiffenstein (2012) presented the DSM-IV-TR (Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision; American Psychiatric Association 2000) criteria for PTSD. The entry criterion for PTSD (criterion A) is that the individual had to be exposed to a traumatic event. There are two sub-criteria. Criteria A1 specifies that the individual had to experience, witness, or be confronted with one or more traumatic events that involved "actual or threatened death or serious injury" or the threat to the self or another individual of their "physical integrity" (p. 468). For adults, criterion A2 specifies that the individual had to respond with any of intense "fear, helplessness, or horror."

The next three sets of symptoms in the DSM-IV-TR definition refer to the major behavioral, emotional, and cognitive indices of PTSD (see Table 9.1). There are three clusters of symptoms related to: persistent reexperiencing, persistent avoidance and numbing, and persistent elevated arousal. [Note that research on how the 17 PTSD symptoms form clusters indicates that there are four primary factors in which they organize, and not three, unlike what is presented in the DSM-IV-TR; Gootzeit and Markon 2011; Simms et al. 2002. There is even a five-factor model (Elhai et al. 2011), although the Simms et al. model might better fit the data (Armour et al. 2012).] The last criteria are qualifiers about the duration (1 month or more)] and the psychological/functional effect of the trauma [that there is a "clinically significant distress or impairment" in important areas of function]. Another qualifier specifies that PTSD might develop in a delayed fashion after 6 months. However, Andrikopoulos and Greiffenstein indicated that this qualifier is illogical and, moreover, it rarely happens (Andrews et al. 2007). Finally, in the DSM-IV-TR, clinicians are advised to consider the differential diagnosis of malingering in their evaluations of PTSD when secondary gain (e.g., external financial incentives) might be involved.

For Andrikopoulos and Greiffenstein, the A criteria for PTSD are the most controversial, which is the case for most workers in the field. The authors specified

Table 9.1 Posttraumatic stress disorder: DSM-IV-TR criteria (adapted)

A. Traumatic exposure:
   1. Experienced/witnessed/confronted with event(s) with actual/threatened death/serious injury/threat to physical integrity of self/others
   2. Felt intense fear/helplessness/horror

B. Persistently reexperience in one (or more) ways:
   1. Recurrent/intrusive distressing recollection(s) (e.g., images/thoughts/perceptions)
   2. Recurrent, distressing dreams
   3. Acting/feeling as if event recurring (e.g., sense of reliving it/illusions/hallucinations/dissociative flashbacks)
   4. Intense psychological distress to internal/external cues that symbolize/resemble aspect(s)
   5. Physiological reactivity to internal/external cues that symbolize/resemble aspect(s)

C. Persistent trauma-associated stimuli avoidance/general responsiveness numbing in three (or more) ways:
   1. Efforts to avoid thoughts/feelings/conversations associated with it
   2. Efforts to avoid activities/places/people that induce recollections of it
   3. Inability to recall important aspect of it
   4. Markedly diminished interest/participation in significant activities
   5. Feeling of detachment/estrangement from others
   6. Restricted affect range (e.g., unable to have loving feelings)
   7. Sense of foreshortened future

D. Persistent symptoms of increased arousal in two (or more) ways:
   1. Difficulty falling/staying asleep
   2. Irritability/outbursts of anger
   3. Difficulty concentrating
   4. Hypervigilance
   5. Exaggerated startle response

E. Duration more than 1 month

F. Causes clinically significant distress/impairment in social/occupational/important function areas

Adapted from American Psychiatric Association (2000)
Note: Symptom qualifications about children removed
Acute: <3 months
Chronic: ≥3 months
With delayed onset: ≥6 months after
Abbreviation. DSM-IV-TR Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (American Psychiatric Association 2000)

that for criterion A, an individual involved in a serious MVA (motor vehicle accident) who behaves calmly according to either self-report or emergency response records, or both, does not meet criterion A. In contrast, an individual might react with horror and panic to an event that is not life-threatening, such as an episode of being harshly criticized at work, and so will not meet criterion A because of the lack of life-threatening element to the event. Furthermore, evaluators should not make the "common mistake" to diagnose PTSD simply based on the evaluee having had a serious traumatic event that meets criterion A1 ("presumptive PTSD diagnosis"). Further, Andrikopoulos and Greiffenstein noted that each particular symptom that contributed to the diagnosis should be linked to the traumatic event at claim and not merely be present.

Moreover, Andrikopoulos and Greiffenstein referred to the core features of PTSD as reexperiencing and numbing. They indicated that the flashback symptom is the only one that is unique to PTSD. However, at the same time, they indicated that flashbacks should be rare (unfortunately, no reference given). The other symptoms are considered not specific, that is, they overlap with other disorders. McNally (2003) referred to the dilution of criterion A by including less than serious traumatic events as potential elicitors of PTSD as "conceptual bracket creep."

As for the predictors of PTSD, Andrikopoulos and Greiffenstein (2012) reported that Ozer et al. (2008) conducted a meta-analysis, and found that multiple variables help predict PTSD. In particular, "peritraumatic dissociation and emotional responses, perceived support, and perceived life threat" were the variables that best predicted PTSD. These variables are related, in particular, to the trauma at issue, and they involve contextual factors, as well. Other variables involved in predicting PTSD included more distal factors that preexisted the event at claim, such as prior trauma and adjustment and familial psychiatric history.

Rosen and Grunert (2012) examined PTSD in the workplace. They noted that even in the 19th century, its equivalent diagnosis of "railway spine" was controversial (Erichsen 1882). Since the period of time after PTSD had become a term in the DSM-III (Diagnostic and Statistical Manual of Mental Disorders, Third Edition; American Psychiatric Association 1980), Grob and Horwitz (2010) noted that it has become "one of the most influential psychiatric diagnoses in history" (p. 178). Spitzer et al. (2007) noted that it has generated "so much controversy." The major controversy about it concerns criterion A, because it provides for a specific etiology related to events, such as negligent MVAs, that cause psychological effects to the degree that they become amenable to court action. However, Rosen and Grunert noted that non-traumatic events might lead to endorsements of PTSD symptomology that is at least as high, if not higher, compared to traumatic ones (Gold et al. 2005; Mol et al. 2005). Further, other research has demonstrated that depressed patients or individuals having social phobia would meet the PTSD criteria even without any traumatic event under criterion A (respectively, Bodkin et al. 2007; Erwin et al. 2006; however, I note that the overlap might not be quite at the level indicated). Other research suggests that non-event factors contribute more variance to clinical outcome than event factors (e.g., Bowman and Yehuda 2004).

As with the other work reviewed in this chapter, Rosen and Grunert described the PTSD symptom criteria. Although there are 17 symptoms organized in three clusters, they remind that the criteria are polythetic such that one does not have to express all 17 symptoms to be defined as having PTSD, with as little as one acceptable symptom to meet threshold for a cluster. Therefore, Rosen and Grunert pointed out that there are multiple pathways that can lead to the diagnosis of PTSD and that groups of patients might be quite heterogeneous in their symptom presentation. Rosen and Lilienfeld (2008) noted that this marked variability in evaluee's symptom presentation does not deny the validity of PTSD, because there still might be a common etiology to these symptom variations.

Rosen and Grunert (2012) continued with a discussion of comorbidity. They noted that symptom overlap for the combination of major depression and specific phobia covers all 17 PTSD symptoms (although I note that the overlap might not be at the indicated degree). This leads one to query the validity in diagnosing PTSD. That being said, individual patients expressing any combination of the PTSD complex of symptoms according to the DSM-IV (Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition; American Psychiatric Association 1994) definition and criteria are equally deserving of treatment. Young and Yehuda (2006) had argued that, despite the multiple heterogeneous presentations of PTSD symptoms, each evaluee needs to be considered for her/his individual profile.

Rosen and Grunert continued to discuss the criterion "bracket creep" that had been described by McNally (2003). For example, Breslau and Kessler (2001) showed that the altered definitions of criterion A allow for an increase of over 50 % in the types of events that are considered sufficiently traumatic to reach the criterion. Even watching the news could create "vicarious traumatization" (Ahern et al. 2004; Sabin-Farrell and Turpin 2003). Avina and O'Donohue (2002) suggested that even "crude jokes" could provoke a PTSD trauma reaction because people could worry what could come next. In this regard, Rosen (2004) referred to the new diagnosis of "pretraumatic stress disorder!" Rosen and Grunert also noted that PTSD has been diagnosed as "subsyndromal," "subthreshold," or "partial." Wakefield and Horwitz (2010) opined that these types of modifications of the PTSD diagnosis might blur the distinction between normal and disordered reactions in response to adversity.

However, I note that research has shown that subsyndromal PTSD can be as equally difficult and disabling to deal with as full-blown PTSD. For example, O'Donnell et al. (2009) examined the degree to which posttraumatic stress responses at 1 week and 3 months predicted disability at 12 months. The CAPS (Clinician-administered PTSD-Scale; Blake et al. 1995) was used to assess PTSD. Subsyndromal PTSD was also diagnosed, because evidence had shown that subsyndromal levels of PTSD were associated with levels of impairment similar to full-blown PTSD in a study of psychological sequelae of the 9/11 terror attack (Amsel and Marshall 2003). In the O'Donnell et al. research, disability was assessed using the WHODAS-II (World Health Organization Disability Assessment Schedule, Second Edition; World Health Organization 2001). The results were gathered in a multi-site longitudinal study of 802 Australian hospital patients. A logistic regression showed that measures of posttraumatic stress responses at 1 week and at 3 months predicted disability at 12 months slightly better than measures of depression. The research was controlled for demographic variables and characteristics of the injury. There was no difference in the predictions derived from full and subsyndromal PTSD.

Rosen and Grunert (2012) noted that other extensions of PTSD that deserve criticism include proposals for PTED (posttraumatic embitterment disorder; Linden 2003), posttraumatic relationship syndrome (Vandervoort and Rokach 2004), posttraumatic grief disorder (Prigerson and Jacobs 2001), posttraumatic dental care anxiety (Bracha et al. 2006), and posttraumatic abortion syndrome (Gomez and Zapata 2005). Shephard (2004) referred to criterion A creep as nonsensical, absurd, and a trivialization of the diagnosis.

Rosen and Grunert (2012) noted that, clinically, practitioners find the diagnosis of PTSD helpful because it simplifies understanding of their patients' problems. Patients find it helpful because they do not feel stigmatized, they can adopt the victim role, and any individual weakness for failing to cope with the trauma is cast aside.

Lareau (2011) indicated that PTSD is a diagnosis in vogue. He cited Briere (2004), who noted that prior to the inclusion of the diagnosis of PTSD in the DSM-III, conditions like PTSD were considered transient and often were given pejorative labels like "compensationitis" and "accident victim syndrome" (Slovenko 2004). The criteria for the diagnosis changed, in turn, significantly from the DSM-III (Diagnostic and Statistical Manual of Mental Disorders, Third Edition; American Psychiatric Association 1980) to the DSM-III-R (Diagnostic and Statistical Manual of Mental Disorders, Third Edition, Revised; American Psychiatric Association 1987) to the DSM-IV. Lareau reminded that the symptom criteria are divided into three major groups related to re-experiencing, avoidance/numbing, and arousal. Because of the polythetic manner of using the list of symptoms within each cluster, Lareau noted that there are 175 possible symptom combinations of PTSD. Note that in Young and Yehuda (2006), I calculated the possible combinations as being over 12,000. Despite the differing calculations, we both agree that this creates multiple individual manners in displaying the disorder.

About the reliability and validity of the diagnosis, Lareau (2011) observed that PTSD symptoms become "far more frequent" when the individual is in a position to receive "financial compensations or other benefits." A summary of the research noted that pre-existing personality problems and pre-existing mental health problems predict PTSD better than the characteristics of the trauma itself. In their literature review, Koch et al. (2005) had found that high negative emotionality contributed substantially to the prediction of PTSD. [Note that Gabert-Quillen et al. (2012) found that number of prior trauma types and subjective response to prior traumas are risk factors for developing PTSD symptoms in MVAs, as is lack of social support.] Normally, PTSD exhibits "significant spontaneous remission" even without treatment, but this is not clearly the case for PTSD litigants. Clinicians might diagnosis PTSD due to "confirmatory bias," or a knee-jerk reaction. Patients might have a "recall bias" in remembering the index event, reporting it in a more severe way than objectively happened. Also, patients might blame all their problems on the accident instead of other factors in their lives. Lareau continued to note that there is much comorbidity accompanying the diagnosis of PTSD that makes it challenging to diagnose. If the evidence indicates the presence of PTSD, the most that could be concluded is that it is "consistent with" PTSD.

As for definitions of malingering, Morel (2010) noted that although the DSM-IV-TR definition of malingering, which is the most widely used, includes only "grossly exaggerated" symptoms along with false production of symptoms in its definition, other sources vary in this regard. For example, the other major diagnostic system in use, the ICD-10 (The International Statistical Classification of Diseases and Related Health Problems, Tenth Revision), refers to malingering in the context of feigning for obvious motivation, without qualifying the type (World Organization 2007).

9.2.1.2 Prevalence

In terms of the base rate of PTSD, Andrikopoulos and Greiffenstein (2012) described much epidemiological research indicating that although people are often exposed to traumatic events, PTSD develops infrequently (e.g., Galea et al. 2003). A study of Detroit youth found that 23.6 % developed PTSD after exposure to a traumatic event (Breslau et al. 1991).

Andrikopoulos and Greiffenstein (2012) examined research on the prevalence of PTSD in MVAs. They focused on prospective studies that assessed consecutive admissions to hospitals and that used structured clinical interviews. One study reported an incidence of 1.9 % at 1 year (Schnyder et al. 2001). Another study reported an incidence of 2.5 % (Wrenger et al. 2008). These and other low estimates of PTSD due to MVAs contrast to claims made by other researchers of a higher prevalence rate (e.g., Blanchard and Hickling 2004). However, in the latter study, possible malingering of PTSD was not verified.

As for malingered PTSD, Andrikopoulos and Greiffenstein (2012) considered the prevalence quite high. For example, for veterans, Frueh et al. (2005) conducted a study of American military veterans and a figure of over 40 % of malingered cases seemed evident (attaining benefits after reporting having been in combat but actually not having been). The authors noted that Freeman et al. (2008) studied military veterans using the SIRS (Structured Interview of Reported Symptoms; Rogers et al. 1992) and the CAPS and found an incident rate of malingering of 53 %. Despite the low prevalence of PTSD after trauma and the seemingly high prevalence of PTSD in claims, malingering is not easy to detect.

According to Lareau (2011), most individuals exposed to serious and traumatic events do not develop PTSD. If they do, only 9–15 % develop chronic PTSD (Koch et al. 2006). Even most individuals involved in war do not develop PTSD. Estimates of chronic PTSD vary between 10 and 15 %. Blanchard et al. (1996a) found that two-thirds of MVA survivors diagnosed with PTSD had remitted 1 year after the accident. If claimants in litigation show lower remission rates, it could be because they are focusing on the litigation and the need to appear "damaged" (Bryant and Harvey 2003). It is noted that delay in onset of PTSD is quite rare (North et al. 2002) so that it may arise from compensation motivation.

About malingering and its detection, Lareau (2011) noted that Frueh et al. (2005) reviewed archival data of veterans and found 94 % were diagnosed with PTSD, even though only 41 % had objective evidence of combat exposure (note that 93 % had claimed war zone service). [The equivalent situation in civilian PTSD cases would refer to fake or arranged accidents; however, mental health practitioners are not investigators and, hopefully, screening takes place at initial junctions in the claim system in such cases.]

Howe (2012) indicated that only 9–12 % of MVA survivors develop PTSD (Breslau et al. 1991; Kessler et al. 1995) and that 50 % remit within 6 months (Blanchard and Hickling 1997; Blanchard and Veazey 2001). Moreover, appropriate treatment increases remittance rate (Blanchard et al. 2003). Symptom severity is related more to factors such as pre-existing adjustment and also subjective reactions

to the event, rather than to the degree of trauma (Bowman and Yehuda 2004; Ozer et al. 2003, respectively). Cognitive deficits that precede the trauma constitute risk factors (Parslow and Jorm 2007). Multiple comorbidities complicate assessment and these might be due to intentional symptom over-endorsement, among other factors (Rubenzer 2009).

It is important to note that even in the military, combatants exhibit great resilience. For example, McNally (2012) stated that even among deployed combatants, only 7.6 % developed PTSD.

As for malingering of psychological symptoms after accidents, for Howe (2012) the estimated range is from 1 % to over 50 % (Hickling et al. 1999; Resnick 1997). Merten et al. (2006) found a rate of probable malingering of PTSD of 51.1 % in independent medical examinations (IMEs). Once PTSD was included in the DSM-III, personal injury lawsuits increased by over 50 % and also there was an 800 % increase in stress-related claims (Olsen 1991; De Carteret 1994, respectively).

About prevalence, Morel (2010) noted that about 50 % of civilian claimants expressed "probable malingering." He also referred to the Merten et al. (2006) study that found the rate of 51.1 %. Hickling et al. (1999) reported that "suspected" malingering was present in over 50 % of claimants having been in MVAs.

Also, Rubenzer (2009) noted that Demakis et al. 2008) found that 29 % of PTSD claimants failed one or more validity indicators related to cognition. Moreover, 49 % scored above the cut-scores for either the MMPI-2 (Minnesota Multiphasic Personality Inventory, Second Edition; Butcher et al. 1989, 2001) validity indicators (predetermined ones for the F, Fp, and FBS; respectively, Infrequency Scale, Butcher et al. 1989; Infrequent Psychopathology Responses; Ben-Porath and Tellegen 2008/2011; and Symptom Validity Scale; Ben-Porath and Tellegen 2008/2011; Lees-Haley et al. 1991) or the NBS (Negative Bias Scale) of the DAPS (Detailed Assessment of Posttraumatic Stress; Briere 2001). Demakis and Elhai (2011) referred to several studies that implicated a base rate of malingering of around 50 % in PTSD determinations (Demakis et al. 2008; Elhai et al. 2001; Merten et al. 2009).

Note that the estimate of prevalence for PTSD in the military has been subject to recent debate. McNally and Frueh (2012) had argued that research by Frueh et al. (2005) had found an elevated rate of malingering had taken place. But Marx et al. (2012) argued that McNally and Frueh did not consider factors such as war zone exposure, in general, being a risk factor. Another study described as supportive of a high rate of malingering in the military by McNally and Frueh implicated an excessive rate of delayed PTSD in order to receive benefits (VA Office of the Inspector General, VA OIG, 2005), which is rare (Frueh et al. 2005). However, Marx et al. contested the rarity of delayed PTSD (Andrews et al. 2007). Furthermore, Marx et al. added that treatments help both compensation-seeking and noncompensation-seeking veterans (Monson et al. 2006; Schnurr et al. 2007).

Further research is needed to determine the rate of malingered PTSD and related response biases for civilian populations in the forensic disability and related psychological injury litigation context. The percentage in the literature of up to

50 % malingering in the forensic disability context is contested, as argued at the beginning of the monograph, but according to me that percentage fits the general estimate of problematic presentations and performances in these types of assessments, for example, when general feigning, malingering, milder exaggeration, and gray zone cases are considered together.

9.2.1.3 Malingering

Issues. Howe (2012) pointed out that there is not only pure malingering but also partial malingering and falsely attributing real symptoms to events not related to the events at claim (Resnick 1997). Malingering might take the form of denying functional abilities rather than fabricating symptoms. She noted that in the DSM-IV, when PTSD is diagnosed, the assessor must rule out malingering if external incentives (for example, "financial remuneration") play a role. Resnick et al. (2008) indicated that malingerers are often uncooperative, suspicious, aloof, etc. Detection strategies involve finding unlikely symptoms or amplified symptoms (Rogers 2008). Assessments should involve multiple data sources, including using open-ended questions at first in clinical interviews, in order not to convey the PTSD criteria to the claimant. Howe cautioned against using psychophysiological testing as part of the assessment because it can be "successfully fabricated." She cautioned about publications on PTSD because many researchers do not exclude many individuals who might be malingering (Rosen and Taylor 2007).

According to Howe, although malingering is a pejorative attribution, evaluators need to consider attributing it for multiple reasons. First, beyond any underserved gain from the false claim, it leads to (a) unnecessary medication prescriptions and (b) the medications will not work, given the fabrication involved, so the dosage will be increased, thereby increasing risk factors. Second, it taxes the health care system with false needs and added costs. Third, attributing malingering when it is merited can help the patient by not perpetuating maladaptive behavior.

Comment. The recent work on malingered PTSD that I have reviewed (Andrikopoulos and Greiffenstein 2012; Howe 2012; Lareau 2011; Rosen and Grunert 2012) has provided complementary perspectives on its controversies, which are numerous. The diagnosis of PTSD is given with an entry criterion that imparts causality to an external event, so that it represents a growth industry in court. The DSM-IV-TR recommends differential diagnosis of malingering, where applicable. The scope of the entry criteria for PTSD has become lax, both according to mental health practice and use in court, so that even minor events can qualify, in a process called bracket creep. The predictors of PTSD are multiple, but include pretrauma history and personality factors. PTSD can be accompanied by co-morbid disorders. Certain combinations of co-morbid disorders might even give the same symptoms of PTSD. Its prevalence or base rate is low, especially in the long term. However, some consider the rate for malingered PTSD as high [or to be conservative, the rate of problematic presentations of PTSD as high]. Treatment can be effective for

PTSD, but this appears less true in litigation cases. Malingering of PTSD can be partial rather than full and it is hard to detect. However, its costs to the system are high and even the DSM-IV-TR notes the need to rule it out.

9.2.1.4 Treatment

As for treatment, Andrikopoulos and Greiffenstein (2012) referred to the best practice guidelines available: the International Society for Traumatic Stress Studies guidelines by Foa et al. (2009); the American Psychiatric Association guidelines by Benedek et al. (2009); the Cochrane Reviews guidelines (see Bisson and Andrew 2007; Stein et al. 2006); the Australian Center for Posttraumatic Mental Health guidelines (Forbes et al. 2009); and the NICE guidelines (National Institute for Health and Clinical Excellence 2005). With respect to psychopharmacology, the FDA has approved the use of Paxil (paroxetine) and Zoloft (sertraline) to treat PTSD. However, compared to prescription of medications, psychotherapy is the treatment of choice. Pharmaceutical products should not be administered unless psychotherapy has proven ineffective, the patient refuses to have the psychotherapy, the medicines are needed to reduce symptoms so that psychotherapy can begin, or they are taken as an adjunct to psychotherapy.

The psychotherapeutic approaches that are deemed most efficacious revolve around cognitive behavioral therapy (CBT), in particular (e.g., Bisson and Andrew 2007). Andrikopoulos and Greiffenstein recommended a treatment plan of 8–12 sessions, with another 12 sessions for cases involving comorbidities or contributing psychosocial factors. Patients who do not improve with psychotherapy should indicate to the evaluator that either the diagnosis was not accurate, the patient cannot improve with the treatment, or the symptoms are either not really present or not as severe as originally reported. In the latter case, referral for IMEs might be appropriate.

In terms of treatment, Rosen and Grunert (2012) focused on treatment of PTSD in the workplace. They espoused use of CBT because it has been shown to be effective in a wide range of RCTs (randomized control trials) (Cahill et al. 2009; Foa et al. 2009; also see Hembree and Foa 2010). Another therapy that has been used is EMDR (previously referred to as eye-movement desensitization and reprocessing, but now other types of repetitive components are considered to work for certain patients). Workers such as Rosen and Davison (2003) argued that the extra components added to EMDR are not necessary and do not increase the effectiveness of the treatment relative to standard CBT approaches, although they do not dispute that it can help. Rosen and Grunert (2012) presented the clinical work of Grunert for PTSD, which involves: psychoeducation; emotional reprocessing; imaginal exposure (Foa et al. 1989, 2007); IRRT (Imagery Rescripting and Reprocessing Therapy); and assuring that the patients develop a complete narrative. Also, the patients do in vivo exposure work right at the site of their injury, but the authors note that this works only if the employer involved in work accidents is cooperative. The authors provided excellent statistics for recovery and return to

work for this program. However, I note that careful research needs to be conducted to determine the efficacy of the program relative to control groups.

Lareau (2011) argued that when treatment begins soon after a traumatic event, it appears to be substantially beneficial (Foa et al. 2009) and does not decay at follow-up (Sherman 1998). However, Koch et al. (2005) noted that the effective psychological treatments rarely apply in this type of litigation context, because litigants might exhibit "disincentive" to undergo early, effective treatment.

9.2.1.5 Assessment

Andrikopoulos and Greiffenstein (2012). In terms of neurobiology, the literature review by Andrikopoulos and Greiffenstein (2012) is extensive and they refer to Vasterling and Brewin (2005). The research is also controversial, for example, Gilbertson et al. (2002) showed that smaller hippocampal volume precedes rather follows the development of PTSD. Research supports differing psychophysiological reactivity in PTSD compared to controls (e.g., heart rate, skin conductance, and electromyographical recordings).

However, McNally (2006) argued that physiological reactivity might reflect response to emotionally-evocative memories, in general, and not necessarily those related to PTSD or even true memories. For example, McNally et al. (2004) studied individuals who had claimed to have been abducted by aliens. They were measured for skin conductance, heart rate, and EMG of the left lateral frontalis muscle. The more they reported alien experiences that were negative, compared to neutral or positive experiences, the more they expressed reactivity on the physiological measures. The results indicate that the field has not advanced enough to specify biomarkers of PTSD that could be used in individual assessments.

Andrikopoulos and Greiffenstein (2012) reviewed the major detection methods that can be used in detection of malingered PTSD. Morel (1998) has developed the only stand-alone forced-choice test for testing malingered PTSD (the MENT, Morel Emotional Numbing Test, Morel 1995, 1998). In the test, the evaluee is required to match a facial expression, such as sad or happy, with the word that best describes the face. For a sample of military veterans, the reported hit rate for detecting malingering was given as 95.6 %. Another study reported a rate of 75.7 % (Morel 2008, the patients were PTSD and not neuropsychological referrals). The MENT has been used in a civilian study, as well, by Merten et al. (2009). Nevertheless, Andrikopoulos and Greiffenstein (2012) indicated that the test needs validation for civilian use, for example, using a known-groups design. Moreover, Andrikopoulos and Greiffenstein indicated that there is no reason why failure to recognize emotional expressions should relate to PTSD. In PTSD, numbing refers to having a poverty of internal emotions and not a failure to recognize emotional expressions. Moreover, in the 1998 validation study, the instructions across groups were not equivalent.

The DAPS is a self-report instrument for PTSD that has the advantage of incorporating evaluee validity scales, including the NBS. However, for Andrikopoulos and Greiffenstein, the item content of the NBS scale "suggests insensitivity to

malingering." Demakis et al. (2008) conducted a comparative study of the DAPS and three cognitive/psychological SVTs (CARB, WMT, and TOMM; respectively, the Computerized Assessment of Response Bias Test; Allen et al. 1997, and Conder et al. 1992; Word Memory Test; Green 2005; Test of Memory Malingering; Tombaugh 1996). According to Andrikopoulos and Greiffenstein, although the DAPS appeared to function well relative to the other tests, methodological inconsistencies in the study preclude allowing presentation of data on the comparative sensitivity of these measures.

The TSI (Trauma Symptom Inventory, Briere 1995) is a widely used instrument, and it has a response bias measure termed the ATR (Atypical Response Scale). However, the findings on the ATR are mixed and it is more a general validity scale rather than one designed specifically to detect malingered PTSD. Moreover, according to Andrikopoulos and Greiffenstein, the TSI is not tied to the criteria for PTSD in the DSM-IV-TR. However, I note that the TSI-2 (Trauma Symptom Inventory-2; Briere 2011) was just released, and although it too early to tell whether it will help in PTSD malingering attributions, it has instituted modifications that appear to make it a better instrument for this purpose. Further validation research is necessary.

Two instruments that are widely used for the purpose of detecting feigning are the M-FAST (Miller Forensic Assessment of Symptoms; Miller 2001) and the SIRS. Moreover, there is a new edition of the SIRS, the SIRS-2 (Structured Interview of Reported Symptoms, Second Edition; Rogers et al. 2010). These are structured interview instruments that in certain domains related to psychological injury and law hold promise. However, Andrikopoulos and Greiffenstein noted that there are no studies with known-groups using the M-FAST and the SIRS with populations of civilian PTSD litigants, let alone the SIRS-2.

Another instrument that could provide a lot of information with respect to PTSD malingering determinations is the CAPS (see Weathers et al. 2001). Elhai et al. (2005) conducted a survey and found that the CAPS is considered the "gold standard" in interview-based PTSD assessments among evaluators. It assesses both frequency and severity of symptoms. The evaluator using the CAPS needs to estimate the overall validity of the interview conducted. However, the manual provides no direction how this can accomplished in an objective manner. The CAPS gives an overall severity score and the score is compared to those of PTSD groups in published research. However, it requires training to administer and takes much time to complete, given that it is not a self-report measure that the evaluee needs to complete. Another instrument used by evaluators for PTSD is the SCID (Structured Clinical Interview for DSM-IV Axis I Disorders; First et al. 1997), but it is used less commonly. It does not have a validity check component.

According to Andrikopoulos and Greiffenstein, the MMPI-2 has not been studied sufficiently with respect to civilian PTSD and especially PTSD litigants (no reference provided). Andrikopoulos and Greiffenstein indicated that there are relevant validity indicators in the MMPI-2 that are worth noting. For example, "the FBS has the most promise in identifying malingered PTSD symptoms" (p. 382). The Fptsd (Infrequency-Posttraumatic Stress Disorder; Elhai et al. 2002) was developed to identify possible malingered PTSD. However, the results are mixed with respect to

its ability to do so for civilian populations. The PK scale was developed to identify PTSD (Keane et al. 1984; with modifications in the MMPI-2 by Lyons and Keane 1992). However, the results are mixed about its detection capacity and so Andrikopoulos and Greiffenstein concluded that it has limited value. Simulation research by Elhai et al. (2004) is cited as demonstrating value for the Fp scale. As for other personality measures, Andrikopoulos and Greiffenstein indicated that the PAI (Personality Assessment Inventory, Morey 1991, 2007) and the MCMI-III (Millon Clinical Multiaxial Personality Inventory, Third Edition; Millon 1994; Millon et al. 1997) have not been studied sufficiently for the purposes of malingered PTSD attributions.

In terms of PTSD self-report measures, Andrikopoulos and Greiffenstein examined the PCL (PTSD Checklist; Weathers et al. 1993), the PDS (Paulhus Deception Scales; Paulhus 1998), as well as the DAPS. They recommended the PDS because it has more research behind it and it has a measure of impairment in functioning. However, they noted that the DAPS is the only to have a response bias scale. Moreover, unlike what Andrikopoulos and Greiffenstein reported, careful inspection of the DAPS manual reveals that it does provide an impairment score. Nevertheless, Andrikopoulos and Greiffenstein are correct to indicate that "not enough is known about the DAPS normative sample." However, further research with normative samples is needed not only with the DAPS but also with all the instruments in the area so that they are applicable to the needed level of efficacy for PTSD civilian litigants in assessment.

Andrikopoulos and Greiffenstein concluded their recommendations for testing by indicating that instruments related to depression and anxiety should be administered. They recommended the PHQ-9 (Patient Health Questionnaire 9-Item Depression Scale; Kroenke et al. 2001) and GAD-7 (Generalized Anxiety Disorder 7-Item Scale; Spitzer et al. 2006). However, I note that the scales do not have respondent validity indicators and have not been normed with respect to PTSD civilian litigants. Clearly, more research is needed in this area before clear recommendations can be made.

Andrikopoulos and Greiffenstein (2012) give much importance to the patient interview in PTSD malingering determinations. They argued that the semi-structured interview for PTSD is the "cornerstone of the PTSD" assessment process. When interview results suggest that malingering is present, it needs to be conveyed in a way to suggest that the likelihood of malingering is "high" "regardless of the formal testing" (p. 387). Nevertheless, the authors then acknowledge that the interview results might be "more subjectively interpreted." Although patient self-report is "problematic," "these difficulties" can be "overcome." For example, the evaluator needs to take note of prolonged pauses in answers, examples that are vague, lack of examples, missing details, contradictory answers, "I don't know" answers, non-responsive answers, and other answers that suggest malingered PTSD. Moreover, each criterion of the 17 for PTSD should be questioned in depth.

Andrikopoulos and Greiffenstein noted that there is very little research on malingered PTSD with known groups, that is, with litigating and non-litigating patient groups having malingering defined operationally. Therefore, for research on

the topic, they recommended using the "level of impairment method." In this regard, they noted that minor MVAs should not produce as severe PTSD compared to more serious situations (however, I note that this statement does not recognize the contribution of survivor appraisal of the event in terms of degree of severity, relative to any objective facts of the event itself). Practice-wise, they recommended that the level of impairment method could be used in each evaluator's practice (i.e., does an evaluee with an everyday stressor express more serious symptoms than other evaluees having experienced more serious traumas in one's practice). The authors qualify that this method is not ideal. I would note that extreme caution should be applied in using this method; for example, it should only serve as a rough guide and not be brought to court itself, because the risks of its use are extreme.

Rosen and Grunert (2012). Rosen and Grunert (2012) noted that for detecting PTSD malingering in civilian litigants, there is no preferred method (Frueh et al. 2004; Guriel and Fremouw 2003; Taylor et al. 2007). For example, the MMPI-2 contains validity indicators that can be affected by coaching, reducing their effectiveness (Bury and Bagby 2002; Storm and Graham 2000). Self-report checklists are "problematic" because they are easily feigned (Lees-Haley 1990) and they have not been well-established for specificity and sensitivity (e.g., the TSI; Rosen et al. 2006). If there are cognitive problems, SVTs can be used (Merten et al. 2009; Rosen and Powel 2003). As for physiological assessment, the measures lack sufficient specificity and sensitivity (Rosen et al. 2010). Given the problems with testing, one might think that clinical assessment would help in the detection of PTSD malingering. However, whether clinical experience can help detect false reporting has been questioned (e.g., Ekman and O'Sullivan 1991). Moreover, Hickling et al. (2002) had six actors feigning PTSD present to a clinic for MVA survivors. After doing so, each of them was diagnosed with PTSD, demonstrating the difficulty in clinical work with PTSD claimants. Therefore, Rosen and Grunert (2012) advised that clinicians should be "less than certain" in their testimony in court about their patients. Nevertheless, they added that, in every evaluation, clinicians and forensic experts both need to provide accurate diagnoses and attempt to rule out malingering.

Lareau (2011). Lareau (2011) reviewed the various psychological instruments that can be used in diagnosing PTSD. He indicated that for the SCID there is a little known about its use in forensic assessment. The CAPS has very good diagnostic psychometrics but that does not preclude unsuccessful detection of exaggeration of symptoms by the evaluee. The MMPI-2 contains two PTSD scales – the PK scale and the PS scale (Schlenger PTSD Scale; Schlenger and Kulka 1989). Lareau indicated that the PK scale should be used with caution and that the PS scale is even less accurate than the PK scale. Lareau described the research by Elhai et al. (2001) on the MMPI-2, which did support using validity scales such as Fp and F-K (Dissimulation Index; Gough 1950). The MCMI-III should not be used in forensic cases. The ARD-T (Traumatic Stress Subscale of the Anxiety Related Disorders Scale; Morey 1991), a subscale of the PAI, has received some support in the literature, but the PAI's validity indicator, NIM (Negative Impression Management), was shown to misclassify genuine PTSD 65 % of the time (Calhoun et al. 2000). The TSI is not recommended for detecting malingering even though it has validity scales

(Elhai et al. 2005). The DAPS is one of the only measures with validity scales to evaluate symptom exaggeration. However, Lareau (2011) cautioned against using any self-report measures as objective evidence. Rather, he supported using psychophysiological measures in assessment, considering them "particularly useful" and "what may be the most objective method for assessing PTSD."

Howe (2012). For Howe (2012), the SIMS (Structured Inventory of Malingered Symptomology; Widows and Smith 2005) should be used cautiously in forensic settings. Its utility as a screen is unknown. The M-FAST is not an effective measure in screening PTSD. As for the MMPI-2, its FBS scale should be used cautiously with PTSD patients (Nelson et al. 2006). Its Fptsd scale is not recommended. Its PK scale is not particularly useful (Scheibe et al. 2001). The utility of its RBS scale (Response Bias Scale; Gervais et al. 2007) is unknown. Howe agreed with Rubenzer (2009) that "no firm recommendations can be made regarding cutoff scores for the validity scales" of the MMPI-2, although they should be set for high specificity. As for the PAI validity indicators, many claimants who are faking escape detection. In addition, genuine patients might score in the malingering range. The ATR of the TSI should be used cautiously (Elhai et al. 2005). For the SIRS, according to Rogers et al. (2009), it does not detect very well PTSD symptom over-reporting, although research is ongoing. The MENT appears to be a useful adjunct for malingering detection. In conclusion, in PTSD determinations, Howe (2012) supported the use of a personality measure, such as the MMPI-2, a PTSD measure having validity measures, such as the DAPS, and other tests, such as the SIRS and the MENT.

Morel (2010). Morel (2010) addressed the multiple problematic issues in assessing malingered PTSD. First, the clinical interview is not effective ("less than certain" in accuracy) in the assessment of "unreliable" or 'mendacious" evaluees (Hickling et al. 2002; Hobel 2005; Samuel and Mittenberg 2005), and is "problematic" in the case of PTSD determinations. Evaluators either might not have had sufficient experience or might have had too much of it and had developed biases, e.g., confirmatory bias. Some instruments to help in the diagnosis of PTSD are clinician-administered, but these are not the "gold standard" that they are made out to be. However, for the best of them, PTSD severity on the CAPS correlated with increases in results on a validity indicator that were indicative of over-reporting (Freeman et al. 2008). Lees-Haley et al. (2001) noted that the SCID lacks means to check evaluee validity, so is "problematic" at best. Moreover, generally, rarely does the detection of "liars" exceed 60 % in experimental settings (Vrij 2000). A literature review revealed that there are no consistent verbal or nonverbal cues related to "lying" that can be detected in clinical interview (DePaulo et al. 2003). When diagnostic errors in detecting deception are made, they relate more to believing that evaluees are telling the truth (Nicholson and Martelli 2007).

Evaluators should, nevertheless, be aware of inconsistencies related to the evaluee in PTSD assessments, for example, overstating nightmares and flashbacks and giving unlikely examples (e.g., repeatedly having exactly the same dream). That being said, overreliance on malingering detection cues such as these could backfire because evaluees might have obtained knowledge not only of the symptoms of PTSD but also of appropriate examples of typical behavioral

manifestations of the disorder. Evaluators need to keep in mind that in clinical interviews confounding factors, such as lack of sufficient quality of sleep, might limit proper description of the event at claim and subsequent symptoms. Therefore, according to Morel, information that is derived from an interview of the evaluee by itself cannot be used to either confirm reliably or negate reliably the presence of malingering in PTSD claimants.

Other errors in assessments relate to not verifying the evaluee's account of having been exposed to a serious trauma that meets the DSM-IV-TR definition of a traumatic stressor (criterion A) and not verifying the impact of the event and its consequences with respect to significant impairment of the social and occupational functioning of the evaluee (criterion F). Even if sincere, the evaluee's memory of the traumatic event at issue might not be accurate. If the case is a military one, military records can be accessed, the claimant's assignments verified and, for the US, any claims that records were destroyed by a fire refuted (most of the records lost in the fire at issue have been reconstituted).

Morel raised other issues. The evaluator might refer to research on PTSD that had not verified either at all or sufficiently enough whether members of the sample had potentially malingered. They might refer unquestioningly to prior evaluations in which PTSD had been diagnosed. They might have a diagnostic bias towards it and not consider alternate diagnoses. Conversely, they might gravitate to malingering attribution without verifying alternate possibilities, such as factitious disorder and somatization. Evaluators might fear attributing malingering because of potential legal consequences for themselves, or they might avoid giving it because of a misplaced sympathy for the evaluee.

Morel (2010) also cautioned against overreliance on testing. Typically, self-report tests related to PTSD (e.g., the PCL) are "face-valid" and are "ineffective" in distinguishing between evaluees having genuine PTSD and simulators (e.g., King and Sullivan 2009). Even when they are administered in the military context, it has been found that more objective means of assessing negative response bias is ignored (e.g., on the MMPI-2; Arbisi et al. 2004).

When accepted validity indicators are used in assessments, the evaluator should not be prone to attribute malingering based on one positive result on a test of negative response bias. Multiple sources should be used. Even when there are no positive results, malingering cannot unequivocally be ruled out. Intent to malinger can be inferred, for example, from multiple sources that indicate highly improbable data not typically found in legitimate patients. Even the genuinely injured can present in combination with genuine malingering in the case at hand (e.g., Iverson 2006).

In terms of the instruments to detect malingering that were reviewed in Morel (2010), structured clinical interviews were described. The M-FAST is an instrument to screen for feigning of psychiatric illness. With respect to trauma, two analog studies found that its sensitivity was elevated (68 % in Guriel et al. 2004; 78 % in Messer and Fremouw 2007). In the latter study, which used both the MENT and the M-FAST in the classification/detection of malingered PTSD, the correct rate was increased to over 90 %. The SIRS is a structured interview to detect malingering and related problematic response styles in psychiatric/

psychological evaluations. Rogers et al. (2009) have reported results supporting its use in compensation and disability settings. Morel (2010) did not cite research on its use for malingered PTSD.

As for validity scales within self-report tests of PTSD, the TSI has three validity indicators, including the ATR. Rosen et al. (2006) cautioned its use in settings in which secondary gain is a factor. Results from multiple studies that were described by Morel (2010) concord with this conclusion (e.g., Efendov et al. 2008; Elhai et al. 2007). Morel did not review another PTSD self-report measure that includes validity scales, the DAPS.

In terms of personality measures of psychopathology that might help in PTSD determinations, Morel (2010) does support the utility of the MMPI-2. According to Elhai et al. (2001), its validity indicators that are best for predicting malingering in the civilian population are Fp (Infrequency Psychopathology), F-K, and O-S (Obvious minus Subtle items). Grieffenstein et al. (2004) found that the FBS was superior to other MMPI-2 validity indicators in detecting evaluees with improbable trauma claims. However, Arbisi et al. (2006) found that the FBS did not add incrementally to validity with respect to other MMPI-2 validity scales in predicting simulation or exaggeration of symptoms of PTSD. The Fptsd was created for detecting simulated PTSD in combat veterans (Elhai et al. 2002), but it has not been found effective with civilian populations (Arbisi et al. 2006; Elhai et al. 2002, 2004; Marshall and Bagby 2006). The PAI also has several validity indicators, but Morel (2010) argued that the research indicates that a degree of caution is necessary in using it in malingered PTSD detection.

Morel (1995, 1998) has developed the MENT, a two-alternative forced-choice measure of facial recognition items to detect simulated PTSD. It is a 60-item test for detecting negative response bias. It is composed of 3 sets of 20 items. Each test item displays simultaneously the two choices (incorrect, correct) as well as the target stimulus, so that errors are not a question of chance but of deliberate distortion or dissimulation. The test includes normative data on patients with PTSD and suspected malingerers. The test gives a total error score. Its reliability and validity are reported as acceptable in Anglophone and foreign (German) cultures (respectively: Morel 2008, 2010; Morel and Shepherd 2008a, b; Merten et al. 2009). Rubenzer (2009) has supported its use in PTSD malingering determinations.

As for other ways of detecting the validity of PTSD claims, Morel (2010) pointed out that even psychophysiological measures do not provide fool-proof signs of PTSD. They might not distinguish those diagnosed with PTSD and those instructed to feign it (Gerardi et al. 1989). Other putative biological markers of PTSD are not supported conclusively, e.g., neuroimaging testing (North et al. 2009; National Academy of Sciences Institute of Medicine 2006).

Rubenzer (2009). Rubenzer (2009) has published the most comprehensive and informative review of tests to use in malingered PTSD assessments. Rubenzer included an exhaustive listing of the tests applicable to assessing PTSD, response style, and malingering, and the weightings toward attributing malingering that each test might have based on positive results. Rubenzer discussed structured interview measures for PTSD, personality inventories, structured interviews for malingering,

specialized self-report measures of trauma and PTSD, cognitive symptom validity tests, embedded neuropsychological indices, and the MENT. He concluded his survey with recommendations for a response-style battery applicable to PTSD evaluations.

For structured interviews on PTSD, Rubenzer described the CAPS. Its advantage is that it has a consistency scale to evaluate "unreliable" responding. However, Rubenzer reported that only one study has researched its usefulness (Hickling et al. 2002), and the results indicated that it was "completely ineffective" in identifying exaggeration.

Rubenzer reviewed the utility of three personality inventories in the evaluation of PTSD response-style. The MMPI-2 includes two scales that address PTSD – PS and PK. However, Scheibe et al. (2001) found they are not specific to PTSD and Senior and Douglas (2000) found they are not very sensitive to PTSD. As for the general MMPI validity scales, the more traditional ones have been found to have "mixed evidence" in their ability to distinguish malingering from individuals with genuine PTSD [L (Uncommon Virtues, Lie Scale; Bianchini et al. 2005), F, F-K, K (Adjustment Validity, Correction Scale; Bianchini et al. 2005); e.g., Greiffenstein et al. 2007; Rogers et al. 2003]. The Fp scale is supposed to offer a better measure of intentional exaggeration (Arbisi and Ben-Porath 1995). However, Nelson et al. (2006), in their meta-analysis of studies that had included the FBS scale of the MMPI-2, found that the Fp had smaller average effect sizes relative to most other MMPI-2 indices. As for the FBS, little research has been conducted so that Nelson et al. (2006) advised caution in its use with PTSD claimants. Rubenzer continued that other MMPI-2 scales might have utility in the evaluation of exaggerated PTSD, including the Ds (Dissimulation Scale; Gough 1954), Ds-r (Ds, Revised; Gough 1957), and ES (Ego-Strength Scale; Barron 1953). The Fptsd scale developed by Elhai et al. (2002) for military claimants does not have data yet to support its use for civilians.

Rubenzer concluded that the relative absence of well-designed research does not permit firm recommendations for which cut-off scores to use on the MMPI-2 validity scales in evaluating PTSD and response style. However, they should be set to yield high specificity.

As for the MMPI-2-RF (Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form; Ben-Porath and Tellegen 2008/2011), Rubenzer indicated that its validity scales parallel those of the MMPI-2 and it has a completely new index, Fs (Infrequent Somatic Response Scale). The FBS has been reduced (to the FBS-r) and other validity indicators not typically scored with the MMPI-2 compliment the MMPI-2-RF protocol. Research is accumulating on the validity of the MMPI-2-RF validity indicators (e.g., Fp-r, Toomey et al. 2009). Moreover, Sellbom et al. (2012) demonstrated that apparently genuine disability claimants (screened for failure on the WMT, TOMM, or CARB) who were assessed for PTSD symptoms using self-report questionnaires [DAPS, DTS (Davidson Trauma Scale; Davidson 1996), or IES (Impact of Event Scale; Horowitz et al. 1979)] demonstrated differential prediction of global PTSD and its three clusters with respect to different aspects of the MMPI-2-RF. Specifically, in a structural equation modeling analysis,

the Demoralization factor was most strongly associated with global indices of PTSD while Anxiety was most associated with the particular clusters [other specific problems were involved, as well]. I note that future research might show that evaluees who are less genuine might reveal different MMPI-2-RF patterns of results.

The PAI includes various scales of respondent validity. However, the evidence for the value of the PAI validity indicators is mixed and genuine PTSD patients are likely to score in the elevated range of these indices. The MCMI-III is another personality inventory that one could use in PTSD assessments. However, recent opinion is that it should not be used to detect feigned symptoms or response style in forensic psychiatric evaluations (Berry and Schipper 2007; Sellbom and Bagby 2008).

Rubenzer (2009) does support use of the SIRS to detect malingered psychopathology (Rogers et al. 1992). Freeman et al. (2008) studied chronic pain patients who were administered the SIRS. However, Rubenzer reported that they had calculated the total SIRS score incorrectly. In Rogers et al. (2009), some of the results seemed applicable to PTSD. Rubenzer supported use of the SIRS in PTSD determinations, using its standard criteria for decision rules, because none are yet available for PTSD. It should be noted that Taylor et al. (2007) supported the value of using the SIRS for detecting malingered PTSD.

The M-FAST is a briefer structured interview of malingering, as is the SIMS. The SIMS has not been used with PTSD claimants. In contrast, there is research on PTSD with the M-FAST (Smith 2008); however, Rubenzer noted that the SIRS has better psychometric properties so that it would be hard to justify using the M-FAST in these types of cases.

As for specialized self-report measures, Rubenzer reviewed the TSI. It includes the ATR. Research has shown that it is only "modestly effective" and it suffers from not having clear guidance in establishing an appropriate cut-off score in forensic evaluations. The DAPS is another specialized self-report measure but, according to Rubenzer, its validity scales have yet to be examined directly.

It is interesting to note that Rubenzer (2009) recommended the use of cognitive symptom validity tests in PTSD assessments. He described the TOMM. Rubenzer noted that its performance is not significantly affected by factors such as anxiety, depression, and pain that might come up in PTSD evaluations (e.g., Ashendorf et al. 2004; Iverson et al. 2007). The WMT is noted to have exceptional sensitivity, including relative to the TOMM (e.g., Demakis et al. 2008). The WMT meets most of the Hartman's (2002) eight proposed criteria for use of SVTs in assessment. Sharland and Gfeller (2007) surveyed the use of testing by neuropsychologists and noted that the use of the WMT is rising rapidly. Other tests developed by Green include the MSVT (Medical Symptom Validity Test; Green 2004a) and the NV-MSVT (Nonverbal MSVT; Green 2008). Rubenzer also mentioned the MCI (Memory Complaints Inventory) by Green (2004b; see Armistead-Jehle et al. 2012).

If PTSD evaluation is accompanied by intellectual or neuropsychological evaluation, there are good embedded indices of effort. For example, Babikian and Boone (2007) noted that the age-corrected DSS (Digit Span Scale), the RDS (Reliable Digit Span; Babikian et al. 2006; Greiffenstein et al. 1994), and the

VOCss – DSss (Vocabulary and Digit Span Age-Corrected Scale Scores) could be used. Finally, Rubenzer recommended use of the MENT. He noted that for this test norms are available for legitimate PTSD claimants as well as patients identified as probably exaggerating. Research shows it has excellent specificity and good sensitivity. However, among other difficulties with this scale, it might be vulnerable to coaching.

To conclude, Rubenzer (2009) recommended using multiple modalities in assessing PTSD and suspected PTSD malingering. He noted that none of the methods currently available has a sufficiently satisfactory database for the evaluation of PTSD. He recommended use of the SIRS, MMPI-2, the WMT, the MENT, and the MCI. On the MMPI-2, he supported use of the F, Fb, Fp, FBS, Ds, ES, and RBS. He included the WMT because, although memory or cognitive complaints are not a crucial part of PTSD symptoms, even when there are no cognitive complaints, everything else being equal, failure on an SVT with high specificity "strongly suggests" that the evaluee did not perform to the best ability possible. Also, research has shown a correlation between various self-report scales and SVT performance, including the SIRS (Rogers et al. 2009).

9.2.1.6 Other Recommendations

Torres et al. (2012) surveyed tests used to assess PTSD. They found that following instruments were used most frequently (above 10 %): MMPI-2; TSI; PCL-R (Hare's Psychopathy Checklist, Revised; Hare 1991); PAI; CAPS; MCMI-III; SCID; SIRS; DAPS.

As for evaluation of malingered PTSD, the results showed the following methods and tests used: clinical opinion (65.9 %, a quite remarkable amount!) and tests at percentage of about 40 % or less, in descending order of use: MMPI-2; other embedded validity indices; TSI; TOMM; SIRS; CAPS; M-FAST; RMFIT (Rey 15-Item Memory Test; Rey 1941); other tests: IES-R (Impact of Event Scale, Revised; Weiss and Marmar 1996); PDEQ (Peritraumatic Dissociative Experiences Questionnaire; Marmar et al. 1997); STAI (State Trait Anxiety Inventory; Spielberger 1983); PDRT (Portland Digit Recognition Test; Binder 1993; Binder and Willis 1991); PDS.

Ingram et al. (2012) recommended the MMPI-2, the SIRS, and the PTSD checklist, Civilian Version (PCL-C; Blanchard et al. 1996b). The PAI is an alternate personality test that could be used and, to assess anxiety and depression, they recommended the Becks (BAI, Beck Anxiety Inventory, and the BDI, Beck Depression Index; respectively, Beck and Steer 1993; Beck et al. 1961). Note that Rubenzer denied that the PAI is equivalent to the MMPI-2 in efficacy in these type of evaluations. Ulloa et al. (2012) reviewed the available instruments and only the DAPS among them was described as having a response bias scale. Elhai et al. (2012) listed instruments that have response-bias detection measures, and included the MMPI-2, PAI, TSI, and the SIRS.

That the MMPI-2 and the SIRS should be the primary instruments in this type of assessment is supported by both Kane and Dvoskin (2011) and Taylor et al. (2007).

Note that Elhai et al. (2010) provided a comprehensive list of PTSD assessment instruments. However, they did not mention (a) personality tests, such as the MMPI-2, (b) structured interviews to detect response bias, such as the SIRS, or (c) specific tests of PTSD having validity indicators, such as the DAPS and the TSI.

9.2.1.7 Comment

The assessment of PTSD and malingered PTSD requires a multimodal approach, but there is no gold standard assessment approach and the recent work in the area does not arrive at a consensus. Rather, there are glaring differences in the recommended practices. The traditional distinction is in the use of clinical experience and judgment compared to psychometric testing and algorithms. One recent work reviewed in this chapter emphasizes the importance of the clinical interview in detecting PTSD and its malingering (Andrikopoulos and Greiffenstein 2012), but the remainder of the recent work examined favors other means as primary data sources. One of these recommended use of physiological data (Lareau 2011), but others argued that even these might provide invalid data. Moreover, in this regard, Langleben and Moriarty (2012) noted that the use of brain imaging in court to detect "lies" remains "risky," lacks ecological validity, and is insufficiently reliable and accurate for court purposes. All sources in this chapter describe multiple instruments, especially psychological tests, but the recommended lists offered in the various works differ. Not one instrument was universally recommended, including the widely used MMPI-2 and SIRS, although they received broad support among the works. The MENT and DAPS have received some support among the works. In terms of screening measures, the M-FAST and SIMS generally were not recommended. Of the structured interviews that could be used to detect PTSD/malingered PTSD, the CAPS has some utility (but only according to one of the sources, Andrikopoulos and Greiffenstein 2012), but the SCID does not. The MMPI-2 validity indicator scales supported for use in detecting malingering relative to PTSD included the Fp and F-K. Rubenzer (2009) has provided the most comprehensive review of the various PTSD/malingered PTSD psychometric instruments and, for the MMPI-2, he recommended that evaluators consult the results for the F, Fb, Fp, FBS, Ds, ES, and RBS. The MMPI-2-RF has much potential, e.g., the Fp-r (Rubenzer 2009; even thought it had just appeared at the time of his publication). Other personality inventories generally are not supported in the works reviewed (PAI, MCMI-III). Self-report measures that did not fare well in the reviews included the TSI, PCL, and PDS. If cognitive issues arise, the WMT appears the best SVT for the task, with the TOMM popular, as well. Of the embedded intellectual/neuropsychological measures, the age-corrected DSS, the RDS, and the VOCss – DSss could be used. For verification of comorbidities, anxiety and depression instruments were recommended, but none that were mentioned include validity indicators.

To conclude, PTSD (malingering) assessment needs to be comprehensive, multimodal, scientifically-informed, and impartial, blending clinical and instrument data sources. Although malingering might be hard to detect, there are other ways of

suggesting poor evaluee credibility without using the "M" word, which should only be used when there is incontrovertible evidence.

In addition, workers in the field should note that cases of genuine PTSD do appear in forensic disability and related contexts (e.g., Sellbom et al. 2012). Moreover, although models explaining it include pre-existing factors, such as personality disorder (Friborg et al. 2012) and biological and cognitive factors (Bomyea et al. 2012), a diatheses-stress model involving stressors including the event at hand appears to help explain it.

9.3 Chapter Conclusion

The psychological injuries are highly contentious conditions that lead to contested cases when presented in court. This chapter has shown that for PTSD, in particular, there is a general consensus on its controversy but there is little consensus on its assessment. Perhaps that disjuncture should be expected, given its problematic nature. Outstanding issues related to PTSD include: (a) the validity of the DSM approach to its definition, (b) its prevalence or base rate, (c) the effectiveness of its treatment, and (d) the validity of the clinical methods and psychological instruments used to assess it, including the various measures used to detect malingered PTSD. More research is needed on all these questions.

However, this does not deny that evaluators can make scientifically-informed decisions about PTSD's presence or absence, including when it is malingered. Given the "more likely than not" criterion for conclusions on evidence in civil cases, the element of doubt in professional opinions proffered to court is the norm and understood as inevitable. The state-of-the-art science needs to examine dispassionately the area of PTSD. Mental health workers have the obligation to consider all the appropriate reliable evidence gathered in a case, but that evidence can be evaluated properly only when all the essential science available in the literature is examined properly. This might ask practitioners to abandon myths that they hold about PTSD and PTSD claimants, but it is better to be up-to-date in understanding PTSD and how to assess it validly within the limits of current science than to face court or even one's regulatory body for having used poor science and having conducted a poor assessment. This chapter is aimed at providing the information needed toward these ends.

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Chapter 10
Psychological Injury: Law and Causality

10.1 Introduction

In this chapter, I present other issues related to malingering, such as legal ones, and the admissibility of expert opinions related to malingering. In this regard, begin the chapter, I concentrate on two chapters published in the work of Larrabee (2012a) in which Kaufmann was involved. Next, I focus on two chapters in Morgan and Sweet (2009). In beginning this review of the four mentioned chapters, I use the content-commentary format.

The first two chapters reviewed involving Kaufman, published in Larrabee (2012a) concern the relationship of law and psychological injury. They deal with issues such as the utility of clinical judgment and SVTs (symptom validity tests) as perceived in court. The next two chapters, published in Morgan and Sweet (2009), examine further malingering in court and practice. First, Taylor (2009) supported that mental health practitioners are allowed to testify on the ultimate issue of malingering. Second, Millis (2009) supported algorithmic approaches to malingering detection, but not necessarily that of Larrabee. Therefore, I examined more carefully the research described in Larrabee (2012a). Surprisingly, the descriptions of the research that he cites in support of his approach are not consistent with the actual research undertaken for the issue of independence of SVTs. As will be shown in Chap. 16, Schutte and Axelrod (2013) found a similar limitation in the research referred to by Larrabee in support of his approach.

Second, this chapter examines the evidence law and federal rules of evidence related to admissibility of mental health testimony and reports to court and related venues. It examines the nature of emotional damages in tort cases from the perspective of law (Foote and Lareau 2013). Also, it looks at the parameters governing forensic mental health evaluations and veterans' compensation and examinations, including rules of evidence.

G. Young, *Malingering, Feigning, and Response Bias in Psychiatric/Psychological Injury*, International Library of Ethics, Law, and the New Medicine 56,
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The last part of the chapter presents various aspects of causation, including Young's guidelines (2007). Also, it lists the 100 factors found to be involved in the causality of and influences on somatization (Young 2008a). The optimal manner of understanding causality in forensic disability and related determinations is multifactorial and biopsychosocial as well as forensic. I present a five-stage model of assessment in relation to legal causation (Goodman-Delahunty and Foote 2011) that provides a useful heuristic for practitioners and court. To conclude, the chapter presents a revised GAF (Global Assessment of Functioning Scale) model (Young 2008b).

Table of Terms and Sources

Abbreviation	Name	Source(s)
AVLT-R	Auditory Verbal Learning Test, Recognition raw score	Barrash et al. (2004)
DMT	Digit Memory Test	Hiscock and Hiscock (1989)
DSM-IV	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition	American Psychiatric Association (1994)
DSM-IV-TR	Diagnostic and Statistical Manual of Mental Disorders Fourth Edition, Text Revision	American Psychiatric Association (2000)
FBS	Symptom Validity Scale (originally called Fake Bad Scale)	Ben-Porath and Tellegen (2008/2011), Lees-Haley et al. (1991)
FTT	Finger Tapping Test	Heaton et al. (1991)
FTT-D	Finger Tapping Test, dominant hand raw score	Heaton et al. (1991)
GAF	Global Assessment of Functioning Scale	Young (2008a)
HHI	Henry-Heilbronner Index	Henry et al. (2006)
LMT	Letter Memory Test	Inman et al. (1998)
MMPI-2	Minnesota Multiphasic Personality Inventory, Second Edition	Butcher et al. (1989), (2001)
MMPI-2-RF	Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form	Ben-Porath and Tellegen (2008/2011)
RAVLT	Rey Auditory Verbal Learning Test	Schmidt (1996)
RDS	Reliable Digit Span	Greiffenstein et al. (1994)
RMFIT-II	Rey 15-Item Memory Test, Second Edition	Griffin et al. (1997)
RMT	Recognition Memory Test	Warrington (1984)
ROCFT	Rey-Osterreith Complex Figure Test	Rey (1941)
TMT	Trail Making Test	Reitan and Wolfson (1993)
TOMM	Test of Memory Malingering	Tombaugh (1996)
VFDT	Visual Form Discrimination Test	Benton et al. (1983), (1994)
VSVT	Victoria Symptom Validity Test	Slick et al. (1997/2005)
WCST-FMS	Wisconsin Card Sorting Test, Failure-to-Maintain Set Score	Suhr and Boyer (1999)
WMT	Word Memory Test	Green (2005)

10.2 Other Approaches to Malingering

10.2.1 Review

Argument (a). In Greiffenstein and Kaufmann (2012), the authors presented basic principles of interactions between psychologists and attorneys and referred to the need to practice "competent psychology" in terms of legal knowledge. They noted the well-established dose-response relationship between severity of head injury and severity of neuropsychological outcome.

Comment (a). I would add that the evaluee's perception of the effect of the TBI (traumatic brain injury) might be quite different; for example, patients with mild TBI might claim more symptoms than even patients with moderate to severe TBI.

Argument (b). Greiffenstein and Kaufmann (2012) noted that evaluators should justify with scientific empiricism both methodology used and conclusions of evaluations. However, they cautioned that not every question that is involved in evaluations in the legal context will have research studies about them. Therefore, every evaluation will have "unique aspects" that have not been dealt with directly in publications. Consequently, evaluators must use "clinical judgment" to address the issues at hand. That is, in each legal case, evaluators will be confronted with the need to consider published research and extrapolate from it, by appropriate logic, to the case at hand. The evaluator must use "sound judgment" in making generalizations both from the data that have been collected and from the published literature to the particular legal issues at hand when there is not direct publication on the matter. In this regard, Greiffenstein and Kaufmann noted the following: "Even the champion of actuarial approaches, Paul Meehl, recognized the need to use case-specific data to modify conclusions in the absence of the perfect on-point study" (Meehl 1954, p. 25).

Comment (b). Surely, these arguments made by Greiffenstein and Kaufmann (2012) on the utility of clinical judgment in forensic disability evaluations is one of the most important in the whole book by Larrabee (2012b). It lays to rest absolutist arguments that only actuarial decision procedures should be used in forensic disability and related assessments and, indeed, in any psychological assessment. More to the point, evaluators need to know the relevant literature and apply it appropriately to the case at hand, using actuarial procedures where available and appropriate. The value of the latter is indisputable, but so is the contribution of well-trained and scientifically-informed evaluators who need to rely on clinical judgment in whole or in part, depending on the individual being assessed and the science available to inform the assessment.

With respect to the primary topic of the present monograph on malingering, the perspective of Greiffenstein and Kaufmann (2012) on actuarial decision procedures, and the role of clinical judgment in arriving at determinations such as the presence of malingering, is illuminating. On the one hand, science must always take precedence in working as a mental health professional in court even with respect to issues such as malingering. On the other hand, science does not exclude clinical judgment

in valid assessments in appropriate circumstances, so that clinical judgments pertaining to malingering have their place in court by well-trained, scientifically-informed mental health professionals. This supports conclusions made at previously about the role of clinical judgment in evaluations, including the need for it in querying malingering determinations and attributions.

Argument (c). Greiffenstein and Kaufmann (2012) then proceeded to describe the differences between law and science or psychology, referring to them as different epistemologies (Greiffenstein 2008). In particular, they noted that psychologists are trained to be objective and at least "partially" ground their evaluations in science. In contrast, legal proceedings take place in adversarial settings and attorneys are "zealous" advocates. Simply, for attorneys, the goal of "winning and losing cases" is more important than accuracy and objectivity and, moreover, justice is considered more important than truth itself. This does not mean that attorneys are allowed to lie; nevertheless, the legal agenda allows attorneys to exclude reports that are not helpful in the advocacy function that governs their practice. "An accurate, comprehensive, and balanced report may be harmful to an attorney's case" (p. 27).

Comment (c). Just as argument (b) above was considered essential to note, the same applies to argument (c). It illustrates different perspectives on impartiality, science, and truth in the legal and psychological arenas and what psychologists need to know as they negotiate the legal domain and its adversarial divide. The collective ethics and the obligations in presenting and defending evidence in court is strikingly different between attorneys and mental health professionals, yet they need to work together in cases when mental health evidence, reports, and testimony are required. In terms of the primary issue of this book, that of malingering, the importance of this separation in epistemology and practice across attorneys and mental health professionals is even more striking. That is, psychologists need to present evidence impartially about any allegations with respect to malingering but, in contrast, attorneys do not even have to proffer any evidence to court that does not meet the advocacy objectives that they entertain in the case at hand.

Argument (d). Kaufmann (2012) addressed the SVT wars, for example, of the admissibility of the MMPI-2 (Minnesota Multiphasic Personality Inventory, Second Edition; Butcher et al. 1989, 2001) Symptom Validity Scale (FBS; Ben-Porath and Tellegen 2008/2011; Lees-Haley et al. 1991) in court. The courts have been contesting the role of SVTs for the past decade (e.g. *Batzel v. Gault* 2002). In general, the arguments against SVTs include: (a) results of SVTs are more prejudicial than probative or helpful; (b) they are confusing to triers of fact; (c) they relate more to character and should be excluded on that basis; (d) they are akin to hearsay evidence, so should be excluded; (e) they go beyond the limits of expert witnesses who use them, by their intrusion into the role of the trier of fact in court; and (f) they do not meet the general acceptance standard of the particular scientific community that might use them.

For example, in *Williams v. CSX Transportation, Inc.* (2007), the judge noted that the use of the term "faking bad" to describe the FBS is prejudicial. In *Nason v. Shafranski* (2008), the judge restricted use of the term malingering. In *Vandergracht v. Progressive Express* (2005), the judge excluded the FBS in court based of its lack

of acceptance, not knowing about its wide-spread use (e.g., Sharland and Gfeller 2007). Some other decisions of the admissibility of the FBS did lead to its exclusion in court (e.g. *Limbaugh-Kirker v. Decosta* 2009), yet others have not (e.g. *Solomon v. TK Power* 2008).

Overall, it has been concluded that the FBS is "here to stay" in its use in court cases about malingering (Hoyt 2009; after reviewing 12 cases challenging its admissibility in court). Moreover, generally, the evidence provided by SVTs is not challenged in court (Ben-Porath et al. 2009a). Further, whenever SVT science is challenged, usually it is admitted to court (e.g., *Jackson v. Mason* 2009). Granted, FBS court decisions "remain hotly debated" (e.g., Ben-Porath et al. 2009b; Kaufmann et al. 2010). Nevertheless, Kaufmann (2012) concluded that SVT science, in general, is here to stay.

Comment (d). It has been shown that SVTs are susceptible to coaching and Internet learning. They are not equally effective in detecting malingering. In general, none meet the criterion of being a gold standard in malingering detection. Therefore, they must be complemented by clinical judgment, and used multiply along with other types of testing, to determine the presence of malingering or its absence. Indeed, they should not be used in isolation to determine such presence. All that being said, Kaufmann (2012) clearly pointed out that in the collision between science and the court on SVTs, in general, the SVTs have won the war and, in particular, the FBS has successfully met most admissibility challenges.

10.2.2 Interim Conclusion

To conclude this section of the chapter, I expand on some of the issues raised about the actuarial and clinical judgment debate in arriving at decisions in practice and for court by mental health professionals. Some of the points I raise deal directly with this debate and its implications, and others are secondarily but importantly related. I pose general questions that we need to consider, and that need due consideration for effective and circumscribed presentation of evidence to court and related venues. I deal with questions related to ethics, efficacy, advocacy, controversy, obligations, evidence, litigation, and hyperbole.

Mental health professionals need to ask what is the hierarchy of concerns in relation to our work in terms of ethics, dictates of professional guidelines, obligations to the referral source, and court requests and impositions, such as summons, as well as any other factors that come to mind. How does that differ across mental health professionals, across different jurisdictions (states), in different forensic and related questions (civil, criminal), etc.? What trumps what, morally, practice-wise, and legally?

How do attorneys square the different perspectives on presenting evidence in their profession relative to mental health ones? Generally, mental health professionals are obligated to consider all the evidence, acknowledge what fits and what does not fit preferred conclusions, acknowledge controversies, not advocate, etc., but attorneys are allowed to advocate, consider select evidence, etc. Do attorneys reveal the

differences to court, have triers of fact consider the differences, e.g., in what is considered "evidence," "truth," and "fair" in the differing professions, etc.? Mental health professionals are asked to consider our biases, such as confirmation bias, but are there equivalent considerations and restraints on attorneys?

For mental health professionals, with respect to science, logic, evidence, best practice, obligations, ethics, controversies, psychology, and the law, there is no place for unsupported statements, excesses beyond the data, fixation on only parts of the data, etc. We should give respect to good science rather than poor or junk science, in order to assure self-respect in our dealings across the adversarial divide in our field and in court. However, the science in our area is not always clear, and this leaves us with conundrums to consider.

For example, in court and related venues, what are our obligations to report and testify on controversies, at least at a minimum? Should this refer to all possible controversies, or just major ones? What is the understanding of the difference between the various takes on efficacy and empirically-supported, best interventions and practices? Which tests are considered gold standard, if any? Mental health professionals need to know better the differences between their practice obligations, court and related requirements, and what to do when the two do not mesh, especially at the practice level for court and related venues and the science underpinning it.

10.3 Malingering in Court and Practice

10.3.1 Review

Argument (i) Taylor (2009) addressed the issue of malingering in court by presenting a series of cases relevant to the issue. She wrote that malingering is an "octopus" with tentacles reaching into every aspect of personal injury cases. Deciding whether malingering is involved appears to be an issue "during every moment of civil trials" (*United States Fidelity & Guaranty Co. v. McCarthy* 1931). Juries worry that the malingerers with false claims might be compensated if they are not detected (*Southwire Co. v. George* 1996). Taylor noted that trial lawyers for plaintiffs have a "keen interest" in demonstrating that their clients are not malingerers (*Salas v. United States* 1997). I note that the converse argument would be that defense lawyers have a keen interest in "proving" that plaintiffs are malingers.

Taylor continued that when the courts accept that a plaintiff is not malingering, it helps produce compensation for the court action (*Mascenti v. Becker* 2001). However, trial courts might refuse evidence about the plaintiff not malingering. This could lead to an appeal, and in *Means v. Gates* (2001) this scenario led to a new trial. The plaintiff might be an informative source that is quite respected in court for the denial of malingering (*A.C. Lawrence Leather Co. v. Loveday* 1970). Experts need to be impartial in court about malingering. However, Taylor cited the

extraordinary testimony in *Ladner v. Higgins* (1954) in which the defense expert stated the following about whether the evaluee was malingering; "I wouldn't be testifying if I didn't think so, unless I was on the other side, then it would be a post traumatic condition." Taylor noted that the court in the Ladner case rejected the admissibility of the defense expert's testimony. Courts are careful to attribute malingering lest the plaintiff is stigmatized. Only positive and convincing evidence should lead to such a conclusion (*Williams v. Bituminous Casualty Corp*. 1961). However, when the court believes that malingering has taken place, it might refuse to award any or give only little compensation (e.g., *Glamann v. Kirk* 2001). It is important to note that experts are allowed to testify about malingering because it is not "a direct opinion on the issue of lying" (*Rose v. Figgie International, Inc*. 1997).

Comment (i) The latter case illustrates that mental health practitioners can proffer testimony about the ultimate issue of malingering to court. Therefore, they need not only use appropriate malingering detection methods in their evaluations, but also (a) they must arrive at judicious conclusions about malingering that carefully consider all the reliable data, (b) the data needs to be gathered impartially and with the best tools that science dictates, and (c) they need to be impartial in arriving at their conclusions so that the court can deliver a just conclusion to the case at hand, at least in terms of the way they use the mental health expert's testimony.

Argument (ii) Millis (2009) examined the basis for clinical evaluation of malingering and included description of appropriate measures and statistics. He noted there is no gold standard for detecting malingering so that clinical judgment needs to figure "keenly" in organizing and interpreting the data gathered. He noted there are limitations of clinical judgment so that there is an "absolute need" to use statistical methods in diagnosis.

Clinical judgment is replete with potential for error. These include over-relying on salient data, neglecting base rates, the conservatism and confirmatory biases, and the anchoring bias. Remedies for avoiding clinician errors include using statistical decision rules because, typically, statistical prediction outperforms clinical prediction by a factor of 10 % or more (Grove et al. 2000).

Millis (2009) reviewed the appropriate statistics that can be used in psychological evaluations, such as the likelihood ratio (LR) and its conversion to a probability that the evaluee has the disorder or condition at issue. In order to use the statistic, the sensitivity and the specificity of the test involved must be known, as well as the base rate for the disorder or condition. The evaluator can use a nomogram to facilitate the clinical utility of likelihood ratios in calculating post-test probabilities.

Millis (2009) cautioned that there are numerous issues that need to be considered in using the LR approach to determine probability of diagnosis or condition. First, the base rate for the target disorder or condition needs to be known with accuracy. If the base rate is not known, evaluators typically assume that the prevalence for the condition at issue is 50 %. However, this often is not the case. Therefore, the diagnostic utility of the measure for estimating the probability involved might be "inflated." Another caution is that the diagnostic decision-making process needs to consider context and that there might be different cut scores for each of them. This will alter the false-positive and false-negative errors that derive from the statistics

from one situation to the next. Measure sensitivity and specificity are inversely related and are affected by cut scores. Evaluators need to be provided with a full-range of cut scores and their associated sensitivities and specificities for accurate diagnosis. Millis (2009) pointed out that the LR has limitations when it is used as a single measure of diagnostic accuracy. Measures should be accompanied by ROC curves (receiver operating characteristic) or AUC (area under the curve).

When an assessment involves multiple test scores related to validity indication, Millis (2009) noted that evaluators seek to combine the results. In combining tests, the issue is whether they are redundant or does every test provide useful information incrementally beyond the others. Millis noted that if the measures are statistically independent, the task is easier. However, he noted that "it is highly unlikely" that tests of effort are not intercorrelated. Therefore, the tests cannot be combined and "the independent rule cannot be used to combine test results" (p. 32). Millis goes on to discuss discriminant function analysis and logistic progression, topics that are beyond the scope of the present work. These statistics collectively can be helpful. However, the research generating the models need to have large samples and, moreover, there are few cross-validated multiple-variable algorithms that have been created to detect malingering or poor effort. Millis concluded that much research needs to be undertaken and that it should be a coordinated, multi-centered, data collection effort. Although composites of multiple variables would appear to be advantageous, it still entirely possible that a single measure of validity could be as good, if not superior, to multi-variable indices in detecting malingering or poor effort. That being said, Millis argued that it appears short-sighted that new stand-alone effort tests are proliferating.

Comment (ii). Millis' (2009) understanding of the literature on (a) intercorrelations among validity tests/measures/indicators and (b) the consequent inappropriate attempt to combine them in efforts to detect malingering appears telling. Therefore, in the following, I revisit the issue of aggregating SVTs to determine malingering. In Chap. 7, I had described Larrabee's (2012a) description of the research on failure in combinations of two or more measures of evaluee invalidity. Larrabee argued that LR chaining of odds in multiple SVT testing can effectively add post-test probabilities in malingering detection. Before commenting further on the argument by Larrabee (2012a), I present the tests that had been used in the most-cited aggregating research described in Larrabee. First, in his research, Larrabee (2003) used the Benton VFDT (Visual Form Discrimination Test; Benton et al. 1983, 1994), FTT (Finger Tapping Test; Heaton et al. 1991), RDS (Reliable Digit Span; Greiffenstein et al. 1994), WCST-FMS (Wisconsin Card Sorting Test, Failure-to-Maintain Set Score; Suhr and Boyer 1999), and the FBS. Next, in their research, Vickery et al. (2004) used the LMT (Letter Memory Test; Inman et al. 1998), the DMT (Digit Memory Test; Hiscock and Hiscock 1989), the TOMM (Test of Memory Malingering; Tombaugh 1996) (Trial 2), and the TOMM (Retention Trial). Third, in their research Victor et al. (2009) used the ROCFT (Rey-Osterreith Complex Figure Test; Rey 1941; Lu et al. 2003), RAVLT (Rey Auditory Verbal Learning Test; Schmidt 1996), FTT (Heaton et al. 1991), and RDS (Babikian et al. 2006). Compared to the various lists of such tests compiled at various points in the present monograph, this list is quite incomplete.

Larrabee (2012a) indicated that SVTs might take the form of a forced-choice task on which evaluees might perform at chance level, which is consistent with "zero ability." Evaluees might even perform significantly worse than chance. This is determined by application of the normal approximation to the binomial theorem. In performing at the below-chance level, the evaluee presumably knows the correct answer and selects the incorrect one on a consistent basis. When the probability of functioning below chance reaches extreme levels, such as 0.5 or 0.1, Larrabee (2000) argued that the performance is so improbable that it is the equivalent to admitting to having malingered.

Larrabee (2012a) presented the formula for the uncorrected z score to the binomial. The formula is that $z=(X-NP)$ divided by the square root of NPQ. In this formula, X represents the evaluee's correct score, N the amount of test items, and P and Q the expected proportions of correct and incorrect answers, respectively. If the forced-choice measure is a two-alternative task, $P=Q=0.5$. If the task is a four-alternative one, $P=0.25$, and $Q=0.75$. To test the binomial result, a one-tailed test is preferred because of the "suspected" intent to produce "suppressed" scores. Larrabee also recommended a correction factor of 0.5 to maximize correspondence with the normal curve distribution, given that the binomial distribution involves discrete variables and the normal one a continuous variable. As for the actual correction factor, "for x falling below NP, the 0.5 is added to x; for x falling above NP, the 0.5 is subtracted from x" (Siegel 1956; quoted from Larrabee 2012a, p. 122).

Larrabee pointed out that aside from scoring two-alternative, forced-choice tests for worse-than-chance performance, they could be scored according to empirically-derived cut scores. These are chosen to minimize false-positive identification in nonlitigating groups of clinical patients. This scoring approach is needed because many "suspected malingerers" do not obtain scores that reach the criteria for below chance.

Larrabee (2012a) needs to consider that the calculation of likelihood ratios and regression statistics for detecting malingering in research using multiple detection instruments raises certain questions. In the following, I raise issues related both to individual assessments and research in the area.

The research on which practical use of aggregating across multiple measures of evaluee validity must itself be valid. In the following, I examine carefully the three major research studies that have combined validity measures in order to improve the detection of malingering. (a) First, it is important to note that over the three studies, only a limited range of validity indicators have been used. (b) Second, the research should be replicated with appropriate samples for the forensic disability assessment context. Moreover, different indicators and different combinations of indicators should be examined for their efficacy in aggregation procedures or algorithms. (c) Third, the aggregation is effective only when the measures used are statistically independent. In this regard, in Vickery et al. (2004), the intercorrelations of the measures were not even calculated! However, two of them would have been correlated because both came from the TOMM. In Victor et al. (2009), the intercorrelations were calculated. The requirement is that the intercorrelations of the measures emerge non-significant. However, reference to Table 4 of their article indicates that the RDS, ROCFT, RAVLT, and the FTT were intercorrelated at a "modest to moderate"

level (0.23–0.63)! [Note that Schutte and Axelrod (2013) noted the same; see Chap. 16]. The authors did not refer to this contradiction in their results with respect to the issue of test intercorrelations as they interpreted them in terms of the value of combining validity indicators in an incrementally valid way. As for Larrabee (2003), he did calculate the appropriate intercorrelation matrix and the measures did turn out to be intercorrelated at a non-significant level. (d) Fourth, overall, it can be concluded that the statistical basis in the three studies that have examined aggregating measures of validity indicators in forensic populations relevant to psychological injury is insufficient to allow for practical application in individual evaluations. In effect, only one study has met the requirement for demonstrating the independence of the measures used and only a few of the many measures possible were involved.

It also should be noted that Larrabee (2012a) could have been well aware that Victor et al.'s (2009) intercorrelation table of validity indicators showed positive results and, therefore, the implication is that the variables are not independent. Moreover, for the Vickery et al. (2004) results, Larrabee could have been well aware that an intercorrelation matrix of the critical variables was not calculated. In reading Larrabee (2012a), I found it puzzling that he supplied the names of the measures for the Victor et al. study but not the Vickery et al. study. Recall that I had noted that two of the four measures involved were from the same test and so were most probably correlated.

Another point to note is that although Larrabee (2003) had found that the intercorrelations in his study, on average, were not significant, future research with different populations or in different contexts might find that particular correlations over relevant pairs of measures that he used might be significant even after appropriate statistical adjustments, and also an averaging technique might mask the positive results. Researchers should take care to use the appropriate statistics to determine the significance of individual and overall correlation results.

10.3.2 Interim Conclusion

Distinction between performance and testing, or effort and testing, is an important one. The term performance validity is becoming the more acceptable one instead of effort because it is more objective and refers to results obtained on testing rather than whether the evaluee is trying hard or not. This approach is consistent with the general approach that evaluee validity concerns whether performance/presentation is valid, rather than the person him- or herself being "valid."

Heilbronner and Henry (2012) explored further the assessment of effort. They noted that Heilbronner et al. and Conference Participants (2009) had underscored the importance of evaluating effort throughout any neuropsychological assessment. They noted that SVTs might be either stand-alone or embedded, such as the stand-alone forced-choice tests, the TOMM, the WMT, and the VSVT (Victoria Symptom Validity Test; Slick et al. 1997/2005), and the embedded tests, the RDS and the FTT. They noted that the MMPI-2 is the test that is "primary" in

investigating the validity of psychological and somatic complaints. The F scale is sensitive to overreporting psychiatric symptoms, the L and K scales are used to detect underreporting of normal human frailties, and the VRIN and TRIN scales are sensitive to inconsistent variables or systematic response bias. The FBS can accompany the MMPI-2 or the MMPI-2-RF (Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form; Ben-Porath and Tellegen 2008/2011) and, according to Heilbronner and Henry, it has demonstrated "superiority" in the identification of symptom overreporting of physical symptoms. Aside from these scales, other newer MMPI specialty scales used in detecting effort and symptom reporting include the RBS, the HHI (Henry-Heilbronner Index; Henry et al. 2006), and the MMDS (Malingered Mood Disorder Scale), the first two of which are available in MMPI-2-RF scoring protocol. When test results indicate poor or insufficient effort, the evaluee's performance can be judged as non-credible and the data in the evaluee's test battery is considered "limited" in their reliability and validity. The research has shown that performance on validity tests is not "unduly influenced" by factors of depression (Rohling et al. 2002) or chronic pain (Meyers and Diep 2000).

Iverson and Lange (2012) noted that evaluators should not conceptualize dichotomously effort, exaggeration, and malingering. Rather, conceptually, they are continuous and probabilistic. They noted that even failing one test of effort renders questionable, if not invalid, "the entire set of tests results," meaning that the evaluator should give less weight to the actual results and have less confidence in their reliability and validity. Even "broadly normal" scores on tests might not represent the evaluee's "true" ability. Overall, one should conclude that when there is invalid performance/poor effort, the test scores related to ability represent only the evaluee's "minimum *overall* performance" during the evaluation. Evaluators should adhere to decision rules in determining which test performances are invalid, questionable, or biased, rather than using clinical judgement alone. In offering their conclusions, evaluators should use clear and objective statements that are well-reasoned and not over-stated in either direction (i.e., excellent or poor).

Davis et al. (2012) examined the relationship of performance validity on selected measures and neuropsychological outcomes in the archival data of a sample mostly reporting symptoms of MTBI. Inclusion criteria included response to at least two effort tests. For the neuropsychological tests administered, participants who had passed all effort measures outperformed for the majority of the tests those who had failed two or more of them. The amount of effort measures did not correlate highly with the overall test battery mean.

In addition, performance validity measures demonstrated "modest" measure intercorrelations, but differed notably in the Pass and Fail groups in terms of significant results (see Table 10.1). Although not discussed by the authors, these results speak to the issue of whether aggregate algorithms can be used in detecting malingering over multiple SVTs (Larrabee 2012a). For example, on the one hand, the participant scores on these tests were correlated even after adjusting for multiple significance-testing in the matrix! The types of algorithms that can be used in aggregation scoring depend on the independence of the tests used, or else aggregate outcomes are inflated for

Table 10.1 Performance validity correlations by group

Variable	1	2	3	4	5	6	7	8	9
1. AVLT-R	–	0.07	0.42*	−0.01	0.38*	0.31	−0.16	−0.30	0.04
2. FTT-D	0.10	–	0.22	0.00	0.12	0.06	−0.34	−0.26	0.14
3. RDS	0.10	−0.03	–	0.25	0.30	0.48**	−0.31	−0.44*	−0.13
4. RMFIT-II	0.17	0.31	−0.05	–	0.06	0.10	−0.24	−0.27	−0.11
5. RMT-Faces	0.27	0.10	−0.04	0.25	–	0.52***	−0.22	−0.09	−0.10
6. RMT-Words	0.24	0.05	−0.10	−0.03	0.38	–	0.19	−0.12	−0.06
7. TMT-A	−0.30	−0.20	0.02	−0.19	−0.13	0.01	–	0.45**	−0.22
8. TMT-B	−0.27	−0.16	−0.11	−0.16	−0.18	0.04	0.61***	–	−0.01
9. WCST-FMS	0.01	0.18	0.17	0.01	−0.02	−0.10	−0.07	−0.01	–

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Notes. Correlations between performance validity indicators with Sidak adjustment for multiple analyses

Correlations in the Pass group are below the diagonal, and correlations in the Fail group are above the diagonal

Abbreviations. *AVLT-R* Auditory Verbal Learning Test, Recognition raw score (Barrash et al. 2004), *FTT-D* Finger Tapping Test, dominant hand raw score (Heaton et al. 1991), *RDS* Reliable Digit Span (Greiffenstein et al. 1994), *RMFIT-II* Rey 15-Item Memory Test, Second Edition (Griffin et al. 1997), *RMT* Recognition Memory Test (Warrington 1984), *TMT* Trail Making Test (Reitan and Wolfson 1993), *WCST-FMS* Wisconsin Card Sorting Test, Failure-to-Maintain Set score (Suhr and Boyer 1999)

*$p < 0.05$

**$p < 0.01$

***p, 0.001 (Sidak adjusted)

significance. On the other hand, the results varied in the Pass and Fail groups, so that no one pattern could be used to characterize all evaluees anyway. The conclusion has to be that it is premature to use such algorithms as actuarial predictive devices of malingering in forensic disability and related examinations.

The present monograph was inspired by the exchange in the journal "Psychological Injury and Law" by Rogers et al. (2011a, b) and Boone (2011). It led to comprehensive literature review, mostly including multiple, self-assured statements by various authors on both sides of the divide that, upon further scrutiny, reflect the need for more thought and research. The field needs to keep in mind the reliable and valid work in this area in order to find its bearing and to orient its conceptualizations and research. In this regard, in the next chapter, I review more thoroughly the work of Rogers.

10.4 Evidence Law

Evidence law refers to court decisions that govern admissibility of evidence in court. The *Daubert* trilogy (*Daubert* 1993; *General Electric* 1997; *Kumho Tire Company* 1999) is a series of SCOTUS (Supreme Court of the United States)

Table 10.2 *Daubert* Test

Point	Explanation
1	A method that federal district courts use to determine whether expert testimony is admissible under Federal Rule of Evidence 702 (The Committee on the Judiciary 2011), which generally requires that expert testimony consist of scientific, technical, or other specialized knowledge that will assist the fact-finder in understanding the evidence or determining a fact in issue
2	In its role as "gatekeeper" of the evidence, the trial court must decide whether the proposed expert testimony meets the requirements of relevance and reliability. The court applies the test outside the jury's presence, usu. during a pretrial *Daubert* hearing (*Daubert* 1993). At the hearing, the proponent must show that the expert's underlying reasoning or methodology and its application to the facts are scientifically valid
3	In ruling on admissibility, the court considers a flexible list of factors, including (a) whether the theory can be or has been tested, (b) whether the theory has been subjected to peer review or publication, (c) the theory's known or potential rate of error and whether there are standards that control its operation, and (d) the degree to which the relevant scientific community has accepted the theory
4	Based on *Daubert v. Merrell Dow Pharms., Inc.* (1993). Similar scrutiny must be applied to non-scientific expert testimony (*Kumho Tire Co. v. Carmichael* 1999). Variations of the *Daubert* test are applied in the trial courts of most states

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decisions that govern admissibility in the American federal jurisdiction, and many American states have adopted the same or similar standards. Tables 10.2 and 10.3 and Fig. 10.1 present the *Daubert* criteria for admissibility evidence to court and indicate that they are incorporated into Federal Rule of Evidence 702 (The Committee on the Judiciary 2011). Canada has adopted similar criteria for admissibility to court (Gold 2003). *Daubert* (1993) is considered a landmark ruling on presenting evidence to court because it provided a list of flexible criteria that went beyond but included the criterion of "general acceptance" (*Frye* 1923). Moreover, the *Daubert* ruling gave the trial court the "gatekeeper" function to determine whether evidence proffered to court meets *Daubert* standards. Therefore, judges need to determine whether expert testimony is sufficiently relevant and reliable (which refers to "validity" in psychological terms), being more probative or helpful rather than prejudicial to the case at hand.

As for the criteria themselves, *Daubert* considered that good compared to poor or junk evidence or science (theory or technique), aside from being generally accepted, should be (a) testable, (b) the product of peer-review, and (c) with known or potential error rate/accuracy, having appropriate standards that control operation (see Table 10.2). Figure 10.1 indicates that the *Daubert* criteria call for direct evidence but also can involve indirect or inferential evidence. Erard (2012) elaborated on these criteria of good science in court (see Table 10.3). Like Faust (2012) who prepared Fig. 10.1, he noted that the court needs to determine not only whether the theory or technique is testable but also whether it has been tested using procedures that are reliable and valid and with positive results obtained. Only in this regard can

Table 10.3 Criteria of good vs. poor/junk science: According to *Daubert* (1993), General Electric (1997), and Kumho Tire (1999)

Criteria	Explanation
1	Is the proposed theory (or technique), on which the testimony is to be based, testable?
2	Has the proposed theory (or technique) been tested using valid and reliable procedures and with positive results?
3	Has the theory (or technique) been subjected to peer review?
4	What is the known or potential error rate of the scientific theory or technique?
5	What standards, controlling the technique's operation, maximize its validity? [legal; reliability]
6	Has the theory (or technique) been generally accepted as valid by a relevant professional community?
7	Do the expert's conclusions reasonably follow from applying the theory (or technique) to this case? [Added later, based on the current revision of FRE 702]

Adapted with permission of Springer Science+Business Media. Erard (2012); with kind permission from Springer Science+Business Media B. V. [Excerpt of 105 words, Page. 127]
Abbreviation. FRE 702 Federal Rule of Evidence 702 (The Committee on the Judiciary 2011)

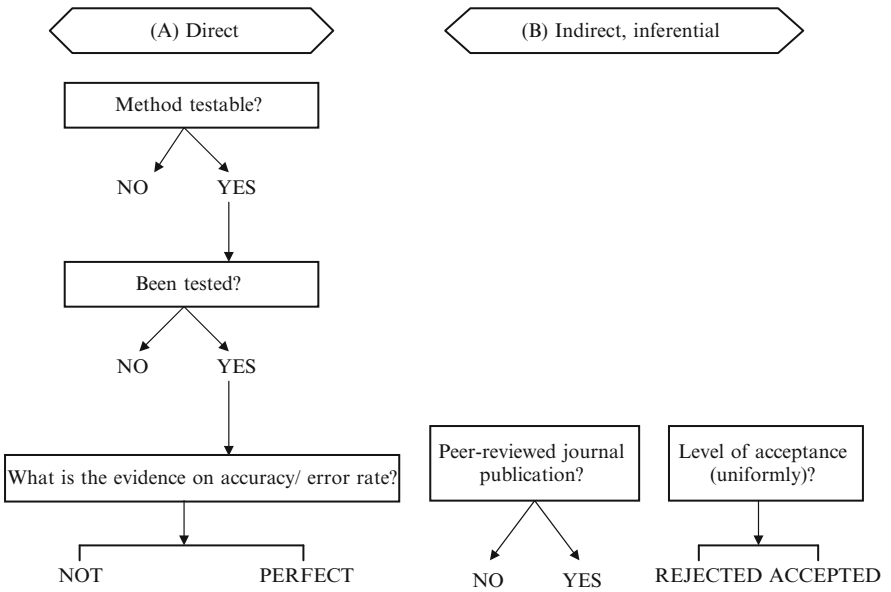

Fig. 10.1 Direct and indirect sources of evidence on *Daubert* criteria
This figure organizes the four *Daubert* criteria of acceptable science in court according to direct and indirect evidence
Adapted from Faust (2012)

evidence about the potential or known accuracy/error rate be obtained. Therefore, the operation or the technique needs standards that maximize its validity. Erard continued that evidence law also deals with the admissibility of the experts' conclusions. That is, do the conclusions derived from the application of the science, theory,

Table 10.4 Reliable expert testimony characterized by four considerations

Consideration	Explanation
1	Rest on an adequate basis (i.e., dates and details of interviews and examinations; results of appropriate laboratory and psychological testing; school, military, and work records)
2	Clearly articulate what opinion(s) or conclusion the expert draws from the raw data
3	Clearly explain how the expert reasoned from the raw data to the opinion offered, including the relevant science and its limits
4	Fairly address these issues from the opponent's perspective (*Gilbert*, 2004; Shuman, 2005)

Adapted with permission of Springer Science+Business Media. Gold and Shuman (2009); with kind permission from Springer Science+Business Media B. V. [Excerpt of 71 words, Page. 41]

or technique in the case at hand follow in a reasonable way in a testimony or report proffered by the expert.

Gold and Shuman (2009) listed their own four factors to consider so that expert testimony is legally reliable, or valid (see Table 10.4). They noted that evaluations undertaken for testimony should be adequate. The conclusions should derive from the data obtained, with explanations for the conclusions offered. Also, they should address the issues involved "from the opponent's perspective." Note that Shapiro (2012) indicated the admissibility of evidence to court is rarely contested based on *Daubert* criteria. Rather, the focus is on the reliability and relevance of the evidence in helping the trier of fact (see Chap. 17).

10.5 Tort and Related Law

Foote and Lareau (2013) examined tort law related to psychological evaluation for emotional damages and, as well, they examined the legal framework in personal injury cases. In tort, the plaintiff must establish that the defendant breached a duty sufficiently to cause a harm, which in this case is a psychiatric/psychological one (e.g., negligent infliction of emotional distress, NIED). In emotional claims, that physical impact is not necessary to the case is illustrated by the zone-of-danger rule, in which bystanders can claim damages just by witnessing a horrific trauma to a family member, although limits are imposed on the rule (e.g., *Thing v. La Chusa* 1989). As for the legal framework involved in such cases, refer to the five-stage model by the authors and colleagues, which is presented in Table 10.14.

Worthen and Moering (2011) helped understand that there are different court and related venues to consider in forensic disability evaluations. They listed the legal parameters that govern typical forensic mental health practice and Veterans' compensation and pension evaluations (see Table 10.5). For example, in the forensic mental health arena, the context is adversarial. However, in the VA system, it is more supportive of the military veteran. Indeed, the government is obligated to help

Table 10.5 Differences between the legal parameters governing typical forensic mental health evaluations versus VA compensation and pension examinations

	Typical forensic mental health evaluations	VA compensation and pension examinations, etc.
Relationship of the parties	Adversarial	Ex Parte[a]
Standard of proof	"Beyond a Reasonable Doubt," "Clear and Convincing Evidence," or "Preponderance of the Evidence" (51 % probability or greater)	Equipoise – "at least as likely as not" (50 % or greater chance)[b]
Level of formality	Formal	Informal[c]
Obligation of the government	In criminal cases the government represents the people and vigorously prosecutes persons accused of crimes	The government must help a claimant develop his or her case[d]
Side favored?	Neither side is favored over the other	If there is doubt about a decision, benefit of the doubt goes to the veteran[e]
Right to representation	Defendants in criminal cases have a right to be represented by an attorney, even if they cannot afford one. In civil matters, litigants have the right to be represented, although payment can be an issue for many lower and middle class litigants	Claimants have a right to representation by an attorney only after a claims decision has been made and the veteran has filed a Notice of Disagreement (NOD).[f,g] The attorney's fee can be paid from a "past due" lump sum amount, if benefits are awarded[h]
Recording of evaluation sessions	In some forensic evaluation contexts, audio or video recordings are permissible and even encouraged.	Veterans do not have a right to record their C&P examinations[i]
Responsibility to obtain records	The attorney or forensic mental health professional must obtain records he or she deems necessary to conduct a thorough evaluation	The Veterans Benefit Administration is required by law to assist veterans by seeking to obtain all relevant government and private records that might further the veteran's claim[j]
Rules of evidence	Federal Rules of Evidence or State Rules of Evidence	The Federal Rules of Evidence do not apply to veterans cases but "…the rules on expert witness testimony provide useful guidance…"[k]

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[a]Latin, "On one side only". *Done by, for, or on the application of one party alone.* http://legal-dictionary.thefreedictionary.com/ex+parte

[b]"… when a veteran seeks benefits and the evidence is in relative equipoise, the law dictates that veteran prevails." *Gilbert v. Derwinski* (1990)

[c]Although a case becomes progressively more formal as it moves up the chain of appeals from the VA Regional Office, to the Board of Veterans Appeals, to the Court of Appeals for Veterans Claims, etc. See Figure 1 for a graphic describing the appeals process for veteran's disability benefits claims

Table 10.5 (continued)

[d]"The Secretary must make reasonable effort to assist claimant in obtaining evidence necessary to substantiate the claimant's claim for benefits under a law administered by the secretary." (Duty to Assist Claimants, 38 U.S.C. §5103A, 2010)
[e]"When there is an approximate balance of positive and negative evidence regarding any issue material to the determination of a matter, the Secretary shall give the benefit of the doubt to the claimant." (Claimant Responsibility; Benefit of the Doubt, 38 U.S.C. § 5107(b), 2010)
[f]Payment of Fees for Representation by Agents and Attorneys in Proceedings before Agencies of Original Jurisdiction and before the Board of Veterans' Appeals, 38 C.F.R. § 14.636(c) (2010)
[g]However, veterans can receive assistance in developing their claim from a Veterans Service Organization (VSO) such as Disabled American Veterans, Vietnam Veterans of America, or American Legion (not an exhaustive list)
[h]Payment of fees for representation by agents and attorneys in proceedings before Agencies of Original Jurisdiction and before the Board of Veterans' Appeals, 38 C.F.R. § 14.636(g)(2) (2010)
[i]Vet. Aff. Op. Gen. Couns. Prec. 04-91 available at http://www4.va.gov/ogc/docs/1991/PREC_04-91.doc
[j]38 U.S.C. § 5103A; See also *Moore v. Shinseki* (2009), wherein the Court held that a veteran's military psychiatric hospitalization records should have been obtained by the VA as part of its duty to assist; and see also *Golz v. Shinseki* (2010): "[t]he legal standard for relevance requires VA to examine the information it has related to medical records and if there exists a reasonable possibility that the records could help the veteran substantiate his claim for benefits, the duty to assist requires VA to obtain the records."
[k]*Nieves-Rodriguez v. Peake* (2008)

veterans develop their arguments supportive of their disability claim and, if there is any doubt, decisions must gravitate toward the veterans. The mental health practitioner needs to function within this context rather than the typical adversarial one, which might create conflicts with perceptions of their expected role and training. Other court-related venues that are not forensic or tort-related might have their different procedures and expectations of which evaluators need to be aware to function appropriately and within the limits of their competence. For example, see Piechowski (2013) for workers compensation, Baker et al. (2013) for harassment/discrimination, Corey and Borum (2013) for fitness for duty, and Foote (2013) for Americans with Disabilities Act (ADA) cases.

10.6 Causality

In this concluding section of the chapter, first, I present a classic approach to understanding causality, as summarized in Millis (2009) (see Table 10.6). In this approach, which is epidemiological, one considers not only the temporal sequence, for example, did the event at claim lead to change in psychological/psychiatric condition, but also other factors, such as the degree of strength of the effected change, whether there is a dose-response relationship, and whether it all makes sense.

Table 10.7 is taken from my work. It shows the range of possible conclusions about causality – from the event at claim being the sole cause, to one of several, to having no impact.

Table 10.6 Hill criteria for causation

Criteria	Question	Comment
Temporal sequence	Did the event, accident, or exposure precede the outcome?	If A is causing B, then A should necessarily occur prior to B. Recall bias may preclude accurate recollection of historical data. Longer intervals make interpretation more difficult. Outcome may be multidetermined
Strength of the association	How strong is the effect?	If A causes B, A and B can be shown to be associated with each other. This is a necessary but not sufficient condition for establishing causation
Coherence with exiting knowledge	Is the postulated causal relationship consistent with what is already known about the condition or disorder?	A new discovery will not have a track record. Others could have been consistently wrong
Specificity of association	Does the event, injury, or exposure result in only one outcome?	Multiple disorders produce the same symptoms. Or a single disorder can produce many symptoms
Dose-response relationship or biological gradient	Does a higher exposure result in more of the outcome? Or is increased injury severity associated with greater impairment?	May be difficult to observe in all disorders
Biological plausibility	Does the association make neuropsychological, biological, and/or physiological sense?	Assumes that our current scientific model is correct and complete
Consistency of association	Is the association consistent with all of the available evidence?	If A causes B, then evidence supporting this relationship will be found consistently
Analogous evidence	Is the association similar to others?	If some condition similar to A causes an outcome similar to B, then this is evidence that A causes B
Experimental evidence	Has a randomized controlled trial been performed?	It is not always possible to conduct controlled trials

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Note: Based on Hill (1965)

In Tables 10.8, 10.9, 10.10, 10.11, and 10.12, I present a model of factors to consider in determining causality (Young 2008a). The first set of factors concerns information gathering in assessments. I note that pre-existing psychopathology might be overwhelming, life roles at the time of the event at claim might also be overwhelming, there are grey zones in determining clinical outcome, and that symptom exaggeration might be due for cries for help and catastrophizing rather than because of malingering, per se. Therapy might be ongoing and still be able to help, or maximum recovery might have been reached. If malingering is involved, it

Table 10.7 Five-step analytic structure to guide forensic psychologists' formulation with respect to cause

Step	Explanation
1	The index event is the "sole cause" of the resulting condition. There are no manifest or latent signs evident in the prevent state. The psychological result would not have occurred either in the present or later on had the event in question not occurred (Call 2003, p. 56)
2	The event is the major "precipitating" factor or cause. An emotional disorder had been present in latent or potential form, but would not have manifested but for the effects of the event
3	The event is an "aggravating" factor; some emotional disorder had been clinically evident, but the event adversely affected the condition
4	The event is a "minor" factor. An emotional disorder had been well-developed prior to the event, which contributed to only a small degree to the disorder's intensity
5	The event is unrelated to any emotional disorder

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Note: Based on Ebaugh and Benjamin (1937)

Table 10.8 Factors to consider in causality assessment: information gathering

Factor	Explanation
1	Complainants may be poor or confused historians Or
2	At the nonverbal level, they may exhibit distressed signs of mood difficulties or pain behavior
3	The interview, documentation, or both may reveal that complainants have a preexisting psychopathology or overwhelming history of psychological vulnerabilities
4	The ability to undertake multiple demanding roles may be affected by the event in question such that there is no room in the life of the individual for an accident or other event and its effects
5	On assessment instruments that assess for negative impression management, such as symptom overreporting, symptom magnification, or "faking bad," that are present due to the unconscious biases or even conscious manipulation, the overall pattern of results indicate symptom exaggeration due to a "cry for help" (catastrophizing) rather than anything like malingering
6	To the contrary, the assessment finds that there is an absence of clinical-level symptoms because of symptom minimization, the complainant adopting the attitude of a "stiff upper lip," etc.
7	A complainant may express symptoms that lie on the border of clinical significance, without any confounding factors. These cases are difficult to evaluate because of the gray areas involved

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could be partial rather than full, or, the presence of personality disorder, somatization, unconscious influences, reinforcement of illness behavior, and so on, might explain the problematic evaluation data. There might be extraneous pressures, such as financial pressures, litigation distress, and attorney coaching, or unrelated factors, such

Table 10.9 Factors to consider in causality assessment: adequacy of therapy received

Factor	Explanation
1	Therapy had not been successful in reducing all previously clinically significant psychological symptoms to subclinical levels, and continuation of therapy is needed
2	A complainant may have reached the "maximum" psychological recovery of which she or he is capable but is left with permanent, or relatively permanent, clinically significant symptoms despite the therapy

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Table 10.10 Factors to consider in causality assessment: major issues relates to malingering

Factor	Explanation
1	There may be clear evidence of malingering or the presence of outright conscious illness deception for fraudulent, financial, or other reasons. However, evidence of malingering may be partial, and some legitimate, clinically significant symptoms may be present in the complainant due to the event/stressor in question
2	There may be one or more types of personality disorder that can fully or partially explain ongoing symptoms
3	The complainant may be engaging in unconscious desire for secondary gain, such as getting sympathy or avoiding work, which serves to prolong symptoms through overfocusing, exaggerating, sensitization, somatization, and like processes
4	The complainant may be using the symptoms to somehow attempt to satisfy preexisting unconscious conflicts or unmet needs, issues, or behavioral habits and patterns of a maladaptive nature, such as being overly dependent or needing attention
5	Significant others, such as close family members, may unwittingly reinforce "illness behavior" by being overly solicitous, discouraging functional activity, and so on
6	In other ways, the complainant may avoid undertaking activities related to legal issues at hand, such as engaging in work hardening (therapy preparing the individual for work)
7	The complainant may avoid potentially beneficial psychotherapy or possess a personality and psychological structure that renders her or him unlikely to profit from it

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Table 10.11 Factors to consider in causality assessment: system addressing the claims

Factor	Explanation
1	There are secondary factors, for example, income may decrease substantially, even after benefits are paid. A complainant may lose her or his job due to employer prejudice against injured workers or fear of increased worker disability insurance premiums
2	A complainant may be subject to repeated insurer- and/or attorney-prompted medical/physical and/or psychological/psychiatric evaluations. An attorney may coach a complainant. An insurer may dissuade a complainant by inappropriate means. The complainant may experience acts of bad faith and otherwise be a victim of the adversarial process
3	Corollary, post event stressors may be unrelated to the event/stressor in question and its purported consequences. A complainant may lose her or his job due to factory closure, for example, or a family member may pass away

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Table 10.12 Factors to consider in causality assessment: prior assessment analyzed carefully?

Factor	Explanation
1	Documentation written both before and after the event/stressor (not by a psychologist or other mental health professional) might address pertinent issues
2	Information gathered from significant others might prove helpful to the assessor. For example, collateral information from significant others (family, coworkers, and treating physician) might support the complainant
3	Additionally, the assessor needs to know well the scientific literature. To what degree does population-level, nomothetic research speak to the case at hand and facilitate an understanding of the causality involved for the particular complainant?
4–6	Finally, other psychological and related mental health evaluations undertaken with the individual after the event should be carefully analyzed for the quality of their assessments, including whether the conclusions about causality were informed by enough evidence in terms of clinical interviews, collateral information, instruments/tests, documents reviewed, and other data. For example, were attempts made to rule out all competing, plausible explanations of a complainant's psychological presentation?
7	If I were to add another item to the list, it would be that the context of the assessment includes evaluating individual and group differences pertaining to the complainant, such as the effects of gender, race, age, and preexisting disability

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as a family death, that might intervene. The data gathered in assessments should be comprehensive and fully analyzed and all relevant research consulted. Finally, individual and group differences should be considered.

In Young (2008c), I present a model of somatization that involves 100 factors in the biological, psychological, and social or ecological areas. This biopsychosocial model was developed after a comprehensive literature review. The complexity of having 100 factors involved illustrates the difficulty in arriving at reliable and valid assessments of factors related to psychological/psychiatric injury and the causality of these injuries.

Overall, one should adopt a combined multifactorial, biopsychosocial, and forensic approach to understanding causality, as per Fig. 10.2, taken from my work. The DSM is the tool to use in diagnosis but it cannot help in understanding causality, even for the one case where causality is part of its criteria (PTSD, see Chap. 9). Moreover, one should not confuse the degree of functionality that the DSM's GAF Scale provides with the evaluation of functional impairments required in disability examinations.

Moreover, the GAF scale does have limits and I have attempted a revision that is compatible with the AMA (American Medical Assocaition, Rondinelli et al., 2008) guides (see Table 10.13). This further illustrates that different approaches to judging degree of adaptive effects are not necessarily equivalent in psychology, psychiatry, or other mental health fields, and terms in the mental health field cannot be easily translated into the legal arena. Prudence is needed whenever translating terms both within a field and from one field to the other.

In Table 10.14, Goodman-Delahunty and Foote (2009, 2011; also see Foote and Lareau 2013) have developed a five-stage model of establishing legal causation in

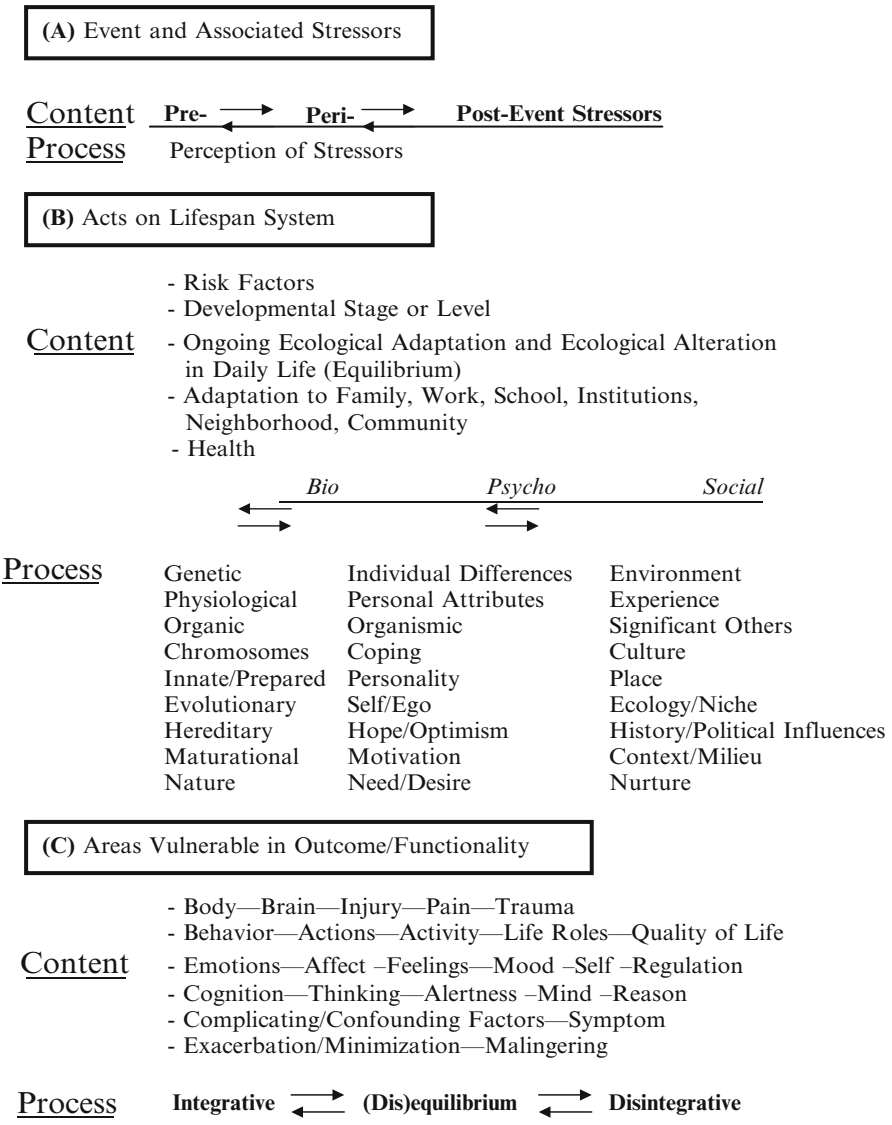

Fig. 10.2 Biopsychosocial model of multifactorial causality
Integrated biopsychosocial and forensic model of multifactorial causality. The figure illustrates the biopsychosocial and multifactorial nature of causality, including roles for pre-event, event, post-event, and unrelated factors. The model is an integrative one along several important avenues. Preexisting, peritraumatic, and postevent stressors may affect the individual's ongoing adaptation in daily life, leading to possible psychological deterioration and poor functional outcome through effects on the body, brain, behavior, cognition, and emotions. The model addresses the relevance of stress as a cohering factor in all conditions. The individual is an important mediator in determining the outcome of any impacting event, through factors such as coping mechanisms, perception of the event, personality, and motivation. There are threats to validity, response biases, and possible malingering to consider in individual evaluations, including that pre-event factors may fully explain post-event presentation
Adapted with permission of Springer Science + Business Media. Young (2008b); with kind permission from Springer Science + Business Media B. V. [Figure 1, Page. 155]

Table 10.13 Revised Global Assessment of Functioning (GAF) scale: rationale, terms, and percentages

Point	Rationale for point
1	First, the proposed scale is entirely consistently with the one in the DSM-IV-TR, which ranges from 1 to 100 % [that the revised scale has been halved to 50 % maximum is inconsequential]. By following equivalency tables with rules that would double the mathematical percentages at each anchor point and use reverse scoring, this revised scale can continue to be used in a manner consistent with its original DSM format, where percentages are assigned and where classes, per se, are not used, although in working with the original GAF, assessors often make reference to the adjectives associated with the percentages, such as mild, marked, and serious
2	Second, the revised GAF scale that I am presenting is compatible with the revised one in the AMA guides to evaluation of permanent impairment (Rondinelli et al. 2008). It maintains the 0–50 percentage point format from no to maximum impairment even as it adds corresponding categories or classes to its proposed anchor points
3	Third, the modifications that I have suggested make the revised scale consistent with the cross-organ template for rating impairments given in the guides. Categories or classes are emphasized here, and the ones I have included are consistent with the ones in the template
4	Therefore, the revised GAF scale being proposed moves the GAF to a category or class-based system that has clear descriptors for each, ones that I culled from examples in the original DSM-IV GAF in the cases where the descriptors were not provided
5	In addition, there is a standard format of 7.5 % as an appropriate interval between scale points in the proposed scale (or, 15 %, if the scale is set at 100 maximum instead of 50). That is, the recommended adjusted impairment rating percentages after the absent one start at 2.5 + % and end at 47.5 + % out of 50 %
6	As an additional advantage, this leaves a workable number of classes and subclasses (absent, mild, moderate, severe, very severe, and complete, with the very severe category divided into the subclasses of major, very serious, and dangerous gross). Note that the default point for both the very severe class and its first subclass (major) is set at 25+
7	To be specific, a working sequence that includes the "very severe" class subclasses instead of the "very severe class" alone becomes *absent, mild, moderate, severe, major, very serious, dangerous gross,* and *complete.* Should the system of this suggested sequence of impairment classes be implemented on a consistent basis, evaluators will have to be careful with the difference between the very severe class and its midpoint subclass, the very serious one
8	Next, the catastrophic threshold of whole body impairment is set at 55 % in jurisdictions where it is in use. However, according to the guides, the maximum percentage attributable to mental-behavioral impairment cannot exceed 50 %. Therefore, evaluators would find it impossible to demonstrate that a behavioral or mental impairment by itself that it is very severe or extreme reaches catastrophic levels. There would have to be a physical contribution to the whole person impairment rating of some sort or the threshold can be modified to accept extreme behavioral-mental impairment as catastrophic
9	The scale is consistent with other scales in the DSM-IV-TR and the AMA guides

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Note. This table is about a Revised GAF scale, based on the categories of *absent, mild, moderate, severe, major, very serious, dangerous gross, complete,* and with a corresponding percentage range per category of 7.5 %, with a maximum value of 50 % that can serve multiple functions
Abbreviations. DSM-IV-TR Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (American Psychiatric Association 2000), *DSM* Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association 2000), *AMA* American Medication Association (Rondinelli et al., 2008)

Table 10.14 Five-stage model of legal causation to determine damages for psychological injuries

Stage	Time period	Causation issue	Injury	Legal damages
I	Day before	Pre-existing conditions: Continuous For later exacerbation	Baseline for day before Functioning	Pre-existing conditions non-compensable
II	During discrimination	Rule-outs: Work stress Family problems Financial illness	Injury onset Natural history of discrimination-caused disorders Co-morbidity	Temporary damages that improved before trial, and "garden variety damages"
III	Following discrimination	Rule-outs: Financial changes not caused by discrimination Family problems, etc. Litigation stress	Onset of injuries caused by reprisal Onset of fallout of wrongful discharge	Temporary damages that improved before trial, and "garden variety damages"
IV	Assessment date/ trial interval	Assessment of current symptoms/ problems of claimant: Emotional Cognitive Interpersonal Work status Rule out malingering exaggeration From perspective of causation: Determine what is attributable to discrimination; include exacerbation of pre-existing conditions What is left is injury attributable to discrimination	Functional analysis Consequences of discrimination: Physical Social Psychological Workplace Hedonic damages	Legally compensable damages Loss of function (I minus IV)

V	Future	Identify future needs for treatment Project loss of work capacity in ensuing years	*Pecuniary* Cost of future treatment Lost future income based on impaired work capacity *Non-pecuniary* Future pain and suffering Projected loss of function over time: Physical Social Psychological Workplace Probability of improvement or deterioration?

Adapted by permission of Oxford University Press. Goodman-Delahunty and Foote (2011). [Table 6.1, Pages. 154–155]

psychological injury cases (workplace discrimination and harassment; emotional damages in tort cases). The stages involve: (a) pre-existing psychological state as baseline; (b) state during injury onset/discrimination exposure; (c) the period after the event at claim until the assessment; (d) assessment state; and (e) projected state (e.g., prognosis, needs, losses). The model is a useful heuristic because it specifies the causal issues at each stage and the legal damages at issue in each of them.

10.7 Chapter Conclusion

The present chapter has provided the legal, conceptual, formal, and case law background needed for conducting a scientifically-informed, comprehensive, and impartial forensic mental health disability and related evaluation. In addition, it considers causality determination. Much of the latter involves ruling out malingering before proceeding to determination of psychological damages and legal damage.

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Chapter 11
Leading the Field in Understanding and Testing Malingering and Related Response Styles: The Work of Richard Rogers

11.1 Introduction

The present chapter examines in detail the work of Richard Rogers on malingering and related response styles and biases. He is a leader in the field who has explored appropriate concepts, definitions, fallacies, detection strategies, research designs, etc. He is also the first author of leading psychological instruments in the field, the SIRS (Structured Interview of Reported Symptoms; Rogers et al. 1992) and the SIRS-2 (Structured Interview of Reported Symptoms, Second Edition; Rogers et al. 2010). In the first portion of the monograph, I have already presented his critique of the MND (Malingered Neurocognitive Dysfunction) criteria of Slick et al. (1999).

Table of Terms and Sources

Abbreviation	Name	Source(s)
DSM	Diagnostic and Statistical Manual of Mental Disorders	American Psychiatric Association (2000)
DSM-IV	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition	American Psychiatric Association (1994)
DSM-IV-TR	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision	American Psychiatric Association (2000)
F	Infrequency Scale	Butcher et al. (1989)
Fb	Infrequent Responses, back	Ben-Porath and Tellegen (2008/2011)
MCMI-III	Millon Clinical Multiaxial Inventory, Third Edition	Millon (1994), Millon et al. (1997)
M-FAST	Miller Forensic Assessment of Symptoms	Miller (2001)
MMPI-2	Minnesota Multiphasic Personality Inventory, Second Edition	Butcher et al. (1989, 2001)
MND	Malingered Neurocognitive Dysfunction	Slick et al. (1999)
MPS	Malingering Probability Scale	Silverton (1999)
O-S	Obvious-Subtle Index	Weiner (1948)

(continued)

G. Young, *Malingering, Feigning, and Response Bias in Psychiatric/Psychological Injury*, International Library of Ethics, Law, and the New Medicine 56,
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(continued)

Abbreviation	Name	Source(s)
PAI	Personality Assessment Inventory	Morey (1991, 2007)
PSI	Psychological Screening Inventory	Lanyon (1973)
RDF	Roger's Discriminant Function	Rogers et al. (1996)
SADS	Schedule of Affective Disorders and Schizophrenia	Spitzer and Endicott (1978)
SIRS	Structured Interview of Reported Symptoms	Rogers et al. (1992)
SIRS-2	Structured Interview of Reported Symptoms, Second Edition	Rogers et al. (2010)

11.2 Review

Terms and misconceptions. Rogers (2008a) presented various terms related to response style and biases, including that of malingering (see Tables 11.1, 11.2, 11.3, 11.4, and 11.5). He added other terms in Rogers et al. (2010) (see Table 11.6). The notable generic or non-specific terms in Table 11.1 include deception and dissimulation. By themselves, the terms do not implicate direct malingering. Table 11.2 presents the definition of malingering. Rogers referred to the DSM-IV-TR definition (Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision; American Psychiatric Association 2000). He noted that the dissimulation involved must be a total fabrication or a gross exaggeration. He wrote that the "the presence of minor exaggerations or isolated symptoms" is not a criterion for malingering. Rogers preferred use of the term "feigning" instead of malingering for understanding the results of psychological tests of response style because the tests do not directly assess the person's "specific motivations." Therefore, by themselves, the tests can indicate deliberate fabrication or gross exaggeration of physical or mental symptoms but without offering insight into the goals of the feigning.

I would note that this comment generally makes sense. However, when the evidence for malingering is incontrovertible, the standard practice is to infer malingering (e.g., Slick et al. 1999).

As for terms that should be avoided in this type of work, Rogers advised not to use the term "suboptimal effort." However, it should be noted that research in the area continues to refer to this term or similar ones, although others are gaining prominence, such as "performance invalidity."

Perhaps Rogers' most contentious recommendation is to avoid the term of "secondary gain." However, he noted that in the forensic context, it has a particular meaning of deliberately using illness to gain special attention and material profit. In this regard, in the forensic context, the term continues to be used and should be continued to be used, as long as the other meanings of the term are ignored, such as psychodynamic ones, and these other meanings are not confused with the forensic meaning.

Rogers referred to terms related to simulated adjustment. He described impression management. I note that similar terms are over- and under-reporting and possibly "faking bad" and "faking good." Rogers mentioned "playing dumb" in this regard.

Table 11.1 Terms related to response style: nonspecific

Term	Explanation
Unreliability	Questions about the accuracy of reported information; without making assumptions about intent/reasons for inaccurate information
Nondisclosure	Withholding of information (i.e., omission), without assumptions about intentionality. It could happen freely or it may be compelled by internal demands (e.g., command hallucination)
Self-disclosure	Individual reveals something about her/himself. Unwillingness to share personal information does not necessarily imply dishonesty
Deception	Attempt to distort or misrepresent in self-reporting, e.g., acts of deceit, often accompanied by nondisclosure
Dissimulation	Deliberately distorting or misrepresenting psychological symptoms. Not necessarily malingering, defensiveness, or any specific response style

Adapted from Rogers (2008a)

Table 11.2 Terms related to response style: overstated pathology

Term	Explanation
Malingering	Intentionally producing false/grossly exaggerated physical/psychology symptoms, and motivated by external incentives (DSM IV-TR; American Psychiatric Association 2000, p. 739). The magnitude of the dissimulation must be a fabrication or a gross exaggeration and, moreover, of multiple symptoms (minor exaggerations/isolated symptoms do not qualify). The presence of external incentive does not rule out additional internal motivation
Factitious presentations	An intentional production/feigning of symptoms to assume a sick role (American Psychiatric Association 2000, p. 517). Ruled out if any external incentive is found. However, most evaluee roles also involve concomitant modifications of work/family responsibilities (Rogers et al. 2005)
Feigning	The deliberate fabrication/gross exaggeration of psychological/physical symptoms without assuming its goal (Rogers and Bender 2003). Evaluations might conclude a feigned presentation but might not be able to discern underlying motivation. Similarly, psychological tests can be used to establish feigning, but not malingering, per se, although this data could contribute to a conclusion of malingering once all relevant data is considered

Adapted from Rogers (2008a)
Abbreviations. DSM Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association 2000), *DSM IV-TR* Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision

Other related terms include irrelevant and random responding. This type of behavior in responding to psychological instruments clearly invalidates them and makes it difficult to arrive at conclusions about malingering. Finally, Rogers referred to hybrid responding, or behaving in a mixed fashion.

Rogers et al. (2010) mentioned the terms symptom magnification and disengagement (see Table 11.6). They strongly advised to avoid the term symptom magnification because it is poorly defined. However, I note that use of the term "symptom exaggeration" generally is considered acceptable because it is stating the fact in a case without any motivation ascribed to the term.

Table 11.3 Term to avoid in clinical and forensic practice

Term	Explanation
Suboptimal effort	(Or "incomplete" or "submaximal" effort). The subtext sometimes used is that these terms represent a proxy for malingering (Rogers and Neumann 2003). However, these terms lack precision (see Rogers and Shuman 2005). "Best" effort of any individual is variable and affected by internal (e.g., fatigue) and external (e.g., a stressful evaluation) factors
Overreporting	A statistically high level of item endorsement, especially on multiscale inventories. Should not be equated with feigning. The term lacks clarity. It has been applied to both deliberate and unintentional acts (Greene 2000)
Secondary gain	The term has clear definitions. However, it presents conflicting meanings (Rogers and Reinhardt 1998). From a psychodynamic perspective, secondary gain is part of an unconscious process to protect against intrapsychic needs/defenses. From a behavioral medicine perspective, illness behavior is perpetuated by social context (e.g., treatment providers), and not by the individual. From a forensic perspective, individuals might deliberately an illness to gain special attention/material gains

Adapted from Rogers (2008a)

Table 11.4 Term associated with simulated adjustment

Term	Explanation
Defensiveness	Deliberate denial/gross minimization of physical/psychological symptoms (Rogers 1984). Defensiveness distinguished from "ego defenses," which involve intrapsychic processes distorting perception
Social desirability	"Presenting oneself in the most favorable way compared to relevant social norms/mores" (King and Bruner 2000). It involves both denial of negative characteristics/attribution of positive ones (Carsky et al. 1992). More encompassing than defensiveness, so it should be carefully distinguished from defensiveness
Impression management	Deliberate effort to control others' perceptions of oneself; e.g., to maximize social outcome, portrayal of desired identity (Leary and Kowalski 1990). More situationally driven compared to expressing social desirability, which might reflect a characteristic way of self-presentation. May be used for a range of purposes not necessarily prosocial (e.g., "playing dumb"; Thornton et al. 2006)

Adapted from Rogers (2008a)

As part of his work in helping the field understand malingering, Rogers dealt with misconceptions and fallacies in the field (see Tables 11.7). The first fallacy is that malingering is rare. In the tables related to this misconception, Rogers is equivocal about the prevalence of malingering. The misconception states that malingering is "rare" in Table 11.8 and "very rare" in Table 11.7. Furthermore, later in Table 11.7, Rogers provided the statistic that "possible malingering" could be over 50 %. However, he does note that the base rate for malingering itself could

Table 11.5 Other response styles

Term	Explanation
Irrelevant responding	Evaluee does not become psychologically engaged in the evaluation (Rogers 1984). The responses given might not be related to the content of the evolution; disengagement, no effort to respond accurately
Random responding	Responding based entirely on chance factors. A likely example would be the completion of a long test in less than 5 min
Role assumption	Assume the role/character of another (Kroger and Turnbell 1975). This response style needs further research and is included only for sake of completeness
Hybrid responding	Use of more than one response style in a particular context. For example, honest responding about most facets but defensive with respect to substance use/abuse. Hybrid responding indicates response style as adaptable and potentially transitory

Adapted from Rogers (2008a)
Abbreviations. Minnesota Multiphasic Personality Inventory, Second Edition (Butcher et al. 1989, 2001)

Table 11.6 Other key terms for malingering and related concepts

Term	Explanation
Symptom magnification	Rogers and Vitacco (2002) describe the term as a poorly defined construct that implies some exaggeration of symptoms that is likely intentional. The problems with symptom magnification are twofold. First, there is no operationalization for the level of exaggeration required; therefore, even minor embellishments would likely qualify. Second, the construct may be misconstrued by courts and other decision makers as a proxy for malingering. To make matters worse, the term sometimes appears to be used interchangeably with overreporting (Tsushima and Tsushima 2001), which further muddles the distinction between magnifying and fabricating symptoms. Evaluators are strongly discouraged from using this impermissibly vague term
Disengagement	The term describes an infrequent response style that occurs when examinees are minimally engaged in the assessment process. In our programmatic research on feigned mental disorders, we have observed a small number of simulators (i.e., participants in the feigning condition) who attempt to avoid detection via disengagement. We have operationally characterized disengagement as the denial of almost all items of normal, non-pathological content. Unlike defensiveness, no systematic effort is presented to minimize or deny psychological impairment. Moreover, this marked pattern of non-involvement is not generally observed in clinical populations. In professional practice, a small number of feigners may have been coached via the Internet (Ruiz et al. 2002) or other sources to watch out for "malingering" test. Efforts to foil feigning measures through disengagement should be identified

Table 11.7 Commonly held misconceptions regarding malingering

Misconception	Explanation
Malingering is very rare	A false belief; leading to ignoring the possibility of malingering, perhaps equating infrequency with inconsequentiality. Rogers et al. (1994, 1998) surveyed forensic experts; malingering was found to be not rare in either forensic or clinical settings. Normally, malingering should be systematically evaluated. Its neglect is a serious omission
Malingering is a static response style	Avoid the flawed logic "once a malingerer." Consider – most efforts at malingering arise for specific objectives in a particular context (e.g., see Walters 1988)
Deception is evidence of malingering	A fallacy that "malingerers lie; therefore, liars malinger." Marked minimization of symptoms (i.e., defensiveness) is not necessarily of malingering. Also, deception by manipulative inpatients is not necessarily malingering
Malingering precludes genuine disorders	A misconception that malingering and genuine disorders are mutually exclusive
Malingering is an antisocial act by an antisocial person	This common misperception is perpetuated by the DSM-IV's inclusion of antisocial personality disorder as a screening indicator of malingering
Malingering is similar to the iceberg phenomenon	Misconception that any evidence of malingering is sufficient to attribute it, because one falsely believes that any observable feigning is like the tip of an iceberg with the true intent below the surface
Malingering has stable base rates	Rogers et al. (1998) found marked variations in the base rates (i.e., SD = 14.4 %) for malingering across forensic settings. Even within one setting, marked variations are likely to occur, e.g., depending on the referral question and individual circumstances. When malingering measures are used with all referrals, its base rate is likely to be relatively low (e.g., 10–30 %), even in forensic contexts. However, when validated screens (e.g., the M-FAST) are used to identify possible malingerers, the base rate is likely to exceed 50 %
Malingering is very common	This misconception is fueled by fears of fraud and injustice. Certain stakeholders in the system suspect that malingering and dissimulation are very prevalent. Also, the MND model has been applied over-broadly. Therefore, some defense workers maintain that the majority of forensic referrals are likely to be feigning (e.g., Ardolf et al. 2007)
DSM-IV-TR provides a "diagnosis" for malingering	The DSM-IV-TR considers malingering a "V code," or other conditions/problems that might be a focus of clinical attention (American Psychiatric Association 2000). V codes should not be equated with diagnosis
DSM-IV-TR provides an effective screen for malingering	The DSM-IV-TR includes four items for when malingering should be suspected, but they have conceptual and empirical difficulties (Rogers and Shuman 2005)

(continued)

Table 11.7 (continued)

Misconception	Explanation
Laser accuracy of cut scores	Practitioners falsely attribute diagnostic accuracy to specific cut scores without taking into account the SEM. When a specific score is within 1 SEM of the cut score, the likelihood of error is multiplied. Marginal cases should be considered indeterminate. Multiple cut scores should be considered

Adapted from Rogers (2008a) and Rogers and Bender (2012), who added the last four misconceptions

Abbreviations. DSM-IV Diagnostic and Statistical Manual of Mental Disorders IV (American Psychiatric Association 1994), *SD* standard deviation, *M-FAST* Miller Forensic Assessment of Symptoms Test (Miller 2001), *MND* Malingered Neurocognitive Dysfunction (Slick et al. 1999), *DSM-IV-TR* Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (American Psychiatric Association 2000), *SEM* standard error of measurement

Table 11.8 Description of representative detection strategies for feigned cognitive impairment

Category	Detection strategy	Description
Unlikely	Performance curve	Malingerers often do not calculate item difficulty in deciding which items to fail. They can often be detected by failing to produce the characteristic decline (e.g., easy, moderate, and difficult items) in correct responses found with genuine populations
Unlikely	Magnitude of error	Malingerers often do not consider whether their incorrect responses are characteristic of genuine populations; their errors are often too distant or too close to the correct response
Unlikely	Violation of learning principles	Malingerers may fail to consider well-established learning principles and violate these principles (e.g., recognition memory vs. recall)
Excessive	Floor effect	Malingerers sometimes fail to recognize that some items are so simple that correct responses can be achieved by impaired populations
Excessive	Symptom validity testing	A minority of malingerers fail so many items on a multiple-choice test that they exceed binomial probability. This strategy works only if the responses are equiprobable
Excessive	Forced-choice testing	Malingers often evidence a greater level of failure than genuine populations. Issues of comorbidity may confound the usefulness of this strategy

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be as low as 10 % in forensic settings. In 2012, Rogers and Bender considered four new misconceptions. One concerns the fallacy that malingering is common. Others concern the inexact diagnostic capacity of cut scores and of the DSM-IV-TR approach (see Table 11.7, last entries).

Table 11.9 Description of representative detection strategies for feigned mental disorder

Category	Detection strategy	Description
Unlikely	Rare symptoms	Malingerers do not realize that some symptoms occur very infrequently in clinical populations. The criterion for rare symptoms varies across scales from 5 to 20 % on genuine disorders
Unlikely	Improbable symptoms	A substantial minority of malingerers reports or acknowledges fantastic or preposterous symptoms
Unlikely	Symptom combinations	Malingerers often do not consider which pairs of symptoms rarely occur together
Unlikely	Spurious patterns	Malingerers are unaware that some clinical profiles occur very infrequently among patients with genuine disorders
Unlikely	Erroneous stereotypes	Malingerers and other person often have common misconceptions about the clinical characteristics of patients with genuine disorders
Amplified	Obvious symptoms	Malingerers frequently endorse a high proportion of symptoms that are clearly evidence of a major mental disorder
Amplified	Subtle symptoms	Malingerers sometimes report a wide array of minor psychological problems in addition to the above-noted obvious problems
Amplified	Symptom severity	Malingerers tend to report symptoms of extreme intensity
Amplified	Symptom selectivity	Malingerers often report or endorse a much wider array of symptoms than found in patients with genuine disorders
Amplified	Reported vs. observed	Malingerers sometimes evidence a consistent pattern of reporting greater impairment on overt behavior than what is observed

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Detection strategies. The various detection strategies that could be used for malingering and related response biases concern an area of study in the field where Rogers excels. He is comprehensive in describing the strategies that could be used and they form the basis for the psychological instruments that he created for detecting malingering and related behavior. These strategies are described in depth in Tables 11.8, 11.9, 11.10, 11.11, 11.12, 11.13, 11.14, 11.15, 11.16, 11.17, 11.18, 11.19, 11.20, 11.21, and 11.22. Table 11.8 gives the detection strategies for feigned cognitive impairment. For example, for the strategy of the performance curve, one tries to establish whether the evaluee exhibits the expected decline in performance from easy to moderate to difficult items. For the floor effect, evaluees are tested to determine whether they succeed on very simple items as would even very impaired populations. Table 11.9 indicates detection strategies related to feigned mental disorders. For example, evaluees should be tested for their endorsement of items that are considered rare or improbable. In addition, relative to the norm, they should be tested for whether they are endorsing too many symptoms and symptoms at extreme intensity.

Table 11.10 Detection strategies for feigned mental disorders: rare symptoms

Symptom	Explanation
Description	This strategy capitalizes on symptoms or features that are very infrequently reported (e.g., < 5.0 %) by bona fide clinical populations. Malingerers are often detected because they overreport these infrequent psychological problems
Strengths	This detection strategy has been widely applied to different psychological measures; it tends to yield large to very large effect sizes
Limitation	None is noted
Examples	(a) SIRS RS (Rare Symptoms) scale (b) MMPI-2 Fp (F-psychiatric) scale (c) PAI NIM (Negative Impression) scale (d) M-FAST UH (Unusual Hallucinations) scale

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Abbreviations. SIRS Structured Interview of Reported Symptoms (Rogers et al. 1992), *MMPI-2* Minnesota Multiphasic Personality Inventory, Second Edition (Butcher et al. 1989, 2001), *PAI* Personality Assessment Inventory (Morey 1991, 2007), *M-FAST* Miller Forensic Assessment of Symptoms (Miller 2001)

Table 11.11 Detection strategies for feigned mental disorders: quasi-Rare symptoms

Symptom	Explanation
Description	This strategy uses symptoms and features that are infrequently found in normative samples. It is considered a "quasi" strategy because infrequent items could reflect either genuine or malingered disorders
Strength	This detection strategy produces large or very large effect sizes
Limitations	Because infrequent problems in normative samples often occur in clinical samples, the interpretation of these results is confounded. For example, clients with schizophrenia or PTSD routinely have marked elevations (e.g., *M* scores ≥ 80 T) on the MMPI-2 F and Fb scales (see Rogers et al. 2003). This confound also contributes to a wide array of cut scores
Examples	(a) MMPI-2 F scale (b) MMPI-2 Fb (F-back) scale

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Abbreviations. PTSD posttraumatic stress disorder, *MMPI-2* Minnesota Multiphasic Personality Inventory-2 (Butcher et al. 1989, 2001), *F* Infrequency Scale (Butcher et al. 1989), *Fb* Infrequent Response, back (Ben-Porath and Tellegen, 2008/2011)

Tables 11.10, 11.11, 11.12, 11.13, 11.14, 11.15, 11.16, 11.17, 11.18, 11.19, 11.20, and 11.21 are taken from Rogers (2008b). These tables amplify the description of detection strategies for feigned mental disorders by indicating their strengths and limitations and by presenting instruments that deal with them [MMPI-2, PAI (Personality Assessment Inventory; Morey 1991, 2007), M-FAST (Miller Forensic Assessment of Symptoms Test; Miller 2001), and SIRS (Structured Interview of Reported Symptoms; Rogers et al. 1992)]. According to the tables, the clear detection strategies concern rare symptoms and obvious symptoms. In Table 11.22, Rogers

Table 11.12 Detection strategies for feigned mental disorders: improbable symptoms

Symptom	Explanation
Description	This strategy is an extreme variant of Rare Symptoms. It utilizes symptoms or features that have a fantastic or preposterous quality
Strength	Because of their fantastic nature, most of its item could not possibly be true. Therefore, substantial endorsement of improbable symptoms is less open to alternative explanations than some other detection strategies
Limitation	The extremeness of improbable symptoms may limit its usefulness with sophisticated malingerers, who can identify the unlikelihood that these represent genuine symptoms
Examples	(a) SIRS IA (Improbable and Absurd Symptoms) scale
	(b) Validity Index of the Millon Clinical Multiaxial Inventory (MCMI-III)

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Abbreviations. SIRS Structured Interview of Reported Symptoms (Rogers et al. 1992), *MCMI-III* Millon Clinical Multiaxial Inventory, Third Edition (Millon 1994; Millon et al. 1997)

Table 11.13 Detection strategies for feigned mental disorders: symptom combinations

Symptom	Explanation
Description	This strategy utilizes symptoms and features that are common to clinical populations but that rarely occur together. Malingerers often endorse a substantial number of infrequent pairs (e.g., grandiosity and increased sleep)
Strengths	This strategy is sophisticated and should be resistant to coaching and other forms of preparation. It is also easily adaptable to structured interviews and multiscale inventories. It produces large effect sizes
Limitation	At present, it has been tested only with structured interviews
Examples	(a) SIRS SC (Symptom Combinations) scale
	(b) M-FAST RC (Rare Combinations) scale

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Abbreviations. SIRS Structured Interview of Reported Symptoms (Rogers et al. 1992), *M-FAST* Miller Forensic Assessment of Symptoms Test (Miller 2001)

Table 11.14 Detection strategies for feigned mental disorders: spurious patterns of psychopathology

Symptom	Explanation
Description	This strategy is an extensive elaboration of symptom combinations. It relies on certain scale configurations that are characteristic of malingering but that are very uncommon in clinical populations
Strength	Its complexity minimizes the possibility that malingerers could prepare for and foil its detection strategy
Limitation	Because of its complexity, spurious patterns of psychopathology requires extensive cross-validation to ensure that its results are not capitalizing on change variance. Care must also be taken against overinterpretation (e.g., drawing conclusions in the absence of clinical elevations)
Examples	(a) PAI Malingering Index
	(b) PAI RDF (Rogers Discriminant Function)

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Abbreviation. PAI Personality Assessment Inventory (Morey 1991, 2007)

Table 11.15 Detection strategies for feigned mental disorders: indiscriminant symptom endorsement

Symptom	Explanation
Description	This strategy relies on the finding that some malingerers, unlike genuine clients, tend to endorse a large proportion of symptoms
Strength	The overall proportion of endorsed symptoms is easy to calculate and can be applied to all psychological measures
Limitations	It has been tested only with structured interviews. Care must be taken that measures cover a broad array of symptoms; otherwise, its use may lead to false positives
Examples	(a) SIRS SEL (Symptom Selectivity) scale (b) SADS SEL (Symptom Selectivity) scale

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Abbreviations. SIRS Structured Interview of Reported Symptoms (Rogers et al. 1992), *SADS* Schedule of Affective Disorders and Schizophrenia (Spitzer and Endicott 1978)

Table 11.16 Detection strategies for feigned mental disorders: symptom severity

Symptom	Explanation
Description	This strategy capitalizes on the finding that even severely impaired patients experience only a discrete number of symptoms as "unbearable" or "extreme" in intensity. Malingerers often endorse a wide array of psychological problems with extreme severity
Strengths	This strategy is easily adaptable to a wide range of structured interviews and clinical scales. It produces large effect sizes
Limitation	At present, symptom severity is considered only across entire scales. Further research may improve its effectiveness by identifying which psychological problems are almost never characterized as "extreme" in clinical populations
Examples	(a) SIRS SEV (Symptom Severity) scale (b) MMPI-2 LW (Lachar-Wrobe Critical Items) scale (c) M-FAST ES (Extreme Symptomatology) scale

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Abbreviations. SIRS Structured Interview of Reported Symptoms (Rogers et al. 1992), *MMPI-2* Minnesota Multiphasic Personality Inventory, Second Edition (Butcher et al. 1989, 2001), *M-FAST* Miller Forensic Assessment of Symptoms Test (Miller 2001)

Table 11.17 Detection strategies for feigned mental disorders: obvious symptoms

Symptom	Explanation
Description	This strategy relies on the idea that malingerers are likely to report or endorse prominent symptoms that are clearly indicative of serious mental disorders. Obvious symptoms are either considered alone or in relationship to subtle symptoms (i.e., "everyday" problems that are not necessarily indicative of a major mental disorder)
Strength	This strategy produces large to very large effect sizes
Limitation	Researchers debate whether obvious symptoms should be considered alone or in relationship to subtle symptoms. In the latter case, both obvious and subtle symptoms work best if converted to standard scores (e.g., MMPI-2 T scores)
Examples	(a) SIRS BL (Blatant Symptoms) scale (b) MMPI-2 O-S (Obvious-Subtle Difference) scale

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Abbreviations. SIRS Structured Interview of Reported Symptoms (Rogers et al. 1992), *MMPI-2* Minnesota Multiphasic Personality Inventory, Second Edition (Butcher et al. 1989, 2001)

Table 11.18 Detection strategies for feigned mental disorders: reported versus observed symptoms

Symptom	Explanation
Description	This strategy uses marked discrepancies between the person's own account of his or her noticeable symptoms and clinical observations. Malingerers can often be identified by the direction of these discrepancies (i.e., lack of clinical observations for reported symptoms that should be conspicuous)
Strength	With standardized observations, this strategy provides independent verification of reported symptoms
Limitation	Because many genuine patients lack insight about their psychopathology, standardization is essential for accurate discrimination
Examples	(a) SIRS RO (Reported vs. Observed) scale (b) M-FAST RO (Reported vs. Observed) scale

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Abbreviations. SIRS Structured Interview of Reported Symptoms (Rogers et al. 1992), *M-FAST* Miller Forensic Assessment of Symptoms Test (Miller 2001)

Table 11.19 Detection strategies for feigned mental disorders: erroneous stereotypes

Symptom	Explanation
Description	This strategy capitalizes on the finding that many persons, including mental health professionals, have common misconceptions about which clinical characteristics are commonly associated with mental disorders. Malingerers are often identifiable by their overendorsement of erroneous stereotypes
Strength	This strategy appears resistant to preparation because even mental health professionals have difficulty detecting erroneous stereotypes
Limitations	It has been tested only with the MMPI-2 and PSI; it varies by scale in the magnitude of the effect sizes
Examples	(a) MMPI-2 Ds (Dissimulation) scale (b) PSI EPS (Erroneous Psychiatric Stereotype) scale

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Abbreviations. MMPI-2 Minnesota Multiphasic Personality Inventory, Second Edition (Butcher et al. 1989, 2001), *PSI* Psychological Screening Inventory (Lanyon 1973)

Table 11.20 Detection strategies for feigned mental disorders: requiring further validation – close approximations to genuine symptoms

Symptom	Explanation
Description	This strategy uses apparently bogus symptoms that parallel genuine symptoms except for some important detail
Strength	None are noted
Limitations	Genuine patients may respond to the gist of the item and be misclassified. It has been tested only with one measure; its item content is considered proprietary
Example	MPS MAL (Malingering) scale

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Abbreviation. MPS Malingering Probability Scale (Silverton 1999)

Table 11.21 Detection strategies for feigned mental disorders: requiring further validation – overly specified symptoms

Symptom	Explanation
Description	This strategy assumes that malingerers may be willing to endorse symptoms with an unrealistic level of precision
Strength	It produces moderate effect sizes (e.g., 0.91 and 1.06)
Limitations	It lacks the conceptual basis of other detection strategies. It has been tested with only one measure
Example	SIRS OS (Overly Specified) symptoms

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Abbreviation. SIRS Structured Interview of Reported Symptoms (Rogers et al. 1992)

Table 11.22 Detection strategies for the domain of feigned mental disorders: representative scales and general descriptions for the SIRS-2 and MMPI-2

Strategy	SIRS-2	MMPI-2	General description
Rare symptoms	RS	F_p	Use of symptoms and other indicators of psychopathology that are very infrequent in genuine clinical populations. Must be differentiated from "quasi-rare" symptoms that are rare in the general population, but are sometimes common in certain clinical populations
Symptom combinations	SC		Use of pairs of symptoms and other indicators of psychopathology that are commonly observed alone, but are seldom observed together
Improbable symptoms	IA		An extreme variant of rare symptoms; characterized by the fantastic and unlikely quality of the acknowledged symptoms that, by definition, would almost never be authentic
Spurious patterns of psychopathology			Building on symptom combinations, this elaborate approach identifies feigning by highly uncharacteristic configurations of scales and subscales that are seldom observed across diverse clinical populations
Erroneous stereotypes		*Ds*	Use of common misconceptions of clinical characteristics that are often associated with genuine mental disorders. These misconceptions are frequently held by mental health professionals, making them the basis for an effective strategy
Indiscriminate symptom endorsement	SEL		Use of the overall proportion of reported symptoms to detect some feigners who adopt the "more is better" approach. Wholesale endorsement of symptoms is uncommon among genuine clinical populations
Symptom severity	SEV	*LW*	Use of the extremeness of reported symptoms to differentiate feigned from genuine responding

(continued)

Table 11.22 (continued)

Strategy	SIRS-2	MMPI-2	General description
Obvious symptoms	BL	*Obv*	Use of the proportion of easily recognized characteristics of major mental disorders to detect feigning among those that markedly exceed what is typically found in diverse clinical populations
Common (subtle) psychological problems	SU	*Su*	Use of the proportion of everyday problems and typical symptoms purported to cause distress or impairment to detect feigning. Proportions reported by some feigners markedly exceed what is typically found in diverse clinical populations
Reported vs. observed symptoms	RO[a]		Use of a consistent pattern of disparities between reported symptoms and features being more impaired or atypical than contemporaneous clinical observations

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Abbreviations. MMPI-2 Minnesota Multiphasic Personality Inventory, Second Edition (Butcher et al. 1989), *RS* rare symptoms, *SC* symptom combinations, *IA* improbable or absurd symptoms, *SEL* selectivity of symptoms, *SEV* severity of symptoms, *BL* blatant symptoms, *SU* subtle symptoms, F_p infrequency psychopathology, *Ds* dissimulation, *LW* Lachar-Wrobel critical items, *Obv* obvious, *Su* subtle

[a]*RO* Reported vs. Observed Symptoms

et al. (2010) give a very similar table to those in Rogers (2008b). The major differences concern referring to the SIRS-2 (Structured Interview of Reported Symptoms, Second Edition; Rogers et al. 2010) instead of the SIRS, removal of quasi-rare symptoms, and adding common (subtle) psychological problems.

Research design. Table 11.23, taken from Rogers (2008a), provides a detailed description of the four major research designs that could be used to investigate empirically different response styles. The four basic designs are (a) simulation research, (b) known-group comparison, (c) differential prevalence design, and (d) bootstrapping comparison. Simulation research is an analog design, which has weak external validity even if its internal validity is strong. Known-group comparisons, in contrast, have strong external validity but weak internal validity. In this design, patients are determined by independent experts or other means to belong to extreme groups, such as malingering and not malingering. The problem with this design, aside from what Rogers indicated, is that even extreme groups might be difficult to define and, moreover, extreme groups might not be representative of the vast majority of subjects/patients to whom one would wish to generalize the results of the research. Bootstrapping comparisons are based on multiple detection strategies

Table 11.23 Researching response styles: an overview of basic research designs

	Research designs			
Characteristic	Simulation research	Known-group comparison	Differential prevalence design	Bootstrapping comparison
Description	Analogue research randomly assigns participants to different experimental conditions. Results are typically compared with those from relevant clinical groups	With the use of independent experts, individuals can be classified in real-world conditions according to specific response styles	Based on assumed incentives, greater numbers of a broadly defined group (e.g., litigants) are presumed to have a specific response style when compared with a second group (e.g., nonlitigants)	By using multiple detection strategies, stringent cut scores can be applied that maximize specificity (e.g., no genuine patients are classified as malingerers) and preserve moderate sensitivity (e.g., the majority of feigners are classified as malingerers)
Internal validity	Strong: Procedures include standardized instructions, conditions, incentives, and manipulation checks	Weak: Researchers have no control over experimental assignment or other standardized procedures	Weak: Researchers have no control over experimental assignment or other standardized procedures	Weak: Researchers have no control over experimental assignment or other standardized procedures
External validity	Weak: Participants do not face the often grave circumstances and consequences of succeeding or failing at a particular response style	Strong: The participants, settings, issues, and incentives fit real-world considerations	Moderate: Participants are often involved in real-world consultations facing important consequences for successful and unsuccessful adoption of a specific response style. However, the lack of group truth (i.e., independent classification of response style) militates against knowing which participants are attempting to engage in which response styles	Moderately strong: The participants, settings, issues and incentives fit real-world considerations. Researchers typically have a high level of confidence for one relevant group

(continued)

Table 11.23 (continued)

	Research designs			
Characteristic	Simulation research	Known-group comparison	Differential prevalence design	Bootstrapping comparison
Classification	Effectively tested: With cross-validation, the accuracy of classification can be evaluated against the experimental condition for specific response styles	Effectively tested: With cross-validation, the accuracy of classification can be evaluated for specific response styles as established by independent experts	Untestable: Without knowing group membership, the accuracy of classification is impossible to establish	Variable: The greatest risk is false positives, because an unknown percentage of the assigned group (e.g., "feigning") do not warrant this classification. Careful application of external indicators with well-established utility estimates can make this design a valuable contribution to the study of response styles

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Table 11.24 Criteria of detection strategies for malingering and defensiveness

Criterion	Explanation
Standardized methods	Are essential to all scientific endeavors. Detection strategies must be operationalized to provide uniform items, scoring, and administration so that their results can be rigorously tested and cross-validated
Conceptual basis	The absence of a well-defined construct limits the usefulness and the interpretability of research findings. Therefore, a conceptual basis much be described in order to test a specific detection strategy and evaluate competing hypotheses
Empirical validation	Focuses on the use of proven methodology to establish the validity of a specific detection strategy. The empirical validation of detection strategies optimally includes both simulation designs and known-group comparisons. It avoids flawed methodology (e.g., differential prevalence rates) and inappropriate comparisons (e.g., contrasting feigned and unimpaired protocols). Other important methodological considerations are summarized in Rogers and Cruise (1998)
Systematic differentiation	Is simply the estimation of accuracy. Statistical significance is an inadequate proxy for accuracy. Many studies of response styles yield results with a high probability of statistical significance that have very little utility in professional practice. Instead, the magnitude of difference is the critical issue (Wilkinson and Task Force on Statistical Inference 1999). Because of its clarity, Cohen's *d* is used in this volume as the standard measure of effect sizes. Beyond effect sizes, the *sine qua non* of accuracy is level of individual classification. Utility estimates are used to calculate the probabilities that individuals are or are not engaging in a specific response style (see Streiner 2003)
A specific response style	The delineation of a specific response style is essential to the accurate interpretation of results. For example, some research on malingered cognitive impairment attempts to substitute "suboptimal effort" for malingering. This construct drift (i.e., broadening the conceptualization of malingering to embrace any manifestation of inadequate motivation) is unacceptable. Researchers and clinicians must verify that criterion groups and instructional sets correspond to the specific response styles under consideration

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using statistically-based tests and procedures. However, there is a great risk of ending up with false-positive classifications in this design, which weakens the validity of the results.

In Table 11.24, Rogers (2008b) described five critical criteria that are found in valid detections strategies. Of note is his criticism that research on malingered cognitive impairment has broadened the conceptualization of malingering to include any indication of inadequate motivation. According to Rogers, this "construct drift" is unacceptable. I share the same concern.

Table 11.25 Brief description of SIRS Scales

Scale	Description
Primary scales	
Rare symptoms	Consists of symptoms that occur very infrequently in bona fide patients
Symptom combinations	Consists of item pairs of common psychiatric problems that rarely occur simultaneously
Improbable and absurd symptoms	Consists of symptoms having a fantastic or preposterous quality that renders them, by definition, unlikely to be true
Blatant symptoms	Consists of symptoms that untrained individuals are likely to identify as obvious signs of a major mental illness
Subtle symptoms	Consists of symptoms that untrained individuals are more likely to associate with everyday problems or minor maladjustment than with a major mental illness
Selectivity of symptoms	Comprised of the combination of Blatant Symptoms (BL) and Subtle Symptoms (SU) scales, and indicates the non-selective or indiscriminant endorsement of psychiatric problems
Severity of symptoms	Consists of the number of BL and SU symptoms endorsed at an "extreme" or "unbearable" severity
Reported vs. observed symptoms	Based on a comparison of the patient's observable behavior (speech and physical movements) and his or her responses to items
Supplementary scales	
Direct appraisal of honesty	Consists of items that address the patient's willingness to be honest and self-disclosing
Defensive symptoms	Consists of items that represent a variety of everyday problems, worries, and negative experiences, which most individuals have experienced to some degree
Overly specified symptoms	Consists of symptoms that are described with an unrealistic degree of precision and typically indicates an implausible attempt to quantify an emotional problem
Symptom onset and resolution	Consists of items that reflect sudden, atypical changes in the course of a mental disorder
Inconsistency of Symptoms	Consists of items identical to those contained in the BL and SU scales, repeated as a measure of discordant self-reporting. The scale is based on the number of disparities between the initial and subsequent administration of these items

Instruments and practice. Tables 11.25 and 11.26 present information on the SIRS and Table 11.27 on the SIRS-2. Table 11.25 shows clearly that the primary scales in the SIRS relate to the detection strategies that Rogers had conceptually elaborated. Moreover, Rogers et al. (1992) added supplementary scales, such as Defensive Symptoms and Inconsistency of Symptoms. Table 11.27 indicates that, for the SIRS-2, Rogers and colleagues added several indices and removed one of the supplementary scales. Table 11.26 provides a preliminary decision scheme for classifying malingering

Table 11.26 Tentative model for the classification of malingering

(A) A pattern of self-reported symptoms which would include at least one of the following:
1. Endorsement of an unusually high number of *rare symptoms* (i.e., symptoms which are very infrequent in bona fide patients)
2. Endorsement of an unusually high number of *blatant symptoms* (i.e., symptoms which are immediately recognizable by non-professionals as indicative of severe psychopathology). It is often useful to ask about symptoms which are not obvious signs of mental illness (e.g., early morning awakening) for the purposes of comparison
3. *Nonselective endorsement of symptoms* which appear to be improbable based on the sheer number
4. Endorsement of *absurd and preposterous symptoms*. This criterion should be applied only to individuals who appear coherent and relevant in their speech, since some grossly psychotic patients may also endorse absurd responses

(B) Corroboration of dissimulation through one or more of the following:
5. *Collateral interviews* which suggest that the individual's self-report is strongly indicative of feigning (e.g., family provides evidence of relatively good adjustment in contrast to self-described "gross impairment")
6. Pronounced *differences between reported prior episodes and their clinical documentation*. Differences should be dramatic and strongly suggestive of feigning (e.g., claims of multiple suicide attempts requiring medical interventions while hospitalized, when there is no evidence in the clinical record of any suicidal ideation or gestures)
7. Unequivocal evidence of feigning on *standardized measures* such as the MMPI and SIRS

(C) Evidence based on self-report or collateral interviews that the individual's motivation for feigning was not exclusively a desire to be a patient or an attention-getting device in a borderline patient

Abbreviations. MMPI-2 Minnesota Multiphasic Personality Inventory, Second Edition (Butcher et al. 1989, 2001), *SIRS* Structured Interview of Reported Symptoms (Rogers et al. 1992)

based on the results of the SIRS and extra test information. The scheme emphasizes the self-reported symptoms that are rare and blatant and non-selective and/or absurd. As for reporting the results related to dissimilation, in Table 11.28, Rogers (2008c) provided examples on how to report feigning without necessarily attributing malingering, per se. For example, for severe malingering, in the context of other evidence, one might write that the patient is presenting as severely disturbed by "fabricating many symptoms" or by endorsing "rare and improbable" symptoms.

11.2.1 Interim Conclusion

The scope of the work by Rogers in the area of malingering and related response styles and biases is impressive. The SIRS, in particular, is an instrument that has received a broad endorsement for use in detection of malingering and related

Table 11.27 The SIRS-2 scales

Scale	Origin
Rare Symptoms (RS)	SIRS
Symptom Combinations (SC)	SIRS
Improbable or Absurd Symptoms	SIRS
Blatant Symptoms (BL)	SIRS
Modified Total Index (MT Index)	SIRS-2
Subtle Symptoms (SU)	SIRS
Selectivity of Symptoms (SEL)	SIRS
Severity of Symptoms (SEV)	SIRS
Reported vs. Observed Symptoms (RO)	SIRS
Rare Symptoms Total (RS-Total)	SIRS-2
Direct Appraisal of Honesty (DA)	SIRS
Defensive Symptoms (DS)	SIRS
Improbable Failure (IF)	SIRS-2
Overly Specified Symptoms (OS)	SIRS
Supplementary Scale Index (SS Index)	SIRS-2
Inconsistency of Symptoms (INC)	SIRS
Symptom Onset and Resolution (SO)	SIRS (dropped from the SIRS-2)

Abbreviations. SIRS Structured Interview of Reported Symptoms (Rogers et al. 1992), *SIRS-2* Structured Interview of Reported Symptoms, Second Edition

Table 11.28 Reporting feigning: a sampling of interpretive statements

Type	Statement
Mild	1. Minor exaggerations were found in the evaluee's presentation. However, some of this might be expected, given the context of the evaluation
	2. Although the evaluee manifested a slight tendency to exaggerate symptoms, no major distortions in this regard were evident
	3. Although some variations were noted in the evaluee's assessment, they have no (or little) relevance to diagnosis or recommendations
Moderate	1. Assessment findings clearly indicate that the evaluee was exaggerating (and/or fabricating) the psychological symptoms/impairments presented. The evidence for this conclusion follows:
	2. The evaluee has feigned/fabricated several important symptoms/impairments, as evidenced by (give examples); these distortions have direct effects on my interpretation of her/his diagnosis, recommendations, and conclusions
	3. The evaluee gives reason to conclude there is a moderate degree of malingering, as evidenced in … (give examples). This distortion of the data in the evaluation raises some concern about the validity of the presentation
	4. The evaluee's presentation appears to be moderately exaggerated/fabricated, as is clearby … (give examples). Because of difficulty in evaluating the evaluee's motivation/intended goal, the rule-out diagnosis is between factitious disorder and malingering

(continued)

Table 11.28 (continued)

Type	Statement
Severe	1. The evaluee shows very clear evidence of attempting to present as severely impaired/disabled/disturbed. The many fabricating symptoms include … (give examples) 2. The evaluee gives clear reason to attribute outright malingering by presenting with … (give examples). Strategies of malingering in this data set include, "rare/improbable symptoms" uncorroborated by other data in the assessment. Clearest examples of feigning fabrication that lead to a conclusion of malingerer include … (give examples)

Adapted from Rogers (2008c)
Abbreviation. DSM-IV Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (American Psychiatric Association 1994)

motivations, in general, and also specifically with respect to psychological injury cases. Nevertheless, much more research is needed to demonstrate its efficacy in the latter context. Moreover, the SIRS-2 is a new instrument that needs further research before its adoption with forensic disability cases and evaluations.

11.3 Chapter Conclusion

This chapter concludes the review in the present book of the literature on fundamentals about malingering and related response styles and biases. Throughout this monograph, I have shown how the work of Rogers is very important and how the area is in need of much research in the way he describes before definitive understanding of malingering and its detection is accomplished. Also this chapter illustrates that (a) even the definition of malingering varies, (b) the research designs to investigate it express limitations, (c) practice recommendations are far from final in the field, such as which malingering detection strategies and instruments meet all required psychometric bars, and (d) there are doubts for court purposes in these regards, e.g., about symptom validity testing.

My overall conclusion to this point in the book is that it is premature to indicate that any one test or procedure in malingering and related response style/bias detection can serve as a gold standard, but that there are promising indicators that a consensus approach might be reached. Until that time, it might be best to consider all procedures and strategies in malingering and related behavior detection as preliminary, experimental, tentative, and not gold standard, including those that are more highly recommended, such as the Slick et al. (1999) MND criteria, the SIRS, and any SVT (symptom validity test). Therefore, in practice, evaluators should be prepared to carefully defend the methodological choices made in their assessments, their interpretation of instrument results, and their conclusions offered to court, while being prepared to present the comparative limitations and deficiencies of all other possibilities that they have chosen not to use along these lines.

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Part III
Psychological Injury, Assessment, Most Recent Literature

Chapter 12
Assessing Psychological Injuries and Malingering: Evaluator Considerations

12.1 Introduction

The first part of the chapter presents the components of a comprehensive forensic disability and related assessment and proceeds to examine factors that contribute to difficulties in the evaluations. The second part of the chapter addresses for assessments the issue of malingering and related response styles/biases and effort. This includes analysis of the discrepancies/inconsistencies that might be evident in the data gathered in an assessment. The section addresses the differential diagnosis and rule in/out process in malingering detection. The third part of the chapter looks at possible sources of bias and error in evaluators. The fourth part of the chapter provides cautions and strategies for conducting adequate and court-admissible evaluations. There are redundancies in this chapter with respect to material in prior ones; however, it enables a comprehensive view of the assessment process in the area and the cautions needed.

Table of Terms and Sources

Abbreviation	Name	Source(s)
DSM	Diagnostic and Statistical Manual of Mental Disorders	American Psychiatric Association (2000)
DSM-IV-TR	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision	American Psychiatric Association (2000)
MMPI-2	Minnesota Multiphasic Personality Inventory, Second Edition	Butcher et al. (1989, 2001)
MND	Malingered Neurocognitive Dysfunction	Slick et al. (1999)

G. Young, *Malingering, Feigning, and Response Bias in Psychiatric/Psychological Injury*, International Library of Ethics, Law, and the New Medicine 56,
DOI 10.1007/978-94-007-7899-3_12, © Springer Science+Business Media Dordrecht 2014

12.2 Components of the Comprehensive Psychological/ Psychiatric Injury Assessment

Tables 12.1, 12.2, and 12.3 outline the components of a comprehensive assessment of psychological/psychiatric injury in the forensic disability and related context. To the degree possible, treatment providers of mental health services should follow the guidelines presented. As emphasized throughout this monograph, the most important principle in this type of assessment is that it is comprehensive, scientifically-informed, and impartial.

Table 12.1 indicates the range of information that should be gathered for the history to be comprehensive. As with all aspects of an assessment, the information gathered should be sufficient to allow for empirically and logically supported conclusions.

Table 12.1 Personal injury assessment components: history

Component	Examples
Social	Including childhood, adolescence, adulthood, family structure, and marital/ relationship history
Educational	Academic and behavioral performance, attitudes, perceptions of successes and failures, special education programs, specific learning problems, class standing, SAT/other standardized test scores, disciplinary actions, and referrals to the school psychologist or other professionals
Occupational	Chose career, career changes, satisfaction/dissatisfaction with jobs, job losses/promotions, job changes and reasons
Legal	Criminal, civil litigation (as plaintiff or as defendant), in family court, restraining orders, administrative actions (e.g., driver license revocation/ suspension)
Medical	Health problems, surgeries, hospitalizations, medications, accidents or injuries
Psychiatric	Inpatient/outpatient treatment, psychotropic medications, psychotherapeutic treatment, reported diagnoses, attitude toward treatment
Substance abuse	Alcohol, illegal drugs, abuse of prescription medications; abuse treatment, 12-Step or related programs, relapses
Job duties	Duties, conditions, schedule, and pace required

Adapted from Piechowski (2011)

Table 12.2 Personal injury assessment components: current

Component	Examples
Daily activities	How spends day, activities of daily living, managing household, care of children/dependents, leisure activities, vacations, social activities, studies
Disability onset	Including description of the last day of work, decision to leave work, decision to seek treatment, and whether decisions were voluntary or mandated
Functional impairments	How functioning has been affected; be specific (work, study, social, home, leisure)

Adapted from Piechowski (2011)

Table 12.3 Personal injury assessment components: records and documents

Record	Examples
Essential	Current treatment records related to cause of disability
	Claim forms
	Job description
Very useful	Past treatment
	Investigative
	Financial
	Primary care
	Prior evaluation
	In-house
Additional	Past primary care
	Other medical
	Insurance company

Adapted from Piechowski (2011)

Table 12.2 elaborates the major components of the current course that needs to be addressed in a comprehensive assessment. It lists the information that needs to be acquired with respect to the impact of the event at claim on work performance/function/disability and activities of daily living.

Table 12.3 indicates the records, documents, or files that are relevant to forensic disability assessments that the evaluator should access. These often are sources of inconsistencies/discrepancies.

Table 12.4 and Fig. 12.1 provide factors that create difficulties and inaccuracies in evaluations. Essentially, evaluators might compromise the adequacy of the data that they gather by making errors that can be avoided. For example, they might use weak or poor tests and methods or they might interpret the data gathered under the influence of biases, such as the confirmatory bias (or making unwarranted generalizations). Or, they might overinterpret normal shortcomings or fail to interpret evidence related to malingering. Other sources of error relate to evaluees; for example, they might be very skilled at falsification, might have been coached how to falsify effectively, or they might vary in their presentation and performance because of valid fluctuations or changes in their condition, for example, flare-ups of their pain experience. Or, they might deny problems in their past or their residual positive abilities after the event at claim.

12.3 Indications, Inconsistencies, and Incontrovertible Evidence

Tables 12.5, 12.6, 12.7, 12.8, 12.9, 12.10, 12.11, 12.12, 12.13, and 12.14 explore further the distinction between evaluees who present or perform in a valid way and those who present or perform invalidly. Table 12.5 notes that effort might be genuine or distorted. However, it notes that evaluees demonstrating genuine effort might still

Table 12.4 Factors contributing to case difficulty; sources of false-positive and false-negative errors

Factor	Example
Examiner factors	
Data gathering and selection of procedures	Weak or poor tests and methods
	Combining weak methods with stronger methods
	Inadequate coverage
	Timing/placement of measures Over-testing or overly lengthy sessions
	Poor match in conditions or sociodemographic features
	Testing while examinee is in fluctuating states
	Testing during flare-ups of comorbid features, associated conditions, or extraneous conditions (e.g., headache, medication side effects, sleep disorder, pain, mood disorder)
	Inadequate data collection (e.g., information about prior functioning)
Interpretive approaches	Confirmatory bias, premature closure
	Illusory correlation, inadequate covariation analysis
	Overconfidence
	Inappropriate disjunctive or conjunctive strategies
	Trying to integrate all data, adding weaker predictors to stronger predictors, viewing validity as cumulative, insufficient attention to incremental validity
	Focusing on complex pattern analysis
	Selection of or overreliance on weaker interpretive methods, subjective judgment; underreliance on validated/statistical decision procedures
	Countervailing validated interpretive procedures too readily
	Failure to consider or properly apply base rates
	Unwarranted generalization
	Misappraisal of injury severity
	Disregard of other factors compromising effort
	Bias/advocacy
Examinee factors	
Data gathering and selection of procedures	Skill at falsifying
	Preparation/"coaching"/incentives
	Overlap
	Fluctuations or changes in condition
	Flare-ups of comorbid features, associated conditions, or extraneous factors
	Attentional lapses/poor concentration
	Complexity (e.g., number of comorbid conditions, number of factors producing inaccuracy, injured and malingering)
	Either worse or better than expected outcome
	Other factors compromising effort (e.g., mood disorder, rapid fatigability, low frustration tolerance)
Interpretive approaches	Conditions less well studied (e.g., electrical injury, rare toxin)
	Absence of hard evidence
	Intraindividual variation
	Cultural diversity
	Other factors compromising accuracy of self-report (e.g., memory dysfunction, lack of insight, severe mood disorder)
	Subtlety of presentation/relevant differentials
	Indirect causal chain between event and outcome

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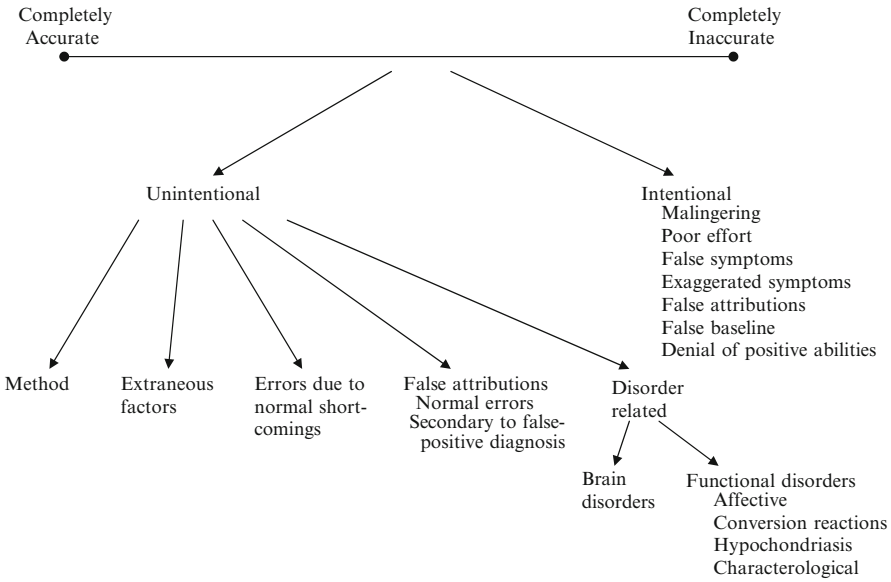

Fig. 12.1 Sources of inaccuracy in assessment data
Note. The term malingering has been added to the figure
Inaccuracies in assessment data might derive from unintentional and not only intentional factors. The former include factors related to the evaluator's methods and interpretations. The latter include various response biases, including malingering
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Table 12.5 A sampling of possible presentations of forensic disability evaluees examinees

Type	Examples
Genuine effort	Genuine/accurately reporting symptoms/impairments/abilities
	Genuine/accurately reporting symptoms/impairments, but their cause is mistakenly attributed to factors such as memory limitations/confusion
	Genuine but inaccurately reporting symptoms/impairments/abilities, resulting from memory limitations/confusion/unconscious processes
Distorted effort	Genuine but intentionally distorting symptoms/impairments/abilities
	Genuine and accurately reporting symptoms/impairments, but their cause is intentionally misidentified ("false imputation", Resnick 1997)
	Intentionally distorting symptoms/impairments/abilities
	Intentional misrepresentation of the degree that genuine symptoms/impairments affect capacities at issue
	Within the limits of methodological limitations/false positives/diagnostic errors

Adapted from Otto (2008)

be inaccurate in their reports because of valid psychological reasons. As for distorted effort, a series of possibilities are presented related to intentional motivations. However, I would note that distorted effort might also take place for unintentional reasons, unconscious ones, etc.

Table 12.6 Forensic disability assessment guidelines for implementation

Guideline	Explanation
1	As a matter of routine practice, include formal measures of motivation anytime secondary gain is possible, whether hired by plaintiff or defense. Emphasize the broadness of the secondary gain concept, as it is not always financial (avoidance of incarceration, parental approval)
2	Always use multiple measures of effort. Use both emotional and cognitive measures of effort
3	Always consider base rates of malingering; see above for a summary of numbers. Use of the base rate in your clinical practice will increase your diagnostic accuracy overall
4	Always use tests with good psychometric properties, especially good sensitivity and specificity. It is essential to choose tests that emphasize low false-positive rates. Use tests with a strong empirical foundation and that can be supported by research in court testimony
5	Consider "real world behavior/demands" versus performance on neuropsychological tests. Independent living and functioning demands an array of instrumental behaviors and activities that require multiple aspects of at least a minimal level of cognitive functioning. It has been established that persons feigning cognitive impairment or those malingering tend to "aim too low" – that is, they often present with such low performance on tests that the results are non-credible (van Gorp et al. 1999). A person who obtains scores in the impaired range (at or below the second percentile) on a test of verbal and/or spatial memory, and yet arrives unaccompanied or unassisted to the office, takes an independent lunch break, returns unassisted, and finds her or his way back to the examination room, is engaging in behaviors that are inconsistent with the memory scores. Every clinician must attempt to relate known functioning in the real world with the results on the neuropsychological examination as further indicia of credible versus non-credible performance
6	Inconsistencies between documented information in medical records versus self-report should also be considered and attempts made to reconcile or discredit. Caution, of course, must be exercises as information in medical records is not always correct; however, observations recorded at the time are often more valid than recollection or retrospective report several years later. An inconsistency, for instance, in which the ambulance and emergency room records state "no loss of consciousness" and an examinee's report 3 years later in the context of litigation states definite loss of consciousness requires an attempt to reconcile. Although some persons who are dazed or confused at the time of injury may misreport a loss of consciousness, the same misreporting can occur due to a revisionist historian
7	Incontrovertible signs of feigning, and here we may appropriately say "malingering," must be acknowledged when they are present. Performance significantly below chance (statistically correcting for multiple trials which would otherwise result in a Type I error) on a symptom validity test may constitute one clear sign of intentional fabrication or exaggeration of symptoms. Some (e.g., Slick et al. 1999) have even suggested that this is one of the few indicators of conscious malingering in which the *wrong* answer is intentionally chosen. The other incontrovertible sign is video or audio (or personal witness) surveillance in which the "injured" party is observed or recorded engaging in some activity that he or she claims is not possible

Table 12.7 Inconsistencies often observed in malingerers

Type	Example
Internal	The evaluee's self-report of symptoms involves clear/articulate explanations of being confused
	Or, there are markedly conflicting versions
External	Between evaluee's reported and observed symptoms
	Between evaluee's reported and observed levels of functioning
	Between evaluee's reported symptoms and expected of genuine symptoms
	Between evaluee's reported symptoms and psychological testing results

Adapted from Resnick and Knoll (2008)

Table 12.8 Discrepancies/inconsistencies in analyzing data, self-report, and other information sources

Source	Examples
Psychological testing	1. Discrepancy/Inconsistency between test data and known patterns of brain functioning
	2. Discrepancy/Inconsistency between test data and observed behaviour [symptoms (positive symptoms-added, negative symptoms-lost), and functions]
	3. Discrepancy/Inconsistency between test data and reliable collateral reports/video
	4. Discrepancy/Inconsistency between test data and reliable documented background history
Self-report	5. Self-reported history is discrepant/inconsistent with reliable documented history
	6. Self-reported symptoms/functions are discrepant with known patterns of brain functioning/genuine symptoms
	7. Self-reported symptoms/functions are discrepant with behavioral observations
	8. Self-reported symptoms are discrepant with information obtained from reliable collateral informants
	9. Evidence of exaggerated or fabricated psychological dysfunction (e.g., on SVTS, the MMPIs)
Within data sources	10. In self-report in interview
	11. In description in reliable documents
	12. In description by reliable collateral informants
	13. In different tests/measures/instruments
	14. In different parts of different tests/measures/instruments
Across data sources	15. 10 and 11
	16. 10 and 12
	17. 10 and 13
	18. 10 and 14
	19. 11 and 12
	20. 11 and 13
	21. 11 and 14
	22. 12 and 13
	23. 12 and 14
	24. 13 and 14
	25. Any other

Adapted from Slick et al. (1999), slightly modified

Table 12.9 Key questions in interpreting of exaggeration/misrepresentation

Question	Interpretation
Type	Amplification or minimisation?
Intentionality	Deliberate or unconscious?
	If the later, what is the intent?
Purpose	Convince or deceive?

Adapted from Main et al. (2008)

Table 12.10 Rule of thumb: symptom exaggeration or lack of effort

Rule	Explanation
1	Symptom exaggeration is not synonymous with lack of effort Symptom exaggeration refers to fabricating or over-reporting symptoms Poor effort describes behavior in which insufficient effort was put forth on testing
2	Symptom exaggeration and poor effort are not all or nothing constructs or behaviors; they can vary over time and reflect a continuum of behaviors

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Table 12.11 Possible underlying motivations for exaggeration (singly or in combination)

Motivation	Explanation
1	"Cry for help"
2	Self-justification, feeling entitled, avarice entitlement
3	Need to be perceived as sick/disabled (i.e., factitious disorder)
4	Attention/avoidance as reinforcer (attention from another, avoidance of unpleasant activity, other reinforcer, i.e., "secondary gain")
5	Concern that not being taken seriously enough
6	Depressive/negativistic cognition
7	Personality style/disorder
8	Frustration/anger
9	Deliberate exaggeration to affect litigation

Adapted from Iverson (2008), slightly modified

Table 12.6 presents the range of data gathered in assessment that is relevant to detection of malingering and related response biases. First, it notes how it is important to use appropriate tests of evaluee motivation and effort. Next, it presents types of inconsistencies and discrepancies that might be evident in assessments. Finally, it indicates the types of incontrovertible evidence of malingering that might derive from psychological tests of effort. In particular, this refers to performing significantly below chance on two-alternative forced-choice measures. I note that the authors of the table (van Gorp and Hassenstab 2009) indicate that in symptom

Table 12.12 Conditions to rule in differentially evaluating malingering presentation

Condition	Intentional feigning	Incentive
Conversion	N	N
Dementia with frontal lobe dysfunction	N	N
Factitious	Y	Assume sick role
Gross exaggeration	Y	Secondary gain
Hypochrondriasis	N	N
Mood	N	N
Munchausen syndrome by proxy	Y	Attention
Pain	N	Not conscious
Personality	N	N
Somatization	N	N
Medical	N	Suffering relief

Adapted from Morel (2010)
Abbreviations. N No, none, *Y* Yes

validity testing, when having multiple trials, statistical correction for avoiding Type I error should be undertaken.

As for inconsistencies and discrepancies, Tables 12.7 and 12.8 indicate the range of these important indications of possible malingering. Table 12.7 specifies that the inconsistencies/discrepancies might be either internal or external (e.g., respectively, marked differences in self-report and notable differences in reported and observed symptoms/functions).

Table 12.8 is one that I made based on the discrepancies and inconsistencies described in the MND (malingered neurocognitive dysfunction) model of Slick et al. (1999). In their model, they described nine inconsistencies/discrepancies, four involving differences between test data and other aspects of assessment data, four involving self-report, and one involving client validity checks in psychological testing. In Table 12.8, I added other kinds of discrepancies/inconsistencies that are possible within and across data sources of an assessment. A full-scale comprehensive assessment should consider all of these possible sources of suspicions about the evaluee's motivation and effort. Essentially, the new points ask evaluators to carefully examine discrepancies/inconsistencies in evaluee interviews, reliable documents, collateral information, and different test measures and instruments in all the various ways that they might be compared.

Tables 12.9 and 12.10 point out that symptom exaggeration and poor effort are different concepts, there might be symptom/function minimization as well as exaggeration, that the response bias might be deliberate for different reasons, and that the reasons might vary over time. Table 12.11 points out that there are multiple reasons why exaggeration of symptoms and functions might take place. When the evaluee deliberately exaggerates, an inference of malingering is warranted. However, the exaggeration might take place for other reasons; the evaluee might be depressed, seeking attention, wanting to be taken seriously, frustrated, or expressing a cry for help.

Table 12.13 Diagnosis and the DSM

Point	Explanation
1	Although potentially relevant, diagnosis is only one factor, and often not the most significant factor, that must be considered in assessing the severity and possible duration of psychological symptoms and associated impairment
2	Assignment of a particular diagnosis does not imply a specific level of impairment or disability since impairments, abilities, and disabilities vary widely within each diagnostic category
3	It does not encompass all conditions
4	Its nomenclature was not developed for purposes other than clinical treatment and research
5	Its use for forensic purposes carries a significant risk that diagnosis information will be misunderstood (American Psychiatric Association 2000)

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Abbreviation. DSM diagnostic and statistical manual of mental disorders (American Psychiatric Association 2000)

Finally, Tables 12.12 and 12.13 deal with diagnosis. First, before malingering can be diagnosed or ruled in, other disorders must be ruled out. For example, evaluees might be expressing a valid conversion disorder or hypochondriasis with no intention to feign. Or, they might be expressing factitious disorder or Munchausen syndrome by proxy with intention to feign but not for purposes of malingering. Other problematic disorders relate to pain disorder, somatization disorder, personality disorder, and mood disorders/conditions elicited by the event at claim, such as depression or anger. It should be noted that these problematic diagnoses are listed in the diagnostic manual used in these types of assessments, the DSM-IV-TR (Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision; American Psychiatric Association 2000). It is accepted that this is a compendium of disorders with various psychometric reliabilities and validities that change from one edition to the next in the manual. Moreover, a diagnosis by itself does not specify impairment or disability – that depends on considering context in interaction with symptoms/impairments consistent with the diagnoses/disorders. Finally, the DSM-IV-TR is not a forensic-oriented manual, per se.

12.4 Evaluator Biases and Errors

Tables 12.14, 12.15, 12.16, 12.17, 12.18, 12.19, 12.20, 12.21, and 12.22 provide an extensive listing of sources of biases and errors that might affect evaluators in their forensic mental health disability assessments. For example, in confirmation bias, evaluators might give more weight to information gathered that is consistent with

Table 12.14 Potential sources of bias and error

Source of bias	Explanation
Anchoring bias	Information received early in an evaluation process might be remembered better and used more than information received later on. Therefore, if the evaluator first asks about the event at issue and the evaluee's response to it, this may bias the evaluation (Bowman 2003; Risinger et al. 2002)
Attribution bias	Discounting contextual factors that might account for behavior and instead ascribing it to a permanent attribute of the evaluee (Sageman 2003)
Confirmation bias	Giving more weight to information that is consistent with one's own beliefs
Conformity effects	Conforming to the perceptions/beliefs/behavior of others people (Risinger et al. 2002)
"Halo effect"	Using evaluation of a person on a specific dimension or in general, as a basis for judgments on other dimensions (VandenBos 2009)
Hindsight bias	When people are aware of how an event turns out and this creates a belief that the outcome was more likely than any objective prediction would indicate
Observer effects	The thoughts, feelings, experiences, and expectations of individuals might influence their perceptions/conclusions, including scientists (Allchin 2008; Committee on Science, Engineering and Public Policy 1995; Risinger et al. 2002)
Overconfidence bias	The person feels certain of the conclusions offered, assumes they are valid, and does not keep an open mind in examining all of the relevant data (Bowman 2003)

Adapted from Kane and Dvoskin (2011)

their beliefs, hypotheses, or pre-existing influences. Or, they might be overconfident to the point of being biased in their evaluations and conclusions. They might ascribe too much importance to one item of data, or they might ignore important data. They might proceed in an inconsistent fashion or they might not change their hypotheses as new items of data are gathered. They might avoid gathering certain items of data. They might work with false assumptions about prevalence rates and use idiosyncratic methods in combining data to arrive at conclusions. Finally, they might use biased approaches in evaluating causality.

Tables 12.19, 12.20, 12.21, 12.22, and 12.23 continue to provide evaluator difficulties in assessments related to forensic disability and related cases. Assessment needs to involve material about background and history, the event at claim, and post-event effects, collateral information, and test results from a multistrategy, multimethod approach, such as might derive from using the MMPI-2 (Minnesota Multiphasic Personality Inventory, Second Edition; Butcher et al. 1989, 2001) and tests on response style and bias. Evaluators might not question or challenge the evaluee's self-report, and they might be overprotective and advocate for the evaluee. They might be afraid of stigmatizing the patient with the label of malingering even though it might be merited. They might think that calling a patient a malingerer does no harm and they might be afraid of complaints by a patient if they rightfully call him or her a malingerer.

Table 12.15 Ten fallacies in psychological assessment

Fallacy	Explanation
1. Mismatched validity	Psychometric properties might be adequate for a test in task for a population in a certain context (e.g., reliability, validity, sensitivity, specificity), but might not apply to the evaluee being assessed (e.g., validity)
2. Confirmation bias	We might seek/recognize/value information consistent with our attitudes/beliefs/expectations. Any initial impression formed might lead to selecting data that support that impression, and conversely, lead to discounting/ignoring/misconstruing data that do not fit it. Similar to making a hasty generalization
3. Confusing retrospective and predictive accuracy (switching conditional probabilities)	Predictive accuracy considers the evaluee's test results with the question: What is the likelihood, expressed as a conditional probability, that an evaluee with these data has condition/ability/aptitude/quality/etc. X? Retrospective accuracy considers the condition/ability/aptitude/quality, etc., in terms of asking: What is the likelihood, expressed as a conditional probability, that an evaluee who has X will exhibit these test data? Errors arise in confusing the "directionality" of the inference (e.g., the likelihood that an evaluee scoring positive on a hypothetical predictor variable will fit into a particular group versus the probability that evaluees in the group will score positive on the predictor variable). This error is similar to **affirming the consequent**
4. Unstandardizing standardized tests	Changing test instructions/test items/how items are administered/scored will compromise use of the actuarial base underlying the test
5. Ignoring low base rates	Ignoring the effects of base rates, especially if very low will alter interpretations and opinions
6. Misinterpreting dual high base rates	Two factors incorrectly appear associated because both have high base rates
7. Perfect conditions fallacy	Not realizing less than perfect assessment under conditions significantly distorted data. For example, taking medication could affect cognition or perception, or forgot it, too
8. Financial bias	Financial conflict of interest can alter (subtly or otherwise) how we collect, interpret, and present information
9. Ignoring effects of recording/third-party observers	Audio-recording/video-recording/presence of third parties might affect evaluee behaviour/response
10. Uncertain gatekeeping	Release evaluee data to people or parties legally/ethically unentitled

Adapted from Pope (2010)

Table 12.22 notes that there are organizational and societal factors that influence evaluations related to malingering. For example, it might be easier to allow false claims than investigate them. Also, certain subcultures might encourage false claims. Table 12.23 indicates ways of decreasing evaluator bias in forensic and clinical assessment, as described by Turk and Salovey (1986).

Table 12.16 Common evaluator errors

Error	Explanation
Overreliance on salient data	Clinicians tend to overestimate the prevalence of salient or unusual conditions (Wedding and Faust 1989). The frequency of rare diagnostic conditions is more likely to be overestimated than common or routine disorders
Representativeness	When evaluating a new patient, clinicians will generally compare the patient's symptom pattern with those of several other diagnostic categories in an attempt to find the best fit (Elstein and Schwartz 2002). However, the various disorders may have widely differing prevalence rates. This "base-rate neglect" often leads to diagnostic errors (Elstein 1999)
Failure to account for covariation	Left to their own devices, it is difficult for clinicians to accurately determine the nature of the relationship among variables, including various tests, symptoms, and disorders (Wedding and Faust 1989). For example, headaches and forgetfulness may be associated with a mild head injury but these symptoms are also very common in the general population. Put another way, clinicians may fail to appreciate the difference between the symptoms that are highly sensitive to a wide variety of conditions and symptoms that are highly specific to a single disorder
Conservatism	Clinicians tend to evaluate data in a sequential fashion but generally fail to revise their diagnostic probabilities accordingly. This bias has been termed "conservatism" (Edwards 1968). Complicating matters even further are various degrees of dependency or covariation among tests and other diagnostic indicators. The practical impact of this covariation is that some tests will provide minimal incremental diagnostic evidence because of high correlations with other indicators
Confirmatory bias	Clinicians may unwittingly seek information that confirms a favored diagnosis while ignoring data that are supportive of competing diagnoses. This bias is also known as "pseudodiagnosticity" (Kern and Doherty 1982)
Anchoring and adjustment	Clinicians have different initial diagnostic anchors, starting points, or "prior probabilities." For example, some clinicians might estimate the prevalence of malingering in litigated mild head injury cases to be 75 % while others would estimate it to be 5 %. Even when given the same data, the final or "posterior probabilities" might be quite discrepant owing to the power of the initial anchor (Tversky and Kahneman 1974)
Processing configural data	Clinicians have difficulty with optimally weighting and combining diagnostic information and rely, instead, on simplified decision strategies that may reject or misuse relevant information (Slovic and Lichtenstein 1971)

Table 12.17 Potential statistical remedies for evaluator errors

Error	Explanation
Base-rate or prevalence information	There are many sources on which to base prevalence estimates for disorders (e.g., clinical experience, regional or national prevalence statistics, practice databases, studies devoted specifically to determining prevalence rates) and studies in which diagnostic tests were developed to detect specific disorders (Straus et al. 2005)
Statistical artifact	No test is without measurement error. Moreover, there tends to be a great deal of neuropsychological variability even among persons without neurological disorders
Statistical decision rules	Grove et al. (2000) found that statistical prediction techniques were about 10 % more accurate than clinical predictions
Multivariable statistical decision rules	Optimal weighting and combination algorithms for those tests

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Table 12.18 Identifying and demonstrating expert bias

Bias	Explanation
Bias among experts	Common elements
Excluding evidence from the expert's data base or avoiding the collection of undesired information	Don't test/don't ask
	Use of tests that skew results or are likely to produce results contrary to preferred outcomes
Unevenness in including versus excluding materials from the report or when testifying	Important results not reported at all
	Inconsistent handling of positive and negative evidence
Creating the appearance of normality/ creating the appearance of abnormality	Scoring errors
	Selective use of test norms
	Reinventing the past
Drawing causal associations that are not justified, or disconnecting causal associations that are plausible	It's been there all along/it's never been there
	It is malingering/it is not malingering
	It's never an alternative cause/it's always an alternative cause

Adapted from Faust (2012), slightly modified

Table 12.19 Cautions in disability evaluations (psychologist)

Caution	Explanation
1	No single "gold standard" for evaluating disability
2	Use psychological/neuropsychological testing, self-reported information, third-party data
3	Self-report data might report better premorbid functioning and poorer current functioning than may be the actual case
4	Test selection on a case-by-case basis; considering question at hand, psychometric properties of tests, the legal standards of admissibility
5	Should include four to five tests, e.g., MMPI-2
6	Estimates of the base rate of malingering in disability evaluations range from 7.5 to 33 %
7	Assess response style
8	Use multistrategy, multimethod approach, e.g., multiscale inventories, structured interviews, and stand-alone symptom validity tests
9	Include third party data

Adapted from Piechowski (2011)

Abbreviation. MMPI-2 Minnesota Multiphasic Personality Inventory, Second Edition (Butcher et al. 1989, 2001)

Table 12.20 Cautions in disabilities evaluations (psychiatrist)

Caution	Explanation
1	Fail to question or challenge the patient's assertions
2	Fail to identify malingering
3	Become overprotective out of concern for the patient's wellbeing
4	Exhibit misplaced advocacy
5	Overdiagnose pathology in the presence of minimal findings to support a disability claim or minimize pathology to facilitate return to work
6	Fail to consider personal or social factors contributing to the work issue
7	Equate pathology and diagnosis with functional limitations and ability

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Table 12.21 Reasons why evaluator may withhold a diagnosis of malingering

Factor	Explanation
General issues	Diagnostic uncertainty
	Inadequate training
	Stigmatization (of patient)
	Social pressures (to be liked)
	Personal beliefs (of evaluator)
	"A victimless crime"? (harms no one not to call out a malingerer)
	Deceit (detecting deceit should not be deceitful)
Role factors	Forensic expert
	Might lead to board complaint
	Treating psychologist
	Advocating for patient

Adapted from Seward and Connor (2009)

Table 12.22 Societal features that influence the incidence of malingering

Feature	Explanation
1	Cultural/legislative framework
2	If social constructions, qualitative symptomatology, and with uncertain uncontrollability
3	Decision-makers might find it easier to allow false claims instead of denying real ones
4	Not enough post-decision checking and no sanctions for recoveries
5	Subcultures might accept such conduct, thereby encouraging false claims

Adapted from Main et al. (2008)

Table 12.23 Methods for decreasing biases in clinical reasoning

Point	Explanation
1	Note one's assumptions, become more aware of them (e.g., "Malingering does not happen in this clinic")
2	Document the evidence and arguments both for and against these assumptions
3	Make decision-making boxes on (1) evidence for genuine PTSD, (2) evidence against it, (3) evidence for malingering, and (4) evidence against it
4	Examine all the evidence before arriving at a conclusion

Adapted from Turk and Salovey (1986)
Abbreviation. PTSD posttraumatic stress disorder

12.5 Cautions and Appropriate Strategies in Assessment

Tables 12.24, 12.25, 12.26, 12.27, 12.28, and 12.29 review good recommendations for conducting assessments for forensic disability and related cases. Table 12.24 reviews the range of suspicions about malingering with respect to cognitive abilities. There are positive indicators, such as poor effort on testing and exaggerated symptoms in self-report, as well as distortions, which refer to inconsistencies/discrepancies.

Tables 12.25, 12.26, 12.27, 12.28, and 12.29 provide tools by way of psychological tests that could be used toward the assessment of malingering and related response biases. The evaluee's self-report should not be relied on solely. Response style scales, indices, and measures should be used, as well. There should be multiple scales, indices, and measures used, they should cover the range of psychological/psychiatric areas and cognitive domains that need to be addressed, and they should have adequate psychometric properties. The instruments used might involve standalone or embedded tests. The detection strategies might involve analyzing performance curves, easy and hard items, and floor and ceiling effects. The results of the

Table 12.24 Behaviors that may be indicative of malingering cognitive deficits

Behavior	Explanation
1	Poor effort
2	Production of nonexistent symptoms
3	Exaggerated symptoms
4	Denial of strengths
5	Distortion of history regarding symptoms
6	Distortion of premorbid functioning

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Note: Based on Faust and Ackley (1998)

Table 12.25 Checklist for assessment of response style in forensic examination contexts

List	Explanation
1	Consider all response styles
2	Avoid using only evaluee's self-report
3	Select response-style scales/indices/measures that fit the evaluee's reported symptoms/impairments/abilities
4	Decide if using highly correlated scales/indices/measures is appropriate
5	Avoid overinterpreting test findings
6	Clarity inferences/limitations in report/testimony
7	Ensure that all opinions about response style are "expert" (meet admissibility requirements)

Adapted from Otto (2008)

Table 12.26 Rule of thumb: testing for response bias

List	Explanation
1	Employ multiple effort indices to provide greater confidence in conclusions
2	Utilize effort indices with adequate sensitivity
3	Select measures of response bias/cut-offs appropriate for the differential diagnosis (e.g., actual versus feigned mild traumatic brain injury, psychosis, depression) and demographic and other characteristics of the test-taker (low IQ, learning disability, ethnicity/language, gender, etc.)
4	Choose a range of effort indices that encompass various cognitive domains (e.g., memory, attention, processing speed, visual spatial skills), and in particular those which overlap with claimed symptoms (e.g., decreased memory, math skills, thinking speed, etc.)
5	Provide results of effort indices in your report but in a manner that does not compromise test security (e.g., do not describe test stimuli or format)

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Table 12.27 Recommendations when analyzing psychometric data

Recommend	Explanation
1	Assess tests' psychometric properties (e.g., validity, reliability, sensitivity, specificity)
2	Review test protocols and scoring summaries for possible errors
3	Given the type of data a test yields, establish the nature of the hypotheses that can reasonably be generated
4	How much do the constructs assessed relate to the referral questions

Adapted from Piechowski (2011)

Table 12.28 Detection strategies in the neuropsychological assessment of malingered head trauma and related cognitive deficits

Strategy	Explanation
1	Floor effect
2	Performance curve
3	Magnitude of errors
4	Symptom validity testing
5	Atypical presentation
6	Psychological sequelae

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Note: Based on Rogers et al. (1993)

tests should be analyzed carefully and appropriately, for example, with care taken in choosing cut-scores, where applicable. Finally, alternative interpretations that are possible should be ruled out before the preferred interpretation is arrived at, including evaluating the validity of alternative reasons for poor effort and symptom exaggeration, before malingering is attributed.

Table 12.29 Elements for feigning evaluations

Element	Explanation
1	Ensure that emotional variables affecting motivation are adequately assessed (e.g., anger or blame and feelings of resentment or victimization, and pain, fatigue or other factors that may actually interfere with optimal performance….)
2	Maximize validity of evaluation procedures, including use of instruments with built-in symptom validity measures…
3	Employ shorter symptom validity tests. They might minimize possible negative reactions
4	Test apparent motivation and effort using multiple data sources
5	Think beyond either-or, clear-cut, one-dimensional categories…. Cut-off scores might create an artificial dichotomy on continuous phenomena. Estimate confidence levels of inferences, giving weight to the multiple factors that contribute to the data gathered…. (p. 18)

Adapted from Kane and Dvoskin (2011) based on Martelli et al. (2007)

12.6 Chapter Conclusion

The present chapter has analyzed factors related to evaluators in forensic and disability assessments that might affect the quality and direction of reports and testimony. The best way of controlling these potential sources of error and inaccuracy is to be well-trained, to check one's biases, and to implement a rigorous and psychometrically-sound assessment protocol.

Varela and Conroy (2012) summarized well the competencies needed in assessment in the area of forensic psychology (see Tables 12.30 and 12.31). In this regard, there are both generalized and specialized competencies. It is noteworthy that their first entry for generalized competencies concerns science. This leads to a point on strengths and weaknesses of assessment methods, others on multisource-multimethod assessment, and the limitations of assessment methods. Forensic psychologists need to recognize and counteract personal biases. Similarly, for specialized competencies, Varela and Conroy (2012) noted the need to resist treating as facts any probabilistic conclusions, despite any pressures from with the justice system (I would add from legal representatives and court-related venues).

In the next two chapters, I switch to examining some of the factors that might influence assessment in forensic disability and related determinations from the perspective of the evaluee, and conclude with an integration. Moreover, I offer perspectives on the evaluation of malingered PTSD (posttraumatic stress disorder).

Table 12.30 Generalized and specialty assessment competencies in forensic psychology: generalized

Competency	Explanation
Generalized	
Knowledge	
A.	Science, theory, and contexts related to psychological constructs being assessed
B.	Interaction between physical and psychological functioning
C.	Psychometric theory and test construction
D.	Strengths and weaknesses of assessment methods
E.	Ethical and legal issues in psychological assessment
F.	Influence of diversity on assessment process and outcome
Skills	
A.	Clinical and diagnostic interviewing
B.	Appropriate test selection, administration, scoring, and interpretation
C.	Data integration from multisource-multimethod assessment
D.	Effective written and oral communication of assessment findings
Attitudes	
A.	Recognition of personal bias that influence assessment process and outcome
B.	Understanding of the limitations of psychological assessment methods
C.	Readiness to seek consultation as needed

Table 12.31 Generalized and specialty assessment competencies in forensic psychology: specialty

Competency	Explanation
Specialty	
Knowledge	
A.	Statutes, case law, governmental rules, and other jurisprudence that may impact assessment
B.	Unique assessment techniques used to address psycholegal issues
C.	Unique rights of examinees in forensic contexts (e.g., avoidance of self-incrimination, refusal rights, prisoner rights)
D.	Unique ethical issues associated with forensic evaluations (e.g., appropriate disclosure to court representatives, defining the client, attorney-client privilege, consent for evaluation)
E.	Diverse cultural groups in justice system (e.g., criminal subculture, gang affiliation)
Skills	
A.	Use/integration of collateral data, including data sources unique to forensic contexts (e.g., police reports, crime witness statements, correctional records)
B.	Incorporation of psycholegal issues and pertinent jurisprudence when selecting assessment methods
C.	Administration, scoring, and interpretation of specialized forensic assessment instruments

(coninued)

Table 12.31 (continued)

Competency	Explanation
D.	Explanation of assessment methods and limitations of methods to non-psychologists representatives of the justice system
E.	Communication of clinical and psycholegal opinions to non-psychologist stakeholders in the justice system
Attitudes	
A.	Awareness of attitudes toward justice issues that may influence assessment process, outcome, and formulation of psycholegal opinions
B.	Acceptance of scrutiny and challenges to assessment methods and outcomes
C.	Acceptance of psychology's limited role relative to the overall goals of the justice system
D.	Resistance to treating probabilistic conclusions as facts, despite the pressure from representatives of the justice system
E.	Understanding of the limitations of forensic assessment techniques
F.	Understanding of the limitations and potential biases of collateral data

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Chapter 13
Assessing Psychological Injuries and Malingering: PTSD and Evaluee Considerations

13.1 Introduction

This chapter and the next one conclude the series of chapters on assessment in forensic disability and related determinations. It begins with a section on a primary topic in this monograph – malingered PTSD (posttraumatic stress disorder). Then, it examines evaluee factors as opposed to evaluator factors that might influence the assessment process. The next chapter deals with disability and report writing and, for the latter purpose, attempts an integration of evaluee factors in assessment. I developed my own tables for the task based on the many tables culled from literature that have been presented over the chapters on the topic.

Table of Terms and Sources

Abbreviation	Name	Source(s)
DAPS	Detailed Assessment of Posttraumatic Stress	Briere (2001)
DSM-IV	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition	American Psychiatric Association (1994)
M-FAST	Miller Forensic Assessment of Symptoms	Miller (2001)
MENT	Morel Emotional Numbing Test	Morel (1995, 1998)
MMPI	Minnesota Multiphasic Personality Inventory	Hathaway and McKinley (1943)
MMPI-2	Minnesota Multiphasic Personality Inventory, Second Edition	Butcher et al. (1989, 2001)
MMPI-2-RF	Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form	Ben-Porath and Tellegen (2008/2011)
MSVT	Medical Symptom Validity Test	Green (2004)
PAI	Personality Assessment Inventory	Morey (1991, 2007)
SCID	Structured Clinical Interview for DSM-IV	First et al. (1997)
SIRS	Structured Interview of Reported Symptoms	Rogers et al. (1992)
TOMM	Test of Memory Malingering	Tombaugh (1996)
TSI	Trauma Symptom Inventory	Briere (1995)
WMT	Word Memory Test	Green (2005)

G. Young, *Malingering, Feigning, and Response Bias in Psychiatric/Psychological Injury*, International Library of Ethics, Law, and the New Medicine 56,
DOI 10.1007/978-94-007-7899-3_13, © Springer Science+Business Media Dordrecht 2014

13.2 Evaluating Malingered PTSD

The assessment of malingered PTSD is fraught with difficulties because of the controversial nature of the diagnosis and the facility in malingering it. In Chap. 9, I had discussed the different approaches of Andrikopoulos and Greiffenstein (2012), Rosen and Grunert (2012), Lareau (2011), and Howe (2012) on assessing malingered PTSD.

In the first two tables of this present chapter (Tables 13.1 and 13.2), I take the conclusions of Lareau and Howe and organize them into tables. Both authors had adopted similar approaches of assuring that adequate assessments include good interview and test methods, in particular. They both mentioned various evaluator and evaluee factors. I had already mentioned in Chap. 9, that compared to Laureau, Howe emphasizes more the value of psychological tests in evaluating PTSD and in detecting malingering. About interviews, one might summarize by saying that the evaluator should have healthy skepticism about self-report and use open-ended questions at the beginning to help in this regard. About tests, classic ones such as the MMPI-2 (Minnesota Multiphasic Personality Inventory, Second Edition; Butcher et al. 1989, 2001) and the SIRS (Structured Interview of Reported Symptoms; Rogers et al. 1992) are emphasized, along with symptom validity tests (SVTs) and PTSD-specific measures, such as the DAPS (Detailed Assessment of Posttraumatic Stress; Briere 2001) and the MENT (Morel Emotional Numbing Test; Morel 1995, 1998). It is noted that there is no gold standard in malingering detection so that a multimethod, multisource approach should be used. Possible confounds in diagnosis include comorbidities, and possible confounds in interpretation include the issue of causation. Fabrication of symptoms might take place for many reasons, not just malingering and, if malingering is present, it might be partial.

Table 13.1 Considerations in malingered PTSD evaluations: Lareau (2011)

Consideration	Explanation
1	The differences between PTSD in clinical and forensic settings leads to concerns its diagnosis
2	Extreme variability in PTSD presentation, leads to questioning its utility
3	In many forensic cases, the accuracy of self-report and the truthfulness of the evaluee can be questioned
4	PTSD is easy to malinger, especially if self-report measures especially used
5	Comorbidity could confound
6	Evaluators thorough?
7	Difficult to identify the correct causative stressor, given past stressors, too, or relative contributions of difference stressors
8	Majority of PTSD cases spontaneously remit over time, even without psychotherapy
9	Early treatment, especially within the first few weeks, significantly decreases probability of chronic PTSD

Adapted from Lareau (2011)
Abbreviation. PTSD posttraumatic stress disorder

Table 13.2 Considerations in malingered PTSD evaluations: Howe (2012)

Consideration	Explanation
1	There continues to be no method or single instrument that is recognized as the best indicator for the detection of malingered PTSD
2	Instead, a multimethod and multisource approach appears best studied to distinguish genuine from malingered PTSD while minimizing potential false-positive results
3	Do not rely solely on subjective data. For example, symptom checklists and information obtained in a clinical interview should not be used in isolation to diagnose PTSD
4	It is important to collect objective data
5	Personality/psychiatric and cognitive complaints should both be assessed with objective methods
6	When possible, it is a good idea for the assessment to include a personality measure with well-established validity indices (e.g., MMPI-2-RF, PAI) a PTSD measure with validity indicators (e.g., DAPS), and psychiatric (e.g., SIRS) and cognitive (e.g., WMT, MSVT, TOMM) SVTs with solid psychometric properties. The MENT also provides useful information
7	No piece of evidence should be used in isolation
8	The clinical interview should begin with open-ended questions and the examiner must push for specific information from the examinee
9	Feigned and genuine symptoms may be present in the same individual
10	Individuals with mental disorders may fabricate symptoms and exaggerate symptoms for many reasons (e.g., access to services, worried deficits will not be detected, wanting additional remuneration)
11	Stating examiners should remain cognizant of potential symptom embellishment and fabrication does not infer individuals who sustained genuine injuries should be denied compensation
12	It simply means individuals should be compensated at the level of injury they obtained and for what actually occurred to them
13	No individual should be unjustly compensated at the expense of another

Adapted with permission of Springer Science + Business Media. Howe (2012); With kind permission from Springer Science + Business Media B. V. [Excerpt of 259 words, Pages 322–323]
Abbreviations. PTSD posttraumatic stress disorder, *MMPI-2-RF* Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form (Ben-Porath and Tellegen 2008/2011), *PAI* personality assessment inventory (Morey 1991, 2007), *DAPS* detailed assessment of posttraumatic stress (Briere 2001), *SIRS* structured interview of reported symptoms (Rogers et al. 1992), *WMT* word memory test (Green 2005), *MSVT* medical symptom validity test (Green 2004), *TOMM* test of memory malingering (Tombaugh 1996), *SVTs* symptom validity tests, *MENT* morel emotional numbing test (Morel 1995, 1998)

The remaining six tables in this section on malingered PTSD provide useful information that adds to the approaches of Laureau and Howe. Tables 13.3 and 13.4 concern malingered PTSD in the military, but I include them because, for the most part, the messages that they offer to the evaluator apply to civilian populations, as well. For example, in Table 13.3, Morel (2010) gives less importance to physiological/medical test results compared to Laureau. Morel also points out that evaluators might not verify the PTSD entry criteria A related to causality and the functional effect criteria F that is important in diagnosis and disability determinations. In

Table 13.3 Problematic issues in assessing malingered PTSD

Issue	Explanation
1	Limitations in detecting malingering by clinical interview alone
2	Lack of adherence to, and verification of, criterion A and criterion F
3	Reliance on the accuracy of patients' memories of traumatic events
4	False beliefs regarding military
5	Overconfidence in physiological or medical neuroimaging test results
6	Use of face-valid self report measures of PTSD
7	Failure to acknowledge or identify invalid test performance
8	Reliance on published research that is biased, problematic, or incomplete
9	Professional and intrinsic needs of physician
10	Altruism/misplaced compassion/empathy
11	Restricted clinical experience
12	Confirmatory biases
13	Noncritical acceptance of previous diagnosis
14	Failure to consider alternative diagnosis that may result from trauma
15	Differential diagnoses: separating malingering from factitious and somatoform disorders
16	Misunderstanding of how malingering is inferred
17	Binary classification of non-exclusionary data

Adapted from Morel (2010), slightly modified
Abbreviation. PTSD posttraumatic stress disorder

Table 13.4 Aids in detecting malingering

Point	Explanation
1	The detection of malingering is typically a probabilistic judgment
2	In the absence of definitive evidence, such as an admission of faking, the best we can usually do is arrive at conclusions like "probable malingering" versus "no evidence of malingering."
3	It is unwise to use tests simply to "confirm" one's impression from the interview
4	For routine clinical practice with treatment-seeking patients, it would be too time-consuming and expensive to administer a full battery of malingering assessments
5	Rather, we suggest that clinician's administer to their patients the M-FAST (taking only 5–10 min) and a diagnostic interview, such as the SCID
6	Available background material such as previous clinical records should also be reviewed, and significant others such as spouses could be interviewed
7	For the proportion of patients in which these measures provide hints of malingering, then a more detailed evaluation could be conducted, such as the SIRS, MMPI-2, or both
8	For those unusual cases in which even this battery is insufficient, then psychopsychological or neuropsychological assessments could be added

Adapted with permission of Elsevier. Reprinted from Taylor et al. (2007), Copyright (2007), with permission from Elsevier. [Excerpt of 168 words, Page 34]
Abbreviations. M-FAST Miller forensic assessment of symptoms (Miller 2001), *SCID* structured clinical interview for DSM-IV (First et al. 1997), *DSM-IV* Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (American Psychiatric Association 1994), *SIRS* structured interview of reported symptoms (Rogers et al. 1992), *MMPI-2* Minnesota Multiphasic Personality Inventory, Second Edition (Butcher et al. 1989, 2001)

Table 13.5 Signs of malingering

Level	Explanation
Strongly suggestive	Claimant states that he or she has applied "because I need more money" with no explanation as to why he or she is disabled that from work
	Despite claims he or she cannot work, he or she engages in a wide range of social and recreational activities
	Significant exaggeration of mental disorder symptoms that is not due to extreme distress or other factors
	MMPI-2 validity indices in the "Conservative Cut" range or SIRS classification in the Feigning range
	Reliable collateral source describes the person functioning well with only mild symptoms
	History of deceit in order to obtain financial gain, e.g., conviction for embezzlement
Definitive	Person admits to fabricating symptoms in order to receive compensation benefits
	Videotape evidence clearly contradicts reported symptoms. For example, person claims mental disorder and a back injury that requires him to always use a wheelchair. He presents to the exam in a wheelchair. He is subsequently observed and videotaped trotting to his car in the parking lot
	Records contradict statements
	Person scores above chance level on an SVT, e.g., a score of 37 or above on the MENT

Adapted with permission of Springer Science+Business Media. Worthen and Moering (2011); With kind permission from Springer Science+Business Media B. V. [Table 4, Page. 202]
Abbreviations. MMPI-2 Minnesota Multiphasic Personality Inventory, Second Edition (Butcher et al. 1989, 2001), *SIRS* structured interview of reported symptoms (Rogers et al. 1992), *SVT* symptom validity test, *MENT* morel emotional numbing test (Morel 1995, 1998)

Table 13.4, Taylor et al. (2007) provide general guidelines for "putting it all together" in malingering detection for PTSD. Note the two-phase approach for clinicians as opposed to forensic evaluators – of using screening measures and then using the MMPI-2 and the SIRS, if needed.

In Table 13.5, in doing this type of work, Worthen and Moering (2011) also support the MMPI-2 and the SIRS, as well as SVTs and the MENT. They refer to inconsistencies, such as claiming not being able to work while engaging in a broad range of recreational and social activities.

Table 13.6 repeats this theme and adds that PTSD symptoms might be reported in a discrepant fashion. For example, nightmares might involve the exact repetition of the trauma at claim. Table 13.7 notes that the trauma might be improbable or implausible as presented. The malingerer might overemphasize flashbacks related to the trauma relative to other symptoms. Table 13.8 points out that evaluees might be too zealous to disguise their trauma and show low anxiety. Table 13.9 adds that dreams might involve themes of grandiosity and power and that, if anger is present, it might not be about the event and its consequences but about authority.

Table 13.6 Clinical decision model for establishing malingered PTSD

Factor	Explanation
A	Ascertain motive to malinger PTSD
B	At least two of the following criteria are present: 1. Irregular employment/job dissatisfaction 2. Prior claims for injuries 3. Antisocial personality traits (not applicable to criminal-forensic cases) 4. Evasiveness/contradictions 5. Noncooperation in the evaluation 6. Capacity for recreation, but not work 7. No nightmares or, if present, exact repetitions of the event at issue
C	Confirmation of malingering by one of the following: 1. Confession 2. Unambiguous psychometric evidence 3. Strong corroborative evidence (e.g., videotape contraindicating alleged symptoms, i.e., person is working despite claims to contrary)

Adapted from Resnick et al. (2008)
Abbreviation. PTSD posttraumatic stress disorder

Table 13.7 Critical cues to malingering (posttraumatic stress disorder, PTSD)

Cue	Explanation
1	History of antisocial behavior/personality
2	Previous claims for damages; previous lawsuits (i.e., litigation proneness)
3	Noncooperation case-related assessment requests/procedures
4	Evasiveness, vagueness, or inability to produce details about the event at claim
5	General tendency blame all ongoing problems on effects of the event
6	Incorrect details of the stressors presented; providing improbable/implausible information about it
7	Behaviors inconsistent with known patterns of PTSD
8	Overemphasis on "flashback" experiences
9	Psychometric testing indicates inconsistency, defensiveness, malingering, lying
10	Falsification/alteration of documents, certificates, reports, etc.

Adapted from Kane and Dvoskin (2011) based on Wilson and Moran (2004), slightly modified

13.3 Assessing Malingering: Evaluee Factors

The collection of tables in this section emphasizes evaluee factors that complicate assessment of PTSD and that create suspicions about malingering. In Table 13.10, Simon and Abrams (2011) note that the litigation context in and of itself is a factor that should raise suspicion. I would note that this does not imply that every evaluee who enters the forensic office should be considered a suspect malingerer. Simon and Abrams then refer to inconsistencies and discrepancies. They refer to response bias in psychological testing. Also, they refer to attitude, such as a lack of cooperation and anti-social personality trait or disorder. Simon and Abrams point out that evaluees

Table 13.8 Behaviors suggestive of malingered PTSD

Behavior	Explanation
1	Check Internet to prepare all DSM-IV criteria for PTSD
2	Too eager to relate the trauma
3	Have low anxiety, little depression, no irritability
4	No nightmares, work 40+h per week, but claim non-functionality
5	Make too far-fetched, difficult-to-believe claims of trauma
6	Report long history of psychological distress, but no history of treatment and present with otherwise good functioning
7	Report extreme patterns of PTSD symptoms, high anxiety, deep depression, but who do not present this way
8	With extreme attitude of entitlement

Adapted from Ingram et al. (2012)
Abbreviations. PTSD posttraumatic stress disorder, *DSM-IV* = Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (American Psychiatric Association 1994)

Table 13.9 Clinical indicators of malingered combat-related PTSD

Genuine PTSD	Malingered PTSD
Minimizes relationship of problems to combat	Emphasizes the relationship
Blames self	Blames others
Dreams: on helplessness, guilt	Dreams: on of grandiosity, power
Denies emotional impact of combat	"Acts out" alleged feelings
Reluctant to discuss combat memories	"Relishes" discussing them
Survivor guilt relates to specific incidents	Generalizing guilt over surviving war
Avoidance of triggers	No avoidance
Anger about helplessness	Anger at authority

Adapted from Resnick et al. (2008)
Abbreviation. PTSD posttraumatic stress disorder

Table 13.10 Indices of possible malingering in context of litigation

Index	Explanation
1	History of accidents/injuries
2	Self-inflicted injuries
3	Poor vocational history
4	Complaint/overdramatization/overstatement
5	Vaguely-defined
6	Claimed inability to work although complaints can engage in pleasurable activities
7	Marked inconsistency between clinical findings and complaints
8	Inconsistency complaints in different contexts
9	Poor effort on psychometric testing
10	Uncooperative with evaluation/treatment
11	Antisocial (and other DSM-IV Cluster B) personality traits/disorders

Adapted from Simon and Abrams (2011)

Table 13.11 Recommendations for the mental and behavioral disorders independent mental health

Evaluation	
Suggestion	Explanation
1	Assess personality structure and health, noting antisocial, borderline, histrionic, narcissistic, passive-dependent, and passive-aggressive features, in particular
2	Evaluate factors such as somatization, a defense mechanism. Do medical records indicate it as a primary defense mechanism
3	Screen past and current substance abuse, as they might mimic symptoms of psychiatric diagnoses at issue
4	Evaluate legal history (e.g., prior lawsuits, work-related injuries, bankruptcies, driving under the influence, incarcerations, restraining orders, court-ordered child support)
5	Evaluate military history (overseas service, adjustment to service, type of discharge, pay grade, military arrests, disability pension)
6	Check overendorsing symptoms during the evaluee interview
7	Assess the evaluee's motivation for return to work (RTW) to adoption of role. Does the condition at issue lead gratifying unconscious or conscious needs in the patient (e.g., dependency)? Is secondary gain involved? Some combination of these elements involved?
8	Assess symptom exaggeration/malingering. Malingering might be subtle, marked, or frank
9	Assess the evaluee's attitude to the third-party payer (employer/insurance company, etc.). Does the injured worker feel the payer responded appropriately?
10	Assess the influence of the litigation process on RTW (promoting return to work vs. illness behavior). Is there a history of failed RTW attempts? Who endorsed – physician, patient, or attorney – whether there would be a return to work and that it failed?
11	Determine whether adequate pharmacologic/biological treatment has been administered. Assess compliance of medications use; dosage/duration. Has the evaluee frequently refused medications because of putative side effects? Has the evaluee accepted and complied with all reasonable treatment/intervention?

Adapted from Rondinelli et al. (2008)

might overdramatize or overstate their case yet present vaguely defined symptoms. They also advise to check carefully historical factors, such as poor work history.

In Table 13.11, Rondinelli et al. (2008) note that the evaluee's personality, defense mechanisms, unconscious needs, attitudes, substance use, illness behavior, and reluctance to take medications or undergo treatment that might help are all factors to consider. In Table 13.12, Gold and Shuman (2009) add that the support of the workplace is important, as is the evaluee's support network. Table 13.13 from Rondinelli et al. (2008) adds that degree of self-confidence and quality of coping style are important to consider. Table 13.14 adds that attitude includes whether there is resistance to or avoidance of taking standardized psychological tests. Rondinelli et al. (2008) add in Table 13.15 that evaluees might not only overreact and are vague but also they might be repetitious, struggle to answer, and report little fluctuation in their symptoms.

Table 13.12 Factors that may affect motivation to work

Factor	Explanation
Medical	Psychiatric illness
	Physical illness
	Traumatic brain injury
	Real or perceived effect of workplace context on disorder
	Side effects of medication
	Substance use
Nonmedical	Demoralization due external factors, such as chronic illness or family problems
	Availability and strength of support network
	Attitude toward job, workplace, or company context
	Personality style: dependent, regressive vs. resilient, adaptive contact
	Fears of losing entitlement
	Secondary gain

Adapted with permission of Springer Science+Business Media. Gold and Shuman (2009); With kind permission from Springer Science+Business Media B. V. [Table 5.4, Page 119]

Table 13.13 Factors that might affect motivation

Factor	Examples
Medical	Psychiatric illness: schizophrenia, depression
	Side effects of medication
	Substance intoxication/abuse
	Traumatic brain injury
Nonmedical	Evaluee's personality/coping style
	Self-confidence
	Demoralization with condition
	Social network support
	Embellishment/exaggeration
	Malingering
	Fear of losing entitlement

Adapted from Rondinelli et al. (2008)

Table 13.14 Behaviors that may be indicative of malingering

Behavior	Explanation
1	Dishonesty
2	Inconsistency between reported and observed symptoms
3	Inconsistency between physical and neuropsychological findings
4	Failure on measures designed to detect malingering
5	Resistance to or avoidance of standardized tests
6	Nonorganic presentation on medical examination (e.g., Video EEG Telemetry)
7	Delayed cognitive complaints following trauma

Adapted with permission of Springer Science+Business Media. Pella et al. (2012); With kind permission from Springer Science+Business Media B. V. [Excerpt of 42 words, Pages 124–125]

Table 13.15 Characteristics suggestive of malingering

Characteristic	Explanation
1	**Overreaction**
2	Description of condition vague/not clear/**lack detail**
3	Symptoms more **repetitious**. In contrast, genuine symptoms are variations on a theme (i.e., recurrent dreams in posttraumatic stress disorder (PTSD) are variations on a theme, not absolute repetitions of the trauma)
4	Struggle to answer when asked about **coping strategies**. Even people who are psychotic or severely depressed have coping strategies
5	Report symptoms more **bizarre** than genuine symptoms (e.g., giants rather than ordinary-sized people in a visual hallucination)
6	More likely report **sudden onset**, whereas genuine hallucinations/delusions usually come on gradually
7	More likely to report **constant** symptoms (even hallucinations, delusions, impairments usually intermittent)
8	About **cognitive impairments** (memory, concentration impairments), may stumble over memory issues. People with psychosis would likely answer unless severely preoccupied by psychotic phenomena/unable to communicate in other obvious manners.

Adapted from Rondinelli et al. (2008)

Table 13.16 is based on Iverson and Lange (2012) and it applies to the assessment of TBI (traumatic brain injury) and neurocognitive complaints, in particular. However, their arguments are important and apply to all types of psychological injury in the forensic disability and related assessment context. For personality factors, they review research showing that there are three types of personality that might influence the development and maintenance of symptoms subsequent to an MTBI (mild TBI). For example, some people overemphasize their symptoms, some people have pre-existing unresolved symptoms appear, and some people have vulnerable personality styles, such as dependency, insecurity, and borderline characteristics. The complications in assessment include expectation effects, which, in this case, means that survivors believe that certain symptoms will develop inevitably as a result of their injury. In the nocebo effect, expectations also come into play. In the good-old-days bias, people over-report how well they had been doing prior to the event at claim. Having received a diagnosis by itself is sufficient to affect performance. In iatrogenesis, treating professionals provide diagnoses that are incorrect but lead to "self-fulfilling prophecy" behavior.

Tables 13.17 and 13.18 were derived from a chapter on response bias in TBI cases, but they apply equally to other types of psychological injury, at least in how I modified them. These tables serve to introduce the next section on pain, too (see Tables 13.17 and 13.18).

In the last tables of this section, Tables 13.19, 13.20, 13.21, and 13.22 deal with issues in assessment related to pain, as a way of completing discussion of the assessment of the major psychological injuries that had been dealt with in this chapter. The tables deal with risk factors for poor treatment outcome, rather than dealing with assessment, per se. They note that complicating factors concern history ones, such as

Table 13.16 Factors relating to the perception and reporting of symptoms

Factor	Explanation
Personality characteristics and disorders	Kay et al. (1992) proposed three personality factors that may influence the development and maintenance of symptoms following MTBI: (1) *Differences in individual response style to trauma.* Some individuals tend to overemphasize cognitive and physical symptoms, whereas others tend to deemphasize them; (2) *Differences in the emotional significance of an event.* For some people the injury can trigger old, unresolved emotional issues; and (3) *Vulnerable personality styles.* These include overachievement, dependency, insecurity, grandiosity, and borderline personality characteristics (not disorder)
Expectation as etiology	Following an injury, people's anticipation or expectation of certain symptoms might cause them to misattribute future normal, everyday symptoms to the remote injury – or fail to appreciate the relation between more proximal factors (e.g., life stress, poor sleep, and mild depression) and their symptoms (Ferguson et al. 1999, Gunstad and Suhr 2001)
Nocebo effect (see Gunstad and Suhr 2001)	The nocebo effect is the causation of sickness by the expectations of sickness and by associated emotional states. That is, the sickness is, essentially, caused by expectation of sickness (Hahn 1997)
Good-old-days bias	The tendency to view oneself as healthier in the past and to underestimate past problems is referred to as the "good old days" bias. In some studies, patients with back injuries, general trauma, and patients who have sustained MTBIs appear to overestimate the actual degree of change that has taken place post-injury by retrospectively recalling fewer pre-injury symptoms than the base rate of symptoms in healthy adults (e.g., Davis 2002; Gunstad and Suhr 2001, 2004). This bias is further complicated by involvement in personal injury litigation (e.g., Lees-Haley et al. 1997) and poor effort on neuropsychological testing (Iverson et al. 2010)
Diagnosis threat	Applied to MTBI, diagnosis threat is the tendency for individuals to perform worse on neuropsychology testing when attention is called to their history of MTBI and the potential negative effects MTBI might have on cognition. That is, Suhr and Gunstad (2002, 2005) reported that university students who are told they are being tested to look for problems relating to a remote MTBI actually perform more poorly than those tested following neutral instructions
Iatrogenesis	A state of ill health or adverse effect caused by medical treatment. For example, diagnosing "brain damage" as an explanation for persistent problems seen long after a mild concussion can be iatrogenic for some people. Telling her she has brain damage and that she will need to cope and compensate, when in fact the probability of permanent brain damage is very low and the probability of an anxiety disorder and sleep disturbance is high, can be iatrogenic. It can also, of course, result in failure to provide the most effective treatment

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Abbreviation. MTBI mild traumatic brain injury

Table 13.17 Negative response bias (some inconsistencies within/between signs involve the given list)

Point	Explanation
1	Reported symptoms
2	Examination/test performance
3	Clinical presentation
4	Known diagnostic patterns
5	Observed behavior (in another setting)
6	Measures of similar abilities (inter-test scatter)
7	Similar tasks or items within the same exam/test (intra-test scatter)
8	Difficult and easy items/tasks
9	Different testing sessions
10	Normative data for similar injury/illness
11	History/course
12	Psychological symptoms (e.g., triple vision)
13	Different interviews/examiners
14	Corroboratory data
15	Failure on physical exam procedures "assessing" malingering
16	Cultural difference expectations
17	Desperation induced malingering/symptom exaggeration inappropriately expressed
18	Sociopathic, manipulative/opportunistic, passive-aggressive, impatient, or rebellious personality traits
19	Skepticism inappropriately expressed
20	Iatrogenic bias inappropriately expressed

Adapted from Martelli et al. (2012)

Table 13.18 Some variables associated with negative response bias

Point	Explanation
1	Anger/resentment
2	Fear of failure/rejection; irrational fear of injury extension/reinjury/pain
3	Loss of self-confidence/self-efficacy/depression
4	External worry/loss of control/anxiety over losing disability status, benefits/safety net
5	Insufficient personality and coping resources and skills
6	Prolonged inactivity/nonfunctionality
7	Excessive reinforcement for "illness" behavior
8	Inadequate and inaccurate medical/legal information/treatment

Adapted from Martelli et al. (2012)

Table 13.19 Challenges in detecting pain feigning

Challenge	Explanation
1	Understanding patient reasons for wanting health-care consult
2	Lack of physical pathology that could explain condition
3	Inappropriate concern about functional/psychological "overlay"
4	Is self-report valid index of subjective state
5	Distinction between pain experience and pain expression
6	Is it possible to establish conscious intent to feign

Adapted from Craig and Badali (2004)

Table 13.20 Summary of exclusionary biopsychosocial risk factors for treatment

Kidd and North (1996), Beltrutti et al. (2004)	Nelson et al. (1996)	Doleys and Olsen (1997)	Beltrutti et al. (2004)	Williams et al. (2003)
	Active psychosis	Active psychosis	Psychosis	Psychosis
	Active suicidality	Active suicidal behavior		Active suicidal behavior
	Active homicidality	Active homicidal behavior		Homicidal behavior
	Insufficiently treated major depression	Major uncontrolled depression	Severe depression	Severe depression
	Insufficiently treated mood disorder			Severe affective instability
	Insufficiently treated anxiety	Major uncontrolled anxiety		Severe anxiety
Somatoform signs on testing	Somatization disorder/ somatoform signs on testing			Somatization, hypochondriasis, conversion disorder
History of substance abuse	Active alcohol or drug dependency	Active alcohol/drug addiction	Alcohol/drug abuse; drug seeking behavior	Active substance abuse
Inadequate support, especially if limitations of functioning	Lack of appropriate social support	*[Inadequate family support]*	Lack of social support	
	Cognitive deficits compromise reason, judgment and memory	Serious cognitive defect	Insufficient knowledge of therapy	Severe cognitive deficits, odd beliefs about implant
	Severe sleep disorder	Severe sleep disturbance		
			Poor compliance	Defiant and unwilling to comply
Unrealistic outcome expectations (e.g., total pain relief)		*[Unrealistic expectations for pain relief]*		Rigid, unrealistic expectations
Unusual/invariant pain ratings	*[Unusual pain ratings]*			Pain associated with psychological factors only

(continued)

Table 13.20 (continued)

Kidd and North (1996), Beltrutti et al. (2004)	Nelson et al. (1996)	Doleys and Olsen (1997)	Beltrutti et al. (2004)	Williams et al. (2003)
Paranoid, schizoid, antisocial or borderline personality	*[Unstable personality]*	*[Personality disorder]*		Severe impulsivity
Unresolved litigation involving medical condition	Compensation or litigation dependent on stimulator outcome	*[Unresolved litigation]*		Litigation or compensation dependent on stimulator outcome
Faulty view of pain, poor coping, pessimism, catastrophizing		*[Incorrect beliefs about pain]*		
				Severe doctor-patient conflict[a]
				Factitious disorder, malingering[a]

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Notes:

[] These risk factors are regarded as cautionary in this system

[a]Similar risk factors regarded as cautionary in other systems

Table 13.21 Summary of cautionary biopsychosocial risk factors for treatment

Nelson et al. (1996)	Doleys and Olsen (1997)	Williams et al. (2003)	Block et al. (2003)	den Boer et al. (2006)
Depression		Mild to moderate depression	Depression	Depression
Anxiety		Mild to moderate anxiety	Anxiety	Anxiety
Nonphysiologic signs			Nonorganic signs	
		Somatization with explainable pain	Pain sensitivity	Somatization
	Inadequate family support	Family distress/dysfunction	Lack of or excessive support	
	Hx of abuse/severe dysfunction	Social distress/dysfunction	Hx of being abused	
	Unresolved litigation	Litigation/disability compensation	Litigation	
	Inability to understand or manage implantable device	Cognitive deficits		Low education
	Worker compensation issues	Job distress/dysfunction	Job dissatisfaction, work compensation	Job dissatisfaction
Unusual pain ratings	Exaggerated pain ratings	Pain disorder with medical and psychological features	Abnormal pain ratings, inconsistent pain behaviors	Excessive pain
Poor coping, pessimism, catastrophizing	Incorrect beliefs about pain		Catastrophizing, defeatist resignation	Passive coping
	Unrealistic expectations for pain relief	Unrealistic expectations that appear modifiable	Pain sensitivity	
	Dependency on medications	Past Hx of substance abuse	Rx seeking, substance abuse	
		Dr./patient conflict	Anger, splitting, threatening behavior	
		Non/poor compliance	Noncompliance	
Unstable personality	Personality disorder	Mild to moderate impulsivity, affective instability	Personality disorder, Hx of psych disturbance	

(continued)

Table 13.21 (continued)

Nelson et al. (1996)	Doleys and Olsen (1997)	Williams et al. (2003)	Block et al. (2003)	den Boer et al. (2006)
Diffuse psychopathology			Pathological depression	
		Excessive disability		Poor functioning
			Pain duration >6–12 months	Extended time off of work
			Destructive surgical procedure	
			Hx of previous surgeries	
			Hx prior medical problems	
			Obesity and Tobacco use	

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Table 13.22 Qualitative variables in assessing response bias

Area	Example
Time/response latency comparisons across similar tasks	*Inconsistencies across tasks*
Remote memory report	Difficulties, especially if < recent memory, or severely impaired in absence of gross amnesia
Personal information	Very poor personal information in absence of gross amnesia
Comparison between test performance & behavioral observations	Discrepancies
Inconsistencies in history and/or complaints (performance)	Inconsistencies across time, interviewer, etc.
Comparisons across testing sessions (qualitative & quantitative)	Poorer/inconsistent performance on retesting
Symptom self-report (complaints)	High frequency of complaints; patient complaints > significant others'
Symptom self-report: early vs. late symptom complaint	Early symptoms reported late
Other pain-related indicators	
Failure to comply with reasonable treatment	
Report of severe pain with no associated psychological effects	
Marked inconsistencies in effects of pain on general activities	
Poor work record and history of persistent appeals against awards	
Previous litigation	

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substance abuse and active psychosis, unusual or exaggerated pain ratings/symptoms, somatoform symptoms, certain personality disorders, poor coping, poor social support, job distress/dysfunction, comorbid conditions, catastrophizing, poor compliance, and being in litigation, aside from malingering. As for Table 13.22, it lists ways of detecting response bias mostly using clinical judgment, including for pain cases.

13.4 Chapter Conclusion

This chapter, as well as the next one, are practical chapters that will help evaluators conduct impartial, comprehensive, and scientifically-informed assessments. However, provision of necessary knowledge to conduct assessments in this manner does not guarantee that it will happen. Each evaluator conducting these types of mental health assessments related to psychological/psychiatric injury and disability might fall into the adversarial divide and have influencing biases in arriving at conclusions about their evaluees' psychological condition, disability, and possible malingering. Evaluators need to be vigilant about all the influences on them and on

their evaluees in order that their assessments meet the required professional, ethical, scientific, and court requirements.

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Chapter 14
Assessing Psychological Injuries and Malingering: Disability and Report Writing

14.1 Introduction

This chapter moves beyond the predominant theme of the book on malingering detection and its assessment to determination of disability once malingering has been ruled out and to report writing. The evaluator in forensic disability and related assessments must be prepared for possible testimony, and court-related considerations are included in the chapter. I offer a summary of factors to consider in report writing that summarizes the major points in prior chapters.

Table of Terms and Sources

Abbreviation	Name	Source(s)
DSM	Diagnostic and Statistical Manual of Mental Disorders	American Psychiatric Association (2000)
DSM-IV	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition	American Psychiatric Association (1994)
DSM-IV-TR	Diagnostic and Statistical Manual of Mental Disorders Fourth Edition, Text Revision	American Psychiatric Association (2000)
GAF	Global Assessment of Functioning Scale	Young (2008)
ICD	International Classification of Diseases	World Health Organization (2007)
ICF	International Classification of Functioning, Disability and Health	World Health Organization (2001)
MMPI-2	Minnesota Multiphasic Personality Inventory, Second Edition	Butcher et al. (1989, 2001)
MMPI-2-RF	Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form	Ben-Porath and Tellegen (2008/2011)
SIRS	Structured Interview of Reported Symptoms	Rogers et al. (1992)
SSA	Social Security Administration	Social Security Administration (2006)

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14.2 Disability

Tables 14.1, 14.2 and 14.3 present different definitions of impairment, disability, and handicap. In general, for mental health, impairments relate to an important deviation, loss, or loss of use of a psychological/psychiatric function, whereas disabilities concern the functional consequences of the impairment, for example, in term of activity limitations, participation restrictions, or both (e.g., with respect to work, school, and activities of daily living). As for handicap, it is more of a social rather than legal term, for example, how one perceives oneself or how society perceives the person with impairment/disability. In Table 14.4, Peterson and Paul (2009) emphasize that to understand impairment and disability, one needs to consider the interaction of the relevant symptoms and functional effects in terms of the

Table 14.1 Defining impairment and disability

Term	Definition
Impairment	A significant deviation loss or loss of use of any body, structure, or function in an individual with a health condition disorder or disease (International Classification of Diseases [ICD]; World Health Organization 2007)
Disability	A physical or mental condition that limits a person's movements; a disadvantage or handicap; with respect to an individual, a physical or mental impairment that substantially limits one or more of the major life activities of such individual, a record of such an impairment, or being regarded as having such an impairment (Individuals with Disabilities Improvement Act [IDEA] 2004)

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Table 14.2 Defining and explaining impairment and disability

Term	Definition/explanation
Impairment	1. According to the International Classification of Functioning, Disability and Health (ICF)/the World Health Organization (WHO) "Impairments are manifestations of dysfunctions in body structures/functions, differentiated from their underlying pathology" (Peterson 2005) 2. A medically determinable physical/mental condition in anatomical/physiological/psychological abnormalities verified by medically acceptable clinical/laboratory diagnostic techniques, or evidence consisting of signs, symptoms, and laboratory findings – and not only by self-reported symptoms (Social Security Administration 2006)
Disability	1. Alteration in meeting personal/social/occupational demands, or statutory/regulatory requirements, because of an impairment. Activity/task that cannot be accomplished. Reflects the interaction of impairment and external requirements. The gap between what a person can do and what the person needs/wants to do (American Medical Association 1995, p. 2) 2. Impairments, activity limitations, or participation restrictions that derive from the interaction between a condition and personal status/existing external factors (Peterson 2005)

Adapted from Cox and Goldberg (2010)

Table 14.3 Defining impairment, disability, and handicap

Term	Definition
Impairment	Departure from typical bodily structure/physiological/psychological functioning.
Disability	Lasting physical/mental impairment significantly interfering with ability to function in one or more central life activities (e.g., self-care, ambulation, communication, social interaction, sexual expression, employment)
Handicap	An inability to perform one of more educational/physical/social tasks, or consistent under-performance in them as a result of a physical/nonphysical obstacle/hindrance

Adapted from VandenBos (2007)

Table 14.4 Points about impairment and disability

Point	Explanation
1	The ICF defines disability as an overarching term referring to any impairments, activity limitations, or participation restrictions, or "the outcome or result of a complex relationship between an individual's health condition and personal factors, and of the external factors that represent the circumstances in which the individual lives" (World Health Organization 2001, p. 17)
2	The term emphasizes how the environment can be used to better understand disability, and how disability advocacy occurs through social change (Hurst 2003)
3	While disability is defined within the ICF proper, it is operationalized by activity limitations (p. 213), in combination with substituting the antiquated term handicap with participation restrictions
4	Thus, "…impairments are interactions affecting the body; activity limitations are interactions affecting (an) individual's actions or behavior; participation restrictions are interactions affecting (a) person's experience of life: (Leonardi et al. 2006; p. 1220; parentheses are the author's)
5	Activity is defined as the execution of a task or action by an individual such as sitting, copying, calculating, or driving
6	Participation is involvement in a life situation
7	As the term impairment, activity limitations and participation restrictions "are assessed against a generally accepted population standard" (World Health Organization 2001, p. 15) for someone without a similar health condition

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context or environment. Moreover, they should be evaluated with respect to norms that are generally accepted in the comparison population.

Figures 14.1, 14.2 and 14.3 illustrate models of disability. Figure 14.1 and 14.3 present the AMA Guides' (American Medical Association, Rondinelli et al. 2008) model of disability as, reproduced from the WHO ICF approach (International Classification of Functioning, Disability and Health; World Health Organization 2001). Figure 14.2 presents a model by Dixon et al. (2008) that integrates the WHO ICF model and the theory of planned behavior (TPB; Ajzen 1985, 1991). Quinn et al. (2012) showed that the integrated model had better fit and accounted for more variance than other models in a population of orthopedic patients

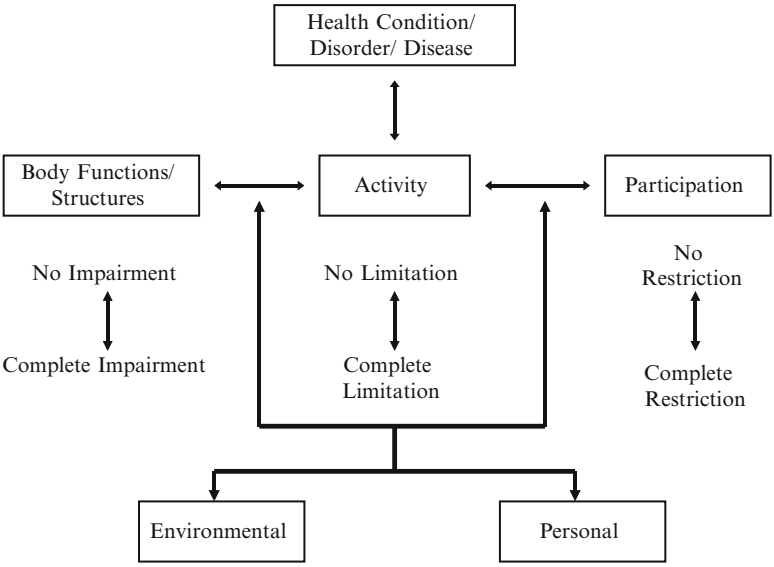

Fig. 14.1 ICF model of disablement (adapted)
The World Health Organization (WHO 2001) model of disability includes participation restrictions, activity limitations, or both, and considers personal/environmental context
Adapted from Rondinelli et al. (2008)

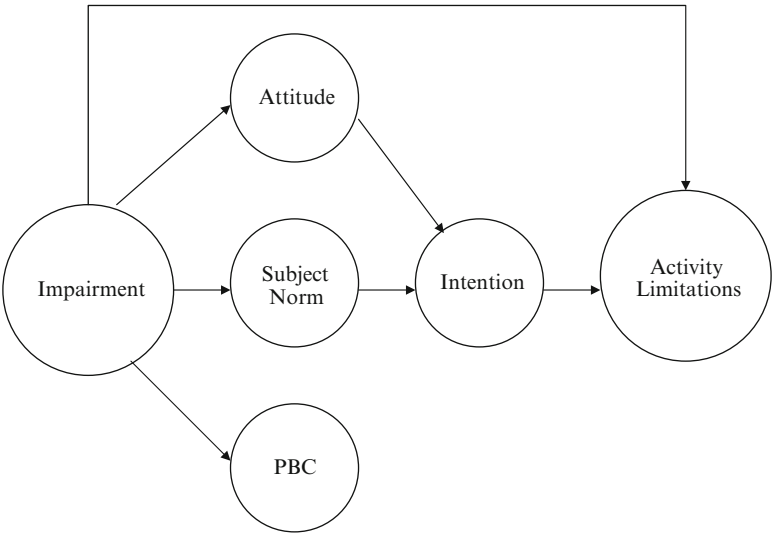

Fig. 14.2 Integrated biomedical and behavioral model of activity limitation
Note. PBC perceived behavioral control
The theory of planned behavior (TPB) integrated into *International Classification of Functioning, Disability and Health*, as tested by Dixon et al. (2008)

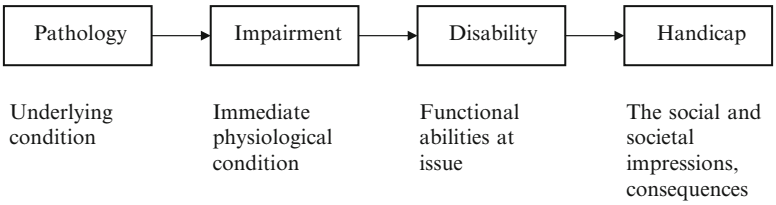

Fig. 14.3 Impairment, disability, handicap
Impairment: significant deviation/loss/loss of use of body structure/body function in a person having a health condition/disorder/disease
Disability: activity limitation/participation restriction or both in a person with a health condition/disorder/disease
Adapted from Rondinelli et al. (2008) and Rondinelli and Duncan (2000) based on World Health Organization's (WHO 2001) International Classification of Illness

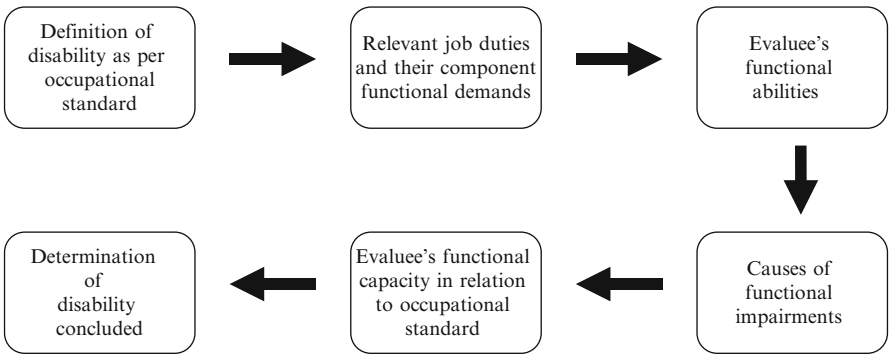

Fig. 14.4 The six-step process of a disability evaluation
A model of the steps in disability evaluation that includes standards, functions, causes and impairments
Adapted from Piechowski (2011)

administered questionnaires before and after surgery. Figure 14.4 is an approach to disability evaluation provided by Piechowski (2011). She noted that one needs to consider the occupational standard involved, the components of the relevant job duty, the relationship of the residual functional abilities with the work demands, etc., in relation to relevant standards, in order to arrive at a valid disability determination. Piechowski (2013) provided a useful review of topics to consider in disability evaluations. She listed history (social, occupational, legal, medical, mental health, substance abuse), job duties, daily activities, and disability/functional impairments. In the workers compensation context, relating functional impairments to work demands is critical in disability evaluations.

In Table 14.5, Gold and Shuman (2009) list common elements in mental health disability evaluations. In particular, they noted that establishing impairments and disability is a step that follows determination of diagnosis and other DSM (Diagnostic and Statistical Manual of Mental Disorders; American Psychiatric

Table 14.5 Disability evaluations: common questions referred for evaluation in psychiatric illness

Question	Explanation
1	Multiaxial diagnosis, including GAF score in the DSM-IV-TR
2	Impairments in work function and the relationship to psychiatric symptoms
3	Causation
4	Disability from one type or own type of work
5	Disability from any type of work
6	Restrictions and limitations
7	Current and past treatment, its adequacy, and claimants response to treatment
8	Treatment recommendations, including recommendations for medical consultations or psychological testing
9	Prognosis
10	Maximum medical improvement
11	Motivation
12	Malingering, primary and secondary gain

Adapted with permission of Springer Science + Business Media. Gold and Shuman (2009); with kind permission from Springer Science + Business Media B. V. [Table 5.3, Page. 116; slightly modified]

Abbreviations. *GAF* Global Assessment of Functioning Scale, *DSM-IV-TR* Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (American Psychiatric Association, 2000)

Table 14.6 Social Security Administration's (SSA) criteria for assessing functional impairment ("Paragraph B")

Category	Examples of related activities
1. Marked restriction of activities of daily living	Cleaning, shopping, cooking
	Taking public transportation
	Paying bills
	Maintaining a residence
	Caring appropriately for grooming and hygiene
	Using telephones and directories
	Using a post office
2. Marked difficulties in maintaining social functioning	Ability to interact independently, appropriately, effectively, and on a sustained basis with other individuals
	Ability to get along with other persons, including family members, friends, neighbors, grocery clerks, landlords, or bus drivers
	A history of altercations, evictions, firings, fear of strangers, avoidance of interpersonal relationships, or social isolation
	Cooperative behaviors, consideration for others, awareness of others' feelings, and social maturity
	In work situations: interactions with the public, coworkers, and persons in authority (e.g., supervisors)

(continued)

Table 14.6 (continued)

Category	Examples of related activities
3. Deficiencies of concentration, persistence, or pace	Frequent failure to complete tasks in a timely and appropriate fashion in work settings
	Ability to work at a consistent pace for acceptable periods of time and until a task is completed
	Ability to repeat sequences of action to achieve a goal or an objective
	Ability or inability to complete tasks under the stresses of employment during a normal workday or workweek (i.e., 8-h day, 40-h week, or similar schedule
	Ability to complete tasks without extra supervision or assistance and in accordance with quality and accuracy standards, at a consistent pace, without an unreasonable number and length of rest periods, and without undue interruptions or distractions
4. Repeated episodes of deterioration or decompensation in work or work-like settings	Withdrawal from the work situation
	Exacerbations or temporary increases in symptoms or signs accompanied by a loss of adaptive functioning, as manifested by difficulties in performing activities of daily living, maintaining social relationships, or maintaining concentration, persistence, or pace
	Worsening symptoms or signs that would ordinarily require increased treatment, a less stressful situation, or a combination of the two interventions
	Documentation of the need for a more structured psychological support system, such as hospitalizations, placement in a halfway house, or a highly structured and directed household

Adapted with permission of Springer Science + Business Media. Gold and Shuman (2009); with kind permission from Springer Science + Business Media B. V. [Table 7.2, Pages. 168–169]. *Note*: Based on Social Security Administration (2006, June)

Association 2000) aspects. Table 14.6 is an important one because it indicates the four major spheres involved in determining functional impairment. These are Social Security Administration (SSA) criteria, but are widely used, e.g., by the AMA guides. In effect, the four criteria relate to "marked restrictions" in (a) activities of daily living, (b) social function, (c) work or other role-related "concentration, persistence or pace", and (d) coping.

In the next figure, I present approaches to disability with respect to one of the three major psychological injuries – PTSD (posttraumatic stress disorder). Figure 14.5 shows that posttraumatic stress might elicit functional impairments and disability, and a multifactorial, biopsychosocial model is needed to guide evaluation.

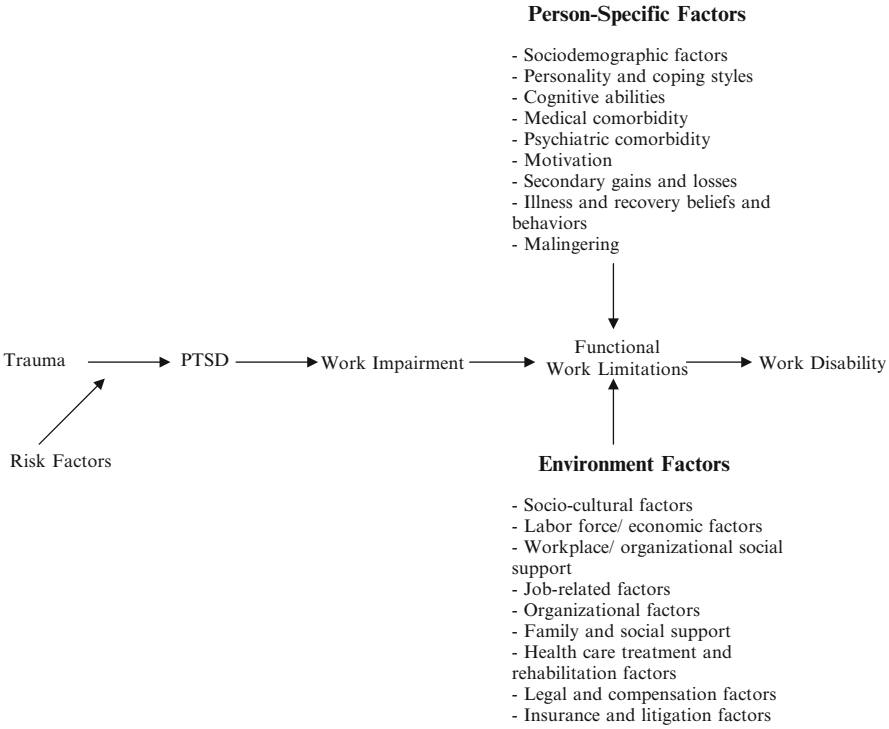

Fig. 14.5 A biopsychosocial model of work impairment and disability in PTSD
A model of PTSD-induced work disability with person and environmental contexts considered
Abbreviation. PTSD posttraumatic stress disorder
Adapted with permission of Springer Science + Business Media. Wald and Taylor (2009); with kind permission from Springer Science + Business Media B. V. [Figure 1, Page. 258; slightly modified]

14.3 Assessing Malingering: Integrations for Report Writing

In the last few chapters, I have presented a multitude of tables derived from other sources that help understand effective assessment procedures and processes in the forensic disability and related contexts, in general, and with respect to the major psychological injuries, such as PTSD, in particular. In this section, I offer integrating tables that can help further with respect to forensic disability and related evaluations of psychological injuries. They can be used to determine the range of factors to consider in assessments, report writing, and testimony. However, note that these tables are not meant to cover and replace all the others but only add to them.

Table 14.7 begins by repeating the central theme in psychological assessment that evaluation should be impartial, comprehensive, and scientifically-informed. It should include multiple sources of information and use multiple tests. The evaluator should aim to get all the data needed and not ignore any data collected. The interview of the evaluee should begin with a good mental status exam. The interview

Table 14.7 Factors contributing to difficulties in evaluations: assessment

Type	Examples
General	Impartial
	Comprehensive
	Scientific
Interview	Not get all data needed
	Ignore certain data
Mental status	Cognitive
	Behavioral
	Emotional
Context	Work/school/role
	Social/family
	Other (i.e., finances)
Records/collaterals	All requested records/documents
	All collaterals (personal, work, role, professional) consulted
	Only reliable ones used
Tests/measures	Chosen to fit question at hand
	Multitrait, multimethod
	Psychometrically sound
	With appropriate norms, cut-offs, etc., for question
Symptom validity tests	Stand-alone
	Two-alternative forced choice
	Embedded in personality inventories
	Embedded in neurocognitive batteries
	Structured interview ones
Inconsistencies/discrepancies (within, across) each of the following:	Interview
	Observations
	Tests
	Reliable records/documents
	Reliable collateral information
	Known effects/expected symptoms
Event at claim	Fact vs. perception
	Dose-response relationship, absence
Provider	Advocate?
	Dismissive?
Evaluator	Biases at play?
	Adversarial divide at play?
	Blaming victim/extreme entitlement in victim?
Evaluation inconsistencies	Magnify/minimize pre-event status
	Magnify/minimize event and immediate reaction
	Magnify/minimize post-event symptoms and functions
Evaluee (verbal)	Reliable historian/respondent?
	Inconsistent/discrepant/vague?
	Evasive/uncooperative/resisting/refusing?
Past treatments	Therapies followed?
	Medications taken?
Evaluee (other)	Overdramatization?
	Catastrophizing?
	Crying for help?

(continued)

Table 14.7 (continued)

Type	Examples
Response bias	Feigning, fabrication
	Gross exaggeration
	Exaggeration
	Other
Malingering	Full
	Partial
	Mixed
	Ambiguous/gray zone
Intent in deception	Deliberate/conscious, unconscious?
	For secondary gain?
Idiographic/nomothetic	Consider evaluee as individual and according to normative research
	Individual differences
	Cultural, minority differences
	Sex differences
Research	Absence of relevant research?
	Relevant research analyzed?
Scientific process	Methods scientifically informed?
	Scientific reasoning in conclusions?
Interpretation	Consider all symptoms/functions/roles in arriving at disorders/diagnoses/disabilities/dysfunctions/impairments
	If there are any implicated roles/disorders/diagnoses/disabilities/dysfunctions/impairments, do all data support them?
	Present all evidence for the favored conclusion, for and against, and all the evidence for other conclusions rejected, for and against
Differential diagnosis	Genuine conditions
	Related conditions to malingering (i.e., factitious disorder)
Diagnosis	DSM difficulties
	Polytrama/comorbidities
	Subsyndromal/partial/features
	In remission
Disabilities	Job/role duties
	Residual abilities, impairments
	Transferable skills, retrainable?
Prognosis	Probable course?
	Permanent?
	Treatable?
Causal factors	Pre-event related
	Event-related
	Post-event related
	Extraneous/unrelated/auxiliary
Insurance process	Litigation
	Iatrogenesis
Causation	Event at claim material contributor?
	Thin/crumbing skill considered? (i.e., pre-existing responsible in full, in part)

Abbreviation. DSM Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association 2000)

should examine the whole person in context. Aside from classic tests, such as the MMPI-2 (Minnesota Multiphasic Personality Inventory, Second Edition; Butcher et al. 1989, 2001) and the SIRS (Structured Interview of Reported Symptoms; Rogers et al. 1992), symptom validity tests (SVTs) should be used. Newer versions of the classic tests should be considered, e.g., the MMPI-2-RF (Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form; Ben-Porath and Tellegen 2008/2011). Aside from seeking direct evidence of malingered presentation and performance in interviews and tests, as well as whatever reliable records and documents are available, careful comparison of the information in all sources might reveal inconsistencies and discrepancies. In addressing the event at claim, the evaluator should verify differences in the facts available and the evaluee's perception of the facts. Moreover, one should query whether there is a dose-response relationship between injuries sustained and psychological effects reported.

The evaluator should verify whether past treatment providers, especially those who have filled in reports and forms, are reliable and not either advocating for the evaluee or dismissive of her or him. The evaluator should ask the same questions of him or herself; to what degree do biases affect the assessment being undertaken. Needless to say, in this area of psychological/psychiatric assessment, the adversarial or plaintiff/defense divide might be an important influence. Does one overly blame the victim/survivor or does the victim/survivor overly claim entitlement? Does the evaluee reliably report pre-event situation, the event at claim, and its immediate physical and psychological effects, the course of symptoms, functional effects in the immediate aftermath and current post-event symptoms and functions? Or, is the evaluee an unreliable historian/respondent and demonstrates test performance invalidity? However, perhaps the poor test performance and effort are due to other factors, such as being overwhelmed, catastrophizing, and crying out for help. In other words, one needs to ascertain whether the response styles and biases that might be evident reflect an unspecified, general feigning or fabrication or, rather, outright malingering.

Needless to say, many evaluees will present and perform in an ambiguous, mixed, or uncertain way, which has been called the grey-zone, or being indeterminate in their presentation and performance. Their grey-zone status might leads to a grey zone in interpretation, as well. One way to minimize the uncertainty in these kinds of cases is to know the scientific literature well, assuming it is available or applicable to the case at hand, to use scientifically-informed methods and procedures, and to use scientific reasoning. The evaluator should respect the individual differences that include cultural and minority differences, for example, both in the literature and in the evaluee being assessed. In the assessment, the evaluator needs to consider distinctions between symptoms versus impairments, and disorders/diagnoses versus disabilities/dysfunctions. Has the evaluator considered isolated diagnoses versus ones with polytrauma and comorbidity and have subsyndromal or partial features of disorders been considered when they are known to be as problematic as full-blown disorders or otherwise problematic? Have job or role duties been described in relationship to residual abilities and transferable skills? In arriving at conclusions, has all the reliable evidence been considered? Has the conclusion that has been proffered been supported more clearly compared to the alternatives? Have other diagnostic possibilities been

Table 14.8 Factors contributing to difficulties in evaluations: pre-existing

Type	Examples
Psychological/psychiatric vulnerabilities/disorders	Treatment required
	Clinical conditions
	Personality
	Intellectual
	Substance dependence/abuse
	Psychological abuse
	Mood/motivation
	Coping/decompensation
History/context	Health, physical
	Financial
	Work
	Disabilities
	School
	Military
	Family
	Partners
	Social relations
	Deaths (significant others)
	Criminal/law/police/litigation
	Living arrangements
	Neighborhood
	ADLs
	Stressors/traumas

ruled out? Have all relevant causal factors been considered, including the effect of litigation, and the like, and whether the evaluee has been compliant with treatment recommendations in order to attempt to mitigate loss? Ultimately, the question is whether the event at claim has been a material contributor to the psychological condition presented and whether pre-existing factors are responsible in full or in part (i.e., "crumbling" versus "thin skull").

Table 14.8 examines the range of pre-existing factors that might influence disability determinations in the forensic context. Table 14.9 emphasizes that events at claim might lead to physical injuries, psychological injuries, or both, and the injuries might be at either minor or major levels. Moreover, the facts in the event at claim might be perceived as more traumatic by the evaluee than the actual facts themselves. Table 14.10 points that the evaluee might also be unduly influenced by the litigation process and iatrogenic factors. I should point out that this can work toward favoring the defense as well as the plaintiff. For example, evaluees might be stressed by insurance exams and defense medicolegals because they fear that their fabrication and deception would be exposed.

Table 14.9 Factors contributing to difficulties in evaluations: event-related

Type	Examples
Physical injury – major (e.g., more than whiplash)	Facts
	Perception
	Body reaction
	Psychological reaction
Physical injury – minor	Facts
	Perception
	Body reaction
	Psychological reaction
Trauma – major (e.g., meets a criteria for PTSD)	Facts
	Perception
	Body reaction
	Psychological reaction
Trauma – minor	Facts
	Perception
	Body reaction
	Psychological reaction
Other (e.g., illness in disability evaluation)	Facts
	Perception
	Body reaction
	Psychological reaction

Table 14.10 Factors contributing to difficulties in evaluations: litigation/iatrogenic

Type	Examples
Litigation (stress/psychological reaction at each point)	Potential litigation event
	Engaging attorney
	Litigation steps begin
	Court (or related venues)
Iatrogenic (stress/psychological reaction at each point)	Multiple assessments (treatment providers)
	Multiple treatments
	Multiple assessments (plaintiff)
	Multiple assessments (defense)
Insurance process (stress/psychological reaction at each point)	Claim initiated
	Multiple letters/forms
	Claims denied (e.g., for treatment/supports)
	Third party attitude

14.4 Legal Aspects and Testimony

The last section of this chapter considers the legal steps in psychological injury cases (Tables 14.11 and 14.12) and then provides an outline of how psychological/psychiatric injury reports should be written after the evaluation is completed (Table 14.13). The description of the legal steps is more from the perspective of what the evaluators need to do in forensic disability assessments to meet court admissibility standards.

Table 14.11 Steps in the legal process

(1) Complaint lodged (tort); Referral made to psychologist; Referral question addresses theory of the case	**(2) Psychologist checks** whether: Index event really took place; Is there a discredited diagnosis; inappropriate therapy, etc.?	**(3) Psychologist proceeds** to causal analysis in a comprehensive, impartial assessment (Did index event A cause reported condition B?)	**(4) Legal gatekeeper** function: Judge determines expert's qualifications and evidence's admissibility	**(5) Legal deliberation:** Psychologist's evidence included in legal decision making process
Process				
The referral question	*Verification by psychologist*	*Psychological assessment*	*Level of court*	*Evidence*
To determine whether index event A caused reported condition B:	(To the degree possible, and without having an investigative role):	Comprehensive, impartial Undertaken of symptoms, impairments, diagnoses, disorders, disabilities, possible malingering, etc. which addresses:	Federal State Provincial etc.	Report Testimony Deposition etc.
Index event (A)	*Of index event* (A)	*Causation process*	*Regulation/rule in jurisdiction*	*Trier of fact*
Is it proximate, psychological cause of a clinically significant, functionally relevant effect or reported condition	Is it possible, plausible Is it documented *Of reported condition* (B) In other documents(s), does the diagnosis fit the person and event	Two-tiered process: (a) What is normative expectation in research evidence (nomothetic) (b) Applying this to individual case (idiographic)	*Frye* *Daubert* *Kumho/Joiner* FREs *Mohan* etc.	Judge Jury *Thresholds/tests* Disability Functional impairment Degree Permanency etc. (varies with jurisdiction)

Reported condition (B)	In the professional opinion of the psychologist, is PTSD, or any disorder or syndrome, even possible, given the nature of the event	*Causation product*	*Admissibility* Yes, No	*Compensation*
Reported symptoms may constitute impairments, disorders, diagnoses, disability, etc., which are serious severe, etc.	Has a diagnosed disorder or syndrome been deemed valid in the literature	Two decisions possible: (a) Causation evident (A caused B) (full, partial) (b) Causation absent	*Attorney's role* Initiate tort/defend Retain expert Adhere to rules	Two decisions possible: (a) Liability: Yes, No (b) Damages: based on factfinder's judgment of degree of harm
Context				
Psychologist must be competent to address each component of the referral question	Psychologist may believe, for example, that:	Court decisions on "crumbling" skull, "thin" skull, etc.	Regulations/rules vary according to jurisdiction	How are legal tests and thresholds different from psychological ones
Referral source/side-defense of plaintiff; or by court appointment	(a) And MVA had been stages, (b) A child's testimony had been elicited inappropriately, (c) Battered Women's Syndrome is valid	For example, is a complainant with a "thin" skull eligible for psychological therapy and/or for compensation, and, if so, to what degree	Regulations/rules are not uniformly interpreted/applied Variable knowledge of psychology, science	Dialogue between law and psychology e.g., on how disability is defined psychologically and legally

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Table 14.12 Multifactorial assessments framework

Precausal/preexisting state	Causal event	Caused condition
Process		
Functional status	*Index event at possible proximate cause*	*Impairments/disorders*
For example,	For example,	For example,
Health status, work/school status	MVA	Symptoms/impairments
Personal/family/relational status	Rape	Course
Life role satisfaction	TBI in accident	Diagnosis/disorder(s)
Leisure activity/social status		Normative expectation
		Prognosis
Psychological status	*Causal mechanism*	*Disability/handicap*
For example,	For example,	For example,
Personality	Traumatic aspects of:	Functional limitations
Psychopathology	MVA	Outcome
Psychological vulnerability	Rape	Catastrophic injury
History of prior stressors/ their perception	TBI in accident	Quality of life
Coping skills		Suffering
		Permanency
		Barriers to recovery
Context		
For example,	For example,	For example,
Social support	Loved one killed	Iatrogenic therapy
History of life successes/their perception	Child hurt in MVA	Treatment compliance
	Job requires skills affected by TBI	Positive motivation
		Secondary gain
		Malingering

Adapted with permission of Springer Science + Business Media. Young (2007); with kind permission from Springer Science + Business Media B. V. [Table 3.2, Page. 67]
Abbreviations. MVA motor vehicle accident, *TBI* traumatic brain injury

Table 14.11 specifies after referral and when beginning the assessment that part of what the evaluator needs to specify to the degree possible is not only the details of the event at claim but its credibility. Once the evaluation is completed and the report written or testimony prepared, the evaluator is ready for the next step in the court process, which might begin with judges determining the testimony/report's admissibility. Legal decisions will hinge on issues of functional impairment, disability, permanence of the damages, and so on. The evaluator needs to be aware that different court venues have different standards and thresholds, and the nature of the communications between the evaluator and law will vary accordingly. Table 14.12 further specifies that the functional outcome in disability cases could examine quality of life, pain and suffering, and the catastrophic nature of the injury involved but, that being said, the causality analysis might lead to conclusions that malingering, more than anything else, had been involved.

As for recommendations for report writing (and organized testimony when reports are not required), the model presented in Table 14.13 follows standard

Table 14.13 Psychological injury report summary approach

Section	Details
Referral information	Referral source
	Professional role
	Reason/purpose
	Legal complaint(s)
	Psycholegal issue(s)
	Intended use(s) of report
	Confidentiality/privilege/access questions
	Nature of report
Informed consent	Attorney
	Party
Procedure of exam/nature of information	Assessment instruments and dates administered
	Questionnaires and dates completed
	Evaluee interviews and dates undertaken
	Collateral sources
	Documents
	Other persons
	Other professionals
	Check anything non-standard
Evaluee's current presentation	Mental status exam/description
Relevant history	Family of origin (e.g., abuse)
	Relationships
	Family members/partners/children
	Other significant people
	Residential
	Educational
	Religious/spiritual/philosophical
	Recreation
	Leisure activities/hobbies
	Volunteer activities
	Employment
	Employment/unemployment (and records)
	Homemaker/caregiver
	Disability
	Military service (and records)
	Current and past legal
	Juvenile/divorce/paternity/family law
	Agency/union grievance/governmental/administrative
	Civil/business law
	Criminal misdemeanors/activities
	Other criminal allegations/charges
	Substance use
	Alcohol/drug/other substance use/abuse
	Physical health
	Health/fitness
	Treatments/medications
	Injuries/illnesses
	Hospitalizations/surgeries/major treatments

(continued)

Table 14.13 (continued)

Section	Details
	Mental health
	Therapy/counseling/treatment
	Other interventions (e.g., group/psychoeducational)
	Medications needed
Event at issue	Information
	Evaluee's description of events
	Collateral information (documents, people)
Assessment results	Data/results interpretations attributed
	Comment on any prior testing
Conclusions	Summary of examination information
	Extra-examination information (e.g., research, literature)
	Opinion for each psycholegal issue
	Caveats
	Limitations
	Additional information needed
	Offer to make corrections of any factual errors
	Offer to consider new information
	Recommendations, if any

Adapted from Greenberg (2003), based on Greenberg (2001)

forensic guidelines. I do note that much of the table involves background and history of the evaluee relative to event/post-event effects.

As for Figure 14.6, the model presented is more conceptual than practical and complements Table 14.13. It indicates the legal tests and psychological constructs involved as well as assessment and testimony practices. The evaluator must assess damages for the event at claim (e.g., in tort actions), and arrive at conclusions based on the legal test of "preponderance" of the evidence. Other relevant models for report writing are presented in Tables 14.14 and 14.15.

DeMier (2013) noted three central points to effective forensic report writing. (a) First, essential points need to be included, such as use of third-party information and description of functional abilities. (b) Second, the report should show clearly how clinically findings relate to the legal question at hand, so that psycholegal opinions are clearly justified. (c) Third, the issue of whether forensic psychologists should address ultimate issues is actually secondary to the quality of the data gathered and justification of the interpretations and conclusions presented. I surmise when the latter is done well, the trier of fact is in a position to arrive at valid ultimate issue opinions independent of whether the forensic psychologist has done so in her/his report testimony.

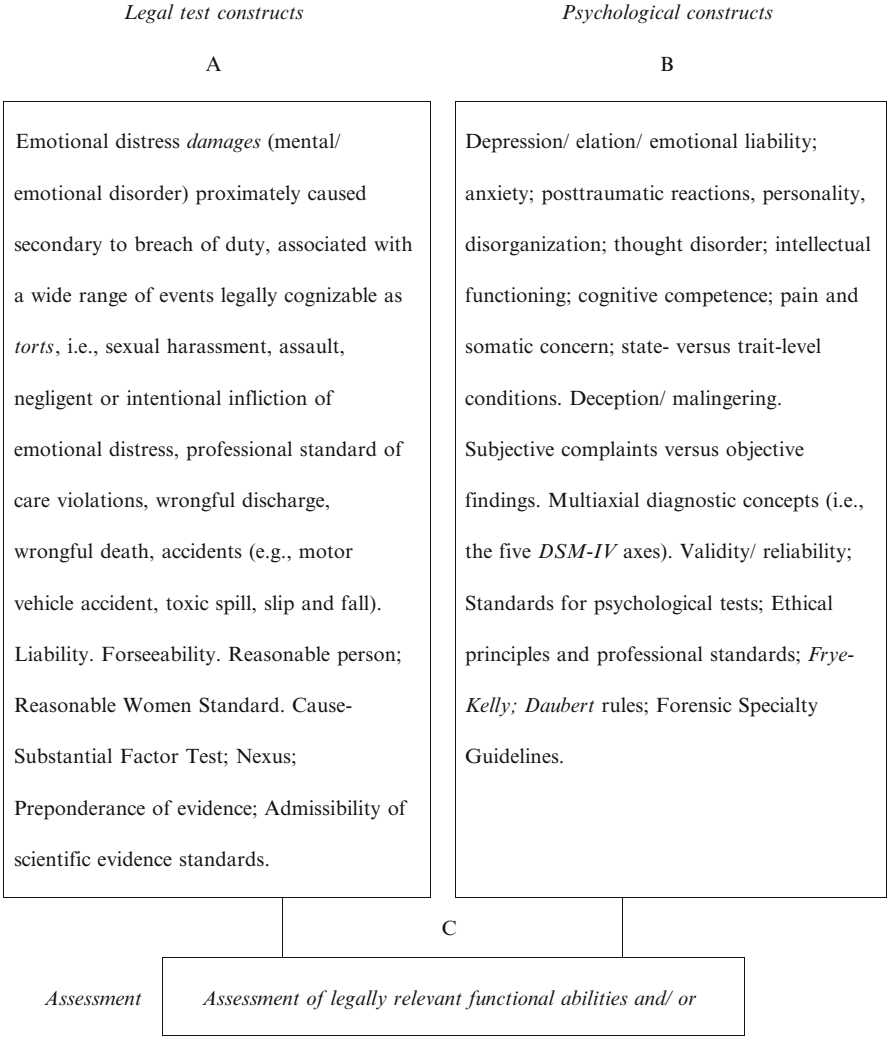

Fig. 14.6 Psychological injury evaluation model
Abbreviation. DSM-IV Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (American Psychiatric Association 1994)
The figure indicates a model for psychological injury evaluations. It indicates legal tests, psychological constructs, assessment procedures, and testimony preparation
Adapted with permission of John Wiley & Sons. Weissman and DeBow (2003). Copyright © 2003 and John Wiley & Sons, Inc. Reproduced with permission of John Wiley & Sons, Inc. [Table 3.3, Page. 45] Note: based on Grisso (1986)

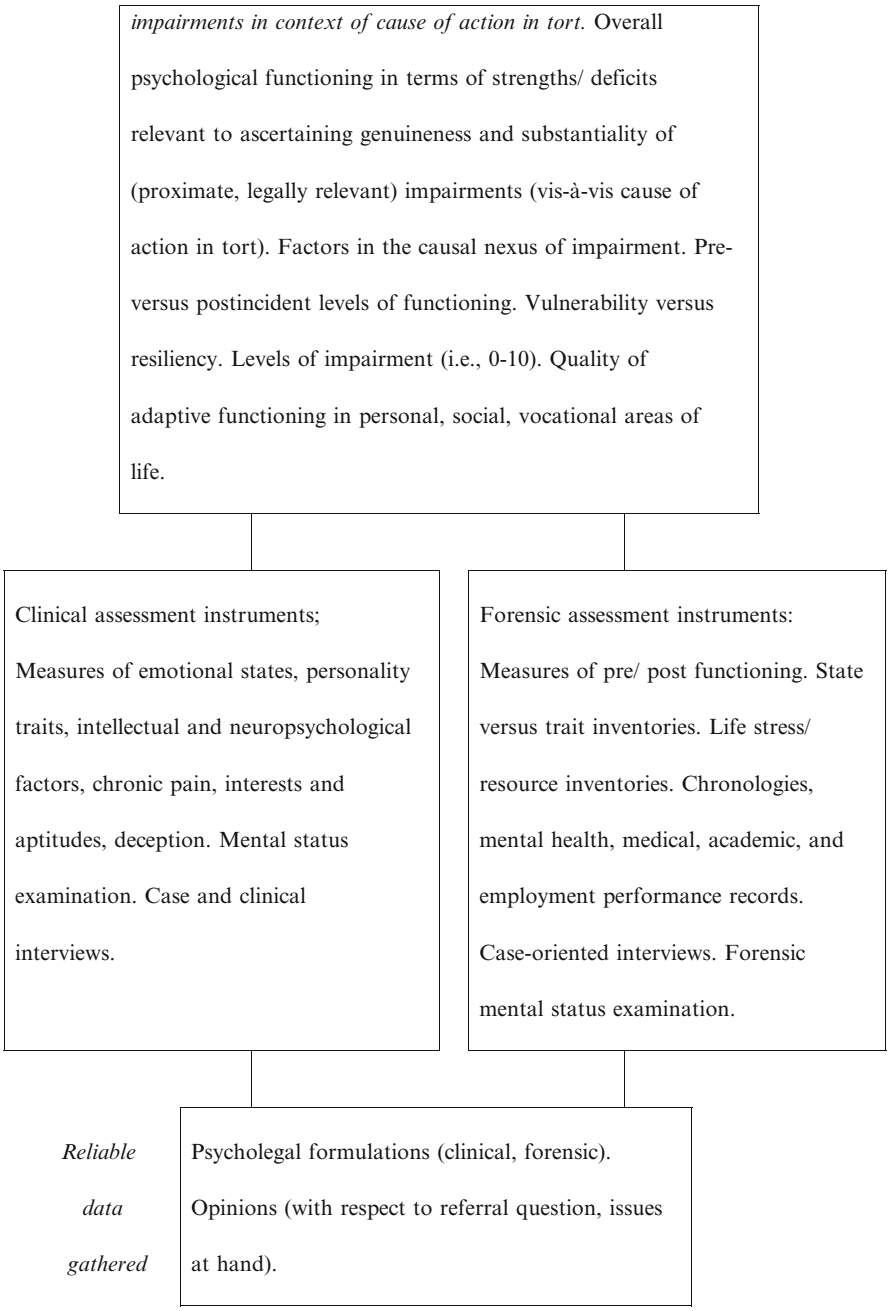

Fig. 14.6 (continued)

Table 14.14 Model forensic report structure on causation of workplace psychological injuries

Stages	Title of section	Contents
I	*PREAMBLE*	*Preliminary information*
1	Identification	Name
		Date of birth
2	Information sources	Tests and dates of administered
		Documents reviewed
		Persons interviewed; date/duration
3	Referral	Name of party
		Question(s)
4	Informed consent	
5	Behavioral observations and mental status	Orientation
		Communication capacity, speech style, etc.
II	*ASSESSMENT*	*Details*
6	History	Childhood and development, including any child abuse
		Education
		Family
		Employment
		Military
		Physical/mental health
7	Account of alleged discrimination	Status the "day before"
		Description of events
		Reported changes in emotional/physical status
		Status following end of events; treatment history, changes in job situation, emotional and physical status
8	Current status	Physical, social, psychological, and workplace functioning
		Daily activities
		Treatment, medications
		Job status
9	Results of objective psychological testing	Cognitive
		Personality
		Effort
		Validity test results
		Results summary
10	Summary	Limitations of the data
		Functioning and loss
		Answers to referral question(s)
		Bases for opinion
III	*OPINION*	*On referral question(s)*
		Limitations on opinions
		Prognosis/prospects
		Treatment/intervention needs
		Other damages

Adapted from Goodman-Delahunty and Foote (2011)

Table 14.15 Fitness-for-duty evaluations

Item	Principle
Referral issues	
1	Determine whether employer met legal threshold for requesting a fitness evaluation
2	Identify relevant clinical/forensic issues
3	Determine whether the referral meets area of expertise/competence
4	Determine whether if you are able to be impartial
5	Identify legal standard for establishing fitness
6	Determine the evaluee's rights/limitations to access report/file
7	Inform referring party about fees/evaluator role/procedures
Evaluation/procedural concerns	
8	Provide evaluee appropriate disclosure and obtain informed consent/authorization
9	Inform stance about third-party observers/recording devices in session
10	Gather multiple sources of clinical/behavioral information, consistent with utility for court and psychological validity issues
11	Assess feigning/malingering/response styles
Determining fitness	
12	Use a scientifically-informed, comprehensive model for determining fitness for duty
Communicating the results and conclusions	
13	Be consistent with legal and ethical limitations on report content
14	Back up conclusions with relevant gathered data and consider all that data
15	Address causation, treatment/restoration of fitness/accommodations, as requested by the referral source

Adapted from Corey and Borum (2013)

14.5 Chapter Conclusion

The present chapter provides more material on the basics needed for effective assessment and practice in the area of psychological/psychiatric injury and law. It goes beyond the theme of malingering detection and assessment that served as the primary focus of this first portion of the present book, by considering disability and report writing. The student and practitioner who have studied and absorbed the material to the present point in the book have received foundational knowledge of the field. The next portion of the book fills in much needed information and topics in order to provide a broader knowledge to the reader. In particular, it updates the literature, presents chapters on therapy and ethics, and gives supplementary material, such as on tests and testing.

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Chapter 15
Slick-Sherman's 2012–2013 Revision of the 1999 Slick et al. MND System

15.1 Introduction

This chapter and the next one compare the main concepts and arguments in the present book with those found in Carone and Bush (2013). In this chapter, I review the revised 1999 MND (Malingered Neurocognitive Dysfunction; Slick et al. 1999) model presented by Slick and Sherman (2013) and, as I proceed, I include material on the topic from Slick and Sherman (2012). By comparing the revised 2012–2013 Slick-Sherman MND malingering detection system with my own, as outlined in Chap. 5 of the present book [which was developed before the revised 2012–2013 Slick-Sherman MND model was published], I underscore that the present system is a valid and valuable model, and that it does not require change in light of the Slick and Sherman (2012, 2013) revision.

In the next chapter, I proceed to review the other chapters in the Carone and Bush (2013) book, and conduct the reviews essentially in the order that they are presented, although I just mention briefly several less germane to the present book. In order to provide continuity of the present two chapters and the material in Carone and Bush (2013) with the prior chapters of the present book, in some of the preceding chapters of this present book, I have referred to these reviews of the Carone-Bush chapters that I undertake in the present two chapters. Further, where required, I have provided brief summaries of my reviews of the chapters in Carone and Bush (2013) at those earlier points in the present book where I have mentioned the present chapters. Most of the material in Carone and Bush (2013) that I have reviewed allows for a more elaborate literature review than would otherwise have been undertaken in the present book.

G. Young, *Malingering, Feigning, and Response Bias in Psychiatric/Psychological Injury*, International Library of Ethics, Law, and the New Medicine 56,
DOI 10.1007/978-94-007-7899-3_15, © Springer Science+Business Media Dordrecht 2014

Table of Terms and Sources

Abbreviation	Name	Source(s)
DSM-IV-TR	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision	American Psychiatric Association (2000)
MMPI-2	Minnesota Multiphasic Personality Inventory, Second Edition	Butcher et al. (1989), (2001)
MND	Malingered Neurocognitive Dysfunction	Slick et al. (1999)
MPRD	Malingered Pain-Related Disability	Bianchini et al. (2005)

15.2 Revision of the MND

15.2.1 Introduction

In light of the criticisms of Larrabee et al. (2007), in particular, of the MND model of Slick et al. (1999) for the detection of malingering in neurocognitive evaluations, Slick and Sherman (2012, 2013; see Table 15.1) have developed a revised MND system. The two Slick-Sherman 2012–2013 sources are almost identical in content but, as I review them in the following, there are some differences to which I refer by mentioning just one or the other, as the case may be, before returning to mentioning both. Also, the two sources differ in the numbering of the MND criteria, with the Slick-Sherman 2012 version of the revised MND using the style of the 1999 version criteria (numbering them A, B, C) and the 2013 version dropping this aspect, thereby making the differences in the notation used across the two presentations of the revised system liable to confusion.

Slick and Sherman (2012) noted that Larrabee et al. (2007) had suggested that, for specifying definite, probable, and partial confidence of diagnosis, the 1999 MND criteria employ a relatively crude, nonactuarial method of aggregating indicators of response bias. Larrabee et al. had noted that there are more sophisticated actuarial methods that could be used, such as logistic regression and advanced Bayesian analyses.

Larrabee et al. (2007) had also noted that self-report data, such as on the MMPI-2 (Minnesota Multiphasic Personality Inventory, Second Edition; Butcher et al. 1989, 2001), should not be considered as secondary evidence relative to objective test data, such as in neuropsychological testing. They argued that even though the research literature does not give greater evidentiary weight to the former type of data compared to the latter, they are considered primary in the 1999 MND.

Given the salience of these two criticisms of the MND by Larrabee et al., as well as other factors to consider according to Slick and Sherman (2012, 2013) – (a) there are other criticisms of the MND and (b) there are other developments in the field of assessment (see below) – Slick and Sherman proposed a revision/modification and update/extension of the 1999 MND model.

Table 15.1 Proposed diagnostic criteria for Malingered Neuropsychological Dysfunction (MND): a revision and extension of the Slick et al. (1999) criteria for malingered neurocognitive dysfunction

Primary MND

Definite

1. Presence of a substantial external incentive for exaggeration/fabrication of symptoms (Criterion 1)
2. One or more very strong indicators of exaggeration/fabrication of neuropsychological problems or deficits (one or more of Criteria 2.0–2.3)
3. Behaviors meeting necessary criteria are not substantially accounted for by psychiatric, neurological, or developmental factors

Probable

1. Presence of a substantial external incentive for exaggeration/fabrication of symptoms (medical-legal secondary gain)
2. Three or more indicators of possible exaggeration/fabrication of neuropsychological problems or deficits (three or more of Criteria 3.1–3.7)

Secondary MND (definite and probable)

Criteria for definite or probable MND are otherwise met, but there are compelling grounds to believe that at the time of assessment, the examinee did not have the cognitive capacity to understand the moral/ethical/legal implications of his or her behavior and/or was unable to control his or her behavior, secondary to immaturity (i.e., in childhood) or bona fide developmental, psychiatric, or neurological disorders or injuries of *at least* moderate severity. Secondary malingering cannot be diagnosed in persons with mild conditions such as MTBI

MND by proxy (definite and probable)

Criteria for definite or probable MND are otherwise met, but there are compelling grounds to believe that a vulnerable examinee acted primarily under the guidance, direction, influence, or control of another individual. Examinees may be vulnerable to the influence of others by virtue of immaturity, neurodevelopmental and cognitive disabilities, and psychiatric illness, or by perceived inability to escape or avoid substantial coercion such as threats of physical harm for failure to behave as directed

Specific criteria

1. Presence of a substantial external incentive for exaggeration/fabrication of symptoms (medical-legal secondary gain)
2. Very strong indicators of exaggeration/fabrication of neuropsychological problems or deficits
   - 2.1. Below chance performance ($\leq$.05) on one or more forced-choice measures
   - 2.2. High posterior probability ($\leq$.95 that performance is substantially below actual level) on one or more well-validated psychometric indices
   - 2.3. Self-reported symptoms are unambiguously incompatible with or directly contradicted by directly observed behavior and/or test performance
3. Possible indicators of exaggeration/fabrication of neuropsychological problems or deficits
   - 3.1. Data from one or more well-validated psychometric measures, although not sufficient to meet Criterion 2.1 or 2.2, are on balance more consistent with noncompliance than compliance
   - 3.2. Marked and implausible discrepancy between test performance and level of function expected based on developmental and medical history
   - 3.3. Marked and implausible discrepancy between test performance and directly observed behavior and capabilities
   - 3.4. Marked and implausible discrepancy between test performance and reliable collateral reports concerning behavior and capabilities
   - 3.5. Marked and implausible discrepancy between self-reported and documented history, consistent with exaggeration of preinjury level of function and capabilities, minimization or preexisting injuries or neuropsychological problems, and/or exaggeration of the severity of new injuries
   - 3.6. Marked and implausible discrepancy between self-reported symptoms and level of function expected based on developmental and medical history
   - 3.7. Marked and implausible discrepancy between self-reported symptoms and information obtained from reliable collateral informants

The main foci of the changes in Slick and Sherman's (2012, 2013) revised MND model related to: (a) broadening the criteria for definite malingering; (b) elimination of the exclusionary criteria; and (c) giving more weight to self-report data in the system. In addition, they altered the name of the MND model from Malingered Neurocognitive Dysfunction to Malingered Neuropsychological Dysfunction.

15.2.2 Name Change

About the name change of the MND model, Slick and Sherman (2012, 2013) indicated that in these types of assessments, the domain of the malingering could be cognitive or psychological, so that a broader term is needed. They suggested that additional criteria might be needed to specify cognitive, psychological, or mixed types of malingering. Note that in the system that I developed, there is a uniform structure (but with differing examples) for malingered neurocognitive-related, pain-related, and PTSD-related dysfunctions/disabilities, which is consistent with their suggestion.

15.2.3 Broadening the Criteria

Compelling Inconsistencies. With respect to broadening the criteria for definite malingering in their revised 2012–2013 MND model compared to the 1999 version of the MND model, Slick and Sherman (2012, 2013) referred to a prior 2005 elaboration of the MND into a pain-related diagnostic system for detecting malingering – the MPRD model (Malingered Pain-Related Disability; Bianchini et al. 2005). For this system of detecting pain-related malingering, everything else considered, its authors gave importance as prima facie evidence of definite malingering to patent, "compelling" inconsistencies, which are unambiguous incompatibilities or direct contradictions between self-reported symptoms and observed test performance/behavior, e.g., in demonstrated level of function. Compelling inconsistencies might also be revealed by data such as found in videographic surveillance. Note that in the integrated malingering detection system that I developed, I considered the concept of compelling inconsistencies as primary evidence, but expanded its application relative to Bianchini et al. (2005).

Likelihood Ratio Chaining (LR) and Positive Predictive Power (PPP). As for recent advances in psychometrics/test development that influenced their 2012–2013 revision of the 1999 MND model, Slick and Sherman (2012, 2013) referred to the work of Larrabee (2008), who developed a method for combining test data to derive increasingly accurate or high posterior probabilities that can serve as a criterion for definite malingering. That is, according to Slick and Sherman's understanding of Larrabee, in testing, very high positive predictive values of feigning (i.e., $\geq .95$), can be considered diagnostic of definitive malingering as much as does below-chance performance on a forced-choice SVT (symptom validity test) measure.

However, in their 2012 chapter, Slick and Sherman cautioned use of this type of algorithmic calculation, at least when PPP (positive predictive power) is used. PPP refers to the estimated probability of malingering associated with a particular index score. To calculate it, one needs the estimated sensitivity and specificity of an index and also the estimated base rate of malingering. They noted that many factors could influence significantly both the accuracy and the meaning of any PPP value, which affects valid interpretation.

Finally, according to Slick and Sherman (2012), although such methods could help in obtaining valid estimates of the probability of malingering for individuals, the assessment methods needed to implement such procedures, for the most part, are lacking. Slick and Sherman (2013, p. 62) added that this particular suggested revision to their MND model is premature until large-scale actuarial studies are undertaken, which has yet to be the case.

In addition, later in the chapter, I point to difficulties with the aggregating methods, such as LR, proposed by Larrabee (2008). In short, in developing my own malingering detection system, I did not use the Larrabee (2008) method itself; however, overall, I considered his system and tried to incorporate criteria consistent with it.

Despite the statements by Slick and Sherman (2012, 2013) that it would be premature to incorporate the specific recommendations of Larrabee (2008) into a revised MND system, it appears that in the tables presenting the actual revision developed by Slick and Sherman (2012, 2013), reference was made to Larrabee's method. However, I note that the manner in which the Larrabee technique has been incorporated by Slick and Sherman in their revised 2012–2013 MND system might be in an inconsistent way. Specifically, one criterion included in the revised MND is that there is "high" posterior probability of one or more well-validated psychometric indices (greater or equal to 95 %) suggesting that performance is substantially below actual ability level. However, posterior probabilities as used in Larrabee were derived from chaining of likelihood ratios when multiple positive test findings were used, not one or more, and these results closely approximated calculations of PPP. Larrabee had concluded that two SVT failures provide strong evidence of probable malingering and three failures provide very strong evidence of probable malingering. He did not refer to one or more failures in this regard, unlike the case for Slick and Sherman in their revised 2012–2013 MND system. Moreover, it is unclear how posterior probabilities with one positive test finding can be calculated, assuming only one test had been used in an assessment, or how one test failure would provide sufficient positive data for the chaining and PPP calculations, assuming two or more had been administered in an evaluation.

Slick and Sherman (2012, 2013) noted that posterior probabilities could be derived from any numeric source, not just test data, such as scores from self-report measures, and even demographic and neurological data. However, they did not specify how to incorporate this aspect of Larrabee's method in their revised model.

Exclusionary Criterion. As for deletion of the exclusionary criterion in the 1999 MND model for their 2012–2013 revised model, Slick and Sherman (2012, 2013) indicated that the criterion raises difficult issues about what to label feigning when

there is not only evidence of malingering but also bona fide syndromes and conditions (psychiatric, neurological/neurodevelopmental) that can fully account for it. For example, feigning might be present in the context of severe schizophrenia, TBI (traumatic brain injury), or mental retardation, so that the behavior should not be labeled malingering given the conditions involved.

The solution adopted by Slick and Sherman (2012, 2013) for their revised MND model was to remove the exclusionary criterion in diagnosing malingering and, instead, to label feigning behavior that might be taking place in the context of serious conditions as "secondary malingering." Part of the issues for the authors was that the exclusionary criterion implied that malingering cannot be displayed at all by individuals with serious conditions. They averred that their proposed solution constituted one possible solution. However, they did not mention others.

Moreover, I note that there are multiple reasons why a diagnosis of secondary malingering, as defined by the authors, is not a valid concept. First, if feigning is expressed by individuals with serious conditions, such as severe schizophrenia, TBI, or mental retardation, to the degree that it should not be considered malingering, and a better label is needed to explain the behavior than the one of malingering, why include the term malingering at all in the new label being created? Second, if one is worried that disallowing the attribution of the term malingering in such cases might lead to the false impression that malingering can never take place in such conditions, why would one then adopt a term that includes malingering and leave the false impression that these seriously impaired individuals are associated with the pejorative label of malingering?

Another solution to the dilemma that the concept of secondary malingering was meant to address is to underscore that the exclusion criterion in the 1999 MND criteria is quite conservative. That is, its wording supports that feigning in serious conditions can be considered malingering unless the serious condition at issue can explain the feigning *in full* and only then should the attribution of malingering be excluded. The wording of the 1999 version of the exclusionary condition appears sufficient if it is realized that it allows for exclusion only in the clearest of circumstances. Therefore, I conclude that wording of the exclusionary criterion in the 1999 version of the MND does permit malingering attribution for serious conditions and does not denote that any serious condition automatically excludes malingering attribution. Given the conservative nature of the exclusionary criterion in the original 1999 MND model, and given these enunciated problems with the concept of secondary malingering, it makes sense that I had decided to use an equivalent exclusionary language in the malingering diagnostic system that I developed and have decided not to alter that decision in light of this new suggestion to use the term secondary malingering. However, note that although I kept without change the exclusionary criterion as promulgated in the 1999 MND model, as I developed my system, I qualified the criterion so that it could be used without misunderstanding.

In summary, once I discovered these confusions in the revised MND system of Slick and Sherman (2012, 2013) pertaining to the exclusionary criterion, I concluded that their rationale for any change to the exclusionary criterion in their revised MND criteria has not been sufficiently explicated or justified to apply them

to my model. Therefore, I retained the criterion that I had already elaborated for my model – malingering evidence "fully accounted for" by other conditions is the primary basis for excluding attribution of malingering.

Moreover, inspection of the actual criteria of the Slick-Sherman 2012–2013 revised MND model indicates that it *does* include an exclusionary criterion, despite their intention to drop this aspect in their revision. For example, for Definite MND, the third criterion is that when malingering criteria are met, they should not be "substantially" accounted for by psychiatric, neurological, or developmental factors. That is, instead of eliminating the exclusionary criterion from their 2012–2013 revised MND model, Slick and Sherman (2012, 2013) appear to have only loosened it by referring to exclusion in cases in which malingering evidence has been "substantially accounting for" rather than "fully accounting for."

Note that the loosening of the exclusionary criterion is not a conservative one, because evidence of malingering can be dismissed with the criterion of "substantially accounted for" compared to the one of "fully accounted for." That the substantial-based criterion is included among the Slick-Sherman revised MND criteria is inconsistent with the other changes in the revision, which appear to lower the bar in the facility of attributing malingering.

Conclusion. Slick and Sherman (2012, 2013) revised their 1999 MND model for the detection of malingering especially by broadening the criteria. However, for each of (a) broadening compelling inconsistencies, (b) using likelihood ratio chaining and positive predictive power and (c) removing the exclusion criterion, the decisions taken were either not entirely clear or were insufficient. For example, for the case of the inconsistencies, I have developed a much more elaborate scheme in my revised MND model. For the Larrabee LR and PPP technique, Slick and Sherman had indicated that their use would be premature but, nevertheless, added the procedure to their model, however, in a seemingly inconsistent way. For the exclusionary criterion, they reported it as dropped from their revised system but, in actuality, they kept it, however, in a revised way that did not broaden but constrained use of the model.

15.2.4 Comparing the Revised MND Model to the Present Model

Definite Malingering. In the 1999 MND model, everything else considered, definite MND was especially indicated by failure on one or more forced-choice test failures. In the 2012–2013 MND version, this criterion was expanded to include high posterior probability on one more or more well-validated measures as well as the presence of a compelling inconsistency, with one of the three types of evidence sufficient, i.e., with respect to forced-choice testing, performance on other measures, and inconsistencies.

In contrast, in my own model, in relation to malingering detection, the criteria related to testing and to compelling inconsistencies differed. First, I distinguished

definite malingering from definite response bias. For its attribution, the former had to have incontrovertible evidence associated with it, such as below-chance performance on *two* forced-choice tests or the presence of *three* compelling inconsistencies, as well as what might be found in videographic evidence. As for the latter, definite response bias involved (a) one below-chance performance on a forced-choice measure, (b) failure on five tests, whether in cognitive, personality, or effort testing (but not at the below-chance level), or various combinations in the latter two types of evidence. Also, other criteria in the system, where warranted, permitted raising any rating that had been at lower levels to this higher definite response bias level, e.g., after consideration of the whole file.

Note that my approach gives equal weight to a forced-choice test failure and failure at other levels of a test, e.g., in terms of their cut-offs, so that it accounts for Slick and Sherman's concerns with respect to giving equal weight to different types of measures. Similarly, among those measures, personality tests, such as the MMPI-2, can be included, fitting their approach. Finally, my approach includes compelling inconsistencies that do not involve test data of any nature, like in their approach, but the range of inconsistencies that I note as possible is quite extensive compared to any other system. Moreover, mental health professionals who are not trained to give psychological tests can still use my system with effectiveness because of the extensive range of inconsistencies that can be sought in any file according to the system.

Nevertheless, despite these aspects of my system, when comparing the two systems – (a) my unified approach for detecting cognitive, pain, and PTSD malingering-related presentations and performances and (b) the revised MND approach of Slick and Sherman (2012, 2013) – my approach appears more conservative with respect to malingering attribution. Although rules are available to allow for exclusive use of inconsistencies and although rules allow raising level of rating when using psychometric data to standards equivalent to those of Larrabee, I took care to create rules that ensure balanced use of the system at the upper end of the system ratings concerning malingering and definite/probable response bias. However, that being said, as a balance, compared to any other malingering-detection system, my system is structured to detect those evaluees who are expressing malingering-related behavior and response biases at the grey zone or intermediate levels, which more corresponds to what is often encountered in typical practice in forensic and disability related contexts.

Probable Malingering. In this regard, it is instructive to examine how the two systems differ with respect to the attribution of a probable level of malingering. First, in my model, I refer to the level as one of probable response bias rather than of probable malingering, per se. It would be up to the evaluator for any one assessment to integrate all the reliable, relevant data that had been gathered, including from the diagnostic system I developed, assuming it is used, to arrive at a conclusion of probable malingering should my system yield a related rating of probable response bias.

Aside from the labeling differences over the two systems for this level, consider that to achieve a level of probable malingering in the Slick and Sherman (2012, 2013) MND system, even possible indicators of such are included and, moreover,

they might reflect possible exaggeration as opposed to fabrication, which I consider more serious. For example, for numerical data from tests, it is only required that the data are more consistent with noncompliance rather than compliance. There is no indication whether this refers to meeting cut-off scores, but at a lower level than for their revised MND category of definite malingering. Perhaps the authors meant to include cut scores that are only minimally above the average score for the normative population as being indicative of probable malingering. The ambiguity in the criterion leaves too much room for doubt for the criterion to be helpful in arriving at reliable and valid system ratings. Note that in the equivalent criterion in the 1999 MND system, it referred to performance on testing that had to provide strong evidence. It is doubtful this criterion could have been misinterpreted in practice the way in which the revised criteria can be, if used.

Discrepancies. As for the other criteria that help define probable malingering in the revised 2012–2013 MND criteria, they concern discrepancies in the file. In the 1999 MND criteria, the discrepancies were referred to without qualification. Bianchini et al. (2005) had been the ones to introduce the concept of compelling inconsistencies in this context. [Note that Slick et al. (1999) had actually used the term compelling in their criteria, but to refer to the clear and compelling evidence needed to arrive at a rating of definite MND, compared to the strong degree needed for probable MND.]

However, for the revised MND criteria (Slick and Sherman 2012, 2013), at the level of probable MND, the authors referred to "marked and implausible" discrepancies. It is unclear to me how marked and implausible discrepancies differ in meaning from compelling ones, the level required in the revise system for definite malingering, although granted that it is understood that marked/implausible discrepancies refer to ones that should be of lesser severity relative to compelling ones. In this regard, I have also developed a two-tiered system for describing discrepancies, but referred to them as compelling, marked, substantial discrepancies and moderate, nontrivial ones, respectively. The distinction between the sets of descriptors for the two levels in my system is clearer, relative to the case for the system of Slick and Sherman (2012, 2013), which does not make explicit that marked inconsistencies are of lesser severity than compelling ones. This ambiguity could seed confusion if the system is used without ready juxtaposition of the two levels involved.

It should be noted that six types of discrepancies are included in the revised 2012–2013 Slick-Sherman MND system, whereas the 1999 system included four of them. The discrepancies in the original 1999 system all concerned ones involving test data and other information sources. However, in the later revised system, three of the discrepancies involved test data, not four, because the one comparing test data and known patterns of brain function was dropped without explanation. Three other discrepancies were added to the revised system, and they involved comparing self-report and other information sources. Note that in the system that I developed, there are 30 types of discrepancies possible, because all possible combinations of information sources are considered, as well the possibility of discrepancies within any one source.

In brief, the revised Slick-Sherman MND model is consistent with my approach to discrepancies at some levels (more than the original number of four needed, more than one level of severity needed), but my system is more elaborate and internally consistent in these regards. If I have been more conservative than the extant MND approaches in developing my malingering detection system with respect to numerical data from testing, although there are compensating rules to accommodate this aspect, I have been less conservative for discrepancies, in the sense of allowing many more of them and, moreover, at more clearly defined levels of severity.

Possible Malingering. There are two more aspects of the revised 2012–2013 Slick-Sherman MND criteria to consider. The original 1999 MND criteria included the possible malingering level. However, this level has been dropped in the revised version. No explanation is provided. Note that, in contrast, my version includes a possible malingering level. Indeed, it includes a probable/possible level that is considered the gray zone or intermediate one. Many evaluees in the forensic disability and related context express ambiguous presentations and performances, and by including in my system a grey/intermediate zone level that incorporates possible response bias as part of its definition, the system conforms to the typical assessor's practice reality. Also, by having a gray/intermediate zone and a level of possible response bias in my system, as well as the other levels, the number of ratings in it reflects that malingering and related response biases should be considered a continuum rather than a categorical judgment. The latter categorical approach might be useful in some research on the matter, and it conforms to the legal test of determining whether or not malingering is present, but it does not conform to the reality encountered by practitioners nor enable more refined research that includes the full range of possible response biases, from frank malingering to mild exaggerations. In this regard, with respect to the range of response biases that it includes, the system that I developed, compared to the revised Slick-Sherman 2012–2013 MND system, should be considered more useful for both research and practice.

Also, in the revision of the 1999 MND by Slick and Sherman (2012, 2013), the decision to exclude the level of possible malingering can be considered a conservative move because fewer options related to malingering detection are available to consider. Or, it might be conceived as a way of forcing the evaluation of malingering and related biases to take place only at more elevated, higher-order, or frank levels through its elimination of lower-order options. Either way, the decision seems premature because instead of limiting the degrees of malingering and related response biases that evaluees might express in assessments, systems should present the full range of possibilities in order to have greater ecological validity.

Interpretation. A last point concerning the revised MND system of Slick and Sherman (2012, 2013) is that they included a category of MND by Proxy. This is a valid concept in the malingering literature, but by Slick and Sherman's own account it is "difficult if not impossible" to determine. In this sense, it is best excluded as a criterion in a diagnostic system related to malingering and other response biases. Rather, where warranted, after consideration of the comprehensive, reliable data gathered in any one assessment, it could be raised as plausible in the interpretations.

This discussion highlights a major issue in the field of malingering detection. In arriving at conclusions once the assessment is completed, the evaluator should take into consideration any reliable and valid algorithms, actuarial method, statistical agglomeration technique, or diagnostic system. However, the evaluator bears the ultimate responsibility for arriving at conclusions in any assessment. First, all decisions on methodology, e.g., how the various tests and systems used, e.g., for malingering detection, need to be justified carefully. Second, the onus for the interpretation of the reliable data that had been gathered in an assessment cannot be delegated to a test's results or to a diagnostic system's criteria. I take great pains to emphasize this throughout presentation of my system, and have incorporated rules to reflect this approach. Briefer systems that do not explicitly include all the needed cautionary statements directly in the text or tables presenting the systems risk, to a certain degree, that the systems are used with less prudence or comprehensiveness than might otherwise obtain.

15.2.5 Conclusions

Overall, I conclude that the revised MND system of Slick and Sherman (2012, 2013) has raised some points worth considering in any revision of their 1999 system. I have compared the revision to my own system for malingering detection, a system that is based on their 1999 version (as well as on its extension by Bianchini et al. 2005). In one way or another, all useful components of their revision have been already included in my system, so I find that the system that I developed needs no further modifications based on the revised MND model presented by Slick and Sherman (2012, 2013). Moreover, relative to my system, there are inconsistencies in their revised model that I have pointed out that detracts from its use in research and practice.

To conclude, the MND system developed by Slick et al. (1999) had constituted a leap forward in creating a reliable and valid diagnostic system for malingering detection. It has been used in tens of research studies, as documented in Carone and Bush (2013) and Larrabee (2012), as well as multiple articles cited in the present book. Slick and Sherman (2012, 2013) acknowledged that the extent of its use in assessment is unknown. However, the revision of the MND system proposed by Slick and Sherman (2012, 2013) suggests that whenever the original 1999 version had been used in practice without considering the gamut of changes that has been recommended in the literature (e.g., Larrabee et al. 2007), the conclusions of the assessments involved might be lacking in sufficient justification and scientific support to be considered sufficiently probative or helpful rather than prejudicial or not helpful in any court or related venue to which the assessments had been proffered as evidence (as reports or testimony). That being said, the revised MND model presented by Slick and Sherman (2012, 2013) might not fare better in these regards, and might detract from more than add to any assessment and its conclusions presented to court and related venues. I, compared to the original MND model, pointed

out sufficient inconsistencies and even errors of commission and omission in the revised MND that its use in practice would be premature at best. Moreover, the compare-contrast format that I used for the MND and its revision relative to my own model highlights that I have avoided the pitfalls that are associated with the MND as originally conceived in 1999, and was comprehensive and astute enough in doing so that I have also avoided the pitfalls associated with any MND revision that might be developed outside of my own, including those of the Slick-Sherman 2012–2013 revision.

The original 1999 MND model has an important place in the history of the field, and still can be considered a model that has the potential to become the gold standard in the field of malingering detection. However, the specific form of the model that might reach that status might relate more to my revision of it more than that of the original authors. Evidently, the field is in a state of flux, given that some assessors will continue to use the original MND model because of difficulties that are clear with the 2012–2013 Slick-Sherman revision, some might use personally-derived versions based on extant criticisms of the original model, such as by Larrabee et al., some might generalize from the pain-related model of Bianchini et al. (2005), given their contention that it is applicable to PTSD (Bianchini et al. 2013), even if that contention has not been well-justified by them, as per below, and some might consider my own model. Whatever course practitioners in the field end up following, their choice of the malingering-detection system used should be justified on conceptual and scientific grounds. In this regard, I am confident that the malingering-detection system that I have developed and that is presented in the present book, if used judiciously to preserve its face validity/utility, will match any other in terms of required conceptual and practice attributes and, therefore, meet any court admissibility challenge related to the evidence on which it is based.

15.3 Differential Diagnosis

As shown in the first part of the chapter, Slick and Sherman (2013) revised their MND model for the detection of malingering. In addition, they helped define some of the terms in the field. Also, for when the evidence yields extreme test performance and inconsistencies, they indicated possible alternative diagnoses and conclusions that could be offered in evaluations other than of malingering.

About terms, Slick and Sherman defined primary and secondary gain. The former is linked to unconscious psychological processes that produce behaviors of a nonvolitional nature, such as in conversion disorder. In contrast, secondary gain is linked with conscious psychological processes that lead to volitional behavior, such as in malingering. Slick and Sherman (2013) noted that evaluees might engage simultaneously in both primary and secondary gain. In addition, the authors distinguished between psychological secondary gains that are interpersonal and social (e.g. attention, affection) and that are linked to minor material advantage and

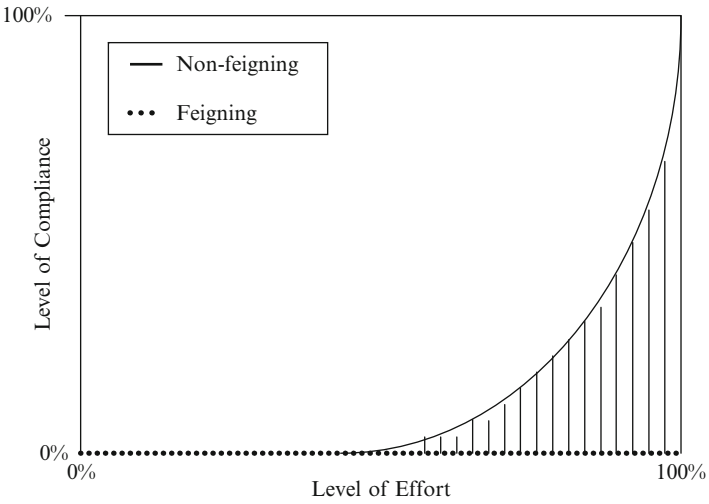

Fig. 15.1 Conceptual relationships between effort and compliance
Note. Shaded area under the curve denotes level of validity of test findings
Adapted by permission of Oxford University Press. Slick and Sherman (2012). Reprinted by permission of Oxford University Press, USA. [Figure 6.1, Page. 118]

material-legal secondary gain. Material-legal secondary gains refer to more than minor material advantages, such as financial compensation after psychological injury. Slick and Sherman (2013) noted that feigning in the forensic disability context might be oriented to both types of secondary gain.

Secondary losses refer to external disadvantages or consequences that might arise in assessments. There may be psychosocial, material-legal, or both. Slick and Sherman (2013) noted that evaluees might strive to maximize psychosocial secondary losses in an attempt to maximize material-legal secondary gain.

Slick and Sherman (2013) indicated that volition refers to the extent to which behavior is both conscious and deliberate in nature. Volition can only be inferred from the data gathered in an assessment, a process that is quite difficult. Therefore, performance on SVTs that is below-chance can be used to help in determining volition. A related concept is that of effort. Slick and Sherman (2013) advised not to confuse poor effort with malingering because simply not trying hard enough on a test is insufficient evidence of malingering (see Fig. 15.1).

They noted that it must be shown that the poor effort in testing is aimed at feigning deficits for reasons of obtaining material-legal secondary gain, in particular. Another related concept is noncompliance. For example, evaluees might not try on testing or exaggerate or even fabricate symptoms. In this regard, SVTs might be considered "noncompliance detection measures." Moreover, evaluators should be cautious in interpreting non-problematic SVT scores. The interpretive language used should indicate that the test results reveal a lack of concern about compliance/credibility instead of the language referring to "good" compliance/credibility.

In terms of alternate explanations about signs of exaggeration and malingering, Slick and Sherman (2013) prepared a table of ten possible alternative diagnoses and conclusions. The alternate possibilities to the diagnosis of malingering involved: (a) malingering by proxy; (b) secondary malingering; (c) conversion disorder; (d) dissociative amnesia; (e) factitious disorder; (f) adjustment problem/disorder with specious symptoms; (g) cogniform condition/disorder; (h) neurocognitive hypochondriasis; (i) stereotype threat; and (j) oppositional-defiant presentations.

Malingering by proxy refers to meeting the criteria of malingering because of deliberate influence or control by another person in order to share the material advantages from the malingering, assuming it is successful. Conversion disorder refers to unconsciously motivated feigning of sensory or motor deficits. Dissociative amnesia refers to a focused memory deficit usually related to trauma or stress that is nonvolitional in nature. Factitious disorder refers to the intentional production of symptoms that are physical or psychological but for purposes of adopting the sick role rather than for material advantage.

Slick and Sherman (2012) proposed the new diagnostic category of adjustment disorder with specious symptoms. A corollary condition of a less extensive nature is adjustment problem with specious symptoms (they are abbreviated as APSS/ADSS). In these conditions, the person deliberately exaggerates or fabricates physical or psychological symptoms in order to obtain psychosocial secondary gain. Therefore, the person seeks to obtain and maintain psychological benefits, such as an increase in attention, affection, or support from other people, a better management of problematic social relations, or avoiding aversive interpersonal situations or obligations, such as household chores.

Slick and Sherman (2013) continued to describe cogniform disorder and cogniform condition (Delis and Wetter 2007). They considered these categories "problematic" with "significant concerns," so they recommended that evaluators should not consider them in the differential diagnosis. As for neurocognitive hypochondriasis, according to Slick and Sherman (2013), it refers to a hypervigilance or increased attention to minor cognitive difficulties and problems that result in considering them as cognitive impairments attributed to a neurological injury or illness (Boone 2009).

Stereotypic threat refers to the modulation of test performance according to expectations (Suhr and Gunstad 2002, 2005). Slick and Sherman (2013) noted that research has not supported more than a minor role of expectancy effects on neuropsychological performance so that the concept of stereotypic threat should not be considered in the differential diagnosis of malingering.

Oppositional defiant behaviors might be expressed situationally in disability and related evaluations. Slick and Sherman (2013) indicated that their extreme manifestation might be used to circumvent assessments that could detect feigning behavior. To conclude their discussion on differential diagnosis, Slick and Sherman (2013) indicated that bona fide impairments might coexist with various differentially relevant diagnoses that they discussed.

Slick and Sherman (2013) have described very well the complications in detecting malingering both in terms of the complexity of the terms involved and the

complexities of the differential diagnosis. In particular, their concept of psychosocial versus material-legal secondary gains is an excellent one. In addition, their list of diagnoses and conditions to consider in the differential diagnosis is extensive and includes the new diagnosis/condition of adjustment disorder/problem with specious symptoms. However, one of these conditions that they recommend to consider in the differential diagnosis includes secondary malingering. Note that in the first part of the chapter I had criticized this concept.

In addition, Slick and Sherman (2013) noted the DSM-IV-TR (Diagnostic Statistical Manual of Disorders, Fourth Edition, Text Revision; American Psychiatric Association 2000) definition of malingering, which involves false or grossly exaggerated symptoms, and they did not note any other definition. However, in their MND diagnostic system of malingering, the definition combines exaggeration and fabrication without specifying that the exaggeration must be gross in nature. Moreover, in terms of prevalence or base rate of malingering, they referred to the survey by Mittenberg et al. (2002). That survey also conflated exaggeration and fabrication so that the survey's estimate of malingering in relevant assessments was in the order of 40 %. I note that the issues of how to define malingering and the quality of the research on its prevalence when it is variably defined constitute primary concerns in the present book.

15.4 Chapter Conclusion

There is little doubt that the 1999 Slick, Sherman, and Iverson MND system to detect malingered neurocognitive function is one of the most important landmarks in the field of psychological injury and law. It has the potential to become the gold standard in the field, at least when revised appropriately. Although, Slick and Sherman (2012, 2013) have attempted such a revision, I have shown several ways in which their approach is lacking. Furthermore, I compared their approach to mine, described elsewhere in the present book, which further reinforces the value and validity of mine.

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Chapter 16
Symptom Validity Assessment, MTBI, and Malingering in Carone and Bush (2013)

16.1 Introduction

This chapter continues review of the excellent book by Carone and Bush (2013a) on symptom validity assessment, MTBI (mild traumatic brain injury), and malingering. The book is quite complementary to the present one. Many of the chapters provide information that parallel or add to the information already presented.

Table of Terms and Sources

Abbreviation	Name	Source(s)
ACS	Wechsler Advanced Clinical Solutions	Wechsler (2008a, b)
ACSS	Age-Corrected Scaled Score	Wechsler (1987)
CARB	Computerized Assessment of Response Bias Test	Allen et al. (1997), Conder et al. (1992)
CPT-II	Continuous Performance Test, Second Edition	Conners (2000)
CVLT-II	California Verbal Learning Test, Second Edition	Delis et al. (2000)
CVLT-II FC	California Verbal Learning Test, Second Edition, Forced Choice measure raw score	Delis et al. (2000)
F	Infrequency Scale	Butcher et al. (1989)
FBS	Symptom Validity (originally called Fake Bad Scale)	Ben-Porath and Tellegen (2008/2011), Lees-Haley et al. (1991)
Fs	Infrequent Somatic Responses	Ben-Porath and Tellegen (2008/2011)
FTT	Finger Tapping Test	Heaton et al. (1991)
HDMT	Hiscock Digit Memory Test	Hiscock and Hiscock (1989)
HHI	Henry-Heilbronner Index	Henry et al. (2006)
LMT	Letter Memory Test	Inman et al. (1998)
MCI	Memory Complaints Inventory	Green (2004b)

(continued)

G. Young, *Malingering, Feigning, and Response Bias in Psychiatric/Psychological Injury*, International Library of Ethics, Law, and the New Medicine 56,
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(continued)

Abbreviation	Name	Source(s)
MCMI-III	Millon Clinical Multiaxial Inventory, Third Edition	Millon (1994), Millon et al. (1997)
MMDS	Malingered Mood Disordered Scale	Henry et al. (2008)
MMPI	Minnesota Multiphasic Personality Inventory	Hathaway and McKinley (1943)
MMPI-2	Minnesota Multiphasic Personality Inventory, Second Edition	Butcher et al. (1989, 2001)
MMPI-2-RF	Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form	Ben-Porath and Tellegen (2008/2011)
MND	Malingered Neurocognitive Dysfunction	Slick et al. (1999)
MPRD	Malingered Pain-Related Disability	Bianchini et al. (2005)
MSVT	Medical Symptom Validity Test	Green (2004a)
NIM	Negative Impression Management	Morey (1991)
NV-MSVT	Nonverbal Medical Symptom Validity Test	Green (2008)
PAI	Personality Assessment Inventory	Morey (1991, 2007)
PCSQ	Postconcussion Syndrome Questionnaire	Lees-Haley (1992), Axelrod and Lees-Haley (2002)
PDRT	Portland Digit Recognition Test	Binder (1993), Binder and Willis (1991)
PDS	Psychosocial Distress Scale	Henry et al. (2011c)
RAVLT	Rey Auditory Verbal Learning Test	Schmidt (1996)
RBANS	Repeatable Battery for Assessment of Neuropsychological Status	Randolph (1998)
RBS	Response Bias Scale	Gervais et al. (2007)
RDS	Reliable Digit Span	Babikian et al. (2006), Greiffenstein et al. (1994)
RMFIT	Rey 15-Item Memory Test	Rey (1941)
RMT	Recognition Memory Test	Warrington (1984)
ROCFT	Rey-Osterreith Complex Figure Test	Rey (1941)
SRT	Seashore Rhythm Test	Reitan and Wolfson (1993)
TOMM	Test of Memory Malingering	Tombaugh (1996)
TOVA	Test of Variable of Attention	Greenberg et al. (1996)
VFDT	Visual Form Discrimination Test	Benton et al. (1983, 1994)
VSVT	Victoria Symptom Validity Test	Slick et al. (1997/2005)
WAIS-III	Wechsler Adult Intelligence Scale, Third Edition	Wechsler (1997a)
WAIS-IV	Wechsler Adult Intelligence Scale, Fourth Edition	Wechsler (2008a, b)
WAIS-R	Wechsler Adult Intelligence Scale, Revised	Wechsler (1981)
WCST	Wisconsin Card Sorting Test	Heaton (1981)
WCST-FMS	Wisconsin Card Sorting Test, Failure-to-Maintain Set Score	Suhr and Boyer (1999)
WMI	Working Memory Index	Wechsler (1997a)
WMS-III	Wechsler Memory Scale, Third Edition	Wechsler (1997b)
WMS-III VPA-2	Wechsler Memory Scale, Third Edition, Verbal Paired Associates-2 scale score	Wechsler (1997a)
WMS-IV	Wechsler Memory Scale, Fourth Edition	Wechsler (2008c)
WMS-R	Wechsler Memory Scale, Revised	Wechsler (1987)
WMT	Word Memory Test	Green (2005)

16.2 Review of Carone and Bush (2013)

16.2.1 History

As for other chapters in Carone and Bush (2013a, b) noted that the first account of malingering dated into the Old Testament. Its scientific study began in earnest in the last century, whereas Rey (1941, 1964) and Pankratz (1979, 1983), in particular, developed the first symptom validity tests (SVTs). Their use in neuropsychological assessments was endorsed both by the National Academy of Neuropsychology (NAN) and the American Academy of Clinical Neuropsychology (Bush et al. 2005; Heilbronner et al. 2009; respectively). I would add the in the origins of psychiatry problems related to the differential diagnosis of malingering were critical, e.g., hysteria in Freud's original work.

16.2.2 Clinical Judgment

Guilmette (2013) advocated for the multimodal integration of clinical judgment in forming conclusions about evaluee assessment validity, especially with respect to inconsistencies in the evaluee's data that had been gathered in the assessment. He referred to two major types of inconsistencies that can be elucidated by clinical judgment – those evident in the patterns of test data and others in the evaluee's self-report, history, observations, and other areas. In addition, data integration toward conclusions about evaluee validity in neuropsychological assessment should be based on results from multiple test measures and procedures specialized for the detection of inadequate effort or malingering.

Pankratz and Binder (1997) presented factors suggestive of possible malingering in the neuropsychological context. They included evidence of lying to health care providers, "functional" findings, inconsistencies, resistance/avoidance/bizarre responses, late onset of cognitive complaints, and feigning test failure. Guilmette (2013) noted that, except for the latter criterion, these criteria require clinical judgment in their determination. Other workers have proposed additional criteria, and they also require use of clinical judgment for their proper application. Nies and Sweet (1994) suggested search for nonsensical test patterns, excessive inconsistencies, independent evidence of self-reported functional limitations, and ascertaining the presence of secondary losses (financial, personal). Guilmette then examined the well-known Slick et al. criteria, noting its use of clinical judgment. Next, he noted that Sharland and Gfeller (2007) surveyed neuropsychologists in NAN on their poor effort/malingering detection methods and the five most prevalent methods were based on clinical judgment alone. The indicators of poor effort/malingering in this professional survey included: inconsistencies/discrepancies and implausible symptoms and test result changes.

In the next part of his chapter, Guilmette (2013) reviewed research on the efficacy of clinical judgment in detecting invalidity in test results in neuropsychological assessment. It is noteworthy that the research was conducted prior to 1990. Faust and Guilmette (1990) concluded that the research conducted at that time was not supportive of the value of clinical judgment in helping to detect malingering, although there were studies for and against the conclusion that are described in Guilmette (2013). He continued that the debate at that time on the issue led to further research, such as on impediments to clinical judgment in assessing malingering.

Research has supported the view that there are limits of clinical judgment in multiple assessment areas, including those related to work in the area of forensic disability determinations, e.g., description of personality (Garb 2005), forensic evaluations (Borum et al. 1993), disability work (Harding 2004), and in neuropsychology (Wedding and Faust 1989). These limits include factors related to decisional heuristics, confirmatory bias, cognitive limits of configural interpretation, lack of corrective feedback, lack of guidelines for discrepancy criteria, the inconsistency and unpredictability of malingering profiles, intra-individual test result variability, and inability to detect malingering by evaluee observation or from data gathered in interview.

To conclude, Guilmette (2013) advised that neuropsychological assessment of MTBI should incorporate well-validated SVT procedures for determining evaluee validity. Moreover, evaluators should not rely on clinical judgment alone, despite the added value that clinical judgment might provide. I would add that evaluators, in general, in the forensic disability context should be aware of the limits of clinical judgment and take steps to deal with them in their practice, e.g., about decisional heuristics and confirmatory bias.

16.2.3 Ethics

Bush's (2013) chapter on ethical consideration in MTBI cases and in symptom validity assessment is treated in detail in Chap. 22 of the present book. In the following I provide the briefest summary. First, he emphasizes positive ethics and refers to the 4 A's in this regard. Second, he deals with ethical issues such as selecting tests and interpreting data. Overall, he takes a positive ethical approach, which means being proactive about ethics in one's practice.

16.2.4 SVTs

Slick and Sherman (2013) presented their revised MND (Malingered Neurocognitive Dysfunction; Slick et al. 1999) system at this point in Carone and Bush (2013a). See Chap. 16 for an extensive review.

Green and Merten (2013) reviewed basic SVTs, such as Green's WMT (Word Memory Test; Green 2005), MSVT (Medical Symptom Validity Test; Green 2004a), and NV-MSVT (Nonverbal MSVT; Green 2008). They reviewed the research that attempted to explain the failure on tests such as these as due to factors other than feigning-related ones, including pain or depression. However, Rohling et al. (2002) presented data that help refute the contention that poor SVT performance in neuropsychological examination can be explained away. Similarly, Demakis et al. (2008) and Gervais et al. (2001) reported similar data for the case of PTSD (posttraumatic stress disorder) and pain, respectively. Moreover, Fox (2011) showed that evaluees who fail effort tests comparatively obtain lower neuropsychological test scores. In this regard, Larrabee et al. (2009) estimated that about 40 % of MTBI evaluees fail effort tests.

In quite opposite contrast to the notion that SVT failure can help diagnose malingering and that it occurs frequently in forensic disability context, others argue that malingering is rare. For example, Stone (2009) argued that almost all cases of MUS (medically unexplained symptoms) reflect underlying genuine symptoms that are unconsciously produced. Green and Merten (2013) correctly maintained that the arguments of Stone lack supportive evidence.

Green and Merten (2013) proceeded to show the logical pitfalls in the arguments raised by those who criticize the value of SVTs or provide inappropriate interpretations of SVT failure (see Table 16.1). For example, SVT failure might be described in obscure language instead of identifying negative response bias, which the authors refer to as "amelioration." The other arguments raised relate less to testing issues and more to biases in interpretation.

To conclude their chapter, Green and Merten (2013) addressed what constitutes "pure malingering" (Resnick 1988). The issue pertains to the extent to which exaggerated symptoms can be differentiated from "real" signs of malingering and the authors stated that there is no valid methodology to distinguish exaggeration and pure malingering. Consequently, it would be futile to separate exaggeration and pure or real malingering in order to establish the base rate of the latter. Note that in Chap. 5 of the present volume, I have proposed a survey of practitioners in the area of forensic and related disability assessments with clear differentiation of degrees of problematic presentations and performances, including different degrees of exaggeration and of malingering. In this sense, I agree with Green and Merten (2013) that the issue of the definition of malingering and the empirical research on its prevalence requires further work. However, my approach is not to argue that the task is impossible but that further conceptualization and research should bring clarity to the matter.

16.2.5 Explaining SVT Failure

Carone et al. (2013) wrote a useful chapter on how to provide feedback in cases of evidence of SVT failure. For the present purposes, their main point is that symptoms

Table 16.1 Potential pitfalls for opponents of symptom validity assessment

Identified pitfalls	Characteristics	Proposed remedy
Amelioration (or Meliorativism)	Avoiding clear diagnostic statements about malingering and negative response bias; use of euphemistic or obscuring language	Use clear and correct language; identify negative response bias when it is present according to diagnostic standards; do not try to obscure it
Mythologism	Repeating traditional beliefs without questioning them in the light of accumulated empirical evidence	Study carefully the rationality and the empirical basis of authority statements; do not repeat them in an uncritical way Note that mythologism may, in fact, weaken the arguments used rather than strengthen them
Pathologism	Detecting a disease or a mental disorder in all persons who claim symptoms or problems	Accept the fact that there are healthy people and that healthy people may claim symptoms that cannot be confirmed; analyze the validity of claimed symptoms instead of accepting them at face value
Authoritarianism	Considering the verdict of famous (mostly older) experts in the field as the highest degree of evidence, in neglect of accumulated empirical research and evidence-based assessment	Remember what Douglas MacArthur said: "Old soldiers never die, they just fade away." In the end, evidence-based arguments will prevail
Ignorism or global attack against psychology	Proclaiming generalized incompetence of psychologists in the field of forensic assessment	The competence of a professional is not created by verdict. Have a close look at what psychologists and their arsenal of validated assessment methods may offer to improve the quality of differential diagnosis
Trivialism	Assuming that psychological assessment can be done by anybody	Remember that psychological assessment, in general, and symptom validity assessment in particular, are complex professional tasks that require an adequate level of qualification
Personal attack	Going beyond any rational argument and attacking your opponent personally	Although this procedure may be very efficient in the short run, it will backfire. If there are no better arguments, refrain from scientific dispute
False historicism	Evoking historical associations to underline ethical doubts about symptom validity assessment	If history is called into the witness box, be careful to be historically correct. Consider that lessons from history may have been learned

(continued)

Table 16.1 (continued)

Identified pitfalls	Characteristics	Proposed remedy
Pseudoethics	Applying ethical principles in a flawed, often populist way	Analyze the ethical implications according to established bioethical principles (e.g., Bush 2007; Bush et al. 2006; Iverson 2006)
Repetitivism	Assuming that a statement is true because it is made so often (e.g., that malingering is very rare)	Look for the empirical data that support or refute the claim

of MTBI might persist even though there are no pathophysiological sequelae. In particular, symptom persistence might take place for reasons of life stress, bodily pain/headaches, poor sleep, and emotions, such as those of frustration or worry.

16.2.6 Research on SVTs in MTBI Cases

Nelson and Doane (2013) have written an extensive chapter, which I analyze in detail only for certain portions. Nelson and Doane (2013) described the research by Bianchini et al. (2006). These authors used a dimensional format to define financial incentive, with the high incentive group demonstrating the greatest range of symptom in validity performance. Meyers et al. (2011) studied the value of embedded SVTs in MTBI evaluations and found that toward 50 % of the variance in performance on the neuropsychological tests involved could be explained by degree of effort. Nelson et al. (2010a) studied military veterans evaluated for the effects of their MTBI. They found that effort indicators correlated significantly with a measure of overall battery performance in the forensic disability context.

Thomas and Youngjohn (2009) found greater problems in an uncomplicated MTBI group compared to a complicated MTBI group and a moderate-to-severe MTBI group. This is referred to as the paradoxical severity effect in that litigation serves to increase MTBI symptoms. Similarly, Green et al. (2011) found that patients litigating their MTBI performed worse on measures of effort compared to patients with dementia.

In the remainder of the chapter by Nelson and Doane (2013), the authors described research supporting the value of the MMPI-2 (Minnesota Multiphasic Personality Inventory, Second Edition; Butcher et al. 1989, 2001) family of tests and their F family of validity indicators. Ben-Porath and Tellegen (2008/2011) developed a revised version of the MMPI-2, the MMPI-2-RF (Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form). Nelson

and Doane (2013) underscored that three F and related scales in the RF have been supported in the research as scales that could help identify exaggerated symptoms of both a somatic and cognitive nature in MTBI samples. The three scales in question are the FBS (Symptom Validity Scale; Lees-Haley et al. 1991), the Fs (Infrequent Somatic Symptoms Scale; Wygant et al. 2007), and the RBS (Response Bias Scale; Gervais et al. 2007). Nelson et al. (2010b) conducted a meta-analysis of research on the FBS and generally found that the literature supported its valid use in MTBI assessments, in particular.

Nelson et al. (2007) examined a compensation-seeking sample for factors that could help explain performance on several SVTs and on several MMPI-2 validity scales, including FBS and RBS, which can be scored with the MMPI-2 as well as the MMPI-2-RF (the FBS aims at somatic symptom over-representation and the RBS at the cognitive). They found a four-factor solution in which the factor of insufficient effort related to SVTs and it negatively correlated at a modest level with a factor involving the FBS and RBS. Nelson and Doane (2013) noted that the finding of only a modest correlation between the SVTs and the FBS/RBS factor suggest that these different types of measures of symptom invalidity are not redundant and, therefore, both could be used in forensic neuropsychological evaluations. In terms of the relative value of the RBS/FBS scales and other F scales, Jones and Ingram (2011) found that the former manifested a stronger prediction of insufficient effort compared to the latter in a military sample.

In conclusion, Nelson and Doane (2013) have provided a valuable review of the relevant literature on response bias detection that supports the use of SVTs as well as validity indicators in the MMPI-2 family of personality inventories. Some of the SVTs that seem supported in the research that they describe include the WMT, the TOMM (Test of Memory Malingering; Tombaugh 1996), and the VSVT (Victoria Symptom Validity Test; Slick et al. 1997/2005), although the goal of the chapter did not involve reviewing the specific research on these tests. As for the MMPIs, the review of the research that they undertook seems to support use of the FBS and RBS, in particular, including as they are scored on the MMPI-2-RF.

16.2.7 Free-Standing SVTs

Guidotti Breting and Sweet (2013) reviewed the concepts underlying free-standing forced-choice cognitive SVTs, and the empirical research justifying their use in neuropsychological assessments. They stated that although the tests typically appear to measure a cognitive function such as memory, which is typically the subject matter tested, in reality, the task demands of the tests are simple and success in the tests relate to putting forth adequate effort rather than relating to memory or other cognitive functions. The logic underpinning SVTs is that failure at the below-chance level is serious enough to suggest malingering because usually even quite compromised patient groups have a much higher success rate. When a forced-choice test comprise a series of two-alternative choices shown to respondents after initial presentation of

the target items, binomial theory predicts that respondents will pass just by chance 50 % of the questions. Most forced-choice tests of this free-standing nature consist of the two-alternative type (e.g., the TOMM). Aside from below-chance performance, free-standing SVTs use empirically-derived cut scores that serve to identify insufficient effort. Many of the tests use the 90 % level to determine the level of correct responses that indicate an absence of insufficient effort, given that seriously compromised patients usually obtain about 90 % correct responses on the tests.

Malingering attribution does not depend on one test result and should be based on a multidimensional, multi-method approach in assessment. Greve et al. (2008) demonstrated the utility of using multiple SVTs in malingering detection in TBI patients. Joint classification accuracy using the TOMM, WMT, and PDRT (Portland Digit Recognition Test; Binder 1993; Binder and Willis 1991) surpassed individual test accuracies. This research is consistent with that of others on the value of multiple testing for effort/malingering, although I note that the research to which Guidotti Breting and Sweet (2013) referred does not necessarily concern free-standing SVTs, in particular (Greve et al. 2009a; Victor et al. 2009). Nelson et al. (2003) found that various Rey-derived SVTs (e.g., RMFIT, Rey 15-item Memory Test; Rey 1941) and embedded SVTs generally provide nonredundant data in assessments pertaining to effort/malingering. This supports that malingering does not take one face but relates to different strategies specific to cognitive domains and, therefore, different validity indicators tapping different domains should be used.

Guidotti Breting and Sweet (2013) catalogued extant free-standing cognitive SVTs into the cognitive domains from which they draw their tasks. There are three major categories: (a) digit recognition; (b) letter/word-based recognition; and (c) visual or mixed visual/verbal tests. The authors listed the major tests in each category: (a) For digit recognition, the tests include the CARB (Computerized Assessment of Response Bias Test; Allen et al. 1997; Conder et al. 1992); PDRT; VSVT; and HDMT (Hiscock Digit Memory Test; Hiscock and Hiscock 1989). Research supporting use of these tests in TBI cases include, respectively, Green and Iverson (2001), Greve and Bianchini (2006), and Grote et al. (2000), with none found for the HDMT. (b) For prominent letter/word based tests, Guidotti Breting and Sweet listed the MSVT and WMT, with supportive research conducted by Armistead-Jehle (2010) and Flaro et al. (2007), respectively. (c) For visual and mixed visual/verbal tests, the tests listed include the NV-MSVT; TOMM; and RMFIT. Research cited supporting use of the first two of the tests in TBI cases include, respectively, Green (2011) and Constantinou et al. (2005). However, the RMFIT has been criticized in the literature, although modifications made by Boone et al. (2002) addressed its poor sensitivity.

Guidotti Breting and Sweet (2013) have provided the reader a great service by enunciating the principles behind free-standing cognitive SVTs, showing their utility in MTBI assessments, and listing major SVTs. The authors concluded that just as subjective complaints increase with lessening TBI severity, so does poorer performance on free-standing cognitive SVTs. They recommended their use throughout neuropsychological assessments along with other types of instruments that can detect malingering.

16.2.8 Embedded Cognitive SVTs

Schutte and Axelrod (2013) undertook a comprehensive review of embedded cognitive symptom validity measures applicable to neuropsychological assessment. In addition, they examined various aggregating methods of SVTs that could be used in practice. Empirically-derived embedded measures in neuropsychological testing typically are derived from commonly administered tests used in clinical assessments. They differ from free-standing, forced-choice SVTs that are designed to directly assess response bias and malingering, such as the MSVT and the TOMM. Despite the empirical research on and validity of stand-alone SVTs, evaluators use embedded measures for the following reasons: (a) efficiency: they do not add testing time; (b) identification and coaching: they are hard to identify and, therefore, difficult to coach; (c) assessment in multiple domains: in contrast to the typical SVT that is putatively based on memory function, they apply to multiple cognitive domains, such as attention span, memory, processing speed, motor speed, and executive function; (d) multiple measures: they lend themselves to embedding multiple measures in the neuropsychological examination, thereby adding incremental validity. For example, although stand-alone tests are considered optimal response bias detection instruments, Greve et al. (2009b) found that only about 12 % of litigants in their study performed at a level below chance for any one measure used; (e) assessment at multiple time points: Boone (2009) recommended assessing response bias throughout neuropsychological assessments because evaluee effort could vary across testing.

Embedded indices can furnish indications of suboptimal effort in neuropsychological assessment in various ways. For example, some embedded measures take the form of forced-choice tasks, such as in free-standing SVTs. These measures include the CVLT-II (California Verbal Learning Test, Second Edition; Delis et al. 2000); the RAVLT (Rey Auditory Verbal Learning Test; Schmidt 1996); the RMT (Recognition Memory Test; Warrington 1984); and the SRT (Seashore Rhythm Test; Reitan and Wolfson 1993). Schutte and Axelrod (2013) noted that these tests are used as free-standing SVTs; however, they typically do not include the 25–50 items recommended for stand-alone SVTs (Millis 2004).

Schutte and Axelrod (2013) listed commonly used embedded measures in neuropsychological evaluations in cases of MTBI. They catalogued the tests according to attention/processing speed, motor functioning, visuospatial functioning, visuospatial memory, and verbal learning/memory. In this brief summary of their work, I can only provide some examples of the measures involved and refer the reader to their excellent tables [I especially list the first reference in each table]. Each table indicates the source, the measure, cut scores, the measure sensitivity, and the measure specificity. When there are multiple publications for the same topic, all are listed and variations in the information about the tests are noted. For attention/processing speed embedded measures, Schutte and Axelrod (2013) listed the WAIS/digit span (Wechsler Adult Intelligence Scale Revised; Wechsler 1981; and WAIS Third Edition; Wechsler 1997a) and the RDS (Reliable Digit Span; Greiffenstein

et al. 1994). For motor functioning, the list included the FTT (Finger Tapping Test; Heaton et al. 1991; Arnold et al. 2005). For visuospatial functioning, Larrabee (2003) researched the VFDT (Visual Form Discrimination Test; Benton et al. 1983, 1994). For executive functioning, Greve and Bianchini (2002) investigated the measure WCST/unique (Wisconsin Card Sorting Test; Heaton 1981). For visuospatial memory and verbal learning and memory, the measures listed were the ROCFT (Rey-Osterreith Complex Figure Test; Rey 1941) and the RAVLT, which were studied by Lu et al. (2003) and Boone et al. (2005), respectively.

The most salient section of the chapter by Schutte and Axelrod (2013) is the one on combining embedded effort indices. They noted that statistical combination procedures could be compromised by multicollinearity (which refers to the strength of relationships between variables in the statistical model), as well as differing likelihood ratios over measures. Also, clinicians use different test batteries. The authors indicated that there are statistical solutions to these pitfalls.

Clinicians might use the additive method, which concerns collating failures on individual tests according to cut scores. The method is intuitive and easy to use and it has been researched. For example, Larrabee (2003, 2008) used embedded indices related to the RDS, the WCST-FMS (Wisconsin Card Sorting Test, Failure-to-Maintain Set Score; Suhr and Boyer 1999), the WCST, the VFDT, the FTT, and the FBS. In equivalent research, Victor et al. (2009) used the RDS, the ROCFT, the RAVLT, and the FTT. In both investigations, the embedded measures were taken from different cognitive domains. Both sets of studies found that two or more test combinations with failing performance indicated suboptimal effort. However, Schutte and Axelrod (2013) correctly noted that in Victor et al. (2009) the embedded measures were correlated at levels between .23 and .63, which the authors refer to as "high" multicollinearity among the measures. They concluded that the measures were not adequately independent, thereby limiting their use in the proposed additive method as applied to clinical practice.

It should be noted that I had discovered the same difficulty in the Victor et al. (2009) study, as described in Chap. 10. Moreover, I had also noted that the research by Vickery et al. (2004) had been described by Larrabee (2012) as comprising a set of independent symptom validity measures. However, inspection of the results of that study had revealed that inter-measure correlation had not been calculated.

With respect to using the additive method for combining neuropsychological measures, Schutte and Axelrod (2013) concluded further research is needed to find measures that do not manifest multicollinearity. Also, in neuropsychological practice, when research on the question in lacking, nevertheless, evaluators who choose to use embedded measures might use the additive method based on clinical judgment that the measures chosen do not express multicollinearity. I note that neuropsychological evaluators might find that this recommendation should be used with extreme caution, if at all.

Schutte and Axelrod (2013) noted that the pattern of performance in neuropsychological evaluations could reveal poor effort. They mentioned that there are empirical methods for examining pattern of performance. For example, Silverberg et al. (2007) developed a method with respect to the RBANS (Repeatable

Battery of the Assessment of Neuropsychological Status; Randolph 1998). However, they noted that Armistead-Jehle and Hansen (2011) reported results that did not support the use of this method in practice.

The floor effect is another method for combining embedded cognitive symptom validity measures in neuropsychological assessment. In this method, the test scores of the evaluee are compared to performance of known groups, such as patients with moderate-to-severe TBI. In this regard, the Wechsler Advanced Clinical Solutions package (ACS; Wechsler 2008a, b) has developed an Effort Assessment Score Report. Schutte and Axelrod (2013) noted that this technique depends on the adequate definition of comparison control groups. For example, for the ACS, the manual involved does not define well the nature of the comparison groups involved.

The next combination procedure of embedded test measures described by Schutte and Axelrod (2013) concerned discriminant function analysis to predict group membership. The method can be used in individual assessments by applying the beta weights for the individual variables in the entire model. However, the model assumes that the variables are normally distributed and that groups have equal variances. Schutte and Axelrod (2013) noted that these assumptions are rarely met in neuropsychological research.

Schutte and Axelrod (2013) described a promising technique using multiple (logistic) regression in predicting group membership. The statistic is more robust with respect to both non-normal variable distributions and heterogeneity of variance, and it can accommodate multicollinearity. The technique can be applied to the individual case by straightforward calculations and the use of readily available computer programs. For example, Wolfe et al. (2010) developed a regression formula for the CVLT-II. However Schutte and Axelrod (2013) noted that Donders and Strong (2011) suggested a different cut score for the procedure based on their research. Other work in the area involves the WMS-III (Wechsler Memory Scale, Third Edition; Wechsler 1997b; Ord et al. 2007); the WAIS-IV/ACS (Wechsler Adult Intelligence Scale, Fourth Edition/Advanced Clinical Solutions; Wechsler 2009; Miller et al. 2011); and the WMS-III/ROCFT/CVLT-II combination (Schutte et al. 2011).

Schutte and Axelrod (2013) concluded that a significant weakness of the regression method is that, in research, the sample tested needs to be greater than 200 in order to maximize stability. The use of smaller samples in the research provides models that are not as strong as they appear and that are less accurate. That being said, there are statistical techniques that can accommodate low sample size.

However, I conclude that just as Donders and Strong (2011) had to revise the work of Wolfe et al. (2010), it is clear that all of these various techniques need further research before they are ready for application in individual assessments. In addition, Schutte and Axelrod (2013) noted that in regression-based methods the selection method used can influence in a significant way the outcome of the statistical model. The authors recommended the approach of Bayesian model averaging rather than a rational or statistical stepwise approach, which holds the touted promise in this technique.

As a final caution, Schutte and Axelrod (2013) noted that evaluators using embedded measures need greater statistical knowledge. Further, evaluees having legitimate cognitive deficits might perform poorly on embedded measures for valid reasons. Finally, evaluators need to possess solid knowledge of the research in the area. For example, research studies vary in sample and design, which impacts significantly the meaning of embedded test failures. Despite these weaknesses with embedded measures in neuropsychological assessment for purposes of detecting response biases, Schutte and Axelrod (2013) concluded that the procedures in their use will continue to evolve and that when used correctly in practice, they will add to data provided by free-standing measures.

In order to get a better grasp of practical applications of the regression method in neuropsychological research on negative response bias detection, it is worth examining more closely the research by Schutte et al. (2011). They assessed 124 consecutive adult referrals to a VA center, in a mixed clinical sample, who were mostly males and who were almost uniformly not specific compensation referrals. Tests were administered in variable order. Quality of effort was evaluated using the MSVT. The indices of the test refer to success in immediate recall (IR), delayed recall (DR), paired associate memory (PA), free recall (FR), and response consistency (CNS). The authors "loosely matched" well-validated embedded memory measures dispersed in the assessment with the first four mentioned effort indicators of the MSVT, which is administered once in the assessment.

Based on MSVT results, the sample was split according to good and poor effort (below cut scores on IR, DR. or CNS, with an additional criterion of Easy minus Hard subtest scores less than 20; groups not differing on demographic variables). The matched neuropsychological measures used to determine whether embedded validity indices could reliably differentiate the good and poor effort groups for the MSVT's IR, DR, PA, and FR scores, respectively, were based on scores from: (a) ROCFT immediate (Rey-Osterreith Complex Figure Test, immediate recall standard score; Meyers and Meyers 1995); (b) CVLT-II FC (California Verbal Learning Test-II, Forced Choice measure raw score; Delis et al. 2000); (c) WMS-III VPA-2 (Wechsler Memory Scale, Third Edition, Verbal Paired Associates-2 scale score; Wechsler 1997a); and (d) CVLT-II Trial 5 (CVLT-II Trial 5 standard z score; Delis et al. 2000).

The linear logistic regression formula that can be used for clinical use that emerged from the study can be summarized as the probability of good/poor effort as derived from the arrangement of scores into the following formula: $p = (-.037 \times \text{ROCFT immediate}) + (-.537 \times \text{CVLT-II FC}) + (-.486 \times \text{WMS-III VPA-2}) + (1.082 \times \text{CVLT-II Trial 5}) + 15.25$; or, $p = e$ to the power of $(15.25 + (-.037 \times \text{ROCFT immediate}) + (-.537 \times \text{CVLT-II FC}) + (-.486 \times \text{WMS-III VPA-2}) + (1.082 \times \text{CVLT-II Trial 5}) / 1 + e$ to the same, where e refers to the exponential function.

For clinical use of the model, scores are entered for each of the four predictors into the model, which is exponentiated for the formula's beta weights as shown, in order to calculate for an individual the probability of good/poor effort group membership. For example, for the four indices, scores, respectively, of 100, 16, 10, and 0 yield a failure probability of 8 %, indicative of an absence of poor effort, but

equivalent scores of 70, 10, 8, and 1 yield a probability estimate of 98 %, indicative of likely poor effort.

The authors concluded that the described logistic function requires cross-validation before being ready for clinical use. Furthermore, newer tests should be used, where appropriate, and they should cover more than the domain of memory. Moreover, I would add that the types of samples tested this way should concern clear forensic and related disability cases, as well as control conditions.

16.2.9 Personality Tests in Symptom Validity Assessment

Heilbronner and Henry (2013) reviewed the three major personality inventories for their capacity to help detect negative response bias. The MCMI-III (Millon Multiaxial Clinical Inventory, Third Edition; Millon 1994; Millon et al. 1997) includes three validity (modifier) scales. According to Heilbronner and Henry (2013), Aguerrevere et al. (2011) found that the scales were useful in identifying intentionally exaggerated symptoms in TBI cases, especially for the Debasement scale, which concerns symptom overreporting. As for the PAI (Personality Assessment Inventory; Morey 1991, 2007), Whiteside et al. (2012) found MTBI compensation-seeking patients were differentiated from controls by higher elevations on a scale of Negative Impression Management (NIM).

As for the MMPI-2, Heilbronner and Henry (2013) described the efficacy of five new measures in detecting response bias – the FBS, HHI (Henry-Heilbronner Index; Henry et al. 2006), RBS, MMDS (Malingered Mood Disordered Scale; Henry et al. 2008), and PDS (Psychosocial Distress Scale; Henry et al. 2011c). The first of this scales with developed by Lees-Haley et al. (1991); with a reduced version, the FBS-r, available in the MMPI-2-RF. Heilbronner and Henry (2013) cited, respectively, the following recent sources as supportive of the use of the first four of these measures in the forensic disability and related context, e.g., neuropsychological testing – FBS: Dionysus et al. (2011); HHI: Henry et al. (2011a), Jones and Ingram (2011); Young et al. (2011); RBS: Whitney et al. (2008); MMDS: Henry et al. (2011b). [Note that the research undertaken in these studies is quite detailed and beyond the scope of the present chapter to summarize in depth.]

In terms of what the various scales measure, Hoelzle et al. (2011) found that the factor structure of the FBS involved a three-factor solution representing somatic symptoms, cynicism, and cognitive inefficiency/emotional distress, but for the RBS and HHI the cognitive inefficiency/emotional distress aspect was more pertinent. The two most recent scales, the MMDS and the PDS, concern emotions and interpersonal/social/family factors, respectively.

According to Heilbronner and Henry (2013), the research does not consistently support one of the new MMPI-2 scales more than any other for the purposes of detecting response bias in TBI-related compensation samples. Moreover, they tap different psychological constructs, so should be used together. The authors recommended that definite negative response bias is indicated when evaluees score

above cut scores set at ≥90 % specificity on three or more of the five measures and that a probable negative response bias is reflected scores like this on two of them.

Note that I find the latter suggestion premature in light of the recent creation of the MMDS and the PDS. Nevertheless, continued research might lead to their clinical use in the way suggested. Moreover, a recent factor analysis of the FBS-r in a military sample has confirmed that there is a cynical-related factor (called Optimism/Virtue) in the factor solution of its items (the other factor concerned somatic symptoms; Gass and Odland 2012). In addition, the factors correlated negatively with each other. Assuming the results are generalizable to compensation-seeking patients, this suggests that the FBS scales (both original and revised) might not validly detect negative response bias, and might have to be revised to exclude items related to optimism/virtue/cynicism before they can be used validly in forensic and related disability assessments.

It is instructive to find that Heilbronner and Henry (2013) differentiated definite and probable negative response bias by problematic performance on three compared to two embedded personality response bias scales, which is an approach quite similar to the one that I had taken as I developed my negative response bias and malingering detection system (see Chap. 5). That is, I suggested that test results, per se, should not be used to conclude the presence of malingering, except in the case of incontrovertible evidence, so that imputation of definite or probable negative response bias should be the preferred approach. Moreover, in my system, everything else being equal, three or more test failures does make sense for attributing definite negative response bias and two of them does suggest the probable level in this regard. However, my approach was to apply this type of determination to any type of symptom validity measure, and not just embedded personality test ones.

16.2.10 Response Bias Detection by Non-neuropsychologists

Carone (2013) referred to use of free-standing cognitive SVTs, such as the MSVT, and personality inventories, such as the MMPI-2, that non-neuropsychologists could use to detect non-credible presentations and performances after a TBI. In addition, he referred to two self-report questionnaires, the PCSQ and the MCI (Postconcussion Syndrome Questionnaire; Lees-Haley 1992; Axelrod and Lees-Haley 2002; Memory Complaints Inventory; Green 2004b; respectively). Both tests include implausible complaints as validity checks. In addition, evaluators can use clinical reasoning using qualitative indicators of response bias.

Carone (2013) reported that Stewart-Patterson (2010) has recommended that the evaluator use coherence analysis based on the "7 Cs": continuity of clinical findings, consistency of clinical data, congruence, compliance, causation, comorbidity, and cultural factors. For example, respectively, one queries: late onset of symptoms, uniformity in the data, biological plausibility, adherence to treatment regimen, valid causality, differential diagnosis, and relevant cultural styles.

16.2.11 Assessing Non-credible Function Outside of Memory in MTBI

The chapters by Victor and colleagues (Victor et al. 2013a, b) offered a comprehensive survey of embedded neuropsychological tests that can be used to detect response bias in areas other than memory. They recommended that tests in these areas be dispersed throughout assessments. In particular, they reviewed the multiple tests that have been constructed in the areas of attention, processing speed, language, and visuospatial/perceptual function in the first chapter and of motor/sensory and executive function in the second chapter. Their work is comprehensive and the amount of tests numerous so that I offer only a brief review.

The tests used to detect negative response bias in the area of attention focus on simple immediate attention rather than selective, sustained, divided, or other types of attention. Tests that are part of the Wechsler intelligence test scales have proven valuable in this regard, e.g., the Digit Span (DSp; includes digits forward and backward strings) subtests (Wechsler Adult Intelligence Scale-Revised, WAIS-R; Wechsler 1981; WAIS-III; Wechsler 1997a; WAIS-IV; Wechsler 2008a, b; Wechsler Memory Scale-Revised, WMS-R; Wechsler 1987; WMS-III; Wechsler 1997b; WMS-IV; Wechsler 2008c). Several scores of the DPs have proven effective in negative response bias research and practice, the ACSS (Age-Corrected Scaled Score; Wechsler 1987) and the RDS (e.g., Iverson and Franzen 1994, 1996; Suhr et al. 1997). Research that supports the use of these attention-based embedded measures in MTBI assessment include, respectively – for the ACSS: Axelrod et al. (2006); and for the RDS: Larrabee (2008). Babikian and Boone (2007) and Suhr and Barrash (2007) conducted comprehensive reviews in support of these indices for the task at hand.

Some other measures reviewed by Victor et al. (2013a) on attention include the WMI, TOVA, and CPT-II (respectively, Working Memory Index, Test of Variable of Attention, Continuous Performance Test, Second Edition). These tests were developed, respectively, by: the authors of the WAIS-III; Greenberg et al. (1996); and Conners (2000). They have been studied in the MTBI context, respectively, by Curtis et al. (2009), Henry (2005), and Ord et al. (2010). Victor et al. (2013a) concluded that among these measures and others in their review of the role that can be played by embedded measures related to simple, immediate attention in neuropsychological assessment for purposes of evaluation of negative response bias, both the DSp ACSS and RDS indices are well-validated in the research that has been undertaken, such as in known-group design research. As for processing speed, language, and visuospatial measures that can serve in the task at hand, some demonstrate potential, but further work is needed.

In the Victor et al. (2013b) review of measures in other non-memory areas (sensory/motor, executive function) that can be used effectively in negative response bias in the MTBI context, they found little to suggest that the various measures are as clearly validated as in the area of attention. Nevertheless, the sensory/motor measures have demonstrated a utility, e.g., in effectively ruling in negative response

bias, although effectively ruling it out is not sufficiently demonstrated. For the sensory/motor area, sample measures/tests include Finger Tapping (FTT; Larrabee 2008) and Grip Strength (GS; e.g., as measured by the Jamar dynamometer; Greiffenstein 2007; Lezak et al. 2004). For executive function, measures related to the WCST constitute a major source that is used (Heaton et al. 1993). However, the research is not as positive about these indices (Greve et al. 2009a, b).

Victor et al. (2013b) concluded their review of non-memory based negative response bias embedded measures in MTBI evaluations by stating that although they do not have the degree of sensitivity evidenced for free-standing SVTs, they can contribute relevant information about evaluees. Moreover, aggregating techniques are available. However, Victor et al. do not specify which is the most helpful in the context of neuropsychological assessment and they refer to difficulties in the research undertaken, e.g., in sample size. The authors called for further validation research for all the measures/tests in the area. The practitioner should not focus on how many SVTs and which ones should be administered but, rather, whether a sufficient interspersed amount have been included, with preference in this regard given to "standard cognitive tests that include embedded effort indicators."

I conclude that practitioners who follow through on the recommendation with respect to embedded neuropsychological measures should consider tests of simple, immediate attention, in particular, although not exclusively, as well as memory ones. They should be aware of the sensitivity and specificity data about the measures that have been found in the research and they should consider the optimal cut scores for the purposes at hand, while considering the role of the measures in ruling in and out negative response bias. The full set of reliable data gathered in any evaluation should be examined to provide the appropriate context for score interpretation.

16.2.12 The Brain in Deception and Malingering

Browndyke (2013) reviewed the research that indicated that the prefrontal brain regions are more engaged in deception and malingering behavior relative to truthful behavior/adequate effort on tasks. Spence et al. (2001) conducted the first fMRI (functional magnetic resonance imaging) study of neuroanatomical correlates of deception. For both auditory and visual stimuli, they found activation in three regions of the prefrontal cortices in deception relative to normal responding, the VLPFC, DMPFC, and DLFPC (respectively, the ventrolateral, dorsomedial, and dorsolateral regions), in addition to the IPL (inferior parietal lobule). These regions are associated with generation/inhibition of responding, working memory, metacognition, and the monitoring of social cues necessary for deception. The research of Ito et al. (2011) implicated the DLFPC bilaterally, as well as the supramarginal gyrus bilaterally and the SMA (supplementary motor area). As for areas not involved in working memory load at the same time, the regions concerned prefrontal areas of the left hemisphere, in particular (ventrolateral, prefrontal, orbitofrontal).

Browndyke (2013) analyzed the fMRI research for areas involved in feigned memory impairment (e.g., Abe et al. 2008; Bhatt et al. 2009; Lee et al. 2005, 2009). The major area involved concerns the prefrontal lobe regions of the right inferior frontal gyrus and middle frontal gyrus. The area is associated with response inhibition and confabulatory behavior and pathological lying (e.g., respectively, Chikazoe et al. 2007; Harada et al. 2009). In a study with direct stimulation technology, the tDCS method (transcranial direct current stimulation), which functions like a virtual and reversible lesion/ablation, Karim et al. (2010) implicated the aPFC (anterior prefrontal cortex) in deception. Indeed, deceptive abilities improved with the temporary suppression of the region, and as a control, there was no effect on a Stroop inhibition trial, which is consistent with the research associating the region with consideration of moral conflict or valuation. Priori et al.'s (2008) research using this paradigm implicated the DLPFC, but with an opposite effect. Karton and Bachmann (2011) used the rTMS procedure (repetitive transcranial magnetic stimulation) to the DLPFC during a non-demanding deception task. They found a laterality effect, such that the right DLPFC, once the left DLPFC is suppressed, might be critical to the tendency to deceive, whereas the suppression of the aPFC might be important for success in deception.

As for other research described by Browndyke (2013), Wu et al. (2010) reported a case study that implicates the working memory network (bifrontal/biparietal and SMA) on a forced-choice SVT, the WMT. The research suggests that the task is not effortless and so cut scores for different groups on these types of tests might need reconsideration. Jin et al. (2009) conducted research using fMRI that might have application to lie detection, although the results are too preliminary for purposes of court use. They found that SMA region activity seemed discriminative of deception and truth conditions, as well the left opercular region and the right putamen.

Browndyke (2013) concluded that the VLPFC and the temporoparietal junction appear to be "distinct deceptive behavioral responses." Hemispheric differences in the PFC are involved in deceptive intent and success. As for the functional substrates of malingering and its detection with SVTs, the research is just beginning. About fMRI lie detection, if evidence using this technique were to be proffered to court, it would not survive admissibility challenge (*Daubert* 1993).

16.2.13 Symptom Validity Testing for Pain and PTSD

Bianchini et al. (2013) reviewed the research on performance invalidity in patients with chronic pain or with PTSD. They argued that the cognitive complaints of pain patients (e.g., Iverson et al. 2001; Krietler and Niv 2007; Nicholson 2000) and PTSD patients (Brewin et al. 2007; Oien et al. 2011; Taylor et al. 2007) in the litigation context merits evaluation of negative response bias. However, the prevalence of malingering in these patients has been quite high (e.g., for pain, about 40 %; Mittenberg et al. 2002; up to 45 % in Greve et al. 2009b; for PTSD, up to 30 % in Lees-Haley 1997; and 29 % failure rate for at least one SVT for patients with PTSD symptoms; Demakis et al. 2008).

Bianchini et al. (2013) reviewed the literature on the specificity and sensitivity of stand-alone SVTs in detection of negative response bias in cognitive test performance. Bianchini et al. (2013) concluded that their pain-related malingering detection system (the MPRD, Malingered Pain-Related Disability; Bianchini et al. 2005) can be extended to use in PTSD assessment. The MPRD system could be applied "reasonably" to the condition of PTSD as it "adapts very well" to it. Moreover, in the authors' opinion, it can be applied to any "potentially compensable condition."

However, although Bianchini et al. (2013) indicated that the MPRD can be used with other conditions because it concerns exaggeration and malingering, in general, they failed to consider that inspection of their system reveals that it includes quite pain-specific criteria. Nevertheless, the gist of their recommendation is important, and one that resonates with the system that I developed, which can apply equally to the detection of negative response bias and malingering in conditions related to cognitive deficits, pain, and PTSD (for the three domains in my system, different examples are provided; otherwise, the structure is uniform across them).

16.2.14 Special Populations

In the last four chapters of Carone and Bush (2013a), special populations are considered, but space considerations preclude but their brief mention. Chafetz (2013) examined the disability and civil litigation context in relation to symptom validity assessment of MTBI, including in social security and private disability assessments. Macciochi and Broglio (2013) reviewed the research relating to neuropsychological assessments of sports concussion. Bush and Graver (2013) considered the military/veteran context. Poor effort in this latter context, for example, as determined by failure on one SVT, has been found to be as high as 57–58 % (Armistead-Jehle 2010; Graver and Shurak in press). Fraud is present in the system (Morel 2010), and evaluators have the ethical obligation to test for malingering (American Psychological Association 2002), although I note that the political pressures not to do so in the system are well-known. Donders and Kirkwood (2013) reviewed assessment of effort in pediatric populations, in particular. It was interesting to note that SVTs used for adults apply to children (TOMM, Kirk et al. 2011; CARB, Courtney et al. 2003; WMT, Green and Flaro 2003; MSVT, Kirkwood and Kirk 2010). Another section of the chapter dealt with the validity of the TOMM even with depressed patients (Ashendorf et al. 2004; Yanez et al. 2006; Gierok et al. 2005; O'Bryant et al. 2007; Rees et al. 2001).

16.3 Chapter Conclusion

Carone and Bush (2013a) and their chapter authors have written an excellent text that is quite complementary to the present book. It was published after I completed the main portion of the present book, and it adds depth to several areas in the present

book in the comprehensive nature of its conceptualization and empirical reviews. As I described in summarizing its chapters, I did fine some lacunae and inconsistencies, but not many, which speaks to its quality. At the same time, some of my critical comments are worth noting. The major ones concern the revised MND system for the detection of malingering proposed by Slick and Sherman (2013). I compared and contrasted this revision with my own system, and concluded that mine might be more scientifically valid and of better practical utility. Similarly, Bianchini et al. (2013) recommended that their extension of the MND into the domain of chronic pain (the MPRD) could be extended even to PTSD and other conditions. Once more, I found this proposal lacking. Rather, I suggested that the system that I developed can apply equally to cognitive, pain, and PTSD-related negative response bias and malingering detection in the forensic disability and related contexts.

As for other chapters in Carone and Bush (2013a), Guilmette (2013) provided a cogent summary of the value of clinical judgment in neuropsychological assessment, supporting the present argument that it can be a useful complement to testing. Bush (2013) gave an ethics tutorial for practice in the area, which is a foundation of practice. Aside from presenting their revised MND system, Slick and Sherman (2013) provided relevant information with respect to differential diagnosis of malingering and even proposed a new disorder related to a specious attitude. Green and Merten (2013) indicated research and arguments supportive of SVT usage in neuropsychological assessments, and also indicated how to counter arguments against attributing malingering. Carone et al. (2013) indicated factors that can lead to persistent post-concussive symptoms beyond any effects of TBI. Nelson and Doane (2013) summarized studies illustrating the value of certain tests in malingering detection and conceptualized the difference between effort and exaggeration.

Guidotti Breting and Sweet (2013) focused on valid free-standing SVTs, which are the tests with the best psychometric properties related to sensitivity and specificity in the area. Schutte and Axelrod (2013) reviewed the value and limitations of embedded cognitive symptom validity measures. They described extant aggregating algorithms and criticized approaches that do not consider the multicollinearity of measures aggregated. They recommended Bayesian approaches. I reviewed Schutte et al. (2011) in detail in order that the reader becomes familiar with their Bayesian approach, which has much potential for individual case assessments.

Heilbronner and Henry (2013) reviewed new validity scales added to the MMPI-2, the RBS, the HHI, and the FBS, in particular. Their specific suggested aggregating method seems premature, but it concords in general terms with my own. Carone (2013) reviewed clinical strategies and testing for non-neuropsychology clinicians. In two successive chapters, Victor and colleagues reviewed the multiple embedded indicators that are used in neuropsychological testing for other than memory (Victor et al. 2013a, b). Ones for simple, immediate attention appear the most valid, but multiple ones should be interspersed in neuropsychological testing and the results should be aggregated. Once more, there were similarities with my approach.

Browndyke (2013) described functional neuroanatomical bases of deception and malingering. The research is not ready to allow for individual lie detection in court. Bianchini et al. (2013) considered tests for malingering detection in cognitive

performance in cases of pain and PTSD. As for the final chapters on the book on special populations, Chafetz (2013), Macciocchi and Broglio (2013), Bush and Graver (2013), and Donders and Kirkwood (2013) explored malingering detection in, respectively, the disability, sports, military/veteran, and developmental contexts, in particular. All these Carone-Bush chapters provide valuable information, the review of which in this chapter and the last one add notably to the present book.

In other relevant research, Greve et al. (2013) surveyed the recent research on various classes of SVTs. They considered an SVT as any score, test, or formal indicator used in assessment of performance validity on cognitive tests, or of accuracy on self-report questionnaires, or information provided in structural interviews. Their approach is quite consistent with the present one of not restricting the use of the term SVT, subdividing its range of application, or replacing it. Their review supported the utility of SVTs; for example, they cited Sollman and Berry's (2011) meta-analysis on the utility of stand-alone SVTs [VSVT, LMT (Letter Memory Test; Inman et al. 1998) MSVT, TOMM, WMT].

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Chapter 17
Most Recent Journal Article Review

17.1 Introduction

This chapter of the present book includes the most recent research (especially journal articles) on the topic of the book and indicates its relationship to prior chapters. I emphasize how the literature illustrates the dynamic of creation in science of new research results, new concepts, and new applications, but also I note that in the forensic context, prudence is needed before change is implemented. Also, I indicate that the recent research supports the main points of the present book, either directly or indirectly, while reflecting the tensions and adversarial divide in the field. To conclude, the chapter lists recommendations for preparing effective testimony in court.

Table of Terms and Sources

Abbreviation	Name	Source(s)
BVMT-R	Brief Visuospatial Memory Test, Revised	Benedict (1997)
CPT-II	Continuous Performance Test, Second Edition	Conners (2002)
CT	Category Test	Tenhula and Sweet (1996)
CVLT-II	California Verbal Learning Test, Second Edition	Delis et al. (2000)
CVLT-II: FC	Forced-Choice Recognition	Delis et al. (2000)
DMT	Digit Memory Test	Hiscock and Hiscock (1989)
DSM-5	Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Draft Version	American Psychiatric Association (2012)
DSY	Digit Symbol Coding	Wechsler (1997)
FBS	Symptom Validity Scale (originally called Fake Bad Scale)	Ben-Porath and Tellegen (2008/2011)
FTT	Finger Tapping Test	Heaton et al. (1991)
HRNB	Halstead-Reitan Neuropsychological Test Battery	Reitan and Wolfson (1993)
ICD-10	The International Statistical Classification of Diseases and Related Health Problems, Tenth Revision	World Health Organization (2007)

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Abbreviation	Name	Source(s)
MAL	Malingering Index	Morey (1991)
MMPI-2	Minnesota Multiphasic Personality Inventory, Second Edition	Butcher et al. (1989, 2001)
MMPI-2-RF	Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form	Ben-Porath and Tellegen (2008/2011)
MSVT	Medical Symptom Validity Test	Green (2004)
NIM	Negative Impression Management	Morey (1991)
OTBM	Overall Test Battery Mean	Miller and Rohling (2001)
PAI	Personality Assessment Inventory	Morey (1991, 2007)
PSI	Processing Speed Index	Wechsler (1997)
-r	Revised (e.g., FBS-r)	Ben-Porath and Tellegen (2008/2011)
RBANS	Repeatable Battery for Assessment of Neuropsychological Status	Randolph (1998)
RDF	Roger's Discriminant Function	Rogers et al. (1996)
RDS	Reliable Digit Span	Greiffenstein et al. (1994)
R-PAS	Rorschach Performance Assessment System	Meyer et al. (2011)
SIRS	Structured Interview of Reported Symptoms	Rogers et al. (1992)
SSPT	Speech Sounds Perception Test	Reitan and Wolfson (1993)
TFRT	Tactile Form Recognition Test	Reitan and Wolfson (1993)
TOMM	Test of Memory Malingering	Tombaugh (1996)
VSVT	Victoria Symptom Validity Test	Slick et al. (1997/2005)
WAIS-III	Wechsler Adult Intelligence Scale, Third Edition	Wechsler (1997)
WAIS-R	Wechsler Adult Intelligence Scale, Revised	Wechsler (1981)
WMS-IV	Wechsler Memory Scale, Fourth Edition	Wechsler (2008)
WMI	Working Memory Index	Wechsler (1997)
WMT	Word Memory Test	Green (2005)

17.2 Canons in Forensic Disability and Related Assessments: Under the Gun and Turned on Their Head

17.2.1 Introduction

One final literature review that I conducted for the present book yielded several surprises that indicate that the field needs continued research and that standard tests and approaches in assessment in the forensic disability and related context do not fully measure up to recent empirical research or conceptualization. All areas of science continue to evolve, so that the theoretical knowledge base in the area of malingering and related response bias detection should be expected to continually transform. However, when data and concepts in the literature lead practitioners evaluating for malingering and related attributions to query the validity of fundamental

assumptions and standard instruments in the field, more reason obtains to keep up with the literature in preparation for court. Similarly, we have seen in the preceding chapter that the MND malingering diagnostic system (Slick et al. 1999) has been revised by its authors, so that the original version of this system is now cast in doubt as the version that will reach the status of gold standard.

In the following, I review recent literature related to the major tests used in the field and efforts to combine them in effective malingering detection algorithms. There is a section on the adversarial divide in relation to malingering and related response bias assessment. Throughout this review, I offer comments and critique, as appropriate. Finally, the chapter examines how to best prepare for court. Note that I have refered to works reviewed in the present chapter, where appropriate, in prior chapters of the present book, providing brief summaries, as required.

17.3 Current Literature and Future Directions

17.3.1 Symptom Validity Testing (In)Validity

Bigler (2012a, b) and Larrabee (2012a, b) engaged in a dialogue on symptom validity testing in neuropsychological assessment. I have reviewed Larrabee's approach in Chap. 7. The major components of his argument in favor of SVTs (symptom validity tests) and their use in neuropsychological assessment are repeated in Larrabee (2012a, b). As for Bigler (2012a, b), he agreed that (a) SVT testing can help infer symptom and performance invalidity in proportion to the number of SVT items that are failed, and (b) below-chance SVT scores, or even scores close to that level, are clear and indisputable indices of invalid test performance. Beyond these major agreements, the Bigler-Larrabee exchange does include differences worth noting about SVTs and neuropsychological assessment.

Bigler queried the meaning and interpretation of SVTs with respect to what these tasks measure and how they should be used in assessments. He restricted his commentary to stand-alone forced-choice measures. Given the apparent lack of effort needed to succeed on these tests and the floor effect in which even seriously injured TBI (traumatic brain injury) patients perform well, these tests provide a possible benchmark of malingering when performance is below chance.

Bigler queried whether individuals who just fail SVTs, which he referred to as "near-pass SVT performance," might do so for valid reasons. For example, there might be valid underlying neuropathology. In this regard, he described two case studies in which a failed SVT performance was associated with underlying neuropathology. [Also see Willis et al. (2011) for similar cases.] Bigler noted that there is no systematic research of the effects of lesions on SVT performance.

Bigler qualified that Williams (2011) noted a SVT failure rate of 15–30 %, or even higher, in non-litigating neurological and neuropsychiatric clinical populations. [However, my review of Williams (2011) failed to find such an explicit statement.]

Bigler continued that performance expectations can influence patients' neuropsychological assessment – this is called "diagnosis threat" (Suhr and Gunstad 2005). Similarly, research using placebos reveals that expectations can influence test performance (Pollo and Benedetti 2009). Wager-Smith and Markou (2011) noted the effect of stress on cognitive performance. Together, this type of research suggests that there are multiple influences on SVT performance beyond any attribution of malingering. Therefore, cases of just-fail SVT performance might be due to factors such as these rather than performance invalidity itself.

In addition, Bigler raised methodological and research issues in the area. For example, on SVT items, there has been no research on whether the foil stimuli in the items are equivalent. As for research designs, there might be circular reasoning and tautology in defining groups in SVT research. For example, there is no independent means of verifying that SVT failure means poor effort or the equivalent. Also, in this type of research, determination of patients with objective brain damage is achieved retrospectively without quality control and uniformity so that the groups are "ill-defined and potentially meaningless." As for the investigators of SVT research, critical studies are conducted by forensic practitioners in private practice. Moreover, the research does not meet accepted standards of the highest ratings of research quality involving independence at all levels of the research.

In terms of practice, evaluators select SVTs without proper universal guidelines; rather, they rely uniquely on their subjective judgment. Moreover, for extant suggestions to use multiple SVTs (Boone 2009; Larrabee 2008), there is no accepted standard for the number of such tests to administer, their order, their context, or what to do when there are some passes and some failures in the battery administered. Also, he asked whether there should be different SVTs used for different disorders. Aside from below-chance performance, SVTs might use cut-scores. However, their choice always involves some degree of judgment (either by the test developer or the clinician). In addition, Bigler expressed concern about a one-size-fits-all approach to selection of cut-scores, e.g., selecting them independent of patient demographics.

Bigler raised other points. No one has examined the question of false memories in relation to SVT performance. It is unclear whether SVT failure means that the whole psychological test battery is invalidated. Finally, research has shown that simulators can be coached how to pass SVTs and then fail other neuropsychological measures. Further, Bigler noted that SVT failure could result from non-neurological factors, such as drive, motivation, attention, and distractibility during testing, rather than from malingering, per se, and that many legitimate patients fail SVTs. Therefore, the tests should not be used in an over-simplified way in dichotomizing neuropsychological performance as either valid or invalid, a practice which leads to Type I and Type II errors. Bigler concluded that much more research is needed on SVTs in neuropsychological assessment.

To comment further upon this exchange, for Bigler (2012a, b), it appears that the difficulty in malingering assessment relates to which measures to use, how to combine them, and their meaning when failed. For example, factors such as expectations and stress could lead legitimate patients to fail. However, for Larrabee (2012a, b),

the science and research behind the approach to use dichotomous pass-fail cut scores and also algorithms to combine tests are valid and avoid inappropriate attributions. Moreover factors, such as expectation and stress alleged to explain poor performance on the tests, have little weight.

Bigler and Larrabee both conduct research in the area of malingering detection, yet they offer contrasting opinions on the degree to which SVTs can be used to attribute malingering. Moreover, they disagree on the relevance of non-TBI factors that could explain SVT failure. It would appear either the science in the area needs continued refinement so that there is less room for such divergent opinions or the arguments made by both parties need careful scrutiny for any errors of omission or commission. The evaluator going to court might be confronted by requests to address similar arguments made by the two parties or even asked to comment on their exchange. The present book has enough material to offer guidelines in this regard, but I refrain from repeating them so that each reader can arrive at their own opinion in preparation for court.

That being said, I agree with both Bigler and Larrabee that forced-choice SVTs can be useful, but more research is needed. Given this state of affairs, and as emphasized throughout the present book, the astute evaluator will assess for malingering and related response biases, but will be careful in attributions made on the presence of malingering, using alternate language, where appropriate, unless there is incontrovertible evidence of malingering.

Although Bigler has raised some important points, some qualifications are needed. For example, he noted that SVT failure could be associated with underlying neuropathology. However, I note that the examples he provided do not concern mild TBI (MTBI), which is more important in the present context. He noted that there is a lack of systematic study on lesions of SVT performance. However, this lack of research does not invalidate the value of research on SVT performance. He noted that even non-litigating neurological and neuropsychiatric patients fail SVTs at a noticeable rate. However, the issue is whether, in clearly defined groups, litigating neurological and neuropsychiatric clinical populations fail SVTs at a significantly different rate than relevant control groups. Similarly, although he queried whether illness behavior, diagnosis threat, and the placebo effect might affect SVT performance, the issue is a comparative one, concerning how target groups fare in these regards compared to relevant control groups. Bigler does raise the important point that near-miss SVT performance should be used cautiously in individual assessments.

As for the methodology/research issues he raised, although research on foil stimuli has yet to be conducted, once more, independent of this criticism, the critical issue is whether different groups vary in performance on SVTs. In terms of research designs, although there might be circular reasoning and tautology in defining groups in SVT research, collectively the research continues to improve and further suggestions to improve it are made; that being said, his point is an important one. He refers to litigation science, and although I agree that this type of research could present biases, the same applies to any science, even if non-litigation. As long as litigation science is conducted transparently, it should not be labeled beforehand as invalid,

although any litigation science should be examined carefully for its validity. Bigler's points about the possible role of false memories and coaching how to pass SVTs are worth noting. His comment on the relationship between SVT failure and implications for invalidity about the formal neuropsychological test battery deserves further research, although I note that Fox (2011) and Williams (2011) and others have begun this type of research. Bigler's most important contribution with respect to SVTs in neuropsychological assessment relates to the lack of guidelines for their proper use in practice. These cautions are similar to the ones I have raised in the present book.

Larrabee (2012a, b) mentioned some of these critiques that I have elucidated concerning the Bigler approach to SVTs in neuropsychological assessment and he adds others (aside from repeating main points his presentation on SVTs as described in Chap. 7). For example, he indicated how several factors serve to minimize false-positive error rates related to SVTs. He qualified that even certain types of case control research designs meet the highest quality of standards in research. He described the high degree of replicability of the results in the research on symptom validity. Moreover, the effect sizes in this type of research are quite large – for example, for the RDS (Reliable Digit Span; Greiffenstein et al. 1994; Jasinski et al. 2011), the MMPI-2's FBS (Minnesota Multiphasic Personality Inventory, Second Edition's Symptom Validity Scale; Nelson et al. 2010b), and the DMT (Digit Memory Test; Hiscock and Hiscock 1989; Vickery et al. 2001). He cited research showing illness behavior and diagnosis threat do not appear to affect performance on SVTs. Note that in Chap. 16, I described that Slick and Sherman (2013) hold the same opinion.

Also, Larrabee proposed that the term SVT should be restricted to performance on self-report measures, such as the MMPI-2, so that performance validity refers to behavior on more formal neuropsychological testing. I note that this is consistent with my own approach in the present book, in that I use the terminology of presentation and performance (in)validity. My use of the term presentation invalidity allows inclusion of inferences about invalidity in all manners of evaluee presentation in session. However, it does not separate (a) symptom report and (b) neurocognitive test performance (in)validities, as Larrabee has suggested should be undertaken. That being said, it would be confusing to stop using the term SVT in a general sense and restrict it to performance on tests such as the MMPI-2. In this regard, I suggest that the limited case of non-performance SVT possibly could be labeled "SRVT" (Symptom Report Validity Testing).

17.4 Free-Standing Measures

In the following, I give a brief description of a few recent studies that include forced-choice SVTs. Williamson et al. (2012) found that failure on the WMT (Word Memory Test; Green 2005) in patients with psychogenic non-epileptic seizures was associated with reported abuse. Binder et al. (2012) found that, in three

cases of psychogenic stuttering and related speech/language abnormalities after uncomplicated MTBI, SVTs (e.g., the WMT, the TOMM; Test of Memory Malingering; Tombaugh 1996) and embedded measures could help detect feigning and even outright malingering.

Research continues on alternate scoring algorithms for the TOMM, which is aimed at detecting exaggerated memory complaints. Davis et al. (2012) developed response consistency indices (CNS) that appear useful. Wisdom et al. (2012) reported results on the utility of using only Trial 1 of the TOMM. Denning (2012) described research on the efficacy of the first ten items of Trial 1 of the TOMM.

The research shows that the basic free-standing SVTs continue to be researched, but that their indices that could be used to indicate pass-fail, or as cut scores, continue to evolve. In practice, this research might lead to effective short-cuts in test administration. At the same time, evidence proffered to court could be challenged for admissibility if these new methods are used prematurely.

17.4.1 MMPI-2-RF

Jones et al. (2012) examined the relationship between SVT failure in a mostly male military sample with MTBI and performance on the MMPI-2-RF. The stand-alone SVTs used in this research were the TOMM, the VSVT (Victoria Symptom Validity Test; Slick et al. 1997/2005), and the WMT. The authors also used one embedded validity indicator, the Effort Index for the RBANS (Repeatable Battery for Assessment of Neuropsychological Status; Randolph 1998). Note that not all the subjects were administered all of these measures.

As for the results, most of the validity indicators and substantive scales of the MMPI-2-RF (Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form; Ben-Porath and Tellegen 2008/2011) were related linearly to increased SVT failure. Also, when comparing a non-fail SVT group with a three-fail SVT group, for the over-reporting validity indicators, all of them had large effect sizes (ESs). Moreover, these groups differed especially on the somatic/cognitive complaints and emotional dysfunction substantive scales. Other results suggested that the three-failure SVT group, in particular, obtained results associated with psychopathology, persecutory thinking, unusual thought/perceptual processes, medical problems, and interpersonal functioning. As for the statistical size of the significant scales, for the validity indicators, RBS had the largest ES, with FBS-r next. For the substantive scales, AXY (anxiety) and COG (cognitive complaints) had the largest ESs. These results are similar to those of Gervais et al. (2011), who investigated the association between MMPI-2-RF performance and SVT failure in a non-TBI population. Jones et al. (2012) concluded that the results are not necessarily applicable to single individuals, although the patterns might help to gauge what to expect in assessments.

Given the consistency of the value of the RBS and the FBS-r in separate samples tested for the relationship between SVT failure and MMPI-2-RF performance, the

results speak to the value of the MMPI-2-RF test and scoring protocol, in general, for detecting poor test performance. Nevertheless, individual evaluees vary enormously, so that caution is always needed in applying results from a research study to an individual evaluation.

17.4.2 FBS-r

Gass and Odland (2012) factor analyzed the MMPI-2-RF's FBS-r in a large (n = 303) nonlitigating neuropsychological (mostly male) sample in a VA setting, although over half were receiving monthly financial compensation. The first level of factor analysis (principal component analysis) produced seven factors and, then, a higher-order analysis produced two major factors. In the two-factor higher-order solution, an optimism/virtue factor consisting of 7 items was found and it correlated negatively (−.289) with a larger somatic complaints factor (21 items; 2 items of the 30 on the scale not loading on either factor). The latter somatic factor included somatic and cognitive items, and it correlated .90 with the full FBS-r. In contrast, the optimism/virtue factor was not significantly correlated with the full FBS-r. In addition, the items of factors that loaded on the latter higher-order factor served to attenuate the reliability of the FBS-r. Supplementary analyses related the optimism/virtue factor to MMPI-2 content scores concerning externalizing forms of social conflict, e.g., cynicism.

Gass and Odland (2012) concluded that unlike the claim about its construction, the FBS-r does not represent a single construct related to noncredible symptom reporting. Moreover, it has a troublesome amount of measurement error, is potentially unstable as a measure, and is ambiguous in meaning or even misleading. They recommended that subscales should be created for the FBS-r based on their results, and that the one for somatic complaints could be effective in detecting symptom exaggeration across diverse settings. However, the authors noted that the results of their study and their implications might not apply to forensic and all compensation-seeking contexts.

The Gass and Odland (2012) study is an important one that indicates that further research on the FBS-r is required. In the forensic disability and related context, will the same two-factor solution emerge, or one like it? If so, the suggestion to create two subscales of the measure and use only the somatic one for assessment of malingering and related biases is appropriate. The implication for court is that despite the positive results for the FBS-r that is found in the literature (e.g., Jones et al. 2012), its use in individual forensic and related assessments may have jeopardized the conclusions offered based on its results. This illustrates once more the need to use alternate language when attributing malingering, except when the evidence is incontrovertible and, of course, to never rely on just one measure in formulating assessment conclusions.

17.4.3 PAI

Lange et al. (2012) also found an effect of poor SVT performance and neuropsychological test performance in a mostly male military sample with MTBI or with severe TBI (STBI). In this case, they used the PAI (Personality Assessment Inventory; Morey 1991, 2007) as a personality test, the WMT as a stand-alone SVT, and four embedded validity indicators. The latter were select measures from the TMT (Trial Making Test; Reitan and Wolfson 1993), CPT-II (Continuous Performance Test, Second Edition; Conners 2002), CVLT-II (California Verbal Learning Test, Second Edition; Delis et al. 2000), and DSY (Digit Symbol Coding; Wechsler 1997). MTBI patients were considered as having failed SVTs if they failed the WMT and one or more of the embedded measures. The results showed that MTBI-fail group performed worse than the MTBI-pass group and the STBI group on the majority of the neurocognitive tests and, also this group had higher scores on a majority of the PAI clinical scales.

Cheng et al. (2010) reported on the utility of the PAI in work with MVA survivors. Results related to internal consistency and factor structure, in particular, supported the use of the PAI with this population. Of the validity indicators in the PAI, the negative impression management one (NIM), along with a cumulative malingering index (MAL), appeared most useful in detecting global symptom magnification, with the RDF (Rogers Discriminant Function; Rogers et al. 1996) being less useful in these regards.

In a study with male prison inmates, Gaines et al. (2013) developed a new feigning detection index (MFI, Multiscale Feigning Index) for the PAI that predicted SIRS (Structured Interview of Reported Symptoms; Rogers et al. 1992) outcome better than the NIM, the MAL, and the RDF. Further research on the index appears warranted, including in the personal injury context.

These studies illustrate the utility of the PAI in forensic disability and related contexts. However, once more, we see that new measures are being introduced and the evaluator needs to proceed with caution. For example, if extant indices are used, an attorney in court could ask why better ones were ignored. Similarly, use of any new index could lead to questions about their premature application in practice. Finally, for the PAI, it is worth noting that the FBS is no longer referred to as the Fake Bad Scale because of its pejorative and biasing connotation. Similarly, I would suggest that the MAL index should not be considered a malingering index, per se, but one of feigning, in general, with the correct attribution for its results left for the individual evaluator to decide.

17.4.4 Rorschach

Mihura (2012; also Mihura et al. 2013) addressed the incremental validity provided by the R-PAS (Rorschach Performance Assessment System; Meyer et al. 2011) in assessment, including of the presence of feigning. She advocating use of a

multimethod approach in assessment, e.g., using the R-PAS in conjunction with the MMPI-2. She proposed that recent meta-analyses that had determined which of the various measures used to score the Rorschach should be included in the revised scoring procedure had contributed to adding to the construct validity of the revised procedure. Of the 30 variables that reached acceptable levels of validity in the meta-analyses, the ones with strongest support concerned cognitive and perceptual processes, for example, thought disturbances and reality testing. Moreover, malingering research indicated that measures related to dramatic content are increased in score in attempts to malinger depression and PTSD (posttraumatic stress disorder), two psychological injuries (Brock 2008; Frueh and Kinder 1994, respectively). Moreover, scores on the Rorschach Dramatic Contents scale were found to correlate significantly with MMPI-2F scale scores (the F scale is one of the test's validity indicators; Brock 2008).

These results on the valid components of the R-PAS, which include studies related to detection of malingering, augur well for increased use of the R-PAS in the forensic disability and related context. Mihura (2012) pointed out that past critics of the R-PAS did not reject use of the test across the board, but restricted their comments to the need to determine which variables in its scoring are valid. With the meta-analysis that she has undertaken, the reliability and validity for use of the R-PAS as an adjunct to tests such as the MMPI-2 in the forensic disability and related no longer appears an issue.

17.5 Embedded Measures

Schroeder et al. (2012) undertook a systematic review of the RDS. They reasoned that the meta-analysis in Jasinski et al. (2011) only considered an RDS cut score of 7 and only global sensitivity and specificity instead of considering these psychometric properties in different clinical groups. In addition, in cross-validation research, they analyzed data from an extensive convenience sample. The RDS criterion of ≤ 7 produced adequate sensitivity but not specificity. Schroeder et al. (2012) noted that similar results are reported in Wechsler (2009). The ≤ 6 criterion provided better results, but cautions were provided for its use with some groups.

In a military sample, Young et al. (2012) explored whether a new measure in the WMS-IV (Wechsler 2008), Symbol Span, could be used as an embedded validity indicator. The authors found positive results, but they called for more research before clinical utility could be recommended.

To conclude, these results relate to an embedded validity indicator that has garnered much empirical support for its use in the forensic disability and related context, the RDS. They speak to the concern that recommended cut-off scores for any particular measure might change according to emerging research. This complicates their clinical application, at least if the current literature is not consulted and analyzed for appropriate decisions about recommendations for assessment. Also, the results suggest that new measures will continue to be developed in the area of

malingering detection. Several recent sources read for purposes of the present book have argued for a moratorium on new measures in these regards, suggesting further research on extant ones should be the central focus. However, such a suggestion might be premature and futile, and, moreover, inhibitory of improvement of malingering detection strategies in the long term.

This latter assumption is illustrated in the following section, as well, in which studies in an emerging area of research – on multiple regression techniques in the detection of malingering – are described. Standard malingering detection strategies based on test/measure failure according to cut-scores, and their combination in algorithms, might see adjunct regression techniques become normal part of individual assessments.

17.6 Combined Measures

Miele et al. (2012) compared the efficacy of free-standing SVTs and embedded validity indicators in neuropsychological assessments. They analyzed the results of 50 evaluees, most with MTBI, who were assessed for medical-legal reasons in a convenience sample. The SVTs used included the TOMM, the VSVT, and the WMT. The 17 embedded validity indicators were derived from the WAIS-R (Wechsler Adult Intelligence Scale, Revised; Wechsler 1981) and the HRNB (Halstead-Reitan Neuropsychological Test Battery; Reitan and Wolfson 1993). Some of these indicators included the RDS on the WAIS-R and, for HRNB, (a) the Total Errors on subtest 7 of the CT (Category Test; Tenhula and Sweet 1996), (b) the Total Errors on SSPT (Speech Sounds Perception Test; Reitan and Wolfson 1993), and (c) the Total Errors on TFRT (Tactile Form Recognition Test; Reitan and Wolfson 1993). The SVT-fail group consisted of those failing two or more SVTs. The authors also created an embedded measure validity index.

In a general sense, the results showed that RDS was the most useful in classifying evaluee effort. However, further results did not support its use without considering stand-alone SVTs.

With respect to the study's specific results, an RDS cut-off score of ≤ 7 led to sufficient classificatory accuracy. Also, it was noted that the addition of any embedded validity index in an attempt to increase classification accuracy did not improve the results or add incremental validity. Finally, use of the RDS alone in classifying poor effort according to the SVT failure threshold involved both a too-high false positive and false negative rate. The RDS misclassified 20–40 % of evaluees.

With respect to the value of the RDS, the results in Miele et al. (2012) support those of Jasinski et al. (2011) in their meta-analysis on its classification accuracy rate using the same cut-off score. Nevertheless, there are cautions to consider. Miele et al. (2012) concluded that despite the advantages of using embedded validity indicators in neuropsychological testing, the research evidence does not yet support their use in practice in litigation settings as replacements of or even complementary measures of SVTs.

Denning (2012) administered to a military veterans sample multiple embedded validity indicators in order to predict exaggerated cognitive deficits, as evaluated by the MSVT (Medical Symptom Validity Test; Green 2004). A total of 497 mostly male outpatients were tested, a good proportion of whom had TBI or chronic pain. In particular, the patients had been diagnosed with depression, PTSD, anxiety disorders, cognitive disorder NOS/mild cognitive impairment, and alcohol/substance abuse/dependence. The five embedded validity indicators used in the investigation included measures relating to the PSI (Processing Speed Index) and the WMI (Working Memory Index) of the WAIS-III, as well as the FTT (Finger Tapping Test; Heaton et al. 1991) and the CVLT-II: FC (forced-choice recognition). These four measures have a sufficient research base, e.g., on cut scores. The fifth embedded measure used was the BVMT-R (Brief Visuospatial Memory Test, Revised; Benedict 1997), which appeared easy and therefore valuable to use. In addition, Denning (2012) noted that this study was the first to combine these specific measures related to client validity in test performance to improve accuracy in detection.

In terms of the results for individual measures, Denning (2012) found that the CVLT-II: FC was the best overall predictor of MSVT failure. This measure was even more accurate than combining failed embedded measures. The efficacy of measure combination to detect effort according to the MSVT results was also checked using multiple regression, and this method proved more effective in predicting MSVT performance than using empirically-derived cut scores.

Denning (2012) noted that although the comparison of cut-score and regression approaches to combining multiple indices of respondent validity favored the regression approach in his study, this type of finding has not always been found in other research (e.g., Larrabee 2003, 2008). He noted that the difference in the various studies pertaining to the relative efficacy in using the cut-score and regression approaches to combining validity indicators in order to predict effort outcome might relate to the difference tests used, e.g., for the embedded measures and for the outcome measure. Therefore, relative to other methods, especially regression-based ones, Denning (2012) suggested caution in considering that combining two failed embedded measures in any test battery administered in an assessment, as recommended by Larrabee, for example, would be as accurate for the task at hand of predicting invalid test performance.

However, regression-based techniques derive data that are dependent on the particular measures administered. Denning noted that there are numerous embedded validity indicator measures, so that many different calculations are possible. Whether for the cut-score and test combination approach or for the regression approach to combining measures in order to predict performance invalidity, Denning (2012) noted that there is little research to guide the best ones to use, and what combinations work best. He called for further research on the regression approach for predicting performance invalidity. I would add that the regression approach needs to be validated with psychological injury populations and, to improve external validity, the samples should account for all the vagaries that can qualify individuals in these populations. That being said, I do envision that regression-based research and

techniques will continue to appear, given their advantages as described in Miele et al. (2012) and Denning (2012), as well as by Schutte et al. (2011), as described in the preceding chapter.

17.7 Computer Measures

Ortega et al. (2012) examined evaluee effort using a Bayesian analysis. Their latent group approach was applied to simulators of malingering using a computerized forced choice SVT task, as well as to a stroke sample. This Bayesian approach avoids the problem of not knowing the base-rate of malingering and also it gives probability estimates of belonging to a group of "malingerers" rather than relying on dichotomous test cut-scores. The results indicated that the Bayesian model allowed for the correct classification of all participants in the study, which indicates excellent sensitivity and specificity. The authors concluded that their research is at an early stage but it has potential utility for attaching probability of malingering in individual assessments and could serve as a compliment to existing methods in this regard.

Neudecker and Skeel (2009) also used a computer-generated measure in a malingering detection study. The clinical sample consisted of moderate to severe TBI. The technique that they developed examined for consistency in performance over time, differences in response to easy and hard items, natural learning curves, as well as response delay. The results supported most of the hypotheses and, moreover, a combination of detection strategies was beneficial in identifying the malingering simulators. To conclude, the authors called for revision of the instrument, and research with MTBI samples and with stand-alone SVTs. They suggested their instrument has potential clinical usefulness.

New techniques will continue to evolve in the area of malingering detection that are computer-based. The advantages of calculating probabilities of malingering on an individual basis based on test performance is similar to OTBM (Overall Test Battery Mean; Miller and Rohling 2001; Nelson et al. 2010a) analyses and avoids to a certain degree the imprecise estimates of base rates for malingering. All agree, however, that much research is needed before any of these measures are ready for individual evaluations.

17.8 Never the Twain Shall Meet

[Or, as per Mark Twain: Get your facts first, then you can distort them as you please]

In the outset of this section of the chapter, I described the differing approaches to SVTs held by Bigler and Larrabee. Their differences illustrate the adversarial divide in the field of forensic disability and related assessments in terms of testing. The following illustrates the differences in the field pertaining to the facility, or lack

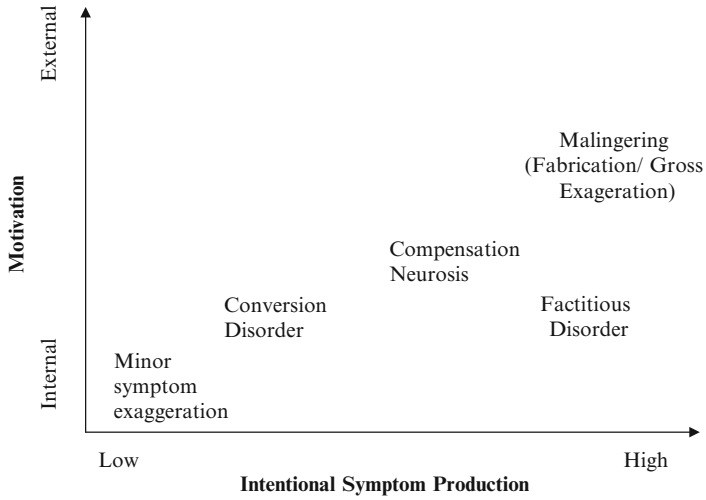

Fig. 17.1 Model of compensation neurosis within the spectrum of symptom exaggeration
The figure indicates the range of attributions that can be used, based on variation in intention (lower, higher) and motivation (internal, external)
Adapted from Hall and Hall (2012)

thereof, in attributing malingering or related response biases. In this regard, Hall and Hall (2012) called for attribution of compensation neurosis when it seems warranted in assessments, a construct which is conceptually related to malingering on the continuum of possible response biases (see Fig. 17.1). In a contrasting opinion, Silver (2012) posited that it is difficult to attribute malingering given the many factors that can explain poor effort.

Hall and Hall (2012) proposed that the concept of "compensation neurosis" (Kennedy 1946; Miller 1961a, b) should be resurrected and included in the DSM-5 (Diagnostic and Statistical Manual of Mental Disorders; Fifth Edition, Draft Version; American Psychiatric Association 2012). It is present in the ICD-10 (The International Statistical Classification of Diseases and Related Health Problems, Tenth Revision; World Health Organization 2007). It concerns symptom exaggeration related to not only the prospect of secondary gain but also to internal motivations (e.g., stress from the case, or from treatment issues, and its effects on somatization and aspects of personality, such as dependence). It differs from malingering by the presence of internal motivations as much as if not more than external incentives, which constitute the sole motivating factor in malingering. Compensation neurosis does not refer to symptom absence, there are physical symptoms involved, but the causes for the symptoms do not involve real injuries related to the event at hand; rather, they reflect psychosomatic processes at work. Individuals might be prone to react to events at claim this way, e.g., in their personality structure. The stress of the case includes conscious and unconscious pressures not to improve. The legal and disability arena is iatrogenic.

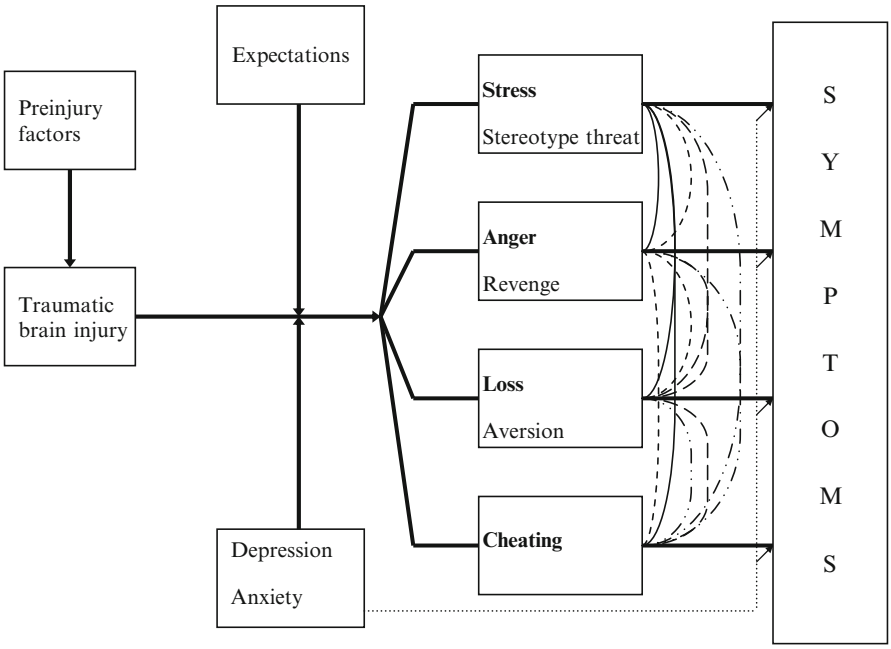

Fig. 17.2 A model for understanding the interactions of multiple factors in their contribution to symptoms after brain injury
The model indicates the classes of factors that influence evaluee presentation after TBI. Multiple other factors could be added. Cheating could be differentiated into general feigning, malingering, exaggeration, etc
Adapted with permission of BMJ Publishing Group Ltd. Reproduced from Silver (2012), Copyright © 2012, with permission from BMJ Publishing Group Ltd. [Figure 1, Page. 5]

To be fair, I would add that the iatrogenic potential in the insurance process might derive not only from conscious and unconscious motivations for financial compensation but also from undue pressures from the insurer or in IEs and the unjust denial of claims. An even-handed approach to the question would acknowledge the presence of stress for the evaluee from all corners of the system. Moreover, compensation neurosis might be difficult to diagnose with any reliability, given the need to parse out conscious and unconscious motivations, internal and external incentives, etc.

However, that being said, to their credit, Hall and Hall (2012) have indicated the complexity of the process of symptom hardening, and that it might exclude the event at claim as a cause. I have presented a similar argument in this book about how a consciously malingered symptom after an event at claim might later become unconsciously maintained for purposes of monetary gain.

Silver (2012) examined concepts related to effort, exaggeration, and malingering after concussion/MTBI (see Fig. 17.2). He noted that symptom severity is influenced by multiple non-TBI factors, pre-existing factors, etc. These include expectations that symptoms reflect TBI (Hou et al. 2012), stereotypic threat (Ozen and Fernandes

2011), and ego depletion, which might be a form of stereotypic threat (Job et al. 2010). In addition, the compensation/insurance/litigation process includes an adversarial component, thereby increasing the psychological costs (more anger, wanting revenge, loss aversion, i.e., generally the reward to loss ratio should be about 2:1), which can affect symptoms. Silver asserted that cheating a "little" might be normal in these circumstances, as well. "A lot" of cheating is not the norm.

Therefore, when suboptimal effort or symptom magnification is evident in neuropsychological assessment, this may occur for reasons other than conscious processes and malingering. Furthermore, the stress of the compensation/insurance/litigation process might lead evaluees to try too hard rather than less hard. Therefore, they would use a thinking process that is slower, deliberate, and conscious (System 2 thought; Kahneman 2011) on tests of effort, which normally should elicit thinking that is fast, non-effortful, and automatic (System 1 thought). Their altered cognitive style might give a false impression of malingering.

Although the arguments presented by Silver (2012) appear to render the attribution of malingering a very difficult if not impossible process, there appear to be factors that he has not considered. First, the insurance process might be stressful or effortful not only because of trying harder but because of efforts to falsely present or produce symptoms. Once more, for the litigation context, one needs an even-handed approach on the source of stressors. Second, there is no empirical evidence to support the statement that only a little cheating can be expected in forensic disability and related contexts, in this case for assessing MTBI. For example, I have argued throughout the present book that better surveys on this matter need to be conducted. Third, I note that the argument that expectations and the like might influence performance in testing has been used to indicate the contrasting views that there are alternate interpretations of poor effort unrelated to negative response bias, as per Silver and also Bigler in this chapter, and that evaluees perform poorly on testing for suspect reasons (e.g., Iverson and Lange 2012).

To conclude my comments for this section of the chapter, once more we see divergent opinions on reasons for evaluee behavior and test performance in cases of evident negative response bias, ranging from what factors in the insurance process can influence evaluees, what other non-TBI factors can influence them, what do they mean, and how much cheating normatively can be expected in the forensic disability and related context. I am not sure whether the twain shall ever meet in this contested area of practice, and whether fact distortion will be attenuated. [We have seen that many concepts, measures, and practice modes are being questioned, if not criticized, and foundational assumptions and approaches are no longer considered valid in this field.] However, I am sure that the best way to attempt to create more balance in the area and to arrive at more just outcomes in court is to keep improving the science in the area and its judicious application in practice.

That being said, one can ask what the court expects of mental health experts in terms of their use of and knowledge of science. Shapiro (2012) provided an answer that runs against the common grain, as described in the next section. The section concludes with how to prepare for court.

17.9 Court

Shapiro (2012) argued that the four *Daubert* (1993) factors (testability, falsifiability, reliability, error rate) are rarely of concern to court, and that gatekeeping of evidence especially relates to whether it can assist the trier of fact. The four *Daubert* factors might have "little" relevance to forensic mental health experts in court, given that their testimony cannot be subject to the kind of analysis within the four factors. For example, in the case of seeking in assessments inconsistencies in the data gathered or in the case of establishing the difference between pre- and post event psychological status at issue, there is no neat equation that applies that can give a specific number with which to work to the point that one can ask in each of these cases what is the testable hypothesis that one could examine. In this regard, mental health practice is not purely scientific, but a blend of scientific, specialized, and technical knowledge. Therefore, the focus in *Daubert* on testability, falsifiability, reliability, and error rates is problematic for the field. Rather, case law shows that experts qualify for admissibility of their evidence when they can demonstrate expertise and the ability to help the trier of fact in its deliberations for the matter at hand and when they use generally accepted methods in arriving at proffered conclusions so that their evidence is reliable and relevant to the case at hand (Fradella et al. 2003; Slobogin 2003).

However, to what extent is evidence impartially-gathered by unbiased experts, and do the courts respect mental health experts to proffer evidence to court? Edens et al. (2012) analyzed case law for expression of perceived bias in expert witnesses working in mental health. They found 160 legal cases in their literature search, and the most frequent criticism of mental health experts were that they are for sale (e.g., as a hired gun). Almost as high were statements in court that they are partisans or advocates, and other similar comments related to bias. These latter categories were relatively more frequent in civil compared to criminal cases. As for the science involved in testimony, pseudoscience and mysticism were the fourth and fifth highest categories in their search of derogatory/denigrating terms about mental health experts (e.g., junk science, charlatan; voodoo psychobabble, respectively). Even judges were found to cast negative aspersions on mental health professionals (and also on the profession as a whole).

Edens et al. (2012) suggested how to prepare for court, e.g., in order to increase credibility in court, experts should follow the "4 C's," which concern clarity, clinical knowledge, case specificity, and certainty (Kwartner and Boccaccini 2008). Similarly, Brodsky (2013) has prepared guidelines and maxims for testifying in court as an expert witness in the mental health field. He emphasized being honest, responsive to questions in cross-examination, and knowing how to defend oneself/one's integrity as well as opinions proffered. I add that by undertaking comprehensive, impartial, and scientifically-informed evaluations, the mental health expert is better positioned to deal with the parry and thrust of court.

17.10 Conclusions

In the context of the present book, it is instructive to examine Brodsky's (2013) advice in dealing with the topic of malingering. The expert is positioned well by stating that in every evaluation he/she conducts in which malingering might be an issue, "possible faking" should be considered. As an expert, Brodsky would also describe the normative representative information about the tests he uses, and how he uses clinical judgment (e.g., verbal-nonverbal discrepancies). If asked if an expert can be fooled by an evaluee, he would answer that the evidence is strong and clear enough to reduce that possibility or even eliminate it. He would add that his evaluations demonstrate validity and sensitivity, and he had been vigilant to the possibility of faking bad. He would refer to the literature to indicate that the best techniques were used. He would not argue against good arguments, such as the limitations in the research but, in response, he would point out the pros and cons of each approach, in order to justify the one used.

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Part IV
Psychological Injuries, Therapy, Ethics

Chapter 18
MTBI and Pain

18.1 Introduction

This chapter considers two major psychological injuries (mild traumatic brain injury, chronic pain) that have been discussed in the book, but not yet in terms of their nature and implications for disability. Therefore, for each of the two parts of the chapter, on MTBI and on chronic pain, there are two major sections, one on the nature of the psychological injury and malingering and one on testing and outcome/disability. For TBI, the section deals with the definition of MTBI and whether there are pathophysiological effects. It considers persistent post-concussive syndrome (PPCS) and its validity. It moves to evaluating malingering for these persistent complaints. Then, it looks at models of factors that need to be considered in evaluating outcome. For pain, the chapter first considers a biopsychosocial model and malingering, and then a model of factors in disability and testing.

Table of Terms and Sources

Abbreviation	Name	Source(s)
CARB	Computerized Assessment of Response Bias Test	Allen et al. (1997), Conder et al. (1992)
CVLT-II	California Verbal Learning Test, Second Edition	Delis et al. (2000)
DSM-IV-TR	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision	American Psychiatric Association (2000)
DSM-5	Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Draft Version	American Psychiatric Association (2012)
MSVT	Medical Symptom Validity Test	Green (2004)
NV-MSVT	Nonverbal Medical Symptom Validity Test	Green (2008)
PDRT	Portland Digit Recognition Test	Binder (1993), Binder and Willis (1991)

(continued)

G. Young, *Malingering, Feigning, and Response Bias in Psychiatric/Psychological Injury*, International Library of Ethics, Law, and the New Medicine 56,
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(continued)

Abbreviation	Name	Source(s)
RDS	Reliable Digit Span	Greiffenstein et al. (1994)
TOMM	Test of Memory Malingering	Tombaugh (1996)
VSVT	Victoria Symptom Validity Test	Slick et al. (1997/2005)
WAIS-III	Wechsler Adult Intelligence Scale, Third Edition	Wechsler (1997)
WMI	Working Memory Index	Wechsler (1997)
WMT	Word Memory Test	Green (2005)

18.2 Mild Traumatic Brain Injury

18.2.1 Issues

MTBI. There are three major psychological injuries – TBI, chronic pain, and PTSD (posttraumatic stress disorder). MTBI is among the most contentious in court. In the following, I review chapters on TBI from the book by Vasterling et al. (2012a).

There is no consensus definition of MTBI, although there is consensus on its major components (Vasterling et al. 2012b). The external force involved should produce at least a transient disruption or alteration in brain function or other signs of some brain injury or pathology. Upper boundaries of its symptoms include (a) a LOC (loss of consciousness) that does not exceed 30 min and (b) PTA (posttraumatic amnesia, or impairment in new memory formation) not to exceed 24 h. Bigler and Maxwell (2012) indicated that well-designed, large-scale, prospective research is finding that up to 30 % of survivors express persistent symptoms at 12 months or more after an MTBI (e.g., Rickels et al. 2010; Zumstein et al. 2011).

The areas that most likely sustain injury in the brain due to MTBI include the upper brain stem and its reticular activating system, the thalamus and its connections in the diffuse thalamic projection system, the hypothalamic-pituitary-adrenocortical axis, the inferior frontal lobe and the frontal polar region, the medial temporal lobe and polar regions, and the corpus callosum and the corticospinal tract as well as its links to the hippocampus (Ropper and Gorson 2007). At the neuropathological level, thin axon membranes (axolemma) are impacted most (e.g., Saatman et al. 2009), and this might result in brain atrophy if sufficient in numbers (e.g., Govind et al. 2010). The process is termed a neurometabolic cascade (Barkhoudarian et al. 2011); also capillary damage might be evident. Long-coursing white matter networks or tracts in the brain might be affected, which could affect speed in neural processing, e.g., in attention and working memory (Vincent et al. 2008). Diffusion tensor imaging (DTI) represents a source for a potential biomarker of chronically lasting MTBI effects (Bigler and Bazarian 2010).

According to Bigler and Maxwell (2012), outcome studies are now well-designed and control for factors such as secondary gain and litigation. Cognitively, they reveal less efficient memory due to MTBI as well as less executive capacity (Geary et al. 2010; Little et al. 2010). As well, research is targeting how specific symptoms are tied to damage to specific areas (e.g., for sleep; Pardini et al. 2010). In general, persistent symptoms as in PPCS (persistent post-concussive syndrome) relate to white-matter disruption within fronto-temporo-limbic regions.

MTBI and malingering. Larrabee (2012a) presented a forensic neuropsychological perspective on MTBI. When it persists (PPCS), it is a controversial diagnosis, and is often influenced by non-injury factors (McCrea et al. 2009). For example, Belanger et al. (2005) found that litigation is associated with persistent neuropsychological complaints and test results in MTBI. Figure 26.1 (in Chap. 26; adopted from Larrabee 2012a, who adopted it from Iverson 2005, and McCrea 2008) reveals that neuropsychological effect sizes for MTBI approximates those found for exaggeration/malingering and moderate-severe TBI after 2 years (Note: no other conditions that have been studied demonstrated such a large effect size – even drug use and bipolar disorder). The figure illustrates that in the differential diagnosis, neuropsychological effects due to MTBI need to be studied carefully before given any credence. Larrabee (2012a) cited Mittenberg et al. (2002), who had indicated that the base rate for malingering is about 40 % and that in litigants expressing neuropsychological deficits after MTBIs, the rate might be as high as 88 %.

Comment. Larrabee (2012a) referred to his chapter on malingering in the same volume (Larrabee 2012b), which I reviewed previously. As for his chapter on MTBI, he presented a valid perspective. Nevertheless, symptoms after MTBI might persist due to comorbid factors and not only pre-existing ones, as Larrabee well noted. Moreover, in the first part of the present monograph, I had shown how Larrabee (2012b) had used a definition of malingering that included even mild exaggeration, thereby leading to inconsistent estimates of its prevalence.

MTBI and outcome. Figure 18.1 illustrates that, aside from the brain injury, there are multiple factors that could lead to persistent post-concussive effects. They are greatly elaborated in Fig. 18.2 by the same author.

Iverson and his colleagues (e.g., Iverson 2012) have presented an integrated biopsychosocial conceptualization of poor outcome after MTBI that is quite balanced. On the one hand, they listed multiple factors that can lead to PPCS that do not reflect patient invalidity in presentation and performance and go beyond anything like malingering. But also, on the other hand, they indicated factors such as a sense of entitlement that can lead to PPCS. They also mentioned factors like secondary gain (see Fig. 18.2).

Otis et al. (2012) also underscored the effect of comorbid pain, as well as the combined effect of MTBI, PTSD, and pain. Hou et al. (2012) noted the relevance of patient perceptions and behavioral responses, at least for their 6- month post-injury follow-up.

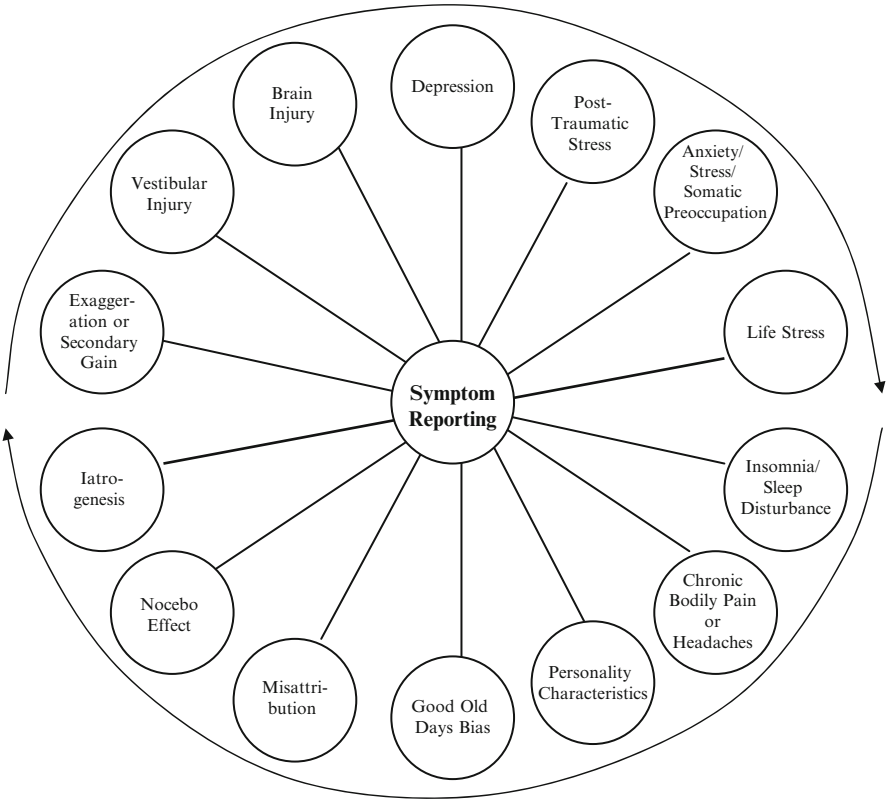

Fig. 18.1 Factors that can influence postconcussion-like symptom reporting postacutely or long after an MTBI
The persistent post-concussion syndrome (PPCS) is influenced by many factors outside of physiological pathology related to the impact in the event at claim
Abbreviations. MTBI mild traumatic brain injury
Adapted with permission of Routledge. Iverson et al. (2009). Reprinted by permission of the publisher (Taylor & Francis Ltd, http://www.tandf.co.uk/journals). [Figure 3, Page. 1307]. *Note*: Based on Iverson et al. (2009)

18.2.2 Testing

Previous chapters have considered tests to use in detecting malingering in neurocognitive assessment. Boone (2013) prepared a usable table of real-world sensitivity levels for some commonly used free-standing SVTs (symptom validity tests), associated with specificity levels of >88 % (see Table 18.1). For Boone, other available free-standing SVTs include the CARB (Computerized Assessment of Response Bias Test; Allen et al. 1997, and Conder et al. 1992), VSVT (Victoria Symptom Validity Test; Slick et al. 1997/2005), MSVT (Medical Symptom Validity Test; Green 2004), and NV-MSVT (Nonverbal MSVT; Green 2008), although

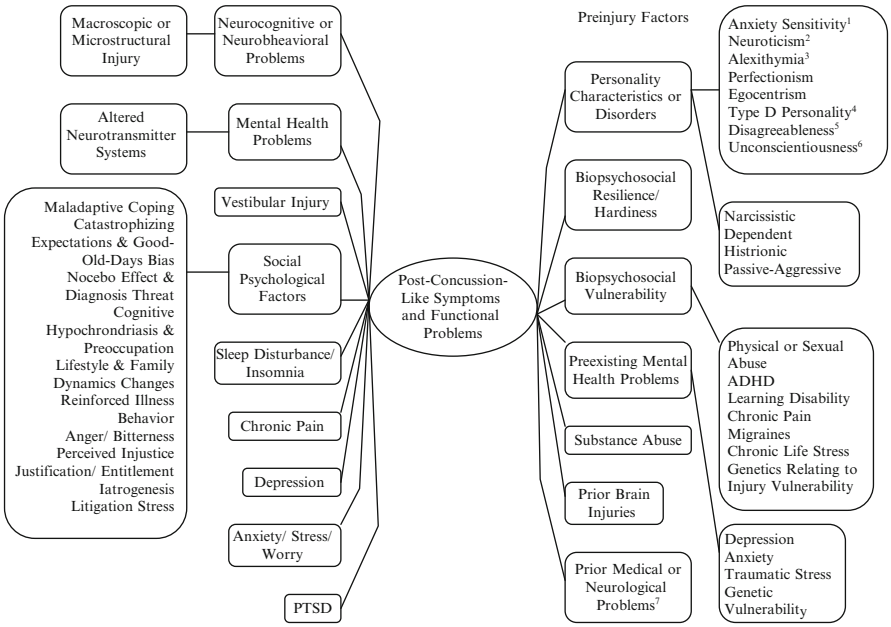

Fig. 18.2 A biopsychosocial conceptualization of poor outcome from MTBI

Notes:

[1]Anxiety Sensitivity: A trait comprised of physical, psychological, and social preoccupations and concerns, is characterized by fear of anxiety-related bodily sensations

[2]Neuroticism: A personality trait characterized by a strong tendency to experience negative emotions such as anxiety, depression, anger, and self-consciousness. Individuals with this trait have considerable difficulty coping with stress

[3]Alexithymia: A cluster of traits characterized by difficulty identifying feelings, difficulty describing feelings to others, externally oriented thinking, and limited capacity for imaginal thinking

[4]Disagreeableness: A personality trait characterized by antagonism, scepticism, and egocentrism

[5]Type D Personality: This personality pattern is characterized by two stable personality traits: negative affectivity and social inhibition

[6]Unconscientiousness: A personality trait characterized by reduced self-discipline and ambition, disorganization, and a more lackadaisical approach to life

[7]For example, hypertension, heart disease, cardiac surgery, diabetes, thyroid problems, and small vessel ischemic disease

Abbreviation. MTBI mild traumatic brain injury

Adapted from Iverson (2012), based on Iverson (2011). Adapted with permission of Springer Publishing Company. The handbook of sport neuropsychology by Springer Publishing Company. Reproduced with permission of Springer Publishing Company in the format Republish in a book via Copyright Clearance Center. [Figure 3.1, Page. 38]

sensitivity levels for these instruments are not provided. There is no explanation why the 88 % specificity benchmark was chosen for the table instead of the 90 % level. She also prepared an excellent table of free standing SVTs grouped by domains likely tapped (e.g., verbal memory, visual memory, attention/vigilance, processing speed) (see Table 18.2).

Table 18.1 Sensitivity levels of commonly used free-standing SVTs

SVT	Cutoff	Sensitivity (%)	Reference
Warrington Recognition Memory Test			Kim et al. (2010)
Words			
All-purpose cutoffs			
Accuracy	≤42	88.9	
Time	≥207 s	65.5	
b-Test (E-score)			Boone et al. (2002a)
All-purpose cutoff	≥150	64	
TBI-specific cutoff	≥90	77	
Dot Counting Test (E-score)			Boone et al. (2002b), Boone and Lu (2007)
All-purpose cutoff	≥17	73–79	
TBI-specific cutoff	≥19	72	
Rey Word Recognition Test (combination score)			Nitch et al. (2006)
TBI-specific cutoff	≤9	82	
Rey 15-item Memorization Test			Boone et al. (2002c), Boone and Lu (2007)
All-purpose cutoff			
Standard	<9	46	
With recognition trial	<20	56–71	
TOMM (Trial 2)	≤48	70	Greve et al. (2008)
TBI-specific cutoffs	≤45	48	
Pain-specific cutoffs	≤49	55	
VIP			Ross and Adams (1999)
Verbal	Invalid	27	
Nonverbal	Invalid	45	
Portland Digit Recognition Test			Greve et al. (2008)
Easy			
TBI-specific cutoff	≤24	74	
Pain-specific cuttoff	≤26	47	
Hard			
TBI-specific cutoff	≤19	56	
Pain-specific cuttoff	≤20	47	
Total			
TBI-specific cutoff	≤44	70	
Pain-specific cuttoff	≤46	41	
WMT			Greve et al. (2008)
Immediate recall			
TBI-specific cutoff	≤75	59	
Pain-specific cutoff	≤87.5	60	
Delayed recall		63	
TBI-specific cutoff	≤77.5	57	
Pain-specific cutoff	≤87.5	63	
Inconsistency			
TBI-specific cutoff	≤72.5	55	
Pain-specific cutoff	≤82.5	85 (but 30 % false-positive rate)	
At published cutoffs			

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Abbreviations. SVT(s) symptom validity test(s), *TOMM* Test of Memory Malingering, *VIP* Validity Indicator Profile, *WMT* Word Memory Test

Table 18.2 Free-standing SVTs grouped by domains likely tapped

Domain	Test	Reference
Verbal memory	MSVT	Green (2004)
	Rey word recognition test	Nitch et al. (2006), Bell-Sprinkel (2012)
	VIP (Verbal)	Frederick (1997)
	Warrington recognition memory test-words	Kim et al. (2010)
	WMT	Green (2003)
Visual memory	CARB	Allen et al. (1997)
	NV-MSVT	Green (2008)
	PDRT	Binder (1993)
	Rey 15-item plus recognition	Boone et al. (2002c)
	TOMM	Tombaugh (1996), Greve et al. (2008)
	VSVT	Slick et al. (1997/2005)
Attention/vigilance	b Test	Boone et al. (2002a)
	Dot counting test	Boone et al. (2002b)
Processing speed	b Test	Boone et al. (2002a)
	Dot counting test	Boone et al. (2002b)
	Warrington recognition memory test-words (time score)	Kim et al. (2010)
Language	b Test	Boone et al. (2002a)
	VIP (Verbal)	Frederick (1997)
Sensory-motor		
Executive		
Visual perception/construction	VIP (Nonverbal)	Frederick (1997)
Numbers/counting	Dot counting test	Boone et al. (2002b)
	CARB	Allen et al. (1997)
	PDRT	Binder (1993)
	Rey 15-item plus recognition	Boone et al. (2002c)
	VSVT	Slick et al. (1997/2005)

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Abbreviations. MSVT Medical Symptom Validity Test, Rey Word Recognition Test, *VIP* Validity Indicator Profile, *NV* Nonverbal, *V* Verbal, Warrington Recognition Memory Test – Words, *WMT* Word Memory Test, *CARB* Computerized Assessment of Response Bias, *NV-MSVT* Non-Verbal Medical Symptom Validity Test, *PDRT* Portland Digit Recognition Test, Rey 15-Item plus Recognition, *TOMM* Test of Memory Malingering, *VSVT* Victoria Symptom Validity Test

18.3 Chronic Pain

18.3.1 Issues

Model. Young and Chapman (2007) described a biopsychosocial approach to chronic pain (see Fig. 18.3). The figure caption of the presented figure helps describe chronic pain.

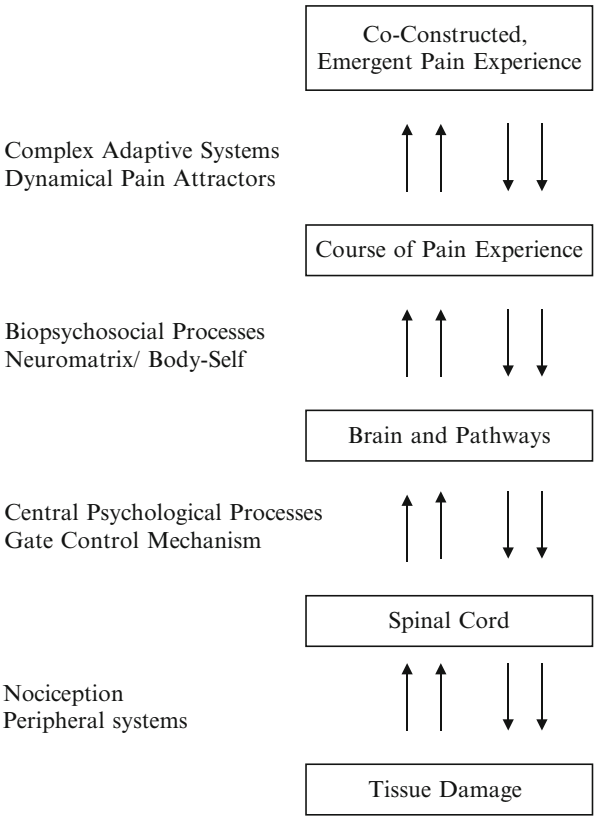

Fig. 18.3 Nonlinear dynamical systems model of pain
The figure presents a nonlinear dynamical systems model of pain. The lower level specifies the early reactions of the body to tissue damage. There are transduction, transmission, and modulation processes at work, as peripheral nerves fire after tissue damage. Already at this level, Melzack and Katz (2006) have shown that descending pathways from the brain can influence pain related processes (nociception), for example, through hypothalamus-mediated opioid mechanisms. Gating mechanisms in the spinal cord constitute the next level. Nociceptors transmit information to the dorsal horns, which can act to open or close the gate, depending on the types of fibers activated and whether activation or inhibition processes are set in motion. Opening the gate, for example, through small-fiber stimulation, facilitates the passage of tissue injury signals to the brain. Melzack and Katz (2006) has shown that central control processes in the brain involving psychological mechanisms can contribute to opening or closing the gate. Psychological or central control processes concern affect (e.g., depression, anxiety, fear, anger), stress (e.g., chronic activation of the hypothalamic-pituitary-adrenocortical axis (HPA), which releases excessive, deleterious cortisol), motivation (e.g., social withdrawal, "crying out for help," keeping financial compensation in mind), and cognitive factors (e.g., catastrophizing, pessimism), as influences on pain experience
In the next level, multiple, parallel, distributed neuronal networks in different regions of the brain and its pathways are activated, to encompass the multiple central factors involved in pain experience. There is not a pain center in the brain nor one nociceptive pathway. Nevertheless, there are certain regions that typically are involved, for example, the hypothalamus, limbic system, and portions of the cortex. Melzack and Katz refer to the "neuromatrix" in this regard, which has a continuously forming felt unitary "body-self " as its primary output, a backdrop onto which pain experience is integrated.

Young and Chapman (2007) examined pain from several different perspectives worth noting. First, we developed a stage model of chronic pain consisting of five steps, but it is beyond the scope of the present paper to analyze it. Suffice it to say that it suggests the means of how pain becomes entrenched in the chronic condition, and becomes quite resistant to any type of intervention, ending up an organized, integrated system in its own right.

Second, we adopted a nonlinear dynamical systems model of pain. Pain is not a straightforward physiological or medical event that only involves tissue damage, transduction, transmission, and modulation processes. Multiple, parallel, distributed neuronal networks in different regions of the brain and its pathways are activated, to encompass the multiple central factors involved in pain experience. There is not a pain center in the brain nor one nociceptive pathway. This view is consistent with the gate control (Melzack and Katz 2006) and biopsychosocial (Gatchel Peng et al. 2007) models of pain, in which sensory, biological, psychological, and social factors interact in generating pain experience.

The nonlinear dynamical systems view adds that pain experience is constantly reconstructed, or reconfigured, out of the matrix of components comprising the pain-related system. An individual's pain experience constantly emerges *de novo*, or is constantly reassembled according to the pattern of elements comprising the system at any one time. These factors may include pre-existing ones, such as prior depression, ongoing ones, such as increased pain-related transmission after a physical activity, and expected ones, such as the anticipated stress of job loss due to the injury. In terms of nonlinear dynamical systems modeling, in chronic pain, patterns of system activation that have emerged after the injury are sensitized.

Fig. 18.3 (continued) This view is consistent with the biopsychosocial model of pain, in which sensory, biological, psychological, and social factors interact in generating pain experience
The nonlinear dynamical systems view adds that pain experience is constantly reconstructed, or reconfigured, out of the matrix of components comprising the pain-related system. Components of the pain system include not only sensory information, for example, currently and on its course since the tissue damage but, also, cognitions, emotions, stress, and motivation, in addition to context, treatment, disability, litigation status, and so on. An individual's pain experience constantly emerges *de novo*, or is constantly reassembled according to the pattern of elements comprising the system at any one time. These factors may include preexisting ones, such as prior depression, ongoing ones, such as increased pain-related transmission after a physical activity, and expected ones, such as the anticipated stress of job loss due to the injury. In terms of nonlinear dynamical systems modeling, in chronic pain, patterns of system activation that have emerged after the injury are sensitized. The patient lapses into illness patterns. These may be called "dynamical chronic pain attractors," or areas in the system's state space to which the system may gravitate more readily. In terms of complexity theory, chronic pain patients appear to follow a movement toward an order of integrated, multiple attractors, considered adaptive in term of systems, *qua* systems, but that is entrenched, less flexible, and maladaptive from the psychological point of view. They gravitate away from a region in their state space that lies between order and disorder, as they descend into a state resistant to therapy
Adapted with permission of Springer Science + Business Media. Young and Chapman (2007); with kind permission from Springer Science + Business Media B. V. [Figure 8.1; Excerpt of 561 words, Pages. 228–229]

The patient lapses into illness patterns. These may be called "dynamical chronic pain attractors," or areas in the system's state space to which the system may gravitate more readily. In terms of complexity theory, chronic pain patients appear to follow a movement toward an order of integrated, multiple attractors, considered adaptive in term of systems, *qua* systems, but that is entrenched, less flexible, and maladaptive from the psychological point of view. They gravitate away from a region in their state space that lies between order and disorder, as they descend into a state resistant to therapy.

This analysis of the experience of pain illustrates how complex it is and how nuanced the concepts underlying it have become. We have gone well beyond the medical model to a multifactorial one that demands that we examine a host of variables in efforts to understand pain. Moreover, the diagnosis of Pain Disorder is in disarray, in that the DSM-IV-TR version (Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision; American Psychiatric Association 2000) has been criticized (Melzack and Katz 2006) and the DSM-5 (Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, American Psychiatric Association 2013) proposal for its diagnosis has serious difficulties (Young 2010, 2013)

Malingered pain. In their criterion group research, Bianchini et al. (2013) supported use of the PDRT (Portland Digit Recognition Test; Binder 1993; Binder and Willis 1991), TOMM (Test of Memory Malingering; Tombaugh 1996), and WMT (Word Memory Test; Green 2005) (Greve et al. 2009a, c, 2008). As for embedded indicators from the WAIS-III (Wechsler Adult Intelligence Scale, Third Edition; Wechsler 1997) and the CVLT-II (California Verbal Learning Test, Second Edition; Delis et al. 2000), their research supported use of the RDS (Reliable Digit Span; Greiffenstein et al. 1994), WMI (Working Memory Index; Wechsler 1997), Processing Speed Index, and CVLT-II, recognition hits and linear shrinkage (Etherton et al. 2006a, b, 2005b; Greve et al. 2009b, 2010) (see Tables 18.3 and 18.4).

Greve et al. (2012) addressed the difficulties in assessing chronic pain from a psychological perspective. They enumerated the psychosocial factors in pain, which includes childhood adversity, somatization, catastrophizing, personality disorder, mood and anxiety disorders, and fear avoidance. The fear-avoidance model of pain-related disability illustrates how catastrophizing, fear of pain, and pain anxiety promote avoidance, escape, and depression, and disuse/disability. Diagnostic issues concern comorbid disorders and alternative disorders, such as factitious disorder, as well as malingering. The authors cited the work of Mittenberg et al. (2002), as well as others indicating that the base rate for malingering in chronic pain patients can be as high as 50 %. Moreover, there are multiple psychological risk factors in chronic pain that are outside of any injury, per se, such as job dissatisfaction, poor coping, and family reinforcement of pain.

Comment. The authors have presented a detailed and credible description of chronic pain in the litigation context. In terms of the figure of 50 % malingering in this type of case, in the first part of the monograph, I had indicated that there might be even more than 50 % with problematic presentation and performance, but only a minority of which should involve direct malingering.

Table 18.3 Simulator and criterion-groups studies examining specificity and sensitivity of embedded validity indicators in chronic pain

Authors	*n*	Sample	Validity indicator	Cutoff	FP	Sens %
Simulator studies						
Etherton et al. (2005a)	20	Undergrad volunteers – control	Reliable digit span	≤	0	65
	20	Undergrad volunteers – cold pressor pain				
	20	Undergrad volunteers – sim pain				
Etherton et al. (2006a) (Study 1)	20	Undergrad volunteers – controls	Working memory index	≤80	0	65
	20	Undergrad volunteers – cold pressor pain				
	20	Undergrad volunteers – sim pain				
Etherton et al. (2006b) (Study 1)	20	Undergrad volunteers – controls	Processing speed index	≤80	0/5[a]	95
		Undergrad volunteers – cold pressor pain				
		Undergrad volunteers – proc distraction				
		Undergrad volunteers – sim pain				
Criterion groups						
Etherton et al. (2005b)	20	Nonmalingering clinical pain	Reliable digit span	≤6	0	37
	35	Definite MND clinical pain		≤7	8	60
Etherton et al. (2006a) (Study 2)	49	Nonmalingering patients with clinical pain	Working memory index	≤70	4	47
	32	Definite MND patients with clinical pain				
Etherton et al. (2006b) (Study 2)	48	Nonmalingering patients with clinical pain patients	Processing speed index	≤75	8	69
	32	Definite MND patients with clinical pain				
Greve et al. (2009b)	38	Non-MPRD clinical pain	CVLT-II recognition hits	≤7	3	24
	41	MPRD clinical pain	CVLT-II linear shrinkage	≤3	3	37
Greve et al. (2010)	176	Non-MPRD clinical pain	Reliable digit span	≤6	1	24
	185	MPRD clinical pain		≤7	15	49

Abbreviations. n sample size, *FP* false positive error rate, *sens* sensitivity, *undergrad* undergraduate, *sim* simulator, *proc* procedural distraction group, *MND* malingered neurocognitive dysfunction, *MPRD* malingered pain-related disability, *CVLT-II* California Verbal Learning Test, Second Edition (Delis et al. 2000)

[a]FP rate = 0 % in the control and procedural distraction groups; 5 % in the cold pain group

Table 18.4 Simulator and criterion-groups studies examining specificity and sensitivity of stand-alone symptom validity tests in chronic pain

Authors	*n*	Sample	Validity indicator	Cutoff	FP	Sens %
Simulator studies						
Etherton et al. (2005a)	20	Undergrad volunteers – control	TOMM	≤45 (T2)	0	85
	20	Cold-pressor induced pain		≤45 (Ret)	0	75
	20	Sim pain-related memory deficit				
Criterion groups						
Greve et al. (2008)	42	Non-MPRD clinical pain	PDRT	≤21 easy	2	63
	58	MPRD clinical pain		≤18 hard	2	56
				≤39 total	2	56
			TOMM	≤45 (T2)	2	48
				≤40 (Ret)	2	44
			WMT	≤62.5 (IR)	2	48
				≤62.5 (DR)	2	52
				≤57.5 (C1)	2	26
Greve et al. (2009a)	75	Non-MPRD clinical pain	PDRT	≤25 easy	3	45/51[a]
	109	MPRD clinical pain		≤20 hard	7	45/48[a]
	29	Undergrad volunteers pain sim		≤30 total	8	59/62[a]
Greve et al. (2009c)	118	Non-MPRD clinical pain	TOMM	≤48 (T2)	0	45
	216	MPRD clinical pain		≤48 (Ret)	1	48

Abbreviations. n sample size, *FP* false positive error rate, *sens* sensitivity, *undergrad* undergraduate, *sim* simulator, *TOMM* Test of Memory Malingering (Tombaugh 1996), *T2* Trial 2, *Ret* retention, *MPRD* malingered pain-related disability, *PDRT* Portland Digit Recognition Test (Binder 1993; Binder and Willis 1991), *WMT* Word Memory Test (Green 2005), *IR* immediate recognition, *DR* delayed recognition, *C1* consistency score 1

[a]Sensitivity data for the simulator group

Disability. Figure 18.4 illustrates that pain-related disability also is multifactorially determined. Factors such as catastrophizing and fear of pain complicate the original injury and could lead to disability.

18.3.2 Testing

A test that could be useful in the psychological injury context is the Pain Disability Questionnaire (see Table 19.4) (Anagnostis et al. 2004). This questionnaire is suggested for use in the AMA Guides American Medical Association; (Rondinelli et al. 2008). I note that it does not have defensiveness or validity checks.

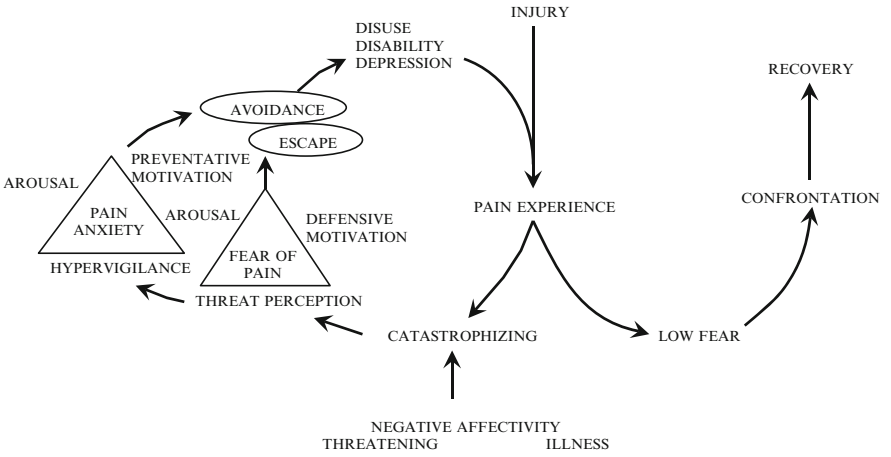

Fig. 18.4 Fear-avoidance model of pain-related disability
The model indicates how fear-induced avoidance complicates pain experience and disability
Adapted with permission of Springer Science + Business Media. Leeuw et al. (2007); with kind permission from Springer Science + Business Media. [Figure 1, Page. 79]

18.4 Chapter Conclusion

This chapter has helped flesh out understanding of major psychological injuries by considering MTBI (PPCS) and chronic pain for their nature, malingering, outcome/disability, and testing. The next chapter continues with a discussion of pain feigning detection, including of a proposed instrument for the topic, and the chapter after that considers conversion disorder, which is a serious confound in the attribution of malingering, especially for neuropsychologists faced with PPCS presentations but also perhaps psychologists confronting chronic pain ones.

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Chapter 19
An Instrument to Detect Pain Feigning: The Pain Feigning Detection Test (PFDT)

19.1 Summary

A valid pain feigning inventory does not yet exist in the field, despite the need for such an instrument in tort, disability, compensation, and other types of forensic and mental health evaluations. The chapter proposes an instrument on the detection of pain feigning that consists of 67 items. Its primary innovation is to compare patient's self-report of ongoing pain experience with baseline estimates of physical injury or condition and expected associated pain. Once fully developed, the instrument should provide data toward determining respondents' validity of presentation about their pain experience and, in particular, about the possible presence of malingering and related response biases. The scores deriving from the instrument would need to be interpreted as part of a comprehensive assessment with a full reliable data set gathered. After the required validating research is undertaken, the instrument could help evaluators in undertaking comprehensive, scientifically-informed, impartial assessments that meet professional and court requirements. It is called the Pain Feigning Detection Test (PFDT).

Many thanks to Robert Erard, David Berry, Brain Levitt, and Andy Kane for comments. Until it is developed psychometrically, the proposed instrument is meant for research purposes and not clinical or forensic purposes. However, practitioners could use portions of it in interview format

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Table of Terms and Sources

Abbreviation	Name	Source(s)
BAPQ	Behavioral Assessment of Pain Questionnaire	Tearnan and Lewandowski (1992)
BBHI-2	Brief Battery for Health Improvement, Second Edition	Disorbio and Bruns (2002)
BHI-2	Battery for Health Improvement, Second Edition	Bruns and Disorbio (2003)
CMAP	Comprehensive Muscular Activity Profile	Medical Technologies Unlimited (2008)
CSQ	Coping Strategies Questionnaire	Rosenstiel and Keefe (1983)
DAPS	Detailed Assessment of Posttraumatic Stress	Briere (2001)
DPQ	Dallas Pain Questionnaire	Lawlis et al. (1989)
FABQ	Fear-Avoidance Beliefs Questionnaire	Waddell et al. (1993)
FBS	Symptom Validity Scale (originally called Fake Bad Scale)	Ben-Porath and Tellegen (2008/2011) and Lees-Haley et al. (1991)
Fs	Infrequent Somatic Responses	Ben-Porath and Tellegen (2008/2011)
LAQ	Life Assessment Questionnaire	Tearnan and Ross (2012)
MBMD	Millon Behavioral Medicine Diagnostic	Millon et al. (2000)
MMPI-2	Minnesota Multiphasic Personality Inventory, Second Edition	Butcher et al. (1989, 2001)
MMPI-2-RF	Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form	Ben-Porath and Tellegen (2008/2011)
MPI	Multidimensional Pain Inventory	Kerns et al. (1985)
MPQ	McGill Pain Questionnaire	Melzack (1975)
MSPQ	Modified Somatic Perception Questionnaire	Main (1983)
NPS	Neuropathic Pain Scale	Galer and Jensen (1997)
NPSI	Neuropathic Pain Symptom Inventory	Bouhassira et al. (2004)
ODI	Oswestry Disability Index	Fairbank et al. (1980)
P3	Pain patient profile	Tollison and Langley (1995)
PAI	Personality Assessment Inventory	Morey (1991, 2007)
PASS	Pain Anxiety Symptom Scale	McCracken et al. (1992)
PCP:EA	Profile of Chronic Pain: Extended Assessment	Ruelman et al. (2005a, b)
PCS	Pain Catastrophizing Scale	Sullivan et al. (1995)
PCSQ	Postconcussion Syndrome Questionnaire	Axelrod et al. (1996)
PDI	Pain Disability Index	Tait et al. (1990)
PDQ	Pain Disability Questionnaire	Anagnostis et al. (2004)
PDRT	Portland Digit Recognition Test	Binder (1993) and Binder and Willis (1991)
PFDT	Pain Feigning Detection Test	Young (2013); present work
PQAS	Pain Quality Assessment Scale	Jensen et al. (2006)
PSEQ	Pain Self-Efficacy Questionnaire	Nicholas (1989)
PSR-2	Pain Symptoms Ratings, Version 2	Duhamel (2012)

(continued)

(continued)

Abbreviation	Name	Source(s)
RDS	Reliable Digit Span	Greiffenstein et al. (1994)
RMDQ	Roland and Morris Disability Questionnaire	Roland and Morris (1983)
RNBI	Ruff Neurobehavioral Inventory	Ruff and Hibbard (2003)
SF-36	Short Form-36 Physical and Mental Health Summary Scales	Ware et al. (1994)
SF-MPQ	Short-Form McGill Pain Questionnaire	Melzack (1987)
SF-MPQ	Short-Form McGill Pain Questionnaire, Second Edition	Dworkin et al. (2009)
SIP	Sickness Impact Profile	Bergner et al. (1981)
SIRS	Structured Interview of Reported Symptoms	Rogers et al. (1992)
SIRS-2	Structured Interview of Reported Symptoms, Second Edition	Rogers et al. (2010)
SOPA	Survey of Pain Attitudes	Jensen and Karoly (2007)
TSK	Tampa Scale for Kinesiophobia	Kori et al. (1990)
TOMM	Test of Memory Malingering	Tombaugh (1996)
VAS	Visual Analog Scale	
WMT	Word Memory Test	Green (2005)

19.2 Introduction

19.2.1 Absence of Pain Feigning Instruments

Pain is a subjective experience so that it is difficult to assess with objective instruments that are reliable and valid. Yet there are no valid existing instruments that are dedicated to determining the validity of subjective pain complaints, which is important in legal and related contexts. I had called for the development of an instrument along these lines in Young (2007), but, to my knowledge, none has been developed to date. Therefore, the goal of the present chapter is to describe the rationale and proposed contents for such an instrument.

19.2.2 Pain Feigning

Patients might engage in symptom minimization (positive impression management, under-reporting, self-favorable reporting) or symptom exaggeration (negative impression management, over-reporting, self-unfavorable reporting), and the reasons for the latter might include conscious malingering for financial gain. However, the use of the term pain feigning for the proposed instrument avoids the difficulties associated with the term malingering and the difficulties in ascertaining its presence (Berry and Nelson 2010).

For present purposes, pain feigning is defined as giving or inducing a false appearance or impression, purporting that it is true (Mish 2003). However, it needs to be clarified that pain feigning is not a question of absolute presence or absence in a categorical sense, but is a question of degree or position on a dimension. Still, the proposed instrument can help evaluators in arriving at conclusions about the presence of pain feigning or symptom exaggeration, if it is found. For example, the evaluator might decide in examining the full reliable data set gathered in a case that negative or untoward motivations prevail in the reasons for any one patient's pain symptom feigning/exaggeration or that there are more patient-sensitive explanations, such as a cry for help.

19.2.3 Checking Pain Feigning

Non-pain Instruments. There are two major types or respondent validity checks, including of positive and negative impression management, and of possible malingering detection – (a) scales that are embedded in broader instruments related to personality [e.g., the F family of scales in the MMPI-2 (Minnesota Multiphasic Personality Inventory, Second Edition; Butcher et al. 1989, 2001) and the MMPI-2-RF (Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form; Ben-Porath and Tellegen 2008/2011), the PAI (Personality Assessment Inventory; Morey 1991, 2007)] and (b) those that can stand alone, the symptom validity tests [SVTs; e.g., the TOMM (Test of Memory Malingering; Tombaugh 1996); the WMT (World Memory Test; Green 2005); and the SIRS/SIRS-2 (Structured Interview of Reported Symptoms; Rogers et al. 1992; Structured Interview of Reported Symptoms, Second Edition; Rogers et al. 2010)]. However, these instruments have either generic respondent validity checks or ones oriented to conditions other than pain. Even when the tests relate to somatic conditions, they do not focus on pain, per se (e.g., the MMPI-2-RF's Fs scale).

Greene (2011) described that the Fs scale (Infrequent Somatic Responses) is comprised of 16 items from the MMPI-2. The items involve somatic content and are frequently endorsed by medical patients in treatment for known medical conditions. Surprisingly, pain and litigating samples do not generally score higher on the scale than clinical and normal, control samples. T scores of 81 and above are considered "marked" and should raise concerns that respondents are endorsing too many items of somatic symptoms and ones that are atypical and unusual. However, two studies conducted in 2012 showed the potential utility of stand-alone SVTs (TOMM, WMT, RDS; Reliable Digit Span; Greiffenstein et al. 1994) and the MMPI-2/MMPI-2-RF validity scales [FBS (Symptom Validity Scale, originally called Fake Bad Scale; Lees-Haley et al. 1991; part of the MMPI-2; Ben-Porath et al. 2009a, b; Butcher et al. 2008), RBS, F/Fr, Fs] to detect exaggerated complaints in pain populations (Greiffenstein et al. 2012; Johnson-Greene et al. 2012).

Table 19.1 BBHI-2 scales

Scale Type	Scale
Validity	Defensiveness
Physical Symptom	Somatic Complaints
	Pain Complaints
	Functional Complaints
Affective	Depression
	Anxiety

Adopted with permission of Pearson Assessment Systems, Inc. Disorbio and Bruns (2002); with kind permission from Pearson Assessment Systems, Inc. [Table 1, Page. 2]
Abbreviation. BBHI-2 Brief Battery for Health Improvement, Second Edition

Other instruments relate to behavioral health, in general, and their client validity checks are more generic even if the clinical scales include somatic conditions or pain [the BHI-2/BBHI-2; (respectively, Battery for Health Improvement, Second Edition; Bruns and Disorbio 2003; Brief Battery for Health Improvement Second Edition; Disorbio and Bruns 2002); the MBMD (Millon Behavioral Medicine Diagnostic; Millon et al. 2000); the RNBI (Ruff Neurobehavioral Inventory; Ruff and Hibbard 2003). There are several other comprehensive instruments related to somatic concerns that do include pain items (e.g., the SIP, the SF-36; respectively, Sickness Impact Profile; Bergner et al. 1981; Short Form-36 Physical and Mental Health Summary Scales; Ware et al. 1994). There is work on the detection of malingered pain-related disability (Bianchini et al. 2005) using criteria related to SVT performance, based on the work of Slick et al. (1999), but the suggested categories do not involve pain-feigning instruments as such.

The BHI-2 and BBHI-2, although not uniquely about pain, are tests that could be used in evaluation of pain in the psychological injury context because they have validity scales measuring defensiveness. In the following, I describe the BBHI-2.

Table 19.1 indicates that the BBHI-2 provides test results related to physical symptoms and affective symptoms. Table 19.2 presents some of the defensives scale items, slightly modified to preserve test proprietary rights. Table 19.3 shows that the defensiveness scale can be interpretive for both high and low scores. The low scores are the ones that reflect exaggeration of symptoms. The possible interpretations offered for this includes a cry for help, seeking secondary gain, etc.

Pain Instruments. A comprehensive pain assessment instrument that has been developed is the PCP:EA, which also comes in a short form (Profile of Chronic Pain: Extended Assessment; Ruelman et al. 2005a, b). The instrument provides information about respondents with respect to: the qualitative features of pain experience, pain location, pain severity, health care status, pain medication use, pain

Table 19.2 Defensiveness scale items on the BBHI-2 (altered)

43. There are numerous work skills that I can do.
47. This has been a terrible time for me.
49. My life was better than this before.
53. I am happy with things now.
56. My health difficulties are not that bad.
58. My life should be easier.
60. I have numerous difficulties that are up and down.
62. Recently, things have been really bad.

Adopted with permission of Pearson Assessment Systems, Inc. Disorbio and Bruns (2002); with kind permission from Pearson Assessment Systems, Inc. [Table 12]

Table 19.3 BBHI-2 test interpretation

Validity scale	
Defensiveness scale	
The Defensiveness scale assesses a patient's ability and willingness to disclose personal information and the degree to which he/she portrays him- or herself in a positive or negative light.	
Extremely high and very high scores (T > 65)	Extremely high or very high scores on the Defensive scale may indicate great concerns about privacy, a desire to conceal information, or a lack of psychological insight. Scores in this range cast doubt on the validity of the patient's profile and raise questions about his/her willingness to disclose personal information. If psychosocial risk factors are present, the possibility that hidden concerns are interfering with recovery should be considered.
High scores (T = 60–65)	High scores on the Defensive scale suggest a high level of psychological defensiveness, which may indicate concerns about privacy, an aversion to complaining, or a desire to downplay problems. This apparent reluctance to disclose sensitive information may have biased the patient's report. If psychosocial risk factors are present, it is possible that the patient does not feel comfortable discussing certain matters, which may delay recovery.
Low scores (T = 34–40)	A low score on the Defensive scale suggest a lowering of defenses that may be explained by an unusual degree of candor with the caregiver, a cry for help, or a propensity to complain. This may have biased the patient's self-reports in the direction of symptom magnification. If psychosocial risk factors are also present, it may indicate a tendency to embellish the report of symptoms. The possibility that this is interfering with recovery should be considered.
Very low and extremely low scores (T < 34)	This unusually low level of defensiveness tends to be associated with inflated reports of physical and/or psychological problems. Scores in this range may indicate a cry for help, exaggeration of symptoms for secondary gain, or a desire to convince others of the seriousness of one's situation. In addition, a score in this range casts serious doubt on the validity of the patient's profile. If psychosocial risk factors are also present, the possibility that symptom magnification is interfering with recovery should be strongly considered.

Adapted with permission of Pearson Assessment Systems, Inc. Disorbio and Bruns (2002); with kind permission from Pearson Assessment Systems, Inc. [Excerpt of 356 words, Page. 59]
Abbreviation. BBHI-2 Brief Battery for Health Improvement, Second Edition

coping, catastrophizing, pain attitudes and beliefs, social responses to pain, and functional limitations in ten areas of daily activity. However, there are no scales related to response bias.

Some popular pain instruments, such as the SF-MPQ (Short-Form McGill Pain Questionnaire; Melzack 1987), the MPI (Multidimensional Pain Inventory; Kerns et al. 1985), the PCS (Pain Catastrophizing Scale; Sullivan et al. 1995), the PQAS (Pain Quality Assessment Scale; Jensen et al. 2006), and the SOPA (Survey of Pain Attitudes; Jensen and Karoly 2007) do not include client validity checks, although workers have developed a variable response scale for the MPI (Bruehl et al. 1998). There are some tests related to pain that include client validity checks, but the items do not deal with pain, per se, and are sparse (e.g., the P3, Pain patient profile; Tollison and Langley 1995). Some pain-related instruments address disability, but do not deal with pain, per se (MSPQ, Modified Somatic Perception Questionnaire; Main 1983; PDI, Pain Disability Index; Tait et al. 1990). Lawlis et al. (1989) have developed the Dallas Pain Questionnaire (DPQ), about how spinal pain affects activities (work, leisure, and daily), mood, and social interest. The instrument has a cut-off score indicative of exaggeration, but Greve and Bianchini (2012) have noted that the instrument does not differentiate motivation for scores above the cut-off.

Another test that could be useful in the forensic disability and related context is the Pain Disability Questionnaire (see Table 19.4) (PDQ; Anagnostis et al. 2004). [This questionnaire is a component of the pain rating system (Rondinelli et al. 2008).] However, I note that it does not have defensiveness or validity checks.

Turk and Melzack (2011; also see DeGood and Cook 2011) offered a comprehensive review of pain assessment. Turk and Robinson (2011) are the only chapter authors in the book to have mentioned malingering. Note that it is beyond the scope of the present paper to analyze extant instruments in headache pain assessment (see Andrasik et al. 2011), although it appears that none test for patient pain feigning.

Howard et al. (2010) underscored that malingering should be addressed from a biopsychosocial perspective. They provided evidence that a measure of surface electromyography (Comprehensive Muscular Activity Profile; CMAP, Medical Technologies Unlimited 2008) can detect objectively respondent effort and not only the physical measures to which it is targeted (ROM, range of motion; lumbar; lifting capacity). They concluded that more objective measures, such as the one described, could help eliminate the misuse and the misdiagnosis of malingering. Nevertheless, paper and pencil self-report inventories are needed to complement the psychologists' test battery in addressing malingering and related response biases.

Epker (2013) reviewed pain-measuring instruments, and there is much overlap in the ones he lists (see Table 19.5) and those mentioned in this chapter. Note that he refers to the PCS and MSPQ as pain instruments having indices related to symptom validity ("psychological overlay"). However, neither the authors nor Greve et al. (2012) described these instruments as having such explicit indices, although research has indicated that certain scores are problematic (e.g., Larrabee 2003).

In their reviews, both Epker (2013) and Greve et al. (2012) found value in using the MMPI-2-RF in pain assessments, as did Block et al. (2012). Greve et al. (2012) argued that both stand-alone and embedded SVTs can be useful in this regard [e.g.,

Table 19.4 Pain Disability Questionnaire

Patient Name _____ Date _____

Instructions:

These questions ask your views about how your pain now affects how you function in everyday activities. Please answer every question and mark the ONE number on EACH scale that best describes how you feel.

1. Does your pain interfere with your normal work inside and outside the home?

Work normally — Unable to work at all

0-------- 1 -------- 2-------- 3-------- 4-------- 5-------- 6-------- 7-------- 8-------- 9-------- 10

2. Does your pain interfere with personal care (such as washing, dressing, etc.)?

Take care of myself completely — Need help with all my personal care

0-------- 1 -------- 2-------- 3-------- 4-------- 5-------- 6-------- 7-------- 8-------- 9-------- 10

3. Does your pain interfere with your traveling?

Travel anywhere I like — Only travel to see doctors

0-------- 1 -------- 2-------- 3-------- 4-------- 5-------- 6-------- 7-------- 8-------- 9-------- 10

4. Does your pain affect your ability to sit or stand?

No problems — Can not sit/stand at all

0-------- 1 -------- 2-------- 3-------- 4-------- 5-------- 6-------- 7-------- 8-------- 9-------- 10

5. Does your pain affect your ability to lift overhead, grasp objects, or reach for things?

No problems — Can not do at all

0-------- 1 -------- 2-------- 3-------- 4-------- 5-------- 6-------- 7-------- 8-------- 9-------- 10

6. Does your pain affect your ability to lift objects off the floor, bend, stoop, or squat?

No problems — Can not walk/run at all

0-------- 1 -------- 2-------- 3-------- 4-------- 5-------- 6-------- 7-------- 8-------- 9-------- 10

7. Does your pain affect your ability to walk or run?

No problems — Can not walk/run at all

0-------- 1 -------- 2-------- 3-------- 4-------- 5-------- 6-------- 7-------- 8-------- 9-------- 10

8. Has your income declined since your pain began?

No decline — Lost all income

0-------- 1 -------- 2-------- 3-------- 4-------- 5-------- 6-------- 7-------- 8-------- 9-------- 10

9. Do you have to take pain medication every day to control your pain?

No medication needed — On pain medication throughout the day

0-------- 1 -------- 2-------- 3-------- 4-------- 5-------- 6-------- 7-------- 8-------- 9-------- 10

10. Does your pain force you to see doctors much more often than before your pain began?

Never see doctors — See doctors weekly

0-------- 1 -------- 2-------- 3-------- 4-------- 5-------- 6-------- 7-------- 8-------- 9-------- 10

11. Does your pain interfere with your ability to see the people who are important to you as much as you would like?

No problem — Never see them

0-------- 1 -------- 2-------- 3-------- 4-------- 5-------- 6-------- 7-------- 8-------- 9-------- 10

12. Does your pain interfere with recreational activities and hobbies that are important to you?

No interference — Total interference

0-------- 1 -------- 2-------- 3-------- 4-------- 5-------- 6-------- 7-------- 8-------- 9-------- 10

13. Do you need the help of your family and friends to complete everyday tasks (including both work outside the home and housework) because of your pain?

Never need help — Need help all the time

0-------- 1 -------- 2-------- 3-------- 4-------- 5-------- 6-------- 7-------- 8-------- 9-------- 10

(continued)

Table 19.4 (continued)

14. Do you now feel more depressed, tense, or anxious than before your pain began?
No depression/tension Severe depression/tension
0-------- 1 -------- 2-------- 3-------- 4-------- 5-------- 6-------- 7-------- 8-------- 9-------- 10
15. Are there emotional problems caused by your pain that interfere with your family, social and or work activities?
No problems Severe problems
0-------- 1 -------- 2-------- 3-------- 4-------- 5-------- 6-------- 7-------- 8-------- 9-------- 10

Examiner

Other Comments:

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Table 19.5 Measures for assessing pain-related domains: normative data and symptom validity

Pain assessment measures	Normative data[a]	Symptom validity (psych overlay and/or intentional exaggeration)[b]
VAS	–	No
VRS	–	No
NRS	Yes	No
MPQ	Yes	No
SF-MPQ-2	–	No
NPS	–	No
PQAS	–	No
NPSI	–	No
Pain drawing	–	Limited
ODI	Yes	No
SIP	–	No
RMDQ	Yes	No
PDI	–	No
PDQ	–	No
SOPA	–	No
PSEQ	Yes	No
CSQ	–	No
PCS	–	Yes: psych overlay
PASS	–	No
TSK	Yes	No
FABQ	–	No
MSPQ	–	Yes: psych overlay & intentional exaggeration
MMPI-2	Yes	Strong: psych overlay & intentional exaggeration
MMPI-2-RF	Yes	Strong: psych overlay & intentional exaggeration
MPI	Yes	No
BHI-2	Yes	Yes: internal
MBMD	Yes	Yes: internal

(continued)

Table 19.5 (continued)

Note

[a] All measures have been used in a number of studied in different populations of patients with chronic pain. Those marked "yes" also have large-scale normative data for chronic pain published

[b] Some measures have internal indices related to symptom validity; some provide information related to the presence of psychological overlay to pain complaints; some have been demonstrated to be useful in identification of intentional exaggeration of symptoms

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Abbreviations. VAS visual analog scale, *VRS* verbal rating scale, *NRS* numerical rating scale, *MPQ* McGill Pain Questionnaire (Melzack 1975), *SF-MPQ-2* Short-Form McGill Pain Questionnaire, Second Edition (Dworkin et al. 2009), *NPS* Neuropathic Pain Scale (Galer and Jensen 1997), *PQAS* Pain Quality Assessment Scale (Jensen et al. 2006), *NPSI* Neuropathic Pain Symptom Inventory (Bouhassira et al. 2004), *ODI* Oswestry Disability Index (Fairbank et al. 1980), *SIP* Sickness Impact Profile (Bergner et al. 1981), *RMDQ* Roland and Morris Disability Questionnaire (Roland and Morris 1983), *PDI* Pain Disability Index (Tait et al. 1990), *PDQ* Pain Disability Questionnaire (Anagnostis et al. 2004), *SOPA* Survey of Pain Attitudes (Jensen and Karoly 2007), *PSEQ* Pain Self-Efficacy Questionnaire (Nicholas 1989), *CSQ* Coping Strategies Questionnaire (Rosenstiel and Keefe 1983), *PCS* Pain Catastrophizing Scale (Sullivan et al. 1995), *PASS* Pain Anxiety Symptom Scale (McCracken et al. 1992), *TSK* Tampa Scale for Kinesiophobia (Kori et al. 1990), *FABQ* Fear-Avoidance Beliefs Questionnaire (Waddell et al. 1993), *MSPQ* Modified Somatic Perception Questionnaire (Main 1983), *MMPI-2* Minnesota Multiphasic Personality Inventory, Second Edition (Butcher et al. 1989; Butcher et al. 2001), *MMPI-2-RF* Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form (Ben-Porath and Tellegen 2008/2011), *MPI* Multidimensional Pain Inventory (Kerns et al. 1985), *BHI-2* Battery for Health Improvement, Second Edition (Bruns and Disorbio 2003), *MBMD* Millon Behavioral Medicine Diagnostic (Millon et al. 2000)

the TOMM, WMT, and (PDRT Portland Digit Recognition Test; Binder 1993; Binder and Willis 1991) for the former and the RDS for the latter]. Moreover, using combined SVTs adds accuracy (Larrabee 2008), as demonstrated by Greve et al. (2009). However, evaluators need to assure the independence of the instruments used and, as the authors conclude, much research remains to be undertaken to calibrate SVTs in chronic pain evaluations.

Note that there are dedicated instruments on the psychological injury of PTSD that include scales on detecting symptom exaggeration (e.g., the DAPS, Detailed Assessment of Posttraumatic Stress; Briere 2001), and the SVTs that have been developed typically concern detection of exaggeration on neuropsychological questions, such as memory (the TOMM). In this sense, the field is in need of an instrument dedicated to the detection of feigned pain experience.

19.2.4 Understanding Pain

It could be argued that construction of such an instrument has not taken place to date because of the myriad difficulties in dealing with the measurement of any facet of pain, given of its subjective and individual nature (Young 2008; Young and Chapman 2007). For example, there is no one-to-one correspondence in a dose-response relationship between injury severity and pain experience severity. Moreover, perhaps pain feigning as a construct cannot be isolated from other facets of pain experience, such as somatization, pain sensitivity, catastrophizing and health anxiety, the relationship of pain to emotions such as depression, anxiety, anger, and the fear of pain, general concerns about somatic symptoms, lack of being heard by professionals and having the pain experience dismissed, litigation distress, the influence of the cumulative life history of pain experience and of stresses, a general inability to cope, a personality predisposed to the types of issues under discussion, and so on. However, these concerns belie the fact that other malingering-detection instruments have been constructed, albeit not on pain, and often these confounding aspects are either the subject of the instruments or are contained in their items, although not in relation to pain feigning itself. Moreover, the other pain instruments have been developed to consider some of these influencing factors on pain.

A reviewer noted that the reason an instrument equivalent to the one being proposed has not been done before is because one quickly gets embroiled in fairly deep conceptual and philosophical problems. Unlike many other morbid conditions, the experience of pain has no well-defined relationship to any observable measure or appraisal of injury. We do not know exactly how much pain a person should have to go along with a particular physical injury. For example, back pain has an extremely low correlation with the extent of disc deterioration. We also cannot find a conceptual scalpel (much less an operational one) thin enough to slice between pain presentations that are malingered, factitious, and 'real' but highly psychosomatic. As well, people with different kinds of personalities and self-images have different styles of experiencing and reporting pain. Also, like anxiety sensitivity, there are individual differences in "pain sensitivity." To the extent that one could even meaningfully say that two people have the same amount of actual pain, one person may treat it as so much meaningless background noise whereas another may make it a central focus of life and find it utterly disabling. (In this regard, consider that: two people sticking their hands in ice water of equivalent temperature might react quite differently; pain that can be intense but unimportant under laughing gas, and also unconscious cueing, have been shown to affect reports of pain). Related concepts would be fearfulness or fearlessness about pain, the conceptual difference between pain and suffering, the complex psychological and physiological connections between pain and depression, and the relation of time orientation to pain.

For a comprehensive understanding of the biopsychosocial and forensic approaches to pain, see Gatchel et al. (2007), Turk and Melzack (2011), Schatman and Gatchel (2010), and Young et al. (2007). Therefore, attempting an operationalization in a self-report instrument of pain feigning, could be too complicated.

However, does one need a perfect pain model and diagnostic category before developing a valid instrument that assesses pain feigning? To the contrary, I believe that the development of a psychometrically sound instrument along these lines will help complete the quest for a well-conceived complete model of pain and a valid diagnostic category, as long as it builds on current theoretical knowledge and considers the factors involved in pain expression relevant to its goals.

19.2.5 Proposing the Pain Feigning Detection Test (PFDT)

Despite these daunting issues of understanding the origins and maintenance of pain experience and how best to measure it with psychological instruments, I developed the questions for the instrument and have suggested steps to maximize content and construct validity. Moreover, any detection of pain feigning or symptom exaggeration on an instrument by itself cannot provide reasons for the elevation. The proposed instrument avoids naming its scales in a way that would imply either conscious or unconscious motivations or the work of internal or external incentives. In interpreting the results that might derive from the instrument, assessors should exhibit great care in imputing motivations. Nevertheless, guidelines and options are provided in this work.

In addition, the proposed instrument needs a development program that assures that it meets the highest standards of the profession and all admissibility tests for court, is structured to be middle-of-the-road, or readily applicable to assessors who have received referrals from either plaintiff or defense, and avoids the debates about the scientific soundness of some other instruments in the field. Until the instrument is developed to this degree, the present proposal constitutes but a modest beginning. Nevertheless, appropriate research such as described by Rogers (see Chap. 11), can provide the needed differential data.

19.3 Rationale for the Instrument

Specifically, the field of forensic disability and related contexts needs to develop chronic pain assessment instruments that facilitate rigorous assessment of the validity or degree of feigning of the pain complaints of patients. These types of scales are sometimes transparent to the respondent or might be readily coached, so that the instrument should be structured in a manner to avoid these contaminating influences.

19.3.1 Primary Goal

In this regard, items selected need to assess the degree of chronicity of the pain being reported in relation to baselines levels of physical injury/condition as relayed to

or reported by treating medical practitioners or primary care physicians of the respondent (referred to as "primary medical professionals"). The rationale behind the instrument is to ascertain the difference in the pain being experienced as reported by the respondent relative to baseline reports of others about the degree of physical injury/condition. The respondent should supply this information, but it should be either checked in the medical and related records or a relevant medical or primary care professional in the case should be contacted to provide an estimate of the severity of the patient's state.

19.3.2 Other Considerations

The proposed instrument should also analyze a range of factors related to ongoing pain experience and their causation. It should be standard in comprehensive evaluations in the field to assess patient psychological presentation to an event at claim in terms of pre-event, event, and post-event conditions and factors (Kane and Dvoskin 2011; Young et al. 2007; Young 2010, 2011). In addition, there are secondary psychological factors that impact pain experience, such as coping capacity and ongoing emotions and stress (Gatchel et al. 2007; Turk and Melzack 2011; Young et al. 2007). Finally, appropriate assessment of pain feigning should include the types of questions in the work of Rogers and colleagues on respondent response bias, malingering, and feigning (e.g., Rogers et al. 1992; Rogers 2008), such as the presence of rare or improbable symptoms. In this regard, for the present instrument, I decided to focus on the most obvious indicators of feigning, that of endorsement of items related to absurd pain presentation.

However, an outstanding issue in the development of this instrument is to what degree other possible items of this nature should be included. Moreover, the same issue applies for the other scales suggested – to what extent more items should be included and more subscales related to pain feigning be allowed to emerge in the instrument. That being said, the following gives a summary of the types of items included in the instrument at present, and the names of the subscales that might emerge in test construction.

(a) *Body-Head pain* (Reported pain experience). There should be separate forms for body and head pain, as these two sources of pain might have different response profiles for any one patient. (b) *Absurd Pain*. Also, some items need to be absurd ones, or similar ones, as found on the SIRS/SIRS-2, in order to check for careless responding, language inattention or difficulties, or other response biases. (c) *Pre-existing Factors*. The instrument should evaluate other threats to validity, such as pre-existing psychological pathologies and pre-existing pain history of respondents. (d) *Coping/Distress/Stress/Emotions*. Finally, patients cope differently with pain; with some being more overwhelmed and controlled by the pain, depending on the patient and her or his resources, supports, and other factors. There is even litigation distress to consider in intruding factors. Pain experience is based on perception or appraisal and is highly individual so that perceived stress levels need to be included

in the items of the instrument, both for the time frame before the onset of the pain at issue and afterwards. Similarly, there should be items related to emotional state.

Note that there are multiple pain instruments that examine these factors and related one's, such as patient attitude. However, although not aimed at these issues, per se, the type of instrument being proposed should have summary items dealing with them because of their importance in contextualizing the pain experience being reported.

19.3.3 What the Instrument Is Not

In constructing the instrument, I considered its goals and examined other pain-related instruments. Should there be more items in each type of question, and then statistics applied to pare them down, as can happen in test development? Particularly, should there be more questions related to pain experience and impairment in function or disability? It would have been easy to keep expanding the number of items about ongoing pain experience from the ones listed by elaborating these issues as major goals of the instrument and borrowing/revising items from other tests. Many such items would help indirectly, for example, in helping to specify the relationship of scores derived from the instrument on pain feigning in relation to more detailed aspects of patient pain experience and the degree of perceived disability. However, I decided to limit the goals and number of items so that they remain focused and limited. Researchers and assessors using the instrument could add other pain-related instruments to the battery administered in order to answer these broader questions at the nomothetic or idiographic levels. Further iterations of the instrument could expand the range of items used to tackle better these alternate goals, perhaps by adding a supplementary section. That being said, the point of departure in developing the instrument should be that the items selected are sufficient for its purposes until shown otherwise.

19.4 Instrument Development

19.4.1 Overview

Most important, item selection considered the enunciated goals of the instrument so that it has face, content, and construct validity, or can be readily tested for same. The instrument consists of 22 preliminary items, 45 items on ongoing pain experience, and place for comments. The instrument is divided into several sections. First, preliminary questions address baseline levels of physical injury/condition and expected associated pain experience, as evaluated by three respondents – the patient, primary care professional, and significant other. Then, the patient describes the areas of pain

and its intensity both in the body and head regions. Next, the patient answers the 45 items related to ongoing pain experience. Finally, there is room to add comments by the patient and assessor. The former includes space to describe the critical questions of suicidal ideation/intention and wanting to harm others.

19.4.2 Structure

Response Format. As for the response format for the items, I use the Likert scale format, with each question having 6 answer points [low (0) to high (5), with an additional NA/not sure category]. That is, each item is accompanied by a continuum of possible answers indicative of increasing difficulties with pain. This approach is consistent with pain rating scales in which one inquires about subjective units of distress, e.g., from 0 to 10.

As test development proceeds, the scale items should be modified by appropriate additions or deletions, as the conceptual and statistical analyses might indicate. In particular, do the number of items and scales remain the same. Although the content domains seem reasonable, individual items need validating? In addition, scaling issues might arise with the response format. Moreover, items should be re-organized to the degree possible to give questions in random order, with some needing reversed scoring procedures, and so on. The degree of language difficulty should be checked.

Missing Items. Scoring rules should be established for missing data. For example, in the case of baseline injury/condition level estimates, there should be rules constructed for use by for the assessor in case professional respondents are not available. Also, when the patient or respondents complete only the injury/condition question and not the pain experience question, the former response should be used as a stand-in for the latter.

Subscales. Moreover, statistical procedures should be used to determine how best to collate items into relevant subscales with separate subtotals (factor analysis). Presumably, the ones that emerge will reflect the goals of the instrument, or the items should be tailored to meet them. For example, after rationalizing the items and altering them according to statistical results, there should be subscales (one to several, depending) related to each of the following: (a) Reported Pain Experience and Relationship of Reported Pain to Baseline (Body-Head pain), (b) Absurd Pain, (c) Pre-existing Factors, and (d) Coping/Distress/Stress/Emotions.

19.4.3 Scores

Two Classes of Scores. The primary scores for the purposes of the instrument relate to difference scores or other types of comparison scores involving the baseline and ongoing pain experience item endorsements. However, the ongoing pain experience scores should provide fruitful information in their own right. Moreover, in cases for

which baseline scores are impossible to establish or cannot be established in a valid way, the ongoing pain experience scores should be analyzed alone and interpreted toward understanding issues in pain feigning or other compromises or threats to validity of pain experience presentation. For example, item endorsements related to absurd pain, pre-existing factors, and coping/distress/stress/emotions should inform very well the nature of respondent validity in pain experience presentation related to symptom exaggeration, explanatory factors unrelated to the event at claim, and psychological factors in the respondent contributing to the pain experience. In this sense, these types of scores constitute primary ones as much as the differential scores involving the baseline.

Ongoing Pain Experience Scores Are Critical. The upshot of the having ongoing pain experience scored separately is that no matter how the questions about baseline are answered, or if they are answered in invalid ways, much information about the instrument can still be gleaned. Indeed, the information provided about the subscales of absurd pain, pre-existing factors, and coping/distress/stress/emotions might prove more informative than scores related to the baseline. Moreover, this is the first pain-related instrument including potentially validly these types of items so that in and of themselves how they are endorsed should prove valuable in psychological assessments.

19.4.4 Deriving Scores

Norms and Groups. An important consideration in the instrument's development is the need to use all relevant targeted normative populations for the question at hand. In the present case, test developers should not only test pain patients in litigation but also those who have not gone or cannot go this route. There should be an orthopedic control group that is comprised of patients who do not have chronic pain. There also should be litigants who do not have pain who are tested normatively (e.g., PTSD or TBI patients). Norms should be established with non-pain, nonlitigating comparative populations as well as clinical populations, and be adjusted for gender, age, and perhaps minority/cultural group.

Cut Scores. Cut scores should be established based on both statistical and rational bases, with perhaps different levels for gender, relevant cultural/racial groups, ages, etc. They should be high enough to reduce false positives to the lowest psychometrically acceptable level and in keeping with standard practices in decision making along these lines. They should be established in a manner that respects the needs of the court for scientifically-informed, evidence-based, impartial assessments. Aside from experts in the field known to be above the fray, expert assessors on both the plaintiff and defense sides should be consulted at this point in test development and both sides should be satisfied with the rules adopted.

My preliminary impression is that T score of *65* in relation to the appropriate comparison population should be used as the cut-off. This should end up being fair to both sides, is statistically-based, should lead to adequate psychometric sensitivity

and specificity, and should concord with estimates in the literature of problematic patient presentations. Moreover, gradations in degree of probability of pain experience feigning could proceed on a 5-point range T score basis (e.g., mildly possible = 60, moderately possible = 65, very possible = 70; extremely possible = 75+).

19.5 Validation

Instrument content and construct validity should be established using accepted empirical strategies, and in comparison with the various tests described above. For example, the degree of association between the scores derived from the instrument, other pain instruments, and the MMPI-2-RF should provide very useful information about the validity of the instrument, such as in findings pertaining to the F-s. Step-wise hierarchical regression analyses should be undertaken with the criterion outcome variables, the degree of pain experience, and the predictors—demographics, pre-existing factors, absurd pain, and coping/distress/stress/emotion measures, and finally baseline injury/condition levels. In the populations of focus, it will be interesting to see how much of the variance is explained by each of the set of variables and their interactions, especially if the residual variance in the baseline condition explains much of the outcome pain measures.

Another test development approach involves analog conditions. These should be used as a secondary source of information. Ultimately, research with the instrument should include known or highly suspected malingerers or pain feigners; however, very conservative criteria should be used in establishing this type of group.

Once completed and standardized with appropriate normative populations (clinical, pain populations), the instrument will provide the pain assessor with a tool that can help achieve in pain assessments the goals of conducting a scientifically-informed comprehensive evaluation, using instruments with adequate reliability, validity, specificity, and sensitivity, in keeping with court and professional requirements of practice.

19.6 Using the Instrument

19.6.1 Introduction

The proposed instrument is not about determining exactly why pain feigning might be evident. It will provide only one source of data toward the question. Moreover, there are so many explanations for symptom exaggeration; therefore, one test can never provide the benchmark for what explanation works best in a particular case. In addition, pain itself is considered multifactorial with many explanations possible. Finally, pain is considered quite individual in experience, so that one instrument can never claim to provide answers that are universally applicable in specifying the presence of pain experience feigning.

Therefore, how the data provided by the test will be used in an assessment should not be simplistic procedure and should reflect the individual differences possible in pain experience and its causation. Nevertheless, the psychometrics of the instrument should lead to the circumscribed goal of giving one more source of data to help explicate the nature of the pain being experienced by individuals – that of pain experience feigning. This question to which the instrument is aimed is one that research can answer – does the questionnaire arrive at its goal of indicating the presence of pain feigning. The goal is not to specify the reasons for the pain or the pain feigning that might be found – that is for the assessor to decide based on the full set of data collected.

Nevertheless, once more, I remind that the full scope of the data gathered should be examined before arriving at conclusions, and the significant scores obtained should not be used unidirectionally to always "blame the victim," in that different interpretations more sympathetic to the respondent are always possible and might be justified by the full data set. The onus is always on the assessor to consider all possible conclusions and explain all portions of the data, including those that do not fit the conclusion offered.

19.6.2 Analyzing Scores

Note that there are several ways that pain exaggeration can be detected in the proposed instrument. (a) If a patient exaggerates the baseline levels beyond those of the primary medical professional, this could lead to critical results. (b) A patient who might overestimate the degree of physical injury/condition and expected associated pain level at baseline acts to minimize discrepancies with the estimate of ongoing pain experience; however, this lack of elevated results would be evidence in its own right of pain feigning. (c) If a patient's baseline level estimates were comparable to that of the primary medical professional, but the pain assessment levels indicated by the patient are significantly higher than expected by them, the results would be beyond threshold. (d) If a patient does not exaggerate the degree of injury and condition nor the concomitant pain experience on the instrument, but does so in the interview phase of the assessment, the assessor possibly has different manner of concluding that pain feigning is involved. (e) Differences in primary medical professional and significant other responses to questions of baseline levels should be informative, as well. Nevertheless, for the most part, the levels reported by the primary medical professional should be considered the most valid indicator of baseline levels.

19.6.3 Comparing Scores

Groups. The pattern of results in different groups such as known pain feigners, students asked to feign pain, known somatizers, people with serious injuries, etc., could be quite revealing on this instrument. The norms that will be established could

help specify how a test taker compares to different types of groups relevant to psychological injury cases, helping assessors arrive at optimal conclusions when the full data set gathered is examined. Moreover, relevant group comparisons and presentation of case studies typifying different groups will help assessors in the interpretative phase of their evaluations of the results obtained with the instrument.

Patterns. Development of the instrument's database will provide the platform for its proper use. Importantly, the pattern of scores on the instrument for any one individual could be quite revealing compared to the database. It would be insufficient to isolate one or two scores on the instrument and arrive at conclusions about the information it provides solely on these grounds. There are total as well as subscale scores to consider [related to (a) Reported Pain Experience and Relationship of Reported Pain to Baseline (Body-Head pain), (b) Absurd Pain, (c) Pre-existing Factors, and (d) Coping/Distress/Stress/Emotions], but the patterns over the subscales and in conjunction with total scores will be the most informative. There might be patterns that clearly reveal trends related to symptom exaggeration and its causes, such as high scores for pre-existing pains in conjunction with high scores in the Difference score between baseline levels and ongoing pain experience scores (low scores if not reverse scored). However, this finding might be limited to a subset of questions related to ongoing pain, such as those that concern ongoing intensity only, or treatment only, or some combination of two types of pain experience questions. As research proceeds, clearer hypotheses that are theory- and literature-based need to be formulated and tested. However, there will be room for exploratory study of the data, as well, due to the novelty of the instrument and the unique data sets that it will generate.

Sequential Testing. Note that serial instrument administrations could be informative, assuming norms are developed that consider them. For example, a patient might not score in the range that indicates any degree of pain experience feigning early after the onset of the pain at issue, but might do so months or years later. The interpretation of these results could indicate increasing pain and desperation, on the one hand, but also could coincide with deciding to sue for damages and consultation with a plaintiff attorney. Another relevant comparison might be for results obtained at a similar point in time with assessors working for plaintiff and defense. If there is a greater pain experience exaggeration with the defense attorney assessor relative to the plaintiff one, a possible interpretation might be that the patient's appraisal that the defense examination is confrontational led to the greater exaggeration in this context, or reflect a desire to be heard. That is, it could be that litigation distress is an issue to consider.

19.6.4 Interpretation

Malingering. Determination of pain feigning or malingering is a complex process that should take place as part of a comprehensive psychological assessment that is impartial and scientifically-informed. The attribution of malingering should be made only if there is incontrovertible evidence that it is taking place. Nevertheless, tests might indicate the presence of response biases that lead to doubt about the

veracity of patient's pain complaints. The instrument being proposed should be used only with careful consideration of these provisos, and on a rule-out basis, with other interpretations of the data considered and ruled out before any conclusions are offered about malingering or its related motivations. Attributions of malingering need to be made carefully after considering all the data gathered, including in sufficient interviewing, testing, document review, and verification of other information. For example, in explaining the pattern of data in any one instrument and in the assessment as a whole, the assessor needs to ascertain any role for careless responding, an undue influence of poor attention due to pain, headaches, poor sleep, and related factors, a cry for help, the role of personality variables and prior psychopathology, and so on, aside from malingering (e.g., Kane and Dvoskin 2011; Rogers 2008). The manual of the instrument should be written to explain the different interpretations and conclusions possible with the data that it allows, using pertinent case studies to illustrate the points made.

Rules. Rules should be developed to accompany the use of the instrument for court purposes, such as those of Slick et al. (1999) on administration of multiple SVTs. Whatever the rules are, they should be face valid as well as statistically valid, so that triers of fact are not left confused by simplistic conclusions either way. (a) For example, the rules should never indicate that one "failure" on this one instrument could mean malingering when other data gathered in an assessment cannot confirm the conclusion. (b) Moreover, even when malingering seems quite possible, unless the evidence is solidly in its favor in the full assessment, the evaluator should consider using generic statements about feigned performance without attempt to specify motivation. (c) Also, when the data point toward different types of response bias other than malingering, the most likely type(s) should be specified. For example, when feigned performance is more likely due to a cry for help rather than more conscious or untoward motivations, this should be considered as more likely. (d) Note, when warranted, the astute assessor could provide conclusions intimating difficulties with the validity of respondent clinical presentation but without offering conclusions directly about malingering. (e) Finally, when conclusions that malingering has taken place are warranted, the assessor should provide all reasons for arriving at the conclusions, including those from the proposed instrument. The assessor should also discuss any evidence that does not fit the conclusions provided, which will function to validate further their strength.

19.7 Other Proposed Pain Malingering Detection Instruments

19.7.1 The LAQ

Introduction. Tearnan and Ross (2012) have developed the first self-report questionnaire dedicated to the detection of pain-related malingering. They indicated

that, to date, for this function evaluators use the MMPI-2 (Bianchini et al. 2008). Bianchini et al. (2008) found that the MMPI-2 could be used to discriminate groups of non-malingerers from chronic pain and student participants who had been instructed to exaggerate their responses. However, the MMPI-2 is not a comprehensive instrument that addresses the detection of feigning in chronic pain patients. Therefore, to fulfill this function, Tearnan and Ross (2012) developed the Life Assessment Questionnaire (LAQ).

In the first of their series of three studies, they developed the questionnaire on a rational basis. Originally, they created an item pool of 398 questions, which were answered on an 8-point Likert-type scale. The responses were converted to a true-false format. The scale was reduced to 373 items because 25 more difficult ones were eliminated. The items were organized into 11 scales, and another one was added later. In this first study, the LAQ, as originally prepared, was completed by 84 chronic pain patients seeking treatment and recruited from a hospital outpatient unit or an outpatient clinic.

In the second study, which used the reduced version, 174 chronic pain patients were administered the LAQ. This group was referred to as the clinical reference group. The patients were similar to those in the first study. Also in the second study, two simulation groups were given instructions to pretend they had pain of mild intensity but they had to convince a psychologist that the pain was more severe. One simulation group consisted of 31 chronic pain patients who were selected at random from among patient files at a hospital outpatient unit. A second simulation group was a community sample of 28 individuals without pain who were recruited by using posters placed in stores and also at a rehabilitation hospital. After statistical analysis, due to their identical results, the results for the two simulation groups were combined. In the third study, 164 participants were recruited from a hospital outpatient unit during their initial assessment. The majority of these patients were worker compensation claimants, with two-thirds receiving disability payments.

Study One. In terms of results in the first study, the 12 scales that emerged for this multiscale LAQ inventory can be found in Table 19.6. The table shows the number of items out of the 373 ones that are associated with each scale. However, I note that there appears to be some confusion, because there were only 11 scales used in the first study, and the 12th was created after the second, yet the 12 scales are listed in the table concerning the first study.

Moreover, the number of items in the scales used in the first study totals far more than 373, that is, well over 800. Therefore, it appears that there is much item overlap over the scales, with each item being used on average for about three scales. In addition, some of the scales have an enormous amount of items, e.g., 246 for each of the Feigning Index and the True-False Bias scale. Two out of the scales deal with actual physical and psychological complaints, and the remaining scales deal with validity indicators and unusual symptoms.

Inspection of Table 19.5 indicates that there are six validity scales, including two for consistency and two more for symptom exaggeration or minimization of chronic pain and related problems (the maximum-minimum scales). The other two validity scales relate to the Feigning Index and the True-False Bias Scale. The two consistency

Table 19.6 Scales of the Life Assessment Questionnaire (LAQ)

Validity	Unusual symptoms
Feigning	Nonsensical symptoms
Opposite items	MD's critical list
Similar items	Infrequent symptoms
True-false bias	Unusual symptom combinations
Maximum – minimum (1st)	
Maximum – minimum (2nd)	
Physical symptoms	
Psychological complaints	

Adapted from Tearnan and Ross (2012)

scales involve pairs of opposite items and similar items. The two maximum-minimum scales involve the first half and then the second half of the items of the questionnaire. They concern whether respondents endorse a high number of symptoms related to disability/suffering/poor health, and so on.

As for the largest two of the six validity scales, the Feigning Index includes items related to beliefs/attitudes about pain, suffering, and disability. The authors noted that its 246 items were shown to discriminate the clinical reference group and the combined simulation group. However, I note that, for study one, these groups were not yet tested (this happened in study two); therefore, the reader might be quite confused. The other major validity index is the True-False Bias scale, and it was aimed to detect individuals who endorse many items as true or false, revealing an irrelevant or disengaged response style.

In terms of the scales relating to unusual symptoms, the four scales involved Infrequent Symptoms, Nonsensical Symptoms, Unusual Combinations of Symptoms, and Critical Items endorsed by Physicians. The Infrequent Symptoms scale consisted of items endorsed by less than 25 % of the clinical reference group. The Nonsensical Symptoms Scale included physical and psychological items. The Unusual Combinations of Symptoms Scale involved pairs of symptoms that rarely occur together. As for the Physician's Critical List, physicians identified symptoms on the list as "suspicious."

Study Two. Proceeding to the study two results, the clinical reference group and the combined simulation group were scored for their differences on the 12 scales of the LAQ and, in a MANOVA set at alpha level 0.005, all were found to differ significantly. Next, individual items were analyzed with one-way ANOVAs at the same alpha level. Of the 373 items in the LAQ, 246 differed at a significant level in the group comparison. For the scale analysis, the results were reanalyzed with Cohen's *d*, and the findings were very similar to those of the MANOVA. Then, a Receiver Operating Characteristic (ROC) analysis was undertaken for area under the curve (AUC). The results indicated high AUC values for the scales that were analyzed.

It should be noted that although the design and statistics used in creating the LAQ might seem appropriate, I do have certain reservations. First, the comparison of pain patients and simulation groups as the primary means for eliminating less

reliable items (the ones lacking discriminability in these regards were removed) might not be the only or best way to conduct this phase of test construction. Also, there were statistical problems that raise questions. For example, instead of adopting an alpha level of 0.005, a more exact Bonferroni statistics adjustment procedure could have been used. Moreover, for determining individual item significance, a series of simple t-tests could have been used instead of ANOVAs, and these would have required Bonferroni adjustments. Therefore, overall, it is uncertain how many of the 246 items actually belong in the scale to which they were assigned, which seemed to be the Feigning Index.

In addition, a scale with 246 items seems overly cumbersome. There might be an extremely excessive number of ways to reach cut-off, so that any significant result might not be easy to interpret. The authors should have considered a factor analysis of the items and reducing the items to a manageable number of subscales having internal coherence.

Beyond these experimental statistical issues, there are much more basic concerns that I have relating to the descriptive statistics used, which cast doubt on the reliability and validity of the statistical analysis undertaken. In particular, Table 19.6 of Tearnan and Ross indicates that the clinical reference group was comprised of 91 patients and the combined simulation group of 46 individuals. However, I note that the sample was described as having 174 and 59 participants, respectively. That many subjects were dropped for the statistical analysis is confirmed by inspection of the *df*s for the univariate *F* tests for each scale (1, 135). Clearly, this confusion about the actual number of participants in the sample for the second study and those actually tested statistically needs careful explanation. This aspect of the research constitutes a major inconsistency that compromises understanding of the results.

Study Three. Next, I consider the third study in the series, which is on convergent validity. The sample involved outpatients administered the LAQ, the MMPI-2, and the BAPQ (Behavioral Assessment of Pain Questionnaire; Tearnan and Lewandowski 1992). For the results, first, demographics were considered. No differences were found in one-way ANOVAs, but because the nature of the ANOVAs that were run were not described, it is difficult to grasp the results. Moreover, although ANOVAs are mentioned rather than correlations, the authors refer to setting alpha at 0.005 because of the number of correlations involved in the analysis, a statement that also seeds confusion. Also, note that demographics were considered only with respect to the Feigning Index, a decision that was not explained.

As for scale intercorrelations in the results for the third study, the validity scales were highly intercorrelated except for the consistency scales. With respect to the other scales, they were also highly intercorrelated. The authors did not mention in the text that their intercorrelation table also revealed high intercorrelations between any one scale from among the three sets of scales (validity, symptom, unusual symptom scales) and any scale from among the two remaining types of the three sets not involved in the first of the pairs. Indeed, every correlation in the table, except for those involving the afore-mentioned consistency scales, were in the order

of .76 to .96 for *r*, except for the correlations involving unusual symptom combinations, which were a bit lower (this scale involves only 4 items).

It is reminded that the scales were constructed rationally, and not by factor analysis, and they have extensive item overlap. Therefore, most likely, the uniformly high scale intercorrelations reflect how the scales were constructed rather than anything about the psychological constructs putatively underlying them. Once more, it is highly recommended that factor analysis be used to empirically construct scales from the items of the questionnaire so that they make sense statistically and psychologically. Before proceeding to the next section, I note that the intercorrelation table was difficult to follow until I discovered that the headings for the columns were displaced leftward by a factor of one column.

The next section of results in the third study of the series in Tearnan and Ross (2012) verified the correlations of the scale results for the LAQ and selected scales of the MMPI-2. There were no correlations involving the LAQ and the L scale, negative ones for the K scale, and positive ones for the F family of validity indicators [F, Fb, F-K, FBS]. As for content scales, for somatic symptoms (HS, HEA), depression (D, DEP), and anxiety (ANX), these were all correlated positively with the LAQ scales (the same result was found for HY (hysteria), but at a slightly lower significance level for 3 of the 10 results).

It should be noted that the authors appeared to have selected not only some relevant MMPI-2 scales but also subscales, and there is no indication if others were considered in this regard. For example, for anxiety, the scale Pt was not included in their analysis although it can be associated with anxiety. Beyond this, fitting the point made in the prior paragraph, almost all the correlations were significant, and moreover, almost all at the same level of significance, thereby indicating that the scales might not be psychometrically and psychologically differentiated to the degree suggested by the authors, rendering their interpretation difficult.

As for the last set of results in the article, they concerned the intercorrelation of scale results for the LAQ, BAPQ, and FBS. The table involved in the article revealed many positive correlations, with the BAPQ Disability Index obtaining slightly higher values. Given the conceptual and statistical inconsistencies encountered in the LAQ, I checked the publication on the BAPQ (Tearnan and Lewandowski 1992). Surprisingly, the scales and subscales listed in Tearnan and Lewandowski (1992) did not include a Disability Index, despite the results reported in Tearnan and Ross (2012) about this scale for the BAPQ. Curious, I checked the website for the BAPQ, and it indicates that the instrument is constantly updated, with a Disability Index having been added (date unspecified). This was not mentioned in Tearnan and Ross (2012).

Still curious, I checked the psychometrics of the BAPQ. It is instructive to note that the authors used extensive factor analysis and also Chronbach's alpha in the 1992 research, which are standard test construction statistics, unlike the case for what I had found for the LAQ (Tearnan and Ross 2012). According to Tearnan and Lewandowski (1992), the validation research for the BAPQ involved earlier editions of personality tests, including for the MMPI, so that its construct validation is not up to date. As of 1992, the article by Tearnan and Lewandowski indicated that the

BAPQ instrument did not include validity indicators. However, the instrument's website indicates that these have since been added. The website also indicates a screening test and a revised BAPQ. For these unpublished instruments, I strongly suggest before their use in practice careful reading should be undertaken of their psychometric properties and reliability/validity descriptions, in particular.

Conclusion. Despite these various criticisms of the LAQ and related instruments, the effort of Tearnan and colleagues to create the first test in the detection of malingered pain is noteworthy. In particular, some of their unusual symptom items are valuable, and could be used in carefully constructed instruments. For example, for the LAQ (Tearnan and Ross 2012), nonsensical items include experiencing muscle spasms when eating too quickly. Also, unusual combinations include experiencing pain as both hot and cold and getting dizzy when muscles spasm/cramp. As for suspect behavior in their physician items, they include arms drooping and falling when held out.

Another unpublished instrument for the detection of pain feigning is the PSR-2 (Pain Symptoms Ratings, Version 2; Duhamel 2012). The manual is in progress, so cannot be evaluated in full. Until it has demonstrated reliability and validity, it should not be used for disability evaluations for court and related purposes. Nor should the first version be used in practice, given the need for its revision.

Nevertheless, the PSR-2 instrument is intriguing in its use of unusual symptoms, like the various Tearnan instruments. For example, Duhamel's list in this regard includes items such as pain increasing whenever appetite increases and, when it becomes sharp, pain spreading in from one area to the roof of the mouth. Another item refers to thickening of skin in an area of the body due to pain in an unrelated area. The principle in these latter examples is that to facilitate pain malingering items should involve unlikely areas of the body being affected by pain. Similarly, for the area of postconcussive symptoms, the PCSQ (Postconcussion Syndrome Questionnaire; Axelrod et al. 1996) includes some improbable items, such as experiencing itchy teeth. The examples in these pain instruments and related tests about unusual, absurd, or improbable symptoms are consistent with the examples described in my own instrument and, certainly, my examples can be modified or added to on the basis of these examples and other examples.

19.8 Chapter Conclusion

19.8.1 Instrument Development Program

The proposed instrument will be useful to the degree that its development leads to acceptable psychometric properties related to reliability, validity, specificity, and sensitivity, in particular. After item selection, scaling, and scoring procedures have been elucidated, the instrument should both be normed appropriately and appropriate group comparisons undertaken. These steps should include all relevant comparison

groups and populations, including those relevant to gender, culture-minority, and age factors. The critical issue will be to avoid the questions that had initially confronted some other instruments in the field that are used in psychological injury and related cases, such as the FBS, even though subsequent research is supporting it (e.g., Young 2011). Before test development begins in earnest, a review should be conducted on some of these tests that are at issue in the field and in court in order to help avoid pitfalls that might arise in the development of the proposed instrument. Were the correct statistics used in instrument development as well as correct cut-off or threshold scores in its application? Were the correct norm and group comparison populations used? And so on.

Pilkonis et al. (2011) have provided an excellent model of group collaboration on the development of appropriate item banks for psychological instruments on depression, anxiety, and anger. They even have found that short forms of their banks (7–8 items) can provide information comparable to legacy measures containing more items. Creation of a short form should be one more major goal in the development of the proposed pain feigning detection instrument.

19.8.2 Cautions/Limitations

The baseline level of physical injury/condition and pain depends on accurate report by the patient and other respondents. The evaluator should check records available in order to confirm whether the primary medical professional has provided a score for the baseline levels that are consistent with those reported by patients. In checking the medical records, the assessor might find differing extreme opinions on the severity of the patient's injuries and conditions, as well as expected pain experience due to them. Therefore, the opinion of the primary medical professional is crucial in providing a gatekeeping function. However, the primary medical professional might be biased for either the third party payor/defense or the patient/plaintiff action, and render a biased judgment. In such cases, the assessor checking the medical records might derive an average estimate of baseline injuries/conditions and expected associated pain experience, or use the most reliable source, but the procedure followed should be clearly documented, especially if extreme opinions are involved in the documentation. Or, there might not be ratings available from any primary medical professional, which would require caution in the use of the instrument.

It is essential to note that new medical information might emerge after the instrument is filled in that would change the baseline estimates. For example, an MRI might reveal either a herniated disc or its absence after initial screening had indicated the opposite. In these cases, the initial instrument results and interpretation would have to be verified and perhaps annulled, if necessary, for example, by the assessor in a follow-up note, or any other professional involved in the case with the correct credentials and information to do so. Indeed, any other assessor in the case should disregard the results and interpretation given to them by an assessor who had administered the instrument if it becomes known to the other assessor that new

medical information has become available since the questionnaire had been first administered that serves to alter the baseline scores that had been obtained in that first administration. The instrument can be rescored using the new information, and new conclusions offered.

19.8.3 In Court

The proposed instrument on pain experience feigning potentially offers the user a solid instrument that can help in conducting a comprehensive, impartial, and scientifically-informed assessment no matter what are the referral sources or sides that they are identified with in the adversarial divide that characterizes the field. On the one hand, the instrument should emerge with sufficiently adequate psychometric properties so that it is well-respected and used by all relevant assessors. Second, the types of interpretations and conclusions offered in reports and in testimony in court will be defensible and admissible, assuming the usual cautions are taken about not going beyond the data in arriving at them and in having considered alternative interpretations.

Appendix

The Pain Feigning Detection Test (PFDT)

Instructions

This pain survey should take 10–15 min to complete. The major part of the questionnaire asks how bad is your pain and how you are dealing with it (45 questions on a scale from 0 to 6, with the points defined in the questionnaire). But before we begin this major part of the questionnaire, there are a few questions at the beginning about what you and your primary care professionals (e.g., your family doctor) believe about your physical injuries/condition and the pain levels expected from them. If a significant other such as a spouse has an idea about this, too, that would help. At the end of the questionnaire, there is space for some personal comments on your pain experience.

It is important to note that information used to answer the baseline questions might change. In this regard, the primary care professional might be sent new medical information after the instrument is filled in that would change the baseline estimates. For example, an MRI might reveal either a herniated disc or its absence after initial screening had indicated the opposite. In these cases, the instrument results would have to be verified and perhaps annulled. The instrument can be rescored using the new information. Therefore, the patient and/or other people

filling in the questionnaire or providing information for it should supply any new relevant information to the assessor and any other person who had received the results related to the questionnaire.

NB. This instrument is not to be used for clinical or forensic purposes until its validity and reliability have been established by research leading to publication in peer-reviewed journals.

I. Baseline Questions

A. Patient

1. On average, my doctors or primary medical professionals have informed me that my physical injuries or physical conditions that are related to the pain that I feel are …..

nothing	mild/minor		moderate		severe	not sure
0	1	2	3	4	5	x

2. On average, my doctors or primary medical professionals have informed me that the pain I feel because of my physical injuries or physical conditions should be …

nothing	mild/minor		moderate		severe	not sure
0	1	2	3	4	5	x

B. Primary Medical Professionals

(indicate type of professional _____)

1. On average, doctors or primary medical professionals have informed this patient that the physical injuries or physical conditions related to the pain being felt are …..

nothing	mild/minor		moderate		severe	not sure
0	1	2	3	4	5	x

2. On average, doctors or primary medical professionals have informed this patient that the pain being felt because of the physical injuries or physical conditions should be …

nothing	mild/minor		moderate		severe	not sure
0	1	2	3	4	5	x

C. Significant Other (if available)
(indicate relationship to patient _____)

1. On average, doctors and primary medical professionals have informed this patient that the physical injuries or physical conditions related to the pain being felt are …..

nothing	mild/minor		moderate		severe	not sure
0	1	2	3	4	5	x

2. On average, doctors and primary medical professionals have informed this patient that the pain being felt because of the physical injuries or physical conditions should be …

nothing	mild/minor		moderate		severe	not sure
0	1	2	3	4	5	x

II. Major Pain Areas and Pain Intensity

A. Body Pain (includes all areas from the neck down; excludes the head, jaw, and facial regions)

Please list the location of your …	Please indicate how bad it feels
1. worst pain _____	6. _____ out of 10
2. next pain _____	7. _____ out of 10
3. next pain _____	8. _____ out of 10
4. next pain _____	9. _____ out of 10
5. next pain _____	10. _____ out of 10

To answer, use a subjective pain intensity scale, where 0 is no pain and 10 is the worst pain imaginable and it feels you have to go to the hospital.

B. Head Pain (includes headaches, jaw and face pain)
Please list the location of your …

Please list the location of your …	Please indicate how bad it feels
1. worst pain _____	6. _____ out of 10
2. next pain _____	7. _____ out of 10
3. next pain _____	8. _____ out of 10
4. next pain _____	9. _____ out of 10
5. next pain _____	10. _____ out of 10

To answer, use a subjective pain intensity scale, where 0 is no pain and 10 is the worst pain imaginable and it feels you have to go to the hospital.

III. Pain Experience Report

A. Questions

1. The pain that I experience is, for me, ….

nothing	mild/minor		moderate		severe	not sure
0	1	2	3	4	5	x

2. It has lasted this way for _____ months.

<1	1–2	3–6	7–12	12–24	24+	not sure

3. The pain mostly is in _____ place(s)?

0 places	1	2	3	4	5+	not sure

4. The pain is also in areas unrelated to my injuries or condition.

nothing	a bit		sometimes	a lot	always	not sure
0	1	2	3	4	5	

5. The pain varies as the day goes on.

nothing	a bit		sometimes	a lot	always	not sure
0	1	2	3	4	5	

6. Some days during the week, I have much less or even no pain.

0 day/week	1	2	3	4	5+	not sure

7. Some days during the week, I get professional treatment such as physiotherapy for my pain.

0	1	2	3	4	5+	not sure

8. Some days during the week, I exercise, move, or stretch for my pain.

0	1	2	3	4	5+	not sure

9. I need the following medications.

none	over the counter regular		prescribed (e.g., Tylenol 3)		narcotics
0	1	2	3	4	5

10. I continue with my normal life despite the pain.

none	a bit		sometimes	a lot	always	not sure
0	1	2	3	4	5	

11. I cope with the pain.

none	a bit		sometimes	a lot	always	not sure
0	1	2	3	4	5	

12. The pain controls my life.

none	a bit		sometimes	a lot	always	not sure
0	1	2	3	4	5	

13. I feel that even when the pain is less, this is the worst thing that could have happened to me.

none	a bit		sometimes	a lot	always	not sure
0	1	2	3	4	5	

14. Stress that happens to me makes my pain worse.

none	a bit		sometimes	a lot	always	not sure
0	1	2	3	4	5	

15. I keep worrying about the pain and can't stop.

none	a bit		sometimes	a lot	always	not sure
0	1	2	3	4	5	

16. I keep telling myself I know it will get worse.

none	a bit		sometimes	a lot	always	not sure
0	1	2	3	4	5	

17. It causes me great distress/or depression.

none	a bit		sometimes	a lot	always	not sure
0	1	2	3	4	5	

18. I get angry about it (and the cause).

none	a bit		sometimes	a lot	always	not sure
0	1	2	3	4	5	

19. I fear doing things because of the pain/I fear the pain.

none	a bit		sometimes	a lot	always	not sure
0	1	2	3	4	5	

20. Other people understand my pain.

none	a bit		sometimes	a lot	always	not sure
0	1	2	3	4	5	

21. Other people do enough for me when I'm in pain.

none	a bit		sometimes	a lot	always	not sure
0	1	2	3	4	5	

22. My doctors and primary medical professionals understand my pain.

none	a bit		sometimes	a lot	always	not sure
0	1	2	3	4	5	

23. My doctors and primary medical professionals do enough for my pain.

none	a bit		sometimes	a lot	always	not sure
0	1	2	3	4	5	

24. My insurance company(ies) (and their doctors and primary medical professionals) understand my pain.

none	a bit		sometimes	a lot	always	not sure
0	1	2	3	4	5	

25. My insurance company(ies) (and their doctors and primary medical professionals) do enough for my pain.

none	a bit		sometimes	a lot	always	not sure
0	1	2	3	4	5	

26. My body pain gets so bad, it spreads to my fingernails until I cut them.

none	a bit		sometimes		always	not sure
0	1	2	3	4	5	

27. My head pain gets so bad, it spreads to my fingernails until I cut them.

none	a bit		sometimes		always	not sure
0	1	2	3	4	5	

28. My body pain gets so bad, it spreads to the tip of my hair until I cut it.

none	a bit		sometimes		always	not sure
0	1	2	3	4	5	

29. My head pain gets so bad, it spreads to the tip of my hair until I cut it.

none	a bit		sometimes		always	not sure
0	1	2	3	4	5	

30. My body pain gets so bad, it freezes my feet for hours.

none	a bit		sometimes		always	not sure
0	1	2	3	4	5	

31. My head pain gets so bad, it freezes my feet for hours.

none	a bit		sometimes		always	not sure
0	1	2	3	4	5	

32. My body pain gets so bad, it freezes me in the same position for hours.

none	a bit		sometimes		always	not sure
0	1	2	3	4	5	

33. My head pain gets so bad, it freezes me in the same position for hours.

none	a bit		sometimes		always	not sure
0	1	2	3	4	5	

34. My body pain gets so bad, my earlobes turn green.

none	a bit		sometimes		always	not sure
0	1	2	3	4	5	

35. My head pain gets so bad, my earlobes turn green.

none	a bit		sometimes		always	not sure
0	1	2	3	4	5	

36. My body pain gets so bad, I have to play my favorite games for hours.

none	a bit		sometimes		always	not sure
0	1	2	3	4	5	

37. My head pain gets so bad, I have to play my favorite games for hours.

none	a bit		sometimes		always	not sure
0	1	2	3	4	5	

38. My body pain gets so bad, I use pain reduction techniques such as banging my head too hard on the wall.

none	a bit		sometimes		always	not sure
0	1	2	3	4	5	

39. My head pain gets so bad, I use pain reduction techniques such as banging my head too hard on the wall.

none	a bit		sometimes		always	not sure
0	1	2	3	4	5	

40. If my pain ever goes away, I'll go back to my day life like it was before it began.

none	a bit		sometimes		always	not sure
0	1	2	3	4	5	

41. I was happy with my home life before the pain began.

none	a bit		sometimes		always	not sure
0	1	2	3	4	5	

42. I was happy with what I did in the day (work, care for children, study, or whatever you did) before the pain began.

none	a bit		sometimes		always	not sure
0	1	2	3	4	5	

43. I had stresses in my life before this pain began that was _____ than the stresses of this body pain.

Absent, not even a bit more less	much		same	little more	much more	N/A
0	1	2	3	4	5	

44. I had psychological problems or disorders before my pain began that were _____ than the ones of this pain.

Absent, not even a bit more less	much		same	little more	much more	N/A
0	1	2	3	4	5	

45. I had other pains in my life before this pain began that were _____ than the ones of this pain.

Absent, not even a bit more less	much		same	little more	much more	N/A
0	1	2	3	4	5	

B. Comments

1. Your Comments to Help Understand Your Pain (1). In particular, let us know in your own words how bad is your pain and how it has changed your life.

_____
_____
_____
_____
_____
_____
_____

2. Also, it is important to know if the pain experience is making you suicidal or making you want to harm someone.

_____
_____
_____
_____
_____
_____
_____

3. Assessor's Comments of Patient Presentation while Filling in the Questionnaire, if available

_____
_____
_____
_____
_____
_____
_____

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Chapter 20
Confusions and Confounds in Conversion Disorder

20.1 Introduction

This chapter examines a topic that lies between malingering and non-malingered medically unexplained symptoms (mus) or somatization, that of conversion disorder. This latter diagnosis is a problematic one, and I make suggestions for future iterations of the DSM-5 on its appropriate label or terminology.

Table of Terms and Sources

Abbreviation	Name	Source(s)
DSM-IV-TR	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision	American Psychiatric Association (2000)
DSM-5	Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition	American Psychiatric Association (2013)
ICD-10	The International Statistical Classification of Diseases and Related Health Problems, Tenth Revision	World Organization (2007)

20.2 Conversion Disorder

Nicholson et al. (2011) referred to the diagnosis of conversion disorder as problematic. Despite over 100 years of effort to describe it with reliability and also to give it a label to that is widely accepted, the field has yet to succeed in these tasks. Patients presenting to outpatient neurology clinics often express symptoms of conversion, hysteria, dissociation, etc., but, more often than not, they are sent to psychiatrists who are equally baffled by the symptoms.

Part of the difficulties with the disorder relates to the problems presented by the DSM-IV-TR (Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision; American Psychiatric Association 2000) and ICD-10 (The International Statistical Classification of Diseases and Related Health Problems, Tenth Revision; World Health Organization 2007) diagnostic approaches

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to defining it and developing its associated criterion list. Other difficulties relate to its heterogeneity in presentation, its poorly understood etiology, and the difficulty in distinguishing it from feigning/malingering. At the psychological level, a range of stressors/trauma, a history of sexual abuse, etc., have been associated with it. However, the evidence does not support the presence of factors such as these in all cases, nor would doing so implicate causal factors. At the neurobiological level, evidence is accumulating of localizations concerning components of brain function involving activation, inhibition, and anxiety-related processes. This work could help in understanding the disorder, but the probability of finding distinct biomarkers of the disorder remains minimal.

In the following, I review the DSM approach to conversion disorder and recommendations for its change. Then, I examine the historical approach to conversion disorder. Next, I consider the major models in the area: the learning/behavioral, sociocultural, and neurobiological approaches, as well as the psychosocial and biopsychosocial approaches I show how the latter has been applied to somatization and to coping (Young 2008a, b). Finally, I present recommendations, especially, to refer to Conversion Disorder as Conversion Complications Disorder. This term respects the tradition behind the term, reduces some of the stigmatization associated with it, by emphasizing its consequences, and allows consideration of complications such as suspected feigning/malingering [Note that evidence of frank feigning/malingering would preclude diagnosing conversion disorder]. The term is consistent with my prior recommendation to refer to pain disorder as Chronic Pain Complications Disorder (Young and Chapman 2006, 2007).

20.3 A Problematic Diagnosis: Conversion Disorder

20.3.1 Diagnosis

Nicholson et al. (2011) indicated that conversion disorder is diagnosed by exclusion, typically when neurologists encounter patients with neurological-type symptoms, such as weakness, sensory loss, or fainting ("blackout"), and which are internally inconsistent or incongruous in terms of known neurological disease expression. Conversion disorders include a broad range of symptoms familiar to neurologists, including action and resting tremor, dystonia, bradykinesia, myoclonus, incoordination mimicking cerebellar dysfunction, chorea, tics, athetosis, and ballism (van Beilin et al. 2010). The condition of nonepileptic seizures (NES) represents one type of conversion disorder, and its complexity is illustrated by the fact that it can co-exist with valid seizures (Rotge et al. 2009). According to Nicholson et al. (2011), the symptoms are common in neuropsychological settings (Stone et al. 2009b) and have poor outcomes (Stone et al. 2003).

Both the DSM-IV-TR and the ICD-10 include four key diagnostic features in the criteria for conversion disorder (Nicholson et al. 2011). (a) First, neurological-type

symptoms are present, such as motor or sensory systems or loss of consciousness. (b) Second, no neurological disease helps explain the symptoms. (c) However, psychological stressors must be present ("associated") relative to symptom onset. (d) Conscious feigning represents an exclusion criterion. The DSM-IV-TR definition further specifies that (a) the indices of conversion disorder include deficits as well as symptoms; (b) the symptoms and deficits affect voluntary motor or sensory function; (c) the symptoms and deficits might mimic other than neurological disease; (d) the psychological stressors that accompany it might be "conflicts or other stressors;" (e) the psychological factors might exacerbate as well as precede the symptoms/deficits; (f) the exclusion criteria include not only explanation by a known medical condition but also the direct effects of a substance and culturally-sanctioned behavior/experience; (g) the symptoms/deficits elicit the need for medical investigation or induce "clinically significant" distress/impairment in important functions (related to work, social life, etc.); (h) the symptoms/deficits go beyond pain/sexual dysfunction/somatization; and (i) another medical condition cannot account for it better than these criteria for conversion disorder.

The ICD-10 approach places conversion disorder among the dissociative disorders, and gives common symptoms to these conditions that include partial/complete loss of normal integration among past memories, awareness of identity/immediate sensations, and control of body movement. The ICD adds further that when the disorder is chronic, particularly for paralyses and anaesthesias, the stressors involved are "insoluble problems or interpersonal difficulties." In addition, the evidence shows that the resultant dysfunction reflects emotional conflicts or needs and might develop in "close relationship" with psychological stress. However, the evidence reviewed below does not support these assertions about the role of stressors in conversion disorder in all cases, as Nicholson et al. (2011) have indicated.

20.3.2 Recommendations for Change

In their article, Nicholson et al. (2011) considered that each of conversion disorder's four key diagnostic features presents difficulties. In particular, they consider these features problematic because each can be contested; (a) the symptoms cannot be clearly identified as neurological-based; (b) conversion disorder cannot be distinguished from neurological or other medical disorders; (c) they cannot be explained psychologically in every case; and (d) conversion disorder is not necessarily distinguishable from feigning/malingering. Because of these lacunae in the current approaches to diagnosing conversion disorder, Nicholson et al. recommended that the current criteria for conversion disorder should be simplified. In particular, the criteria for conversion disorder should change by dropping the need to show that (a) there had been an associated psychological stressor and (b) there is evidence that the patient's presentation is not a feigned one. Moreover, they recommended the addition of positive and negative neurological criteria.

To elaborate, first, Nicholson et al. indicated that neurologists examine for "positive neurological" signs. These include dragging of the leg in a gait weakness, having a clenched fist in dystonia, or experiencing prolonged non-epileptic seizures with the eyes shut. Or, there might be signs of internal inconsistency or incongruence, such as expressing tremor to different degrees when distracted and not distracted. Nicholson et al. point out that signs such as these have their limitations, for example, they might have poor reliability. Similarly, for positive psychological signs, such as "la belle indifference," these too might lack "specificity." Nicholson et al. concluded that neurologists often are indecisive about the diagnosis. Therefore, they send the patient to psychiatrists who, in turn, return the patient to the neurologists, indicating that no psychiatric disorder is evident. This kind of medical indecision constitutes a serious challenge for practice related to conversion disorder presentations by patients.

Second, Nicholson et al. pointed out that it is not clear what is meant by the requirement to find a psychological stressor "associated with" the symptoms of a disorder presenting as conversion disorder. For example, at the temporal level, does an association refer to a recent stressful experience or one distally in childhood, such as sexual abuse? Does an association refer to a risk factor or a causal trigger? Some research has found clear evidence of increased stressful life events before conversion symptom onset relative to neurological controls (e.g., Stone et al. 2004). However, other studies have not found elevated psychological stressors associated with symptoms of conversion disorder. Moreover, depending on how they were defined in these studies, psychological stressors could be found for many cases of conversion disorder. When the research examines specific types of stressors, once more, the evidence is mixed. However, in general, no unique critical psychological stressor has been found to be associated with conversion disorder, in general, or specifically with any particular type of conversion disorder. Even for childhood physical or sexual abuse, the research is mixed, with estimates of its presence in patients with conversion disorder ranging from 0 to 85 %.

Nicholson et al. (2011) continued to examine the question of associated psychological stressors in relation to conversion disorder with respect to the mechanistic link between the stressors and the disorder. This brings them to the heart of the question psychologically about conversion disorder – how do psychological stressors lead to or get converted to neurological symptoms? The classic Freudian model of the mechanism involves psychological repression. Despite ongoing research on the issue and some intriguing findings, the authors concluded that there is not enough evidence to draw firm conclusions.

At the neurobiological level, Nicholson et al. described that Kanaan et al. (2007) conducted an fMRI study of a single case involving motor conversion disorder. They implicated frontal cortical structures inhibiting the motor pathway and also activation of the amygdala, which is involved in emotional processing. Bakvis et al. (2009a) found that non-epileptic seizure patients expressed an attentional bias for emotional stimuli, and link was also found with prior sexual abuse. Another study implicated a role for cortisol; Bakvis et al. (2009b) found that basal cortisol is positively correlated to threat vigilance in patients with psychogenic nonepileptic seizures.

Goldstein and Mellers (2006) found that panic-type symptoms were very common prior to dissociative seizures. As for motor and sensory conversion symptoms, the literature indicates that a good minority of patients reported the presence of a physical injury before the onset of symptoms (Stone et al. 2009a). Together this research indicates that the psychological mechanisms that might produce conversion symptoms include: (a) emotional hypervigilance from early abuse that might create a disposition to dissociate; (b) stimulation of "primitive" mechanisms of avoidance or protection; and (c) centrally mediated inhibitory and activation processes.

Next, Nicholson et al. (2011) addressed whether conversion disorder can be differentially diagnosed with respect to feigning. They argued that the symptoms of a genuine conversion disorder and a feigned one are clinically indistinct. There is no way of distinguishing the voluntary components in the genuine condition and the equivalent symptoms in a feigned one. Moreover, professional training does not provide the clinician any advantage in the difficult task of detecting lying. In this regard, major inconsistencies with respect to the case in hand might raise suspicions and serve as red flags, but inconsistencies are also one of the hallmarks of conversion disorder. In addition, there are no neurological features that are unambiguous in detecting feigning.

As for neuropsychological tests, even if the results are positive for feigning, their interpretation with respect to attributing it can be problematic. Moreover, in the research undertaken in these tests with conversion disorder patients, none have used a control group of known malingerers. Also, the results in this type of research are mixed. For example, Drane et al. (2006) administered effort tests to conversion disorder patients (non-epileptic seizures) and control patients (epileptic seizures), finding five times as many failures in the conversion disorder group. In contrast, according to Nicholson et al., Cragar et al. (2006) did not find group differences in these regards. Nicholson et al. (2011) concluded that it is difficult to prove that a patient presenting with symptoms of conversion disorder is feigning and it is even more difficult to prove that they are not feigning, so that the distinction between conversion disorder and feigning lacks clinical utility.

Stone et al. (2011) are largely in agreement with the proposals of Nicholson et al. (2011), and they cited further evidence in their support. Moreover, they added several other proposals for changing the criteria of conversion disorder. First, they suggested a name change for the disorder. They noted that the term conversion disorder is not neutral etiologically in that it supports the Freudian notion that conversion symptoms reflect the translation of intrapsychic distress into somatic symptoms, thereby lowering the level of distress.

Stone et al. discussed other possible terms. One possibility is "functional" disorder, but the term implies a mechanism, as well, one related to brain function, and often it is considered vague. Another possibility is "dissociative" disorder. However, this term also implies a mechanism that is unproven, one related to integration of brain function. A third possibility is "psychogenic" disorder. Its problem relates to its implicit etiology and the split suggested in psychological and biological factors. Other possibilities are "non-organic" disorder and "non-epileptic" disorder, but these labels do not specify what is the problem; instead, they only specify what the

Table 20.1 Terms commonly used to describe psychogenic disorders and their implications

Term	Implication
Psychogenic	Suggests psychological causation
Conversion disorder	Operationalized within DSM: requires an identified psychological triggering factor for diagnosis
Somatization disorder	Operationalized within DSM: requires presence of multiple physical symptoms including one conversion neurological symptom
Medically unexplained symptoms	Suggests that a medical explanation might one day be apparent Could refer to many medical symptoms that are not thought to be psychogenic, but still are not of a known cause
Functional	Broad term suggesting a functional rather than a structural deficit, which could apply to several neurological disorders not regarded as psychogenic but where structural pathology is absent, e.g., migraine
Hysteria	Historical term that carries substantial stigma in society and implies a link between symptoms and the uterus
Non-organic	Defines the condition by what it is not; the term organic is itself not well-defined

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Note: Based on American Psychiatric Association (2000)

problem is not. Another term that has been mentioned in the literature is "medically unexplained" disorder. Stone et al. (2011) pointed out the many problems with this label, including the confusion that it creates in patients. Given the difficulties with all suggested terms to replace conversion disorder, the authors opt for the term "functional/dissociative/psychogenic neurological symptom disorder," with one of the three prefixes to be chosen and with the term conversion disorder retained in parentheses.

Edwards and Bhatia (2012) also discussed in depth the various terms that have been used to apply to conversion disorder and related conditions and processes (see Table 20.1). They supported changing conversion disorder to "functional" disorder because the term is the one that is most acceptable to patients with the condition. Moreover, the term does not imply an as yet unproven cause for their symptoms. Feinstein (2011) indicated some of the other terms in disorder that are associated with hysteria, which is a term antecedent to conversion disorder (see Table 20.2).

20.3.3 Comment

Although Stone et al. (2011) have pointed out the difficulties in the various options for the term that should be used to replace conversion disorder, it appears to me that there are several difficulties with their preferred option. First, each of the three possible terms that they favored has complications that they did not mention. (a) For example, the term functional has multiple meanings in psychology and psychiatry, not the least of which concerns the functional roles in which patients are involved. Therefore, by adopting the term functional disorder, there might be confusion with

Table 20.2 Diagnostic categories in the DSM-IV-TR encompassing the former category of hysteria

Disorder	Category
Somatoform	Somatization[a]
	Conversion[a]
	Undifferentiated somatoform
	Pain
	Hypochondriasis
	Body dysmorphic
Dissociative	Amnesia[a]
	Fugue
	Identity
	Depersonalization
	Dissociative disorder not otherwise specified (this includes the Ganser syndrome)

Adapted from Feinstein (2011), based on American Psychiatric Association (2000)
[a]Diagnoses particularly relevant to the former diagnostic category of "hysteria"

the generic term for the disorder and its effects in terms of impairments in roles caused by the disorder. (b) Similarly, the term dissociative disorder presents difficulties in view of its multiple connotations. The term dissociative could be used to represent a state in which individuals enter to remove themselves from stress, it could refer to disconnections between psychological entities or components in thinking or of the mind, or it could relate to neurological-related disconnections that influence or are involved in psychological disconnections. (c) Finally, psychogenic is a term that clearly implies a pure psychological causality to the conversion disorder symptoms; however, neurologists, psychiatrists, and other mental health professions are trying to avoid dualistic conceptions of mind and of psychology that separate psychological, neurobiological, and social components.

Because of these issues with the terms suggested, my recommendation is that the label of conversion disorder should not be changed. On the one hand, it is a term that has a storied history in psychiatry, neurology, and psychology. On the other hand, the term conversion could be used in a more contemporary sense of translation from one aspect of the mind-body integration into another, such as might happen in expression of conversion-type symptoms. The neurologist, psychiatrist, or other mental health professional could refer the patient to the well-known process of stress inducing headaches as an example of how stress and psychological processes can affect the body and so can also affect the brain (although they should specify that the brain is not affected in the typical sense of brain damage).

Table 20.2 refers to other terms related to conversion disorder, such as hypochondriasis Feinstein (2011). This term has been replaced in the literature by one such as psychosomatic symptoms and psychophysiological symptoms, which are more general than terms like conversion disorder and somatization disorder, and therefore cannot be used to replace these latter terms or represent their symptoms.

An important contribution by Stone et al. was to list the range of positive signs used by neurologists to diagnose conversion disorder (see Table 20.3). Primary examples include Hoover's sign and the Hip abductor sign for conversion weakness/paralysis (respectively, Stone et al. 2010; Sonoo 2004). Stone et al. noted the different subtypes of conversion disorder. They include: (a) weakness/paralysis; (b) movement disorder; (c) attack/seizure (seizures with impaired awareness, with or without movement); (d) special sensory symptoms; (e) speech symptoms (e.g., dysphonia); (f) swallowing symptoms (globus); (g) cognitive symptoms; and (h) other mixed type. The cognitive subtype is a new one that the authors recommended. The authors also recommended that subtypes should be specified for extent of severity and degree of clinical certainty in diagnosis.

20.4 History and Models

20.4.1 History

Bryant and Das (2012) noted that conversion disorders have been documented for millennia. Scott and Anson (2009) noted that conversion symptoms were represented hieroglyphically in ancient Egypt. Perez et al. (2012) specified that, historically, conversion disorder seems to have been described in ancient Greece. Later, it was considered an expression of demonic possession. Kanaan et al. (2009a, b) noted that as early as the seventeenth century, the condition was understood to be induced by emotions.

In the nineteenth century, Freud (Breuer and Freud 1955) introduced the psychoanalytic concept that psychological distress can produce somatic complaints through repression of conflict, leading to the avoidance of anxiety in conversion processes. For example, developing conversion symptoms allows for "primary gain" by alleviating personal conflicts, usually developed in childhood. In addition, conversion can lead to secondary gain, such as getting attention from others or reducing unwanted daily responsibilities. In the nineteenth century, it was called hysteria by Charcot (1887). Charcot was the first to refer to it as a functional disorder (Nicholson et al. 2011).

At the beginning of the twentieth century, Janet (1907) related conversion symptoms to dissociation. Nicholson et al. described that Janet had argued that in conversion dissociation a rogue "idea" develops and becomes fixed and separated from consciousness, becoming too weak to exert control over conscious behavior.

As the twentieth century proceeded and into the present twenty-first century, other models, such as more neurobiological models, have come into vogue. The different approaches taken by the various DSM and ICD versions in the twentieth century are documented in Scott and Anson (2009).

Table 20.3 Clinical features that can be used to determine criterion B of proposed diagnosis criteria for conversion disorder in DSM-5

Clinical feature	Finding with functional neurological symptom
Weakness/Paralysis	
Hoover's sign	Hip extension weakness that returns to normal with contralateral hip flexion against resistance
Hip abductor sign	Hip abduction weakness returns to normal with contralateral hip abduction against resistance
Other clear evidence of inconsistency	e.g., weakness of ankle plantar flexion on the bed but patient able to walk on tiptoes
Spinal injuries test[a]	Application to patients who are unable to spontaneously flex their hips against gravity. In functional weakness the patient is unable to maintain their knees in a flexed position when placed in this position by the examiner
Global pattern of weakness[a]	Weakness which is global affecting extensors and flexors equally
"Give away" pattern of weakness[a]	When testing power, strength initially is good but then strength appears to 'give way'
Movement disorder	
Tremor entrainment test	Patient with a unilateral tremor is asked to make a rhythmical (preferably 3hz) tapping movement with their unaffected hand The tremor in the affected hand either 'entrains' to the rhythm of the unaffected hand or the patient is unable to make a simple rhythmical movement
Marked improvement with distraction	The movement disappears using distraction technique which may be: cognitive (e.g., count backwards from 100 in 7 s 2) or motor (e.g., make ballistic movements with the unaffected hand)
Fixed dystonic posture	A typical fixed dystonic posture, characteristically of the hand (with flexion of fingers, wrist and/or elbow) or ankle (with plantar and dorsiflexion)
Presence of Bereitschaftpotential[a]	In the correct clinical situation the presence of a Bereitschaftspotential may support a diagnosis
Sensory symptoms	
No clearly reliable signs	Isolated functional sensory symptoms cannot be diagnosed with confidence. However functional sensory symptoms may be diagnosed if there is co-existent mild weakness which is often present and can be tested using the methods above
Non-epileptic attacks	
Prolonged attack of motionless unresponsiveness	Paroxysmal motionlessness and unresponsiveness lasting longer than a minute
Long duration	Attacks lasting longer than 2 min without any clear cut features of focal or generalized epileptic seizures
Fluctuating course	A waxing and waning tempo of motor activity
Side-to-side head or body movement	[no text]

(continued)

Table 20.3 (continued)

Clinical feature	Finding with functional neurological symptom
Closed eyes	Closed eyes during an attack, especially if there is resistance to eye opening
Ictal weeping	Crying either during or immediately after the attack
Memory of being in a generalized seizure	Ability to recall the experience of being in a generalized shaking attack
Occurrence from the apparent sleep with EEG evidence of wakefulness	Patient has seizure while "sleeping" preceded by a normal EEG waking background
Presence of an attack resembling epilepsy with a normal EEG	Normal EEG does not exclude frontal love epilepsy or deep foci epilepsy but does provide supportive evidence
Visual symptoms	
Fogging test	Vision in the unaffected eye is progressively "fogged" using lenses of increasing diopters while reading an acuity chart. A patient who still has good acuity at the end of the test must be seeing out of their unaffected eye.
Stereopsis testing	Patient with poor vision in one eye is able to read a stereoscopic sentence which requires good vision in both eyes
Tubular visual field[a]	A patient is found to have a field defect which has the same width at 1 m as it does at 2 m, (when it should be twice as wide according to the laws of physics)
Tests in complete blindness[a]	There are many highly suggestive simple tests of vision in this situation including the signature test (will not be able to), mirror test (eyes will converge) and finger tip test (will not be able to bring together)
Others	
Hearing assessment	Multiple audiometric tests available including "Ascending descending test" and "Stenger's test" as well as electrophysiological tests
Vocal cord assessment	Presence of typical 'whispering' dysphonia in the presence of a normal cough and normal vocal cord appearance
Globus	A typical complaint of 'something stuck' in the throat even when not eating or drinking in the absence of a structural cause

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Abbreviation: *DSM-5* Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (American Psychiatric Association 2013)

Note: This is a guide and not an exhaustive list. No clinical sign, as with most clinical signs in neurology and psychiatry, has perfect sensitivity and specificity. A judgment regarding whether the clinical signs are compatible with a diagnosis of conversion disorder usually requires a combination of signs as well as knowledge and training in the diagnosis of neurological disease

[a]Signs with less evidence

20.4.2 Models

In the following, I review the predominant models in the field that have been proposed to explain conversion disorder related symptoms. In addition, I present in detail the biopsychosocial model of somatization, as presented in Young (2008a), The biopsychosocial model has been applied to conversion disorder (Stone et al. 2010a), but in Young (2008a) I greatly elaborate it so that it might provide insight for conversion disorder, as well. Aside from the historical models, the major models that have been proposed to help explain conversion disorder include: (a) the behavioral/learning model; (b) the sociocultural model; and (c) the neurobiological model. (d) In addition, in the following, I group the various psychological factors that are associated with conversion disorder according to the literature under the rubric of the psychosocial model.

Behavioral/Learning. For the behavioral model (Bryant and Das 2012; citing Deary et al. 2007), conversion symptoms are produced to alleviate stress and they are maintained by reinforcement factors. For example, the symptoms help remove the person from a stressful source. Also, they are maintained by motivational factors, such as reduced role responsibilities and the avoidance of aversive tasks. As Feinstein (2011) noted, in this model, the environment both shapes and influences the symptoms. Either positive consequences or aversion of negative consequences are reinforced (positive and negative reinforcement, respectively). Also, conversion symptoms might be promoted by punishment.

Sociocultural. The sociocultural model is supported by the evidence for cultural effects in its expression that was gathered by Brown and Lewis-Fernández (2011). For example, in several cultures, syndromes that resemble pseudoneurological conditions might be displayed chronically and, therefore, considered psychiatrically significant (e.g., ataque de nervios; Guarnaccia et al. 1993, 2003). Also, in some cultures, conversion-related symptoms that are expressed are found neither in other cultures nor in the DSM-IV-TR (e.g., peppery sensations). The cross-cultural research suggests that poly-symptomatic conversion disorder and somatization disorder are quite similar, calling into question the validity of having separate diagnostic categories related to them. Feinstein (2011) noted that, in some cultures, intense emotional expression is inappropriate. Therefore, because they are considered more acceptable in these cultures, physical symptoms develop to indicate that the person is distressed or troubled in feeling or thought.

Neurobiological. The neurobiological model is specifying the regions of the brain and pathways that might be involved in relation to conversion symptoms. Neurobiological models allow practitioners to view conversion symptoms as products of intrinsic neural connectivity patterns rather than psychic tension and unconscious processes. In this regard, Perez et al. (2012) proposed that intrinsic neural connectivity aberrations produce the "form" of the conversion disorder but interactions among stressors and neurobiological activity produces the "context," or the reasons why and when the disorder manifests.

Bryant and Das (2012) determined, in a case of chronic hysterical mutism assessed with fMRI during a vocalization task and after psychotherapy, that the neurocircuitry involved in recovery in the case included speech-related networks. Specifically, the regions included the inferior frontal gyrus, the middle frontal area, the supplementary motor area of the frontal cortex, the temporal and parietal cortices, and the primary and sensory motor regions. During speech recovery, inferior frontal gyrus activity was connected positively with activity in the anterior cingulate cortex but negatively for the amygdala. The authors concluded that in conversion disorder involving mutism, there appears to be impaired connectivity between regions involving speech networks and others regulating anxiety. In anxious states, conversion disorder patients have activated inhibitory neural networks (Aybek et al. 2008). This research is consistent with the model of Young (2011) that a ubiquitous function in behavioral as well as brain activity and organization concerns activation-inhibition coordination.

Perez et al. (2012) developed a model of unilateral motor and somatosensory conversion disorder. They emphasized mediation by right-hemisphere lateralized, large-scale network dysfunctioning. In particular, the regions of the perigenual anterior cingulate cortex and the posterior parietal cortices were referred to as important in the network. Specifically, dysfunction in the former and its subcortical connections leads to impaired motivation, motor control, and/or the regulation of affect. For the posterior parietal cortices and their subcortical connections, dysfunction leads to impaired spatial and perceptual awareness, e.g., in forward modeling, motor intention awareness, and sense of self-agency. The model is completed by reference to reciprocal cortico-cortical connections among the two foci described so far and also the dorsolateral prefrontal cortex, which facilitates interaction across awareness and intentional cognitive control circuits.

For the case of functional tremors, Edwards and Bhatia (2012) proposed a neurobiological model quite similar to the others. Functional tremors are accompanied by hypoactivation of the temporoparietal junction. The latter is considered a comparator region in the brain of actual and predicted sensory feedback, and when it fails in the matching due to the hypoactivation, a feeling of involuntariness associated with the movement is produced. Further, studies reveal that the connectivity in the amygdala and the supplementary motor area is especially strong in response to emotional stimuli but weak for reaction time. This suggests that arousing events in these patients might trigger movements that are controlled by the supplementary motor area without top-down control by or connectivity with the prefrontal cortex.

Voon et al. (2011) examined a broader sample of conversion movement behavior than functional tremor, but emerged with a comparable model to explain the behavior, involving regions concerned with self-monitoring or limbic activity. They studied the *Bereitschaftpotential* in motor initiation in patients with aberrant/excessive motor symptoms (tremors, gait disorders, dystonia). Relative to controls, the patients manifested less activity in the left supplementary motor area (a region critical to motor initiation) and more activity in the right amygdala, left anterior insula, and posterior cingulate bilaterally (important in assigning salience). During internally-generated

(to "prepare" instructions) movement, but not externally-generated (to "independently choose" instructions) movement, the left supplementary motor area manifested less functional connectivity with the dorsolateral prefrontal cortex bilaterally. The authors concluded that, in conversion disorder, in arousing contexts, movements that have been mapped representationally "hijack" the voluntary action selection system, which is not only hypoactive but also functionally disconnected from top-down prefrontal regulation.

For further work on the neurobiology of conversion disorder, consult Rotge et al. (2009) with respect to nonepileptic seizures, and Rowe (2010), Scott and Anson (2009), van Beilen et al. (2010) and Voon et al. (2010) on motor conversion disorder. The consensus emerging is that neurobiological correlates are evident in conversion symptoms. Nevertheless, the field still needs to establish exactly how the regions involved behave aberrantly and how that translates into the aberrant behavior of conversion.

Psychosocial. Although psychosocial factors such as stress have not been implicated as specific causal factors in conversion disorder, unlike what is specified in the diagnostic manuals, there is sufficient evidence to give factors such as psychological stress, childhood abuse, and psychosocial context, in general (e.g., responsibility dissatisfaction, desire to escape responsibility) an important role to play in conversion disorder. Nicholson et al. (2011), Stone et al. (2011), and van Beilen et al. (2010) indicated some of the psychological factors implicated in conversion disorder, although not on a universal or consistent basis. These conversion disorder related psychosocial factors include stressors/significant life events in the prior year, work and relationship problems, emotional problems/disorders (e.g., depression, anxiety), personality disorders, dissociation, conflict over speaking out, and childhood abuse, as well as secondary gain. Brown and Lewis-Fernandez (2011) noted that child/adolescent psychosocial stressors could include problems at school/in the family or separation from parents. In this regard, Axelman (2012) presented a case formulation in terms of attachment disorder. van Beilen et al. (2010) noted that deficits in coping mechanisms have been hypothesized as one mediating factor between stressors and conversion symptoms but the evidence is not strong. Nevertheless, the deficits in connectivity with the prefrontal cortex that has been suggested as part of the causal pathway in conversion disorder, as well as the resultant limbic-related system hyperactivation, suggests that problematic coping strategies might be part of the psychosocial complex involved in conversion disorder.

Biopsychosocial. Edwards and Bhatia (2012) supported a biopsychosocial approach to understanding conversion disorder. According to them, the body and mind are integrated and models must reflect all influences in the condition, including the biological, psychological, and societal. This approach is consistent with the multidisciplinary management that is considered somewhat effective in dealing with conversion disorder, for example, that neurologists and psychiatrists work together. In addition, in this approach, recommended treatments are not only physical/medicinal, but also cognitive/behavioral.

20.5 Expanded Biopsychosocial Model

In Young (2008a), I had presented a biopsychosocial model of somatization. Given the close relationship between conversion and somatization factors in psychiatric symptom expression and also the brief description of the biopsychosocial model of conversion that has been described in the literature, I present the biopsychosocial model of somatization because it is a comprehensive one and can help expand the model as it applies presently to conversion disorder (see Tables 20.4, 20.5, 20.6). Moreover, the model incorporates a forensic component, including consideration of malingering, which the biopsychosocial model of conversion disorder does not yet do, despite the importance of ruling out feigning when diagnosing conversion disorder. Finally, a major difficulty in understanding conversion disorder relates to the mechanisms of its unfolding, and the expanded biopsychosocial model that is presented in Tables 20.4, 20.5, and 20.6 includes factors such as body scanning, which might help explain aspects of the mechanisms involved in conversion processes.

The tables list multiple factors that are considered as acting in concert to increase somatization processes (biological, psychological, and ecological or contextual/social). The factors are listed according to subcategories (e.g., for psychological components, subcategories include cognitive, emotional, and behavioral components).

Table 20.4 A biopsychosocial model of somatization: biological factors

Type of influence	Specific factors
Innate or early	
General	1. Genetic; 2. Congenital
Specific	1. Sex/gender; 2. Age
Medical	
Medical, personal history	1. Acute, phasic; 2. Chronic, tonic
Medical, family history	1. Modeling of illness behavior, dependence; 2. Modeling of disability, compensation
Medical, ongoing	1. Acute (e.g., virus); 2. Active chronic, tonic
Sensorial effects	
Sensitization	1. Peripheral; 2. Central
Sensation	1. Proprioceptive; 2. Kinesthetic
Secondary Effects	
Neurovegetative	1. Sleep problems; 2. Nutrition
Stress factors	1. Autonomic, HPA axis, cortisol; 2. Immune system dysfunction
Neurobiological	
Neuronal	1. Circuitry; 2. Connectivity
Neurological	1. Cortical; 2. Limbic, lower
Lobes, regions	1. Frontal, etc.; 2. Amygdala, etc.
Systemic	
Functional	1. Plasticity; 2. Inhibition, activation

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Table 20.5 A biopsychosocial model of somatization: psychological factors

Type of influence	Specific factors
Basic psychological processes	
Arousal	1. CNS excitability; 2. Hypersensitivity
Perceptual	1. Lower perceptual threshold; 2. Faulty signal sensitivity, filtering
Attention, concentration	1. Symptom vigilance; 2. Rumination
Learning	1. Classical; 2. Operant
Cognition	
Cognitive, basic	1. Memory; 2. Expectation
Cognitive, amplification	1. Symptom exaggeration; 2. Catastrophizing
Cognitive, advanced	1. Somatic attribution; 2. Disease conviction
Cognitive, executive	1. Organization, persistence; 2. Systemic, pervasive
Cognitive, medical	1. Disbelieve negative results; 2. Believe doctors/systems do not listen
Cognitive, networks	1. Schemas; 2. Narratives
Affect	
Emotional, internalizing	1. Depression; 2. Anxiety
Emotional, other	1. Fear of symptoms; 2. Anger (e.g., at the system)
Mood	1. General distress; 2. Demoralization
Behavior	
Behavioral, passivity	1. Avoidance; 2. Deconditioning
Behavioral, activity	1. No distraction; 2. No task
Behavioral, dependence	1. Illness behavior; 2. Helplessness
Behavioral, dominance	1. Need reassurance; 2. Doctor shopping
Coping and resilience	
Coping	1. Emotional, dependent; 2. Fight or flight, withdrawal
Resilience	1. Vulnerable, threat sensitivity; 2. Diatheses, distress intolerance
Self factors	
Self-regulation	1. Affective; 2. Cognitive
Image	1. Body; 2. Self
Personality, risk, and psychopathology	
Personality	1. Neuroticism; 2. Negative affectivity
Psychiatric disorder	1. Clinical disorder; 2. Personality disorder
At-risk behavior	1. Addictions, dependence; 2. Legal, police

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The model includes 100 biopsychosocial factors grouped into pairs of 50 factors over the subcategories. There are 13 subcategories and pairs of factors for the biological component, 24 for psychological component, and 13 for the contextual/social component of the model. For the psychological components, because of their amount, I grouped them according to classes within the subcategories, for example, for Cognition: Cognitive; Amplification (symptom exaggeration, catastrophizing) and Cognitive; Advanced (somatic attribution, disease conviction). The model includes forensic/legal factors, which is important for researchers and workers in this field.

Table 20.6 A biopsychosocial model of somatization: ecological factors

Type of influence	Specific factors
Social	
Historical	1. Trauma, stresses, adversity, conflicts; 2. Losses (parental, supports, resources)
Parental attachment style	1. Pre-occupied; 2. Dismissing
Role strain/stress	1. School, work; 2. Family, caregiving
Interpersonal conflict	1. Familial, relational, peers; 2. Work, community
Inadequate support	1. Social, familial; 2. Professional
Overly solicitous support	1. Social, familial; 2. Professional
Cultural	
Socioeconomic status	1. Poverty, jobless; 2. Community, neighborhood
Attitudes in culture	1. Emotional control; 2. Sanction physical symptom expression
Contextual	
Medical	1. Diagnostic uncertainty; 2. Lack of explanation, guidance
Treating professionals	1. Skepticism; 2. Provider profits from treatment
Disability role	1. Expect benefits, compensation; 2. Avoid unpleasant roles, responsibilities
Insurance	1. Contest benefits; 2. Arrange repeated insurance examinations
Social-cultural/ political-economic	1. Pharmaceutical marketing; 2. Public health service cutbacks

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20.5.1 Biological Factors

Table 20.4 presents the biological factors proposed to influence somatization. In the following, I comment on some of them. Deary et al. (2007) described that in long term potentiation neuronal firing thresholds are inhibited and lowered, facilitating sensitization and somatization. Centrally, neuronal network patterns might form tight circuitry that fires more easily and that brings in a wide network of associated connections, spreading the impact of the sensitization. In terms of sensation, the feedback from altered proprioceptive and kinesthetic sensations might serve to heighten activity of circuitry.

Stress is involved in somatization. Epinephrine release takes place to help prepare more immediate action. Norepinephrine is released in a slower response, which has negative consequences when chronic, for example, the release of cortisol (Roelofs and Spinhoven 2007). There may be hypocortisol or hypercortisol activity that is facilitated (Deary et al. 2007; Johnson 2008). Furthermore, HPA axis disruption is associated with inflammation and wide-ranging effects on the immune system and on health.

The register of somatization takes place in neuronal circuitry, helping to integrate into somatization both higher-order and lower-order levels in CNS regions. Various regions of the frontal lobe have been implicated as factors in conditions related to somatization (e.g., the anterior cingulate cortex, orbitofrontal cortex). Other specific

regions involved include the amygdala. Deary et al. (2007) discussed the consequences of prolonged activation of the cognitive activation/behavioral inhibition system, and Meares et al. (2008) implicated a failure of higher-order inhibitory systems in somatization.

20.5.2 Psychological Factors

Table 20.5 presents the multiple psychological factors that are proposed to contribute to somatization. Perceptually, somatization might reflect lowered thresholds to registration of stimuli or sensation and a resultant perceptual sensitivity. The individual might overly organize attentional functions toward the signals, sensations, and percepts (Deary et al. 2007; Rief and Broadbent 2007). In a highly vigilant manner, the body is scanned through concentration processes. The individual consciously ruminates about the symptoms. Somatizers are prone to symptom exaggeration. Catastrophizing is the extreme case of symptom exaggeration. Deary et al. (2007) concluded that fixity and exclusivity in somatic attributions determine extent of physical symptom maintenance. Executive skills may be underused or poorly managed. Somaticizing patients get trapped into believing illness or injury scripts that offer no hope of symptom resolution.

Depression and anxiety have been found to be consistently associated with somatization. Health anxiety, illness worry, and so on, can de-motivate the person (Rief and Broadbent 2007). Other emotional reactions associated with somatization include a fear of either the symptoms or of their aggravation by factors such as physical activity. Or, anger may be expressed at those who cannot find out what is wrong. In somatization, individuals may express a generalized distress, demoralization, or apathy.

Deary et al. (2007) referred to all-or-nothing or avoidance coping patterns as contributory to somatization. The somatization process leads to a feeling of helplessness and acting in a helpless fashion. Coping that is passive or dependent, or that involves withdrawal or flight rather than dealing with the stress, is more likely to be maladaptive. When self-regulation is dysfunctional at the affective level, emotions might be experienced, appraised, expressed, and reacted to in aberrant manners (Gross 2008). When self-regulation is affected at the cognitive level, a narrowing or expansion of focus outside of the bounds of immediate context might occur, undermining problem perception and resolution. Brown (2004) referred to alterations in body image as a factor in somatization. Personality structures, such as neuroticism and negative affectivity, are known to influence somatization (Deary et al. 2007; Rief and Broadbent 2007).

20.5.3 Ecological Factors

Table 20.6 lists contextual, environmental, and system factors that constitute the third vector in the biopsychosocial model of somatization. Ecological factors are those that include but also go beyond the immediate familial social context of the individual.

20.6 Recommended DSM Approach to Conversion Disorder

Given the difficulties presented by the DSM IV's nosology of the somatoform disorders, there have been multiple suggestions to change the labels and criteria of the disorders involved. In this regard, I had suggested that pain disorder should be termed Chronic Pain Complications Disorder (Young and Chapman 2007). The term has the advantage of indicating (a) that the problem does not lie with the pain, per se, but in the individual's reaction and adaptation to the pain, and (b) that complications might derive from any source, for example, from forensically-relevant pre-event factors, or even from suspected malingering, and not only from post-event complications related to the pain.

In this regard, for somatization and somatoform disorders, I had suggested that a useful category for inclusion in the DSM-5 (American Psychiatric Association 2013) would be "chronic physical symptoms complications disorder" (Young 2008a). The types of complications that the diagnostician would list would include various physiological, personal, social, and cultural factors, aside from others, such as forensic.

In the present chapter, I present a another recommendation for the DSM-5 for Somatization Disorder, and suggest that it could be labeled "Somatization Complications Disorder." The reason is that just as I am arguing that the label conversion disorder should be kept in the revised nosological systems, the same should apply to the case of somatization. That is, to introduce of the present chapter, I had indicated that conversion disorder should not be changed in nomenclature in the extent psychiatric manuals. In this regard, and also for purposes of parsimony with prior suggestions for referring to Pain Disorder as Chronic Pain Complications Disorder, the present suggestion that I am making for Conversion Disorder is that the new term for it should be "Conversion Complications Disorder". This term respects the tradition and history of the condition (by keeping the Conversion component) while reducing some of the stigmatization associated with it (by adding the Complications component). Also, it increases the utility of the diagnosis by emphasizing its consequences. Finally, because complications might include factors such as suspected feigning, it allows consideration of complications important in the forensic context. If adopted, current recommendations by others to forego the feigning rule-out condition would be quite problematic, especially for forensic and related practitioners/assessors.

20.7 Chapter Conclusion

20.7.1 Summary

In the literature, conversion disorder is considered a problematic diagnosis that is poorly defined and has unreliable criteria. It cannot be readily distinguished from feigning/malingering. Its psychological mechanism is poorly understood. After a

Table 20.7 Threats to validity of diagnosis of psychological injury: developmental origins

Developmental level	Symptoms magnified/ intrapersonal conflict
Physical	Illness behavior
	Fear of pain
Emotional	Dependency
	Cry for help
Cognitive	Catastrophizing
	Call for attention
Consciousness	Not taking responsibility
	Blaming anyone/anything
Spiritual	Withdrawal
	Isolation

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review of the literature, including about (a) the storied history of conversion-related symptoms in psychiatry and neurology, (b) its present criteria in diagnostic manuals and recommendations for its change for their future drafts, and (c) extant models that have been used to explain it, I propose that (a) an expanded biopsychosocial model can serve as a framework for understanding it and (b) an appropriate diagnostic label for the disorder is Conversion Complications Disorder. Part of the complications might relate to suspected feigning/malingering, if applicable. The chapter reviews a biopsychosocial model of somatization and of coping that appears applicable to conversion disorder. Difficulties presented by the disorder in the forensic disability, psychological injury, and related assessment and legal contexts are described.

20.7.2 Commentary

Given the traumatic stressors that have been implicated in conversion disorder, it might be important to consider the stage of development when stressors such as these have acted on the individual. For example, in Young (2008b), I presented a model with five developmental levels that might be pertinent to somatization (see Table 20.7). Similarly, they might help understand conversion disorder. The levels relate to the sequence of physical, emotional, cognitive, abstract, and spiritual development, and are based on five Neo-Piagetian stages that I have proposed (Young 2011). However, any developmental model that is sufficiently accepted could make the point that an individual might be functioning at a level or stage that is less than optimal, either due to past difficulties or due to ones that have surfaced more in the present. Lamberty (2008) argued that somatoform and related disorder reflect "early relational trauma." This approach is consistent with the present developmental emphasis.

Given the multiple difficulties in defining and understanding conversion symptoms and the scope of factors that might influence its manifestation, including in the earliest developmental levels, the reasons for the confusions and conundrums it creates, as well as the confounds it presents in the forensic disability and related contexts, are understandable. Conversion disorder stands as one of the disorders that need ruling out before malingering can be attributed. However, it presents much like feigning, and one recommendation for the DSM-5 is that the criterion that is should be diagnosed only when feigning can be ruled out should be dropped. That being said, in psychological and neuropsychological assessments, the difficulties presented by complainants demonstrating symptoms of conversion disorder might be complicated but are not insurmountable. In particular, the psychological profession has established testing procedures that can be used to detect malingering and related negative response biases (e.g., Larrabee 2012; Reynolds and Horton 2012; the present book). Despite the issues that have arisen with malingering detection methods, the approaches described in these works can be used as adjuncts in assessments of conversion disorder symptomology.

A more controversial conclusion would be that because Somatization Disorder, Conversion Disorder, and Feigning/Malingering are difficult to differentiate, for court purposes, there is insufficient evidence to support diagnosis of any of them. Therefore, the assessor should focus only on symptoms and functional consequences, if any, without either trying to ascribe a valid diagnosis or attribute malingering. Nevertheless, credibility could be addressed by denying the presence of any valid symptoms, for example, due to the event at issue in tort claims. However, I perceive this latter option as unwarranted, given the advances being made with respect to malingering detection.

By using the term Conversion Complications Disorder in upcoming revisions of psychiatric diagnostic manuals, this will help keep conversion disorder in focus as one possible diagnosis when conversion-type symptoms are presented, while not excluding consideration of suspected feigning. The term will help maintain continuity with the rich tradition and history that the term conversion disorder has contributed to neurology, psychiatry, and psychology since its origins in the last centuries. Moreover, through its complications component, the term will give importance to ruling in or out feigning in assessment of the disorder, which is vital in the forensic disability and related contexts.

Note that O'Hanlon et al. (2012) recommended that because of its pejorative connotations, the term "pseudoseizure" should be avoided in favor of the term "psychogenic nonepileptic seizure." The authors indicated that this subtype of conversion disorder is accompanied by relatively more psychiatric co-morbidity (e.g., depression, personality disorder). Although I am sympathetic to avoiding pejorative connotations in labels, where unmerited, I suggest that for consistency, the various subtypes of conversion disorder have their labels altered to suggest the current recommendations. Therefore, psychogenic nonepileptic seizures should be termed Nonepileptic Seizure Complications Disorder. Aside from the general advantages to this approach already mentioned, specifically with respect to the term psychogenic nonepileptic seizure, it removes a term that still might have a

degree of pejorative connotations and focuses not on the putative cause, and wrongly so, but areas of possible cure (complications).

Note. In December 2012, the American Psychological Association issued a news release that it will keep the label Conversion Disorder and add parenthetically Functional Neurological Symptom Disorder. No rationale was given in keeping the label of Conversion Disorder, but the logical offered in the present chapter provides the appropriate justification. That being said, the next iterations of the DSM-5 should consider removing the "functional" component of the label at least, and consider adding a "complication" one.

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Chapter 21
Therapy in Psychological Injury

21.1 Introduction

This chapter and the next three constitute the therapy and ethics chapters of the book and expand it into areas not yet considered in depth. First, this chapter considers psychotherapy for psychological injury. It considers several transdiagnostic approaches – the componential approach to treating psychological injury (Young 2008a); the transdiagnostic model for treating mood disorder (Barlow et al. 2011a, b) as applied to pain (Allen et al. 2012), and the stages of change model (Norcross et al. 2011) as applied to psychological injury (Tkachuk et al. 2012). The article by Young (2008a) is summarized in depth because it also describes the major schools of thought in the area and the specific techniques that can be used.

The general theme of this therapy chapter is that the whole person needs to be treated, and that there are common factors and approaches to consider along with specific techniques and procedures applicable to psychological injury. The chapter investigates controversy about to what extent psychological therapy should be strictly evidence-based. The underlying approach to psychotherapy in the area needs to be both biopsychosocial and forensic. I develop a model for practice in psychological injury that I refer to as broad therapy. After the next chapter on ethics, the chapter after that presents a transdiagnostic psychotherapeutic module that can be used not only in cases of psychological injury but also in psychotherapeutic cases, in general. It concerns promoting better belief in free will and change.

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Table of Terms and Sources

Abbreviation	Name	Source(s)
CAS	Complex Adaptive Systems	Merbitz et al. (2012)
DSM	Diagnostic and Statistical Manual of Mental Disorders	American Psychiatric Association (2000)
DSM-IV-TR	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision	American Psychiatric Association (2000)
DSM-5	Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition	American Psychological Association (2013)
HAPA	Health Action Process Approach	Schwarzer (2008)
ICF	International Classification of Functioning, Disability, and Health	World Health Organization (2001)

21.2 Introduction to Therapy

In the following, I review the approach taken in Young (2008a) on psychotherapy in cases of psychological injury. In addition, I add new material on the topic published since 2008 as applied in the general rehabilitation context. The predominant psychological approaches to therapy and other treatments in the field of psychological injury mostly concern cognitive behavior therapy and its variants. However, because psychological injuries often involve polytrauma, or simultaneous physical, psychological, and perhaps central injuries or effects, practitioners should adopt an integrated biopsychosocial approach in treatment (Sperry 2006, 2009). For example, because of the polytrauma that often accompanies psychological injuries, the functional effects on the individual may be far-ranging.

Psychology has developed numerous therapies, with estimates that about 1,000 have been developed (Lebow 2008a). However, only a handful of psychotherapies have established a sufficiently positive reputation (Lebow 2008b), having active empirical programs aimed at establishing their validity. Moreover, the schools evidence much overlap. In this regard, there are integrative/eclectic approaches to therapy and most mental health professionals do not limit themselves to one school of thought. One way of proceeding in therapy is to break down the task of treating the person into manageable parts or components, and then dealing with each part in therapy as separate, without losing perspective of the whole. However, before describing this componential approach to psychotherapy, I review the biopsychosocial approach to psychotherapy, forensic considerations, and evidence-based practice.

21.3 The Biopsychosocial Approach to Therapy

21.3.1 Model

In the area of psychological injury, the predominant theoretical approach is biopsychosocial. Psychological injury concerns conditions such as chronic pain and traumatic brain injury (TBI) that necessarily involve biological or pathophysiological

effects in tissue damage and central nervous system neuropathology that may arise. They may be a major source of continued psychological effects subsequent to the event at issue. Posttraumatic stress disorder (PTSD) also has physiological correlates, e.g., in hypervigilance. Other psychological conditions, such as depression, that may be involved as sequelae to events at claim may have physiological concomitants. In all cases, they are amenable to biopsychosocial treatment, which must consider the biological, psychological, and social together in order to be effective. Finally, in psychological injury, often there are stress reactions, which in and of themselves are sufficient to alter physiology and add to psychological distress and social consequences that follow from trauma or an event at claim (see Sperry 2006, 2009).

21.3.2 Stress

Kendall-Tackett (2008, 2010) reviewed the manner in which humans respond to perceived or actual threat through their stress response. Essentially, the stress response consists of three major components: the catecholamine, the HPA (hyptothalamic-pituitary-adrena) axis, and the immune system response. When we are subjected to a stressor, in the classic fight or flight response, catecholamines (adrenaline, noradrenaline, dopamine) are released through sympathetic nervous system activity. The HPA axis releases a cascade of biochemicals, from CRH (corticotrophin releasing hormone), to ACTH (adrenocorticotrophin hormone, from the pituitary gland), to cortisol (a glucocorticoid released by the adrenal cortex). Cortisol is advantageous in the short term, augmenting energy supply, but is deleterious in the long term; for example, it interferes with tissue damage recovery and rehabilitation effort in physiotherapy, exacerbating pain experience (Melzack 1999). As for the immune system, it releases inflammation-promoting proteins and other factors as a stimulant to help heal any wounds and to ward off infections. These inflammatory products released in the stress response include proinflammatory cytokines, C-reactive protein, and fibrinogen.

When the various biochemicals described in the three areas of the stress response are released chronically because of ongoing stress experience, they create wear and tear on the system, and subsequent homeostatic imbalance, or allostatic load (McEwen 2003). The conditions for secondary health effects are put in place. Damage to tissues and organs, such as the heart, might result. The brain is affected, for example, in the hippocampus and prefrontal cortex, areas important for cognition and emotion. Sleep is disrupted and mood is altered, further aggravating the stress response in a vicious circle. For example, von Känel et al. (2006) found that PTSD might increase biochemical markers of hypercoagulability, increasing the possibility of cardiovascular disease.

21.3.3 Comment

These examples illustrate the importance of the psychological stress on psychological injury, given that stress is a common experience resulting from an event at claim or the injuries sustained because of it. Therefore, any approach in treating

psychological injury that includes a combined biopsychosocial approach is helpful (Sperry 2006, 2009). In this approach, all components of the biopsychosocial influences on the person need to be treated together in order that the client makes progress. The medical model is based on a dose-response relationship across pathophysiology, disease progression, and resultant disability. However, this model fails to consider factors such as stress, personality, appraisal, coping, affect, and psychosocial functioning. Coping refers to the personal and social resources that clients brings to bear to events that are perceived as taxing, threatening, or harmful to physical or psychological well-being (Folkman and Greer 2000; Lazarus and Folkman 1984). Without adequate coping skills, even minor stressors that are chronically present can exact effects on the person to the point that it facilitates negative progression of disease (Walker et al. 2004) through cycles and feedback loops in a complex, dynamic, nonlinear process over time.

In a similar biopsychosocial approach, Woolfolk and Allen (2007) described using an affective cognitive behavior therapy for somatization well as an interpersonal approach. Similarly, Johnson (2008) described a biopsychosocial approach to medically unexplained symptoms (MUS), involving psychological treatment with medical care.

21.4 Therapy and Court

Because the area of psychological injury is adversarial, therapists might need to justify their therapeutic approach in court. They can expect questions related to rigorous scientific standards in formulating their approach to treatment for the case at hand and knowledge of the scientific literature behind their clinical decisions in treating clients.

Does the approach adopted for a client meet legal scientific standards (*Daubert* 1993) of (a) being acceptable to the scientific community, (b) being peer-reviewed, (c) being testable and, (d) through its evidence-based research, of having a known success (base) rate compared control conditions. For example, for each particular disorder that can be diagnosed from the perspective of the DSM *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision* (DSM-IV-TR; American Psychiatric Association 2000) that is applicable to cases of psychological injury, what are the best evidence-based techniques or techniques otherwise determined to be the most appropriate that can be used to deal with the disorder? If confronted with such questions in court, the therapist might consider that, the DSM approach to psychological disorder has been criticized on various grounds, it changes with each edition, and it consists of categories of which many are questioned for their validity. Second, various therapies present common frameworks for use across different disorders, and it may be inappropriate to focus on a disorder-first approach to testifying about psychotherapy. The DSM provides consensus labels to the individual's array of psychological difficulties, but labels should not be used as a substitute for understanding and dealing with the full array of symptoms and the particular goals of treatment, which, in the end, should be functional.

Cases of psychological injuries are challenging not only because of the need for an integrated componential, cognitive-behavioral, biopsychosocial, and functional perspective but, also, because of the difficulties presented by the additional strains that accompany the forensic, insurance, and legal contexts that might need supplementary treatment. For example, clients might have to deal with (a) anger toward the insurance process, (b) anxiety generated by certain medical examinations, (c) anxiety from participating in insurance examinations, (d) the stress of cross-examinations, (e) the losses generated by an inability to work, or (f) having physical therapies terminated prematurely or, conversely, not applying oneself sufficiently in physical therapies. Given the forensic and legal aspects of such cases, the psychotherapist should judiciously describe the clients' apparent effort, motivation, openness and adherence to treatment, cooperation in completing homework assignments, and, in general, attempt to mitigate losses.

21.5 Evidence-Based Therapy in Psychological Injury

Kihlstrom (2006a) argued that scientific research is the sole mechanism that clinicians should use in determining the evidence that should guide their evidence-based practices (EBP) and that even clinical expertise and client values can be accommodated within evidence-based research (Kihlstrom 2006b). Work in the area of PTSD provides a good model of the nature of research on the efficacy of therapy in mental health. Resick et al. (2007) described studies in the area that constitute randomized clinical trials (RCTs). Prior to RCT research, pilot testing is conducted, treatment manuals developed, and so on. Once RCTs have been undertaken and have demonstrated the efficacy of a target treatment, and replication has taken place, issues such as generalizability in application are addressed. Resick et al. (2007) indicated that controlled research supports exposure therapy as an effective means of improving some aspects of trauma reactions, including the development of PTSD. However, there is no gold standard therapy for PTSD, and in head-to-head trials, none stand out. At the same time, there is increasing evidence that combinations of therapy, such as exposure and cognitive interventions, may be more efficacious. [See Wolitzky-Taylor et al. (2008) for similar conclusions.]

However, the field of evidence-based practice is not without contention and controversy (Norcross et al. 2006a; Ollendick and King 2006a, b; Wampold 2006a, b). For example, researchers might have vested interests in one predominant approach or another (Greenberg and Watson 2006a, b). Reed (2006a) pointed out that it is difficult to standardize psychotherapy. In addition, beyond treatment procedures unique to a particular manualized approach, therapy might work through common or nonspecific factors, such as ones related to the client, the clinician, their relationship, the culture and other contextual factors, and the match between the treatment and the client. Messer (2006a) added that the EBP research does not take into account individual differences. Messer (2006b) noted that the client's subjectivity must be kept in mind. Reed (2006b) noted that research might not have yet been

conducted for an issue confronting a particular client. Norcross et al. (2006b) concluded that at present there is no conclusive evidence that manuals improve treatment outcome or that controlled research generalizes to the clinic; however, evidence-bases practice is here to stay.

Glancy (2008) provided good advice for the clinician in psychological injury and law, given its potential for court appearance. He noted that in making clinical decisions, when there is insufficient research evidence to consult, the clinician should be transparent, the lack of evidence should be articulated, and the decisions arrived at should be justified on other bases, with clinical experience and expertise as relevant sources. Moreover, the evidence that has been elaborated by research may be contradictory, so that, in the end, the individual clinician is responsible for interpreting the evidence in a manner that is judicious and conscientious.

Barlow (2007) echoed Glancy that psychotherapists should use the best available evidence to treat their clients, but from the perspective of clients being individuals, even if it means not respecting the empirically-supported treatment. For example, therapists might start with an empirically-supported approach and then adjust it to fit the client. Kazdin (2008) called for research on the clinical decision-making process. Tate et al. (2008) pointed out that the field needs practical or pragmatic clinical trials aimed at helping clinicians with decision making in real-world clinical practice.

21.6 Major Schools of Practice of Psychotherapy

Lebow (2008a) reviewed the areas of behavior therapy, cognitive therapy, experiential therapy, mindfulness- and acceptance-based therapy, postmodern and poststructuralist therapies, psychoanalytic therapy, and existential therapy. He included chapters on feminist, couple/family, and group therapy. The book concluded with broader approaches, such as integrative and eclectic therapy, and it ends with a discussion of common factors in psychotherapy. The book mentioned interpersonal approaches within some of the chapters, but should have had a separate chapter on this approach.

Zinbarg and Griffith (2008) described that the main focus of behavior therapy is that it uses laws of learning theory toward modifying problems in behavior. Key ways of learning include classical conditioning, instrumental conditioning, generalization, habituation, extinction, response prevention, stimulus control/discrimination (functional assessment), behavior activation/pleasant event scheduling, contingency management, shaping, and skill training/acquisition. The theory has evolved to include social learning, especially modeling, and self-efficacy (Bandura 1977). It includes behavioral techniques such as systematic desensitization, exposure therapy or flooding, and interoceptive exposure.

Kellogg and Young (2008) described cognitive therapy as dealing with the way individuals interpret events. Problematic emotions derive from maladaptive and/or unrealistic interpretation or processing of information. People think irrationally, and need to be challenged (Ellis), or they develop specific maladaptive cognitions that

need to be prodded for their full implications in the life of the client, leading toward cognitive restructuring (Beck). The therapy grew to include narrative therapy/constructivism, dialectical behavior therapy, acceptance and commitment therapy, schema therapy, and cognitive techniques that included mindfulness. Kellogg and Young (2008) pay special attention to Young's work on schema theory. Schemas concern cognitive, affective, motivational, instrumental, and control processes.

According to Pos et al. (2008), experiential therapy is grounded in humanistic, phenomenological, and existential traditions. It considers clients to be aware, self-reflecting, creative, and having a subjective sense of being that can lead to dynamic reconstruction of lived realities. The experiential approach began as the humanistic third force, and also was gestalt and person-centered.

The existential approach now includes neohumanistic offshoots, such as emotion-focused/process experiential therapy (EFT). In EFT, emotions are considered cardinal to the experience of the self and, in monitoring them as well as the meanings that accompany them, clients are facilitated in the change process.

Baer and Huss (2008) present the fast-growing approach of mindfulness- and acceptance-based psychotherapy. In mindfulness, one focuses intentionally in a nonjudgmental way on ongoing experiences. Acceptance concerns the willingness to experience even unwanted unpleasant internal phenomena without trying to avoid, escape, or end them. Contemporary approaches include acceptance and commitment therapy (Hayes et al. 1999); dialectical behavior therapy (Linehan 1993); mindfulness-based cognitive therapy (Segal et al. 2002); and mindfulness-based stress reduction therapy (Kabat-Zinn 1990).

Tarragona (2008) presented a review of postmodern and poststructuralist therapies. The therapies are also called narrative, discursive, conversational, collaborative, and social constructionist. Knowledge becomes constructed meanings multiple in perspective and voice, derived in collaborative social contexts, through relational and generative language, discourse, stories, narratives, and conversation (Anderson and Gehart 2006; Kim Berg and Steiner 2003; White 2004).

Magnavita (2008) described psychoanalytic or psychodynamic psychotherapy, which ascribes psychological problems to motivations largely hidden from consciousness. Defenses include regression, reaction formation, introjection, identification, projection, and sublimation. Resistance may be at work in psychotherapy. Variations of the Freudian approach have emphasized psychosocial rather than psychosexual stages (Erikson 1963), the ego and the self (Kohut 1977), the mother as predominant, rather than sexuality (e.g., Anna Freud), and interpersonal relations (Sullivan 1953; Bowlby 1980). I maintain that Lebow (2008a) should have had a separate category of interpersonal therapies.

Cooper (2008) described existential psychotherapy as concerned with being in the world (Heidegger, Buber), yet being solitary (Kierkegaard, Sartre) and phenomenological (Laing 1965). In the variant of this approach called logotherapy (Frankl 1984), clients are helped to find meaning in their lives. Mearns and Cooper (2005) indicated that in session the client and therapist engage in a dialogic encounter, which resembles Buber's (1958) I-Thou relationship found in spiritual encounter.

Stricker and Gold (2008), Lazarus (2008), and Sparks et al. (2008) examined approaches to psychotherapy that are flexible in orientation, being integrated,

eclectic, and multimodal, and dealing with common factors that render therapy effective. For example, Beutler et al. (2006) developed prescriptive psychotherapy, a flexible approach considered as technically eclectic. In the common-factor approach, trans-theoretical variables, such as providing insight, new experience, and hope, are emphasized (Garfield 2000). Stricker and Gold have developed an approach that emphasizes the assimilative integration of therapies, where one school is primary and others are used to add to this home one, as needed. Different versions of the approach use different home schools (e.g., psychodynamic, cognitive behavioral).

Positive psychology is making increasing inroads into the mainstream of psychology. It is being applied to the rehabilitative context. For example, Snyder et al. (2006) described how having and promoting an attitude of having hope can be important in rehabilitation. Engaging in catastrophizing is one of the worst reactions that a client with psychological injury can have, and psychotherapists need to work on this disheartening predilection when it is evident after an event at claim, fostering a more optimistic attitude. Frederickson (2001) has described a broaden-and-build model of positive actions and attitudes that can be especially useful in the rehabilitative context.

We can ask how different are the psychotherapies, and if there are ways of treating clients that are not school-dependent, but whole-person focused. That is, I agree with the eclectic, individualized approach; it can be applied to the area of psychological injury and law. I refer to my version of this approach as componential, because it depends on careful assessment of the major complaints of the individual and matching them to accepted treatment techniques and procedures rather than schools, per se. However, in applying this approach in this context, evidence-supported treatments from the behavioral and cognitive traditions should be used as a crucial axis. In this regard, I consulted recent texts on the topic pertaining to one type of psychological injury, PTSD (Bourne 2005; Cash 2006; Taylor 2006; Zayfert and Becker 2006).

21.7 Componential Approach to Psychotherapy

The ten major components of the individual to consider in psychotherapy follow. With each one, I discuss appropriate rehabilitative or therapeutic strategies (see Table 21.1).

21.7.1 Psychoeducational, Instructional

After having completed the relevant paperwork, the assessment, and rapport building, the psychologist can help the therapeutic process by providing feedback on the nature of the client's symptoms, impairments, diagnoses, and so forth, what is the expected symptom course without treatment, the expected course with treatment,

Table 21.1 The ten major components of the person in psychotherapy

Component	Explanation
1	Psychoeducational, instructional
2	Physiological
	Relaxation techniques
	Breathing techniques
	Progressive muscle relaxation
	Biofeedback
3	Behavioral
	General
	Additional behavioral techniques for anxiety
	(a) Systematic desensitization
	(b) Exposure therapy
4	Action tendencies, inhibitory control
5	Cognitive
6	Affective, emotional, intrapersonal
7	Social, relational, interpersonal
8	Self esteem, motivational
9	Coping, problem solving
10	Broader cognitive constructions

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Note. The whole-person, componential approach to therapy is based on understanding the individualized symptom/impairment/disability profile of the person, if any. The profile is established after a scientifically-informed, impartial, and comprehensive assessment The therapy involves an integrated, individualized therapeutic program based on techniques, principles, and schools/theories that address the components involved

the prognosis, the therapeutic recommendations (treatment plan, number of sessions, etc.), and type of therapy to follow. Much of the feedback functions to alleviate incorrect knowledge about the client's condition, and how therapy can help.

21.7.2 Physiological

Cognitive behavior therapy is the primary therapy used by psychologists, partly because of its evidence-based support. Its label indicates that it is multi-componential in nature. Much of the multidimensionality of cognitive behavior therapy lies in its behavioral aspect, where, aside from its traditional emphasis on learning, behavioral modification, and reinforcement contingencies, it describes relaxation techniques that are physiological in nature, describes social skills training and techniques of affective modification, and so on.

Relaxation techniques are mechanisms to reduce tension, moderate stress and anxiety, and create more positive thought processes, affect, and experiences. Moreover, when a client is reacting with excessive physiological distress, relaxation

techniques may be used to control these reactions. The value of teaching clients how to control or re-equilibrate maladaptive physiological reactions cannot be underestimated. Physiological disruption accompanies stress responses to traumatic reactions and panic attacks, emotional responses, such as anxiety and depression, and so on. Long-term release of cortisol and other physiological mediators of continued stress and emotional reactions interferes with appropriate learning in therapy, given its state-dependent nature. By not being able to control stress responses, clients are at risk for poor motivation to participate and improve in therapy, and this might even compromise their physical recovery in rehabilitation. Relaxation techniques allow the individual to moderate initial reactions to stress and emotions, reduce long term stress reactions, learn to maintain equilibrium when confronted with new stresses, and so on. Also, they help equilibrate other vegetative functions, such as helping to relax enough to fall asleep, and returning to sleep after a nightmare.

Breathing techniques constitute a primary relaxation technique that allows for stress reduction and physiological control. The therapist guides the client in regular rhythmic breathing. In my approach, I indicate that any breathing technique itself is secondary to focusing on the rhythms of the breathing and on the expanding lungs, a technique that serves as a distraction technique from stress and, at the same time, calms the body, preparatory to more positive thoughts and visualizations.

The clients learn to breathe diaphragmatically or, if this does not help, in any fashion comfortable to them, reaching a rate of about 8 breaths (+/−2) per minute (e.g., start by breathing in for 2 s, holding the breath for 1, breathing out for 2). By combining breathing exercises with visualizations, positive thoughts, and so forth, one is approaching meditative and self-hypnotic strategies.

Another common relaxation technique concerns progressive muscle relaxation. Essentially, the client is asked to contract or flex and then stretch or extend zones of the body in a sequential manner. The client should engage in periods of muscle tension and release lasting 5 s or more each, in focused muscle groups, with enough repetitions to last up to about 10 min. Woolfolk and Allen (2007) described an abbreviated progressive muscle relaxation technique. The tense-release procedure moves from the arms, to the legs and buttocks, to the stomach, chest, and upper back, to the shoulders and neck, and finally, to the mouth and jaw, eye area, and forehead. In my variation of this procedure, I place the step with the arms between the stomach and shoulder steps.

Biofeedback is another technique that functions to reduce physiological reactivity. There are many ways of teaching biofeedback. However, at the core, the person learns to control physiological activity by receiving signals from apparatuses that represent that activity, such as when electrical conductance responses of the skin due to stress reactions are amplified and modulated into sound signals of varying intensity. The person then uses relaxation techniques to alter the nonrelaxed state toward the relaxed state and, in so doing, the signal moves toward levels indicative of relaxation.

21.7.3 Behavioral

21.7.3.1 General

The behavioral level of therapy concerns several different interrelated strategies. Children/individuals enter therapy with histories of reinforcement, punishment, and learning that have shaped their behavior repertoire. Reinforcements are administered after a desired behavior so that the frequency of its emission is increased. Positive reinforcements are rewards (stimulus, circumstance) that are provided after a desired behavior (dependent on it, contingent with it) in order to increase the frequency of the desired behavior. Negative reinforcements involve removing, stopping, or delaying an aversive or unwanted stimulus or circumstance in order to increase a desired behavior. Punishment is aimed at decreasing an unwanted behavior. Behavior modification concerns the awarding of positive rewards or the removal of negatives in order to alter unwanted behavior, including the awarding of tokens, such as points, that can be used to acquire rewards later on if a certain threshold in behavior or desired outcome is reached. Shaping involves serial goals in behavior modification that come to increasingly approximate the threshold behavior or desired outcome. Praise constitutes the optimal positive reinforcement.

In therapy with children, often, the family has to learn different, more constructive, ways of reinforcing the child, and ways to stop using punishment and coercive strategies that produce negative outcomes. Parents can learn to use a program of positive reinforcement and set up a rewards system of tokens/points; for example, if the child earns 100 points for having engaged in desired behavior and/or controlled unwanted behavior, then she/he gains a reward, such as getting more access to a video game, or the child can play outside more with friends. One procedure involves positive events scheduling, which is consistent with the principle of positive psychology, that we should be promoting well-being, broadening and building appropriate behavior repertoires, and so on.

Finally, much behavior is acquired through observational learning, imitation, and so on. This is especially important with children. We may coach families appropriately concerning a desired behavior, or show videos to children of children reacting well in situations of concern, for example, to presurgery anxiety-provoking painful situations. We may encourage them with developmentally appropriate techniques, such as using the label of well-known superheroes to describe them, and so on. For individual adult clients, the therapist may role model desired behavior, for example, in anger management.

21.7.3.2 Additional Behavioral Techniques for Anxiety

(i) Systematic Desensitization. Systematic desensitization is a classic behavioral technique. It involves exposing the individual to the problematic emotional, arousing, or feared stimulus or situation. However, the exposure is undertaken in a safe manner, because the exposure is graduated and the arousal is dampened by

simultaneous relaxation exercises. In administering the therapy, first, the psychologist elaborates with the help of the client an exposure, anxiety, or fear hierarchy and also teaches relaxation strategies. The hierarchy consists of stimuli or situations that elicit increasing emotional reactions because they increasingly approximate the most emotional anxious or feared stimuli or situations (e.g., for travel phobia with an adult, the hierarchy may proceed from imagining a quiet drive to imagining busy highway driving in a storm with many trucks). Then, the psychologist has the client relax before experiencing each step in the hierarchy. This elicits an incompatible and more relaxing emotional response that reciprocally interferes with and eventually fully helps control the typical emotion, arousal, or fear elicited by exposure to the step in the hierarchy.

Systematic desensitization may be administered either in vivo or imaginally. In vivo systematic desensitization refers to dealing with fears live, in a real life setting. Imaginal systematic desensitization involves visualization of steps in a fear hierarchy in the therapist's office, or at home, but not live (as with the imagined driving hierarchy given above).

By reducing anxiety at each of the lower levels of the hierarchy, this leads to reducing overall anxiety, so that it becomes easier to go from level to level. The therapist asks the clients to report their level of relaxation/anxiety on a scale of 1–10, in terms of their SUDS, or subjective units of distress, in which 10 represents the worst degree of anxiety possible, 2–3 represents a quite relaxed state, and 5–6 is a degree of anxiety that is moderate, or that is elevated but bearable.

(ii) Exposure Therapy. In exposure therapy, clients safely confront their fears in a systematic way, gaining better control and learning new ways of dealing with and processing their trauma, by habituating or getting used to memories of them. Psychoeducation functions as a first step to prepare the terrain. Relaxation techniques are learned to deal with increased arousal responses to the memories and emotions evoked. The techniques employed are repeated and prolonged, for example, the trauma is relived on a daily basis until there is lessened arousal to the desired level. The reliving techniques may take place for as long as it took the trauma in question to have happened, even if it had lasted 20 min or more. Imaginal exposure involves reliving the trauma in question by means of offering a verbal report or of writing a narrative report, or by using associated means, such as relevant photographs and articles. To better deal with their fear, clients are asked to describe exactly the trauma experienced, and to listen to or otherwise perceive the description repeatedly, for example, by listening repeatedly to a tape recording of their own report of the incident in question. For children, drawing techniques are appropriate.

In dealing with traumas that are deeply engrained, clients will attempt to suppress the memories. However, the memories may manifest as flashbacks and ruminations, avoidance behavior, intense physiological disruption/hyper-arousal, numbing to the event/dissociation, and numbing to interpersonal relationships. Nevertheless, by working through trauma, no matter how uncomfortable it may seem at first, clients can recover equilibrium. The goal is to have them be able to relive an approximation of what they experienced in the past at a level of distress that is manageable, for example, at a level of about 50 % of the degree of distress

that recall of the trauma keeps evoking. In the case of a maximum rating of 10 out of 10 on a subjective scale of distress (SUDS scale), this translates into being able to relive the full trauma through imaginal exposure at a level of 5 out of 10, or perhaps 6, at most. By being able to relive the trauma at this level, or less, clients are being primed not to keep being upset at flashbacks, to respond to reminders in a hyper-aroused mode, and so on, or at least to have them reduce the intensity and duration of these symptoms.

In situational or in vivo exposure, clients are exposed to harmless but distressing reminders of the trauma that they encounter in real-life settings. The therapist may decide that an exposure hierarchy needs to be constructed in vivo, and a gradual approach is adopted, facilitating symptom management during the exposure.

(iii) Interoceptive Awareness/Sensitization/Exposure. In this technique, the goal is to have clients gain mastery in a safe environment of neurovegetative reactions that mimic the ones that they may have experienced during episodes of psychological trauma/distress. For example, in panic reactions, clients may be breathing heavily, experiencing a rapid heart beat, getting dizzy, sweating, and so on, and agonize that they are having a heart attack, or other health problem, thereby promoting a vicious circle.

In order to learn that these arousal-related physiological sensations/responses are controllable when they do occur, clients are asked induce them in a safe manner in the presence of the therapist. For example, they may be asked to run on the spot, climb stairs, or otherwise get out of breath. Next, they are asked to use a relaxation technique simultaneously as their body recovers from the exercise, pretending that the recovery is from acquiring control of a panic attack through learning appropriate procedures.

21.7.4 Action Tendencies, Inhibitory Control

Another behavioral level in therapy concerns the control of maladaptive action tendencies. Behavior is not always expressed, because we have regulation mechanisms that act to contain maladaptive responses, at least for the most part. However, adult clients/children may need to learn to better redirect, moderate, inhibit, or otherwise control bad habits that are interfering, disruptive, and so on. Or, they may need to learn better to displace/sublimate/canalize their frustrations/irritability/explosiveness when their action tendencies need to be managed. This is facilitated by techniques that inhibit negative activity, such as using breathing techniques at the first sign of inappropriate or exaggerated emotional upset.

21.7.5 Cognitive

Cognitive therapy is a restructuration process that helps clients alter unhelpful, unrealistic, impairing, irrational, dysfunctional, or otherwise inappropriate thoughts. Our thinking is complicated, existing at several interacting levels, from cognitive contents and products (ideas, structures, etc.) to underlying processes, from basic

schemas that one may have to powerful underlying beliefs. Briefly, the therapist helps the client alter maladaptive thoughts that channel behavior in maladaptive directions. Clients may engage in cognitive distortions, such as attributing hostility to nonhostile activities, looks, or comments by others. In terms of anxiety, this may refer to children catastrophizing, anticipating the worst, feeling helpless, and so on. The therapist challenges the person's cognitions, asks for evidence, requests that the client track the situations and thoughts that precede maladaptive behaviors, and so on. The goal is replace automatic, narrow, habitual cognitive filters elicited in antecedent situations to more balanced, realistic, and accurate constructive perceptions and meanings, so that adaptive behavior and emotion result. When children are involved, the therapist must tailor the cognitive approach to the developmental level of the child.

Ultimately, the therapist is promoting self-confidence that the client can deal with the sequence of situation-thought-maladaptive behavior. The therapist promotes interruption strategies to the sequence, including self-questioning and constructive self-talk. The client learns simple statements to use in situations of concern, such as: "She did not mean it that way," "I do not have to react that way," "I can do it a different way," "Who is in control? I am." The goal is to have clients internalize such statements as part of their thought mechanisms when situation of concern arise, teaching themselves that they have control, that having control is now part of their self-concept, and that cognitive reformulation/restructuration has taken place.

It is important to note that cognitive therapy concerns affect and emotions as much as thoughts. It is based on a particular model of antecedents, beliefs, and consequences, which the client must learn to dispute (A, B, C, D model). At the same time, the schemas that we create and serve as filters directing our behavior are cognitive-emotional schemas that involve both components of the term (in this regard, one branch of cognitive therapy is called rational-emotive). Moreover, we must keep in mind that our schemas are dynamically reworked by ongoing experiences, by alterations of the hold that past memories have on us, and so on, for example, through psychotherapy. In this sense, schemas are flexible constructions more than fixed structures.

Examples of maladaptive cognitions that can be replaced in cognitive psychotherapy include: all or nothing thinking ("I must end up having no pain"), overly negative thinking, catastrophizing ("I'll never get better"), minimization of positives ("Who cares if I am half-way there"), jumping to conclusions ("The physiotherapy hurts; it is not helping"), overgeneralizing ("That headache lasted too long; I will always have bad headaches"), emotional reasoning ("If I feel it, it must be true"), should statements ("I should have been better by now"), and self-blaming ("If only I did not drive that day, the drunk would not have hit me").

21.7.6 Affective, Emotional, Intrapersonal

At the emotional level, a common technique is to encourage clients to try to find the meaning behind the emotion being expressed, and to work toward solving the issues raised in this exploration and insight. By modulating emotional, affective, and other

intrapersonal characteristics, therapists help channel the clients' behavior to more constructive, problem-resolving, self-controlled activities, thought processes, physiological reactivity, and other components.

A typical example involves asking clients what underlies their anger, what are the frustrations and problems, what options have they considered to resolve them, can they think of others, is anger the only option, what are the negative consequences of the anger in terms of their goals, how are the other options that may be available better for the resolution of the frustrating situation, and so on. At the same time, the therapist needs to invoke other techniques, such as techniques that help control physiological reactivity, allow calming down, encourage constructive problem solving and deployment of coping mechanisms that have been learned or are being learned, procure social support, and so on. For example, in terms of anxiety, the meaning behind the emotion may concern dread at the anticipation of what may happen, fearing the worst, catastrophizing, pessimism, and so on. The therapist should deal with the underlying issues, have the client reframe the possibilities, perhaps lead the client to acceptance if planning appropriately cannot help at all, and so on.

Constructive affective self-statements include: "Some worry is motivating; too much is not"; "I'm worried because I want to change." "Anger is telling me to solve that problem in other ways." "I'm in control; I can control my feelings of being down by relaxing, doing something positive for me, and then getting on with it." "My confidence is high; I can do it, maybe I won't do as well as I would like, but I will do my best."

One quite maladaptive thought-emotion complex concerns pessimism, self-doubt, insecurity, and so on. In this regard, for example, students may revise their emotions of self-doubt as follows: "I can't do it; I always procrastinate. But this is how I always used to feel; I just have to start breathing exercises, calm down, and then open the book. Success is more likely this way."

21.7.7 Social, Relational, Interpersonal

Cognitions and emotions express fundamental internal psychological processes that we harbor, but they function to help us adapt successfully to our external contexts. They serve social, relational, and interpersonal ends. We need contextually-attuned social and relational skills in interacting with others. Our emotional intelligence, social cognition, capacity to take the perspective of others, communication skills, and so forth, enable us to balance well the perspectives of others with our own, in negotiations of adaptation. The therapist uses the necessary techniques in working with clients to optimize this area of functioning. Assertiveness training is typically used. Social skills are enhanced through training. The client may have maladaptive schemas or representations of the relationship with the other, related to insecurity, and derived from early attachment experiences. Interpersonal therapy focuses on these issues, in particular. Even basic learning, modeling, and coaching techniques are a good starting point with clients, including with children.

21.7.8 Self Esteem, Motivational

A major issue confronting many clients concerns their self-confidence, self-esteem, self-worth, and so on, which may broaden to wider issues, such as their personal identity, their perceptions of who they are, what others think of them, and so forth. The therapist may work directly on this aspect of a client's psychology. Or, it may be strengthened as secondary effects of successes in other areas. Ultimately, the therapist helps the client construct a new, more positive story about the self relative to past stories that have been learned. Reciprocally, when the sense of self is elevated, motivation to succeed increases, more successes are obtained, and others become more appreciative, in a growing circle of confidence.

Often, motivation is a prime issue in therapy. This is especially true with respect to treatment adherence, engagement in the therapeutic process, positive effort, avoiding self-sabotage, and so on. Motivation affords the critical component to allow appropriate therapeutic learning. The difficulty is that it is hard to measure motivation objectively, it is very complex conceptually, and, in the rehabilitation context, there are extraneous factors to consider.

21.7.9 Coping, Problem Solving

Optimal coping when confronted by problems or stress of any kind is partly cognitive and partly strategic. First, clients need to learn to evaluate adequately the difficulties that they are facing and the resources available to them in dealing with the difficulties. Appraisals are cognitive activities oriented to analyzing problems/stressors, and, more often than not, the objective facts about the situation are not overwhelming but are perceived that way. Moreover, the individual feels helpless, does not know what to do, and so on. By learning to assess well the parameters of the difficult situation/problem/stressor and the coping mechanisms available to deal with it, the individual in therapy already is making progress. Moreover, the therapist guides the client in learning different ways to cope, and, depending on context, ones that are more problem-focused than emotion-focused.

21.7.10 Broader Cognitive Constructions

Cognitive therapy deals with thoughts and beliefs that influence ongoing actions and emotions, but the therapist needs to consider broader cognitive constructions that may not be readily apparent at the more micro level. Although cognitive therapy concerns itself with beliefs that reflect wider concerns in terms of self-confidence, attributions of intentions of others, and so on, there also broader or macro level cognitions that one should consider, such as narratives, life stories, scripts, existential schemas, and so on. Examples include general statements about

locus of control, one's sense of agency, how one's family or marriage functions, what the future holds, does fate determine the life course, and so on. For children, one should query beliefs about family, school, if effort is worth it, and so on. The issues may be similar to some at the micro level, for example, having a sense of control, but the issue will be about control, in general, rather than control of the particular difficulty or problem at hand.

21.7.11 Conclusion

Figure 21.1 presents a graphical depiction that I use with my patients to show the scope of goals and treatment involved in their rehabilitation. It is a practical rather than an integrative model at the conceptual level. For a broad, more integrative model of psychotherapy that I developed, see Fig. 21.4 below.

To conclude the review of the article that I wrote on psychotherapies in the context of cases of psychological injury (Young 2008a), the psychotherapist must be attuned not only to the client and the best approaches to take in treatment but also to the system in which the client and therapist are functioning, and all the extraneous factors impinging on them, including all biasing ones and stress-related ones from either of the adversarial sides of the legal context. The psychologist who can navigate well these considerations will function effectively as an expert not only with the client but also in court.

21.8 Rehabilitation

21.8.1 Models

Psychotherapy for psychological injuries is one arm of rehabilitation psychology. For further background on rehabilitation psychology and its history, see Kennedy (2012) and Sherwin (2012), who reviewed the nature and scope of the field.

Rath and Elliot (2012) reviewed the psychological models in the field. The predominant one is the biopsychosocial model (Peterson and Elliot 2008) and the ICF model (International Classification of Functioning, Disability, and Health; WHO, World Health Organization 2001). The learning/behavioral modification model is an important one, too (Fordyce 1976, 1988; Taub and Uswatte 2000), because it adds to understanding the psychosocial component in rehabilitation. Psychoanalytic models generate little research, but Elliot et al. (2000) found that constructs in self-psychology help account for outcome in rehabilitation. Social psychology has been an important influence (Wright 1960, 1983). Positive psychology is increasing in importance in the area (Dunn et al. 2009).

Cognitive behavior therapy (CBT) has much potential to promote adjustment, well-being, and personal health in the rehabilitation population (Elliot and

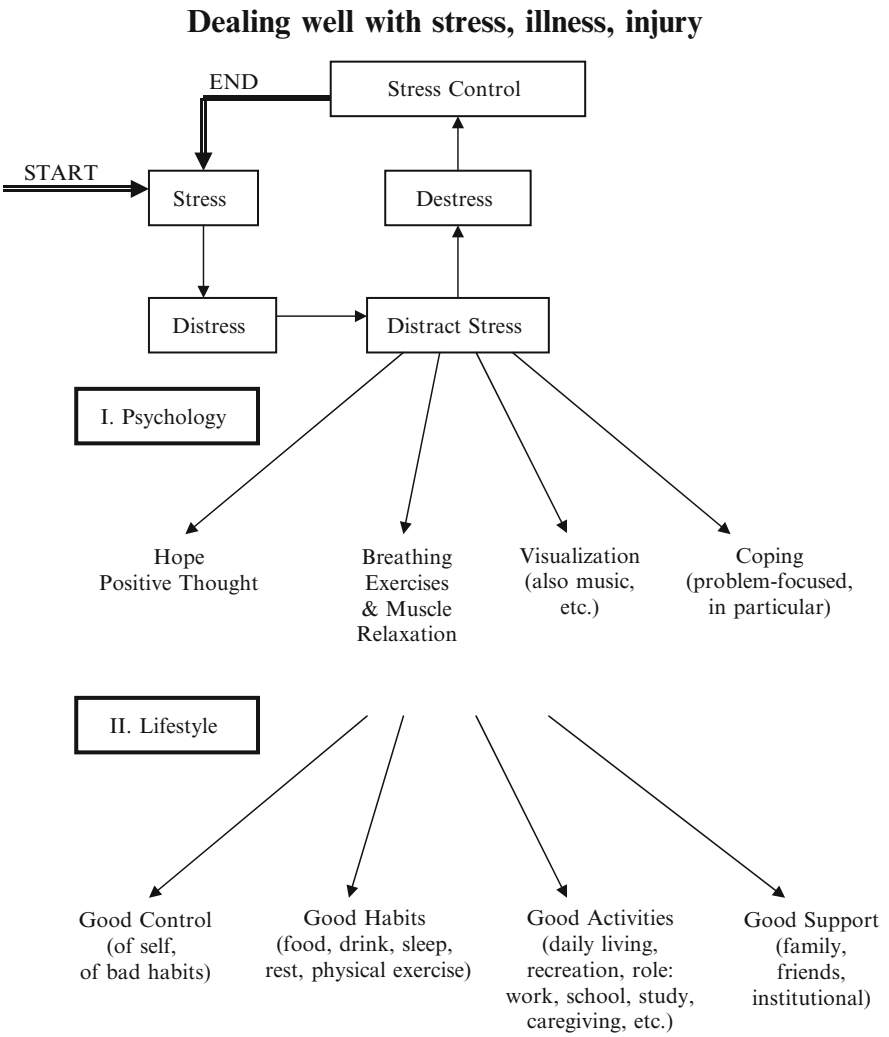

Fig. 21.1 The figure illustrates a transdiagnostic diagram that the author uses with his patients. No matter the psychotherapeutic issue, the psychotherapist should focus on not only psychological advice, techniques, and therapy but also appropriate lifestyle factors. In part, whether confronting stress directly or illness and injury that lead to stress, using appropriate behavioral and cognitive approaches and procedures help. In general, the psychological approach used should encourage hope/motivation to change and good coping skills. As for lifestyle, self-control is critical in order to achieve more effective daily functioning (e.g., good habits, good activities). Aside from fostering the patient's psychological improvement, the therapist should deal with the person's context and communicative abilities (e.g., family, insurer)

Jackson 2005). For example, it works to improve problem solving, with positive benefits found (e.g., Elliot and Hurst 2008; Shanmugham et al. 2009).

The transactional model of stress and coping (Lazarus and Folkman 1984) is important to the field, as well. For example, in SCI (spinal cord injury), appraisal

predicts mood (Kennedy et al. 2009), and training coping effectiveness is helpful (Kennedy et al. 2003) Similarly, Schwarzer's HAPA (Health action process approach 2008), which acts to promote self-efficacy, has been found beneficial. Rath and Elliot (2012) also referred to neuropsychology. In this regard, see Haskins et al. (2012) and Moore Sohlberg and Turkstra (2011) for work on cognition rehabilitation.

Aside from these approaches, others are important to the field, especially systems theory. Merbitz et al. (2012) described a version of systems theory termed CAS (Complex Adaptive Systems) and applied it to rehabilitation. They referred to their model as Complex Adaptive Rehabilitation. Young (2008b) applied systems theory, including the CAS model, to the entrenchment of chronic pain and to health and illness attractors. One factor to consider in developing an ultimate unified, integrative, and transdiagnostic systems model in rehabilitation concerns different levels of rehabilitative practice. At a superordinate level, such a systems model should integrate different schools or approaches. Then, principles and techniques should be considered (e.g., see Fig. 21.2).

21.8.2 Recent Research and Reviews

Kortte et al. (2012) showed the value of considering aspects of positive psychology in rehabilitation. They found that scores on a hope scale predicted positive functional role outcomes at 3 months in an acute rehabilitation population (acute spinal cord dysfunction, stroke, amputation, or recovering from orthopedic surgery).

Schwarzer et al. (2011) reviewed the literature that provided support for the HAPA program in a rehabilitation population. They focused on people with chronic illness or disability. The phases involved include motivation and volition (deliberation and action, respectively).

Quinn et al. (2012) tested with orthopedic patients a model of disability that integrates the ICF model and a behavioral model. The combined model had been developed by Dixon et al. (2008) (see Chap. 14). The behavioral component included intention as mediator between impairment and activity limitations. In the research undertaken by Quinn et al. (2012), the combined model fit better and also explained more variance in the data gathered than either of the component models.

Mehta et al. (2011) conducted an evidence-based review on the effectiveness of CBT in SCI patients for psychosocial issues. In the research that was reviewed, CBT helped for adjustment, anxiety, depression, and coping.

The importance of coping in disability was studied by Hall et al. (2011). The population studied consisted of MVA (motor vehicle accident) survivors with complex musculoskeletal injuries. Active compared to passive coping predicted benefits in QOL (quality of life) and functional dimensions. Also, see Fig. 21.3 for a coping model applied to MS (multiple sclerosis) patients.

Gironda et al. (2009) reviewed challenges to treatment of polytrauma. They recommended an integrated program and noted that the differing aspects in the treatment of polytrauma [pain, PTSD, MTBI (mild traumatic brain injury)] share common principles.

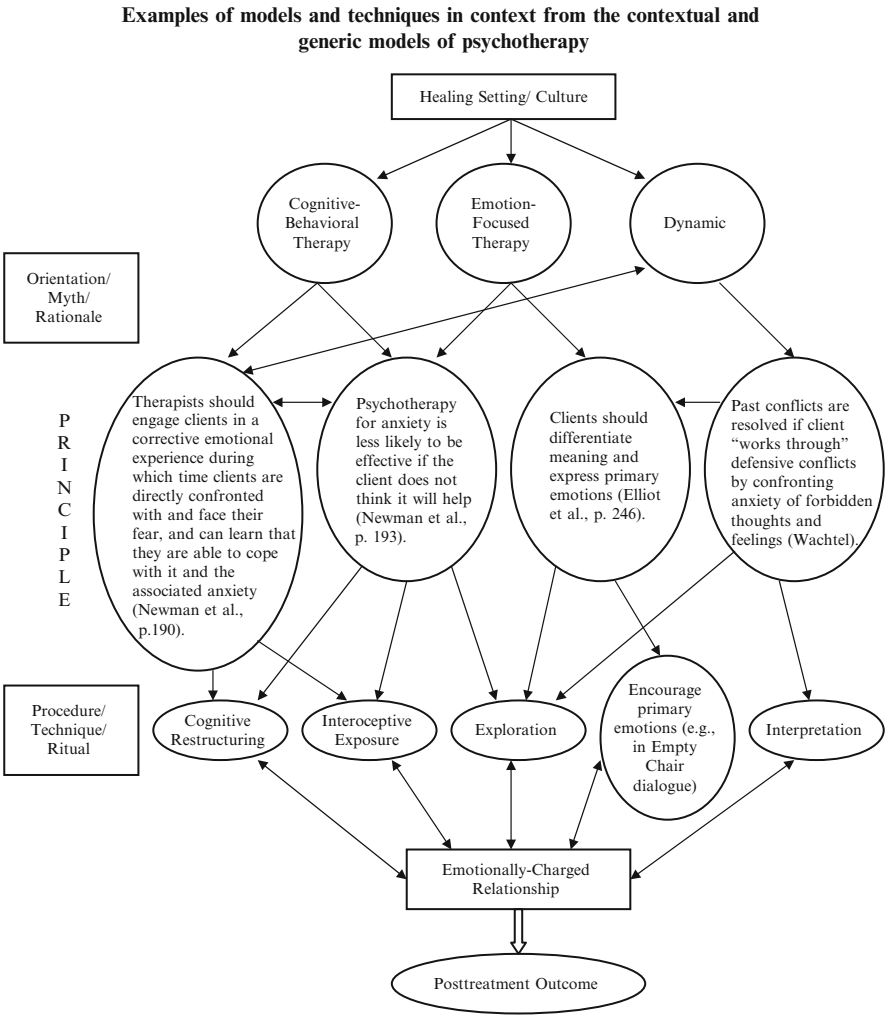

Fig. 21.2 *Rectangular boxes* are the four factors from Frank and Frank's (1991) contextual model. *Circular shapes* represent specific examples of various models and techniques (i.e., myths and rituals), which are on a continuum of high (orientations) to low (specific techniques) levels of abstraction. Treatment principles (intermediate circular shapes) link orientations and techniques. Newman et al. (2006); Elliot et al. (2004); Wachtel (1997)
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Rusin and Uomoto (2010) reviewed research on the effectiveness of psychotherapy in rehabilitation. For example, in an RCT (randomized control trial), brief CBT helped patients with chronic pain due to TMD (temporo-mandibular disorder). Hoffman et al. (2007) conducted a meta-analysis of chronic low-back patients, which revealed

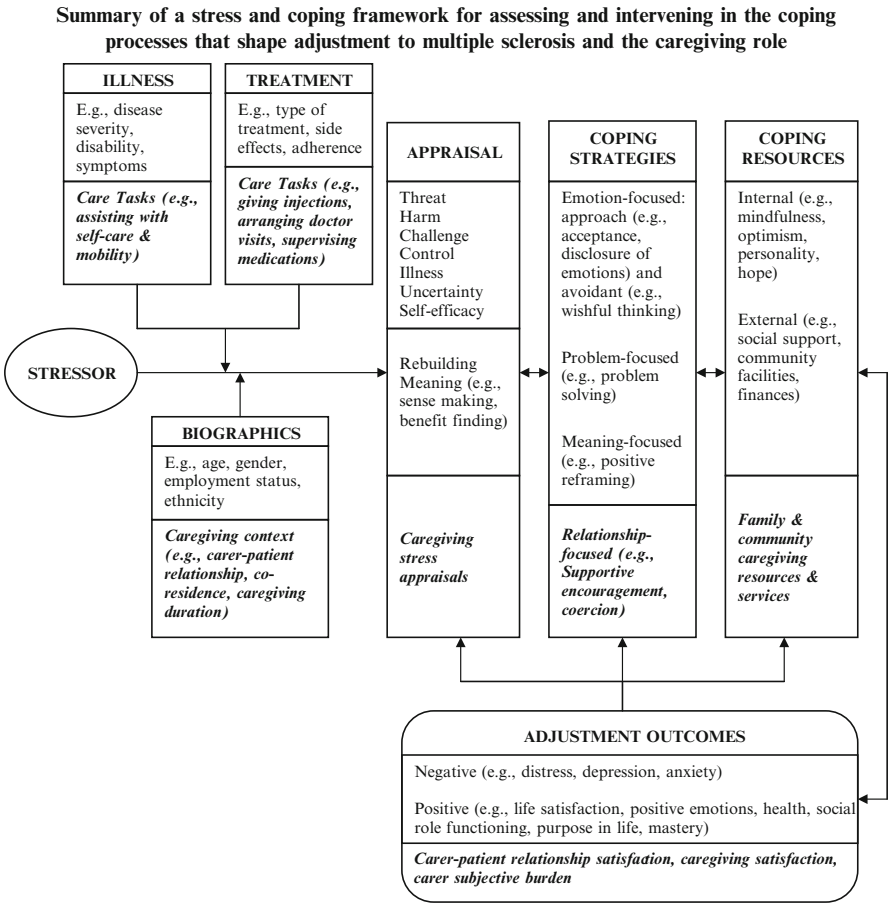

Fig. 21.3 Key generic variables applicable to both the person with MS and caregiver are depicted by regular font and caregiving specific variables are denoted by the *bolded* and shaded *italics* Adopted by permission of Oxford University Press. Pakenham (2012). Reprinted by permission of Oxford University Press, USA. [Figure 12.1, Page. 221]

that psychological intervention is beneficial. Howard et al. (2006) showed the value of therapeutic alliance in helping MS patients. Psychoeducation is useful in rehabilitation (Hughes et al. 2004), as is family intervention (Kreutzer and Taylor 2004).

21.8.3 Comment

The area of rehabilitation includes psychotherapy, so that it is useful to examine the predominant models in the field. The biopsychosocial, cognitive behavioral, positive psychology, social psychology, systems, coping, and related

ones are found both in the psychotherapy literature and the rehabilitation literature. However, there are rehabilitation-specific models, such as the ICF. Research in the area is accruing in support of the various models. However, treatment has common components over different psychological injuries and, moreover, the area needs integrated models. Also, evidence-based treatment is considered the gold standard by its advocates, but manualized and RCT research does impose limitations on generalization from the results obtained that requires care in thought and in application to the rehabilitation context. (See Straus et al. (2011) in support of the evidence-based approach and Guy et al. (2012) against it.)

Rehabilitation relates impairment to functional loss. The latter should never be determined by diagnosis, per se, or disorder attributed to the patient. Moreover, the DSM-IV-TR that is used as a basis of diagnosis of disorder is in flux, with the DSM-5 just published (American Psychiatric Association, December 1, 2013). There are slight changes to the criteria for PTSD (see Chap. 27), and major ones for chronic pain. The rehabilitation field should be wary of basing assessment and therapeutic decisions especially on this diagnostic manual.

21.9 Transdiagnostic and Unified Approaches to Psychotherapy

21.9.1 Models

In reviewing the schools of thought in psychotherapy, one of the more influential ones concerned the common factor, eclectic approach. For example, evidence-based research points to the effectiveness of patient-therapist factors (Duncan et al. 2010; Norcross 2011). Other integrative approaches include the biopsychosocial one (Melchert 2011) (also see the Method of Levels approach; Mansell et al. 2013). As for my own work in these regards, a good portion of the present chapter is on a transdiagnostic, integrated componential approach to psychotherapy (Young 2008a).

Two other major unified, transdiagnostic and integrative approaches to psychotherapy are (a) the unified protocol for transdiagnostic treatment of mood (see Table 21.2), which has been applied to the rehabilitative pain population, and (b) the stages of change model (see Table 21.3), which has been applied to psychological injury populations. The approaches are described, respectively, in (a) Barlow et al. (2011a, b); Ehrenreich-May and Bilek (2012); Ellard et al. (2010); and Fairchione et al. (2012), and (b) Norcross et al. (2011). They have been applied to the rehabilitative/psychological injury context, respectively, by Allen et al. (2012) and Tkachuk et al. (2012).

Table 21.2 Transdiagnostic therapeutic approach for anxiety/depression: sample program outline

Treatment week(s) and module	From workbook	From therapist guide
Week 1 Introduction	What are emotional disorders? Is this treatment right for you? Learning to record your experiences	Overview of general treatment format and procedures
Week 2 Module 1	Maintaining motivation and setting goals for treatment	Motivation enhancement for treatment engagement
Weeks 3 and 4	Understanding your emotions	Understanding emotions
Module 2	Recognizing and tracking your emotional responses	Recognizing and tracking emotional responses
Weeks 5 and 6 Module 3	Learning to observe your emotions and your reactions to your emotions	Learning to observe experiences
Weeks 7 and 8 Module 4	Understanding thoughts: thinking the worst and overestimating the risk	Cognitive appraisal and reappraisal
Weeks 9 and 10	Understanding behaviors 1: Avoiding your emotions	Emotion avoidance
Module 5	Understanding behaviors 2: Emotion-driven behaviors	Emotion-driven behaviors
Week 11 Module 6	Understanding and confronting physical sensations	Awareness and tolerance of physical sensations
Weeks 12–17 Module 7	Putting it into practice: Facing your emotions in the situations in which they occur	Interoceptive and situational emotion exposures
Week 18	Medications for anxiety, depression, and related emotional disorders	Medications for anxiety, depression, and related emotional disorders
Module 8	Moving on from here: Recognizing your accomplishments and looking to your future	Accomplishments, maintenance, and relapse prevention

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Table 21.3 Stages of change model

Stage	Explanation
Precontemplation	There is no intention to change behavior in the foreseeable future. Most patients in this stage are unaware or underaware of their problems. Families, friends, neighbors or employees, however, are often well aware that the precontemplators suffer from the problems.
Contemplation	Patients are aware that a problem exists and are seriously thinking about overcoming it but have not yet made a commitment to take action. Contemplators struggle with their positive evaluations of their dysfunctional behavior and the amount of effort, energy, and loss it will cost to overcome it.
Preparation	Individuals are intending to take action in the next month and are reporting some small behavioral changes ("baby steps"). Although they have made some reductions in their problem behaviors, patients in the preparation stage have not yet reached a criterion for effective action.

(continued)

Table 21.3 (continued)

Stage	Explanation
Action	Individuals modify their behavior, experiences, and/or environment to overcome their problems. Action involves the most overt behavior for a period from 1 day to 6 months.
Maintenance	People work to prevent relapse and consolidate the gains attained during action. This stage extends from 6 months to an indeterminate period past the initial action. Remaining free of the problem and/or consistently engaging in a new incompatible behavior for more than 6 months are the criteria for the maintenance stage.

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Other work on the model includes a resolution phase after the maintenance phase (e.g., Maddox 1995)

21.9.2 Research

Allen et al. (2012) showed the utility of the unified, transdiagnostic treatment approach with adolescent chronic pain patients having comorbid anxiety and depression. They emphasized the emotion regulation component of the treatment protocol. In their study with two case examples, they used a modified transdiagnostic approach (Allen et al. 2010) for adolescents in pain. Improvements were found in the two adolescents even at follow-up. As for mechanisms in the apparent success behind the treatment, it could target common underlying processes for pain and emotions. Or, core skills might be learned that could be applied to either aspect separately.

Tkachuk et al. (2012) found that among MVA survivors, the stages of change questionnaire for pain helped in predicting who would complete a functional rehabilitation program. The questionnaire was developed by Kerns et al. (1997) based on the stages of change model. The scores for the stages of contemplation and action were more clearly involved in the hierarchical regression results. Other data gathered in the study confirmed the utility of the questionnaire and its pain stages model. Note that Table 21.4 presents my own pain stages of change model. It is based on a dynamical systems model that I applied to lifespan development (Young 2011) and is related to the general stages of change model.

21.10 Chapter Conclusions

The present chapter has reviewed the major schools and approaches to psychotherapy in the rehabilitative/psychological injury context. It presented major efforts to create unified, transdiagnostic, integrative treatment protocols. It reviewed the

Table 21.4 Parallel five-step models of stages of change in therapy and in chronic pain

Stages of change in therapy	Stages of change in chronic pain
Contemplation	Coordination
Preparation	Hierarchization
Action	Systematization
Maintenance	Multiplication
Resolution	Integration

Adapted from Young (2011), based on Young (2008b). Adapted with permission of Springer Science + Business Media. Young (2008b); with kind permission from Springer Science + Business Media B. V. [Table 1, Page. 248]

Note. The stage model of therapy is presented in Prochaska et al. (1994) and Maddox (1995)

In the table, the steps that patients might go through as they develop chronic pain are provided. The five steps in this model are elaborated from the five developmental substages of Young's (2011) Neo-Piagetian developmental model. The model is a generic one that is applicable to any system undergoing change, and the change can be progressive or regressive, as exemplified by the entrenchment in chronic pain

evidence-based approach to treatment, which aims to manualize and standardize treatment.

However, there are limits to developing a unified, therapeutic protocol in the sense being described because of the enormous individual variability that patients express and the increasing intransigence presented by complex cases, such as polytrauma and extensive co-morbidity. In this regard, the componential approach of Young (2008a) has a certain merit. Moreover, the transdiagnostic, integrated biopsychosocial model seeks both general principles and individualized approaches to understanding both symptom expression and its treatment. In the rehabilitative/psychological injury context, the biopsychosocial approach should be combined with the forensic one to build toward an integrative model for work in the area (Young 2008a).

Another manner of building toward an integrative model for the area is to consider the systems model, given the range of components in the patient, actors, and agents in the system, and complexities in therapeutic models, schools, principles, and techniques. Moreover, work in the area requires a science-first, ethical approach that is impartial and comprehensive both in assessment and treatment. In these regards, Fig. 21.4 presents a broad model for therapy in cases of psychological injury, while considering the influence or role of law, as well. The model is not final, unified, or fully integrative, but it is transdiagnostic for different types of psychological injury, excluding the cognitive rehabilitation component in cases of TBI. It might prove useful in helping to see the larger picture in the rehabilitative and psychological injury population and its treatment needs and approaches. Also, the model might be useful to consider in other therapeutic contexts.

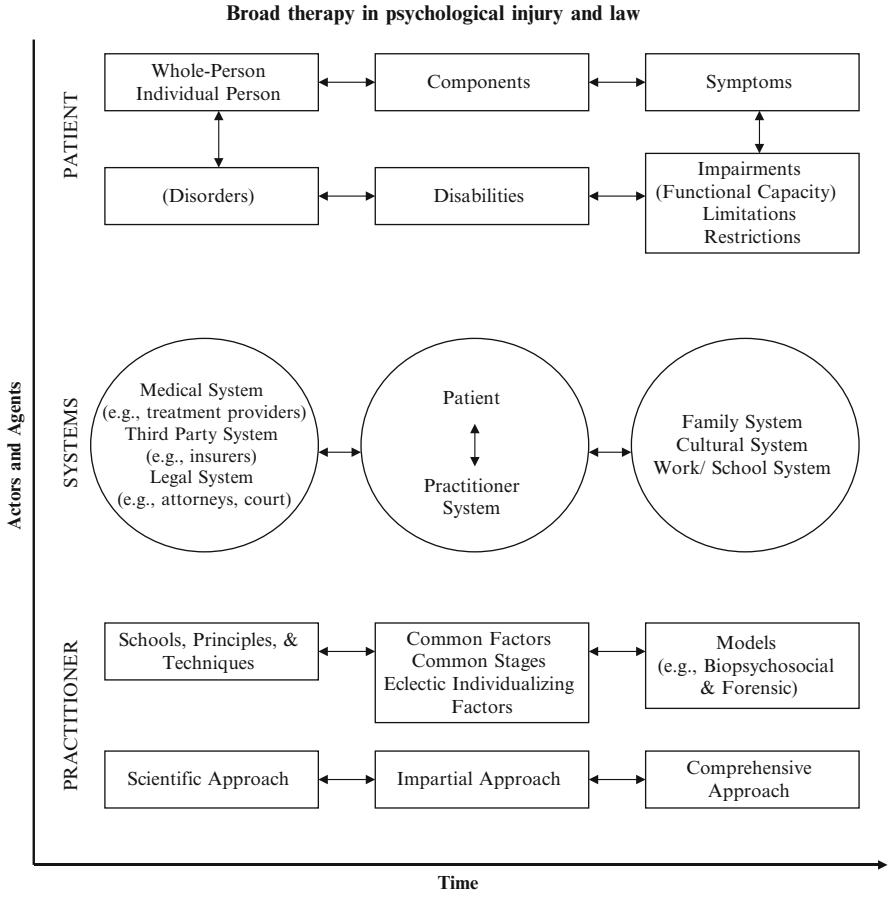

Fig. 21.4 The figure presents a preliminary broad, integrative psychotherapeutic and rehabilitation model for cases of psychological injury (e.g., pain, PTSD, MTBI, polytrauma). It is general enough to apply to any area of psychological practice. The figure includes the main actors and agents (circles) in the therapeutic relationship and associated network, centering on the patient and therapist (practitioner). The *top* rectangles of the figure represent a whole-person, componential approach to therapy and rehabilitation in which the individual's particular symptoms/impairments, and functional effects/disabilities are considered (not being disorder-focused). The *bottom* rectangles represent a broad approach to therapy and rehabilitation that is at once scientific (e.g., evidence-supported, scientifically-reasoned), impartial (e.g., monitored for compliance, mitigation of loss), and comprehensive (e.g., considers the full range of affected whole-person components; also considers all pre-existing, concurrent, and event, as well as unrelated factors, as found in a scientifically-informed, impartial, comprehensive assessment). The broad therapeutic approach is integrative in the sense that it considers the critical factors in the therapeutic process and also the range of models/schools/principles and specific techniques that could help, both as learned in education and training (graduate, continuing, reading) and as constructed individually through experience and reflective thought. The model includes considering of common foci (factors, stages) and also eclectic, individual ones from an overall biopsychosocial and forensic approach. Note that an appropriate broad therapy is a dynamic one, evolving with state-of-the-art scientific knowledge and practice considerations

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Chapter 22
Ethics in Psychological Injury and Law

22.1 Introduction

The chapter examines ethical issues in the field. To start the chapter, I provide an overview of the basic principles in the American Code of Ethics in Psychology (American Psychological Association [APA] 2002, 2010) as well as the Forensic Specialty Guidelines (APA 2013) and Persons with Disability Guidelines (APA 2012), leading to presentation of particular principles relevant to practice in the area of psychological injury. To date, there is no ethics code that includes ethical principles in this particular area and its relation to law, although generally ethics codes present principles that are general to all areas of psychology. Also, the first part of the chapter presents the major points of the guidelines for forensic mental health assessment (Heilbrun et al. 2009). The chapter then examines guidelines and ethics applicable to forensic neuropsychological practice. The work of Bush (2013) stands out in this regard.

The second half of the chapter considers the APA Handbook on ethics in psychology (Knapp et al. 2012a, b), especially the chapter by Kitchener and Kitchener (2012). Along with Cottone (2012), it discusses ethical decision making, in particular. This work prepares the way for my own model of ethical thought and ethical decision making. To conclude the present chapter, I develop a positive ethical and broad model of ethical thought and practice that is based on the primacy of good science, an unbiased attitude, and a comprehensive approach in assessment and practice. The model was created in the context of the area of psychological injury and law but is framed in general terms and can be applied to any area of psychology.

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Table of Terms and Sources

Abbreviation	Name	Source(s)
CARB	Computerized Assessment of Response Bias Test	Allen et al. (1997) and Conder et al. (1992)
EPPCC	Ethical Principles of Psychologists and Code of Conduct	American Psychological Association (2002)
RMFIT	Rey 15-Item Memory Test	Rey (1941)
TOMM	Test of Memory Malingering	Tombaugh (1996)
WMT	Word Memory Test	Green (2005)

22.2 Ethical Guidelines and Practice

Forensic Guidelines. The forensic specialty guidelines (American Psychological Association 2013) include principles related to disability evaluation and ethics (see Tables 22.1, 22.2, 22.3, and 22.4). The APA forensic specialty guidelines include the headings: (1) Responsibilities; (2) Competence; (3) Diligence; (4) Relationships; (5) Fees; (6) Informed Consent, Notification, and Assent; (7) Conflicts in Practice; (8) Privacy, Confidentiality, and Privilege; (9) Methods and Procedures; (10) Assessment; and (11) Professional and Other Public Communications.

The tables point out that forensic practitioners are obligated to strive for "accuracy, honesty, and truthfulness" in their various roles and to resist "partisan pressures." They need to be impartial and fair, unbiased and independent, and comprehensive and not misleading. They avoid or deal with conflicts of interest. Forensic practitioners consider scientific foundations for their opinions and testimony, using reliable and valid procedures and methods in every case, while acknowledging any limitations in these regards. The methods are not only appropriate but also they are multiple and corroborated to the degree possible. In their assessments, forensic practitioners acknowledge that evaluation results might be affected by factors such as response style, which includes malingering, and by litigation stresses. They understand that there are individual and group factors that affect test results and interpretations.

As for equivalent psychiatric ethical guidelines in forensic practice, Table 22.5 refers to the need for honesty and striving for objectivity. Evaluators need to conduct adequate evaluations and not "distort" their conclusions toward the needs of the referral source.

Forensic Mental Health Assessment. Other relevant recommendations for the forensic mental health evaluator can be found in Tables 22.6, 22.7, 22.8, 22.9, 22.10, 22.11, 22.12, and 22.13. In Tables 22.6, 22.7, 22.8, 22.9, 22.10, and 22.11, Heilbrun et al. (2009) describe principles of forensic mental health assessment. For example, they note the need for honesty and impartiality as well as being unbiased and avoiding the adversarial nature of the system. They recommend use of multiple sources of assessment information that are relevant and reliable (valid). It is important to assess response style and bias (in general, all instruments should be scientifically-determined to be reliable and valid). The relevant nomothetic research should be consulted. In interpreting data, scientific reasoning should be used. It can be concluded that all phases of the assessment process should be scientifically-informed.

Table 22.1 American Psychological Association Forensic Practice Guidelines: Responsibilities

Principle	Explanation
Integrity	Forensic practitioners strive for accuracy, honesty, and truthfulness in the science, teaching, and practice of forensic psychology and they strive to resist partisan pressures to provide services in any ways that might tend to be misleading or inaccurate.
Impartiality and fairness	When offering expert opinion to be relied upon by a decision maker, providing forensic therapeutic services, or teaching or conducting research, forensic practitioners strive for accuracy, impartiality, fairness, and independence (Ethical Principles of Psychologists and Code of Conduct Standard 2.01, American Psychological Association 2002). Forensic practitioners recognize the adversarial nature of the legal system and strive to treat all participants and weigh all data, opinions, and rival hypotheses impartially.
	When conducting forensic examinations, forensic practitioners strive to be unbiased and impartial, and avoid partisan presentation of unrepresentative, incomplete, or inaccurate evidence that might mislead finders of fact. This guideline does not preclude forceful presentation of the data and reasoning upon which a conclusion or professional product is based.
	When providing educational services, forensic practitioners seek to represent alternative perspectives, including data, studies, or evidence on both sides of the question, in an accurate, fair and professional manner, and strive to weigh and present all views, facts, or opinions impartially.
	When conducting research, forensic practitioners seek to represent results in a fair and impartial manner. Forensic practitioners strive to utilize research designs and scientific methods that adequately and fairly test the questions at hand, and they attempt to resist partisan pressures to develop designs or report results in ways that might be misleading or unfairly bias the results of a test, study, or evaluation.
Avoiding conflicts of interest	Forensic practitioners refrain from taking on a professional role when personal, scientific, professional, legal, financial, or other interests or relationships could reasonably be expected to impair their impartiality, competence, or effectiveness, or expose others with whom a professional relationship exists to harm (EPPCC Standard 3.06).
	Forensic practitioners are encouraged to identify, make known, and address real or apparent conflicts of interest in an attempt to maintain the public confidence and trust, discharge professional obligations, and maintain responsibility, impartiality, and accountability (EPPCC Standard 3.06). Whenever possible, such conflicts are revealed to all parties as soon as they become known to the psychologist. Forensic practitioners consider whether a prudent and competent forensic practitioner engaged in similar circumstances would determine that the ability to make a proper decision is likely to become impaired under the immediate circumstances.
	When a conflict of interest is determined to be manageable, continuing services are provided and documented in a way to manage the conflict, maintain accountability, and preserve the trust of relevant others (also see Section 4.02 below).

Table 22.2 American Psychological Association Forensic Practice Guidelines: Science

Principle	Explanation
Knowledge of the Scientific Foundation for Opinions and Testimony	Forensic practitioners seek to provide opinions and testimony that are sufficiently based upon adequate scientific foundation, and reliable and valid principles and methods that have been applied appropriately to the facts of the case. When providing opinions and testimony that are based on novel or emerging principles and methods, forensic practitioners seek to make known the status and limitations of these principles and methods.

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Table 22.3 American Psychological Association Forensic Practice Guidelines: Methods and Procedures

Method/principle	Explanation
Use of appropriate methods	Forensic practitioners strive to utilize appropriate methods and procedures in their work. When performing examinations, treatment, consultation, educational activities or scholarly investigations, forensic practitioners seek to maintain integrity by examining the issues or problem at hand from all reasonable perspectives and seek information that will differentially test plausible rival hypotheses.
Use of multiple sources of information	Forensic practitioners ordinarily avoid relying solely on one source of data, and corroborate important data whenever feasible (American Educational Research Association, American Psychological Association, and National Council on Measurement in Education 1999). When relying upon data that have not been corroborated, forensic practitioners seek to make known the uncorroborated status of the data, any associated strengths and limitations, and the reasons for relying upon the data.

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Consensus Statement. Heilbronner et al. and Conference Participants (2009) offer their recommendations for neuropsychologists in testing of response bias and malingering, but their recommendations apply to all forensic mental health assessments. The measures chosen should be psychometrically sound, reliable, valid, and multiple. The practitioner should evaluate for "real-world" activities. The assessment should consider inconsistencies and discrepancies. It is noted that the recommendations do not include specific instruments as gold standards nor do they describe definitive ways of detecting malingering. However, they do note that, as the amount and degree of results that are consistent with the presence of response bias increases, the evaluator's confidence in any conclusion offered increases, as well.

Table 22.4 American Psychological Association Forensic Practice Guidelines: Assessment

Principle	Explanation
Selection and use of assessment procedures	Forensic practitioners use assessment instruments whose validity and reliability have been established for use with members of the population assessed. When such validity and reliability have not been established, forensic practitioners consider and describe the strengths and limitations of their findings.
	When the validity of an assessment technique has not been established in the forensic context or setting in which it is being used, the forensic practitioner seeks to describe the strengths and limitations of any test results and explain the extrapolation of these data to the forensic context. Because of the many differences between forensic and therapeutic contexts, forensic practitioners consider and seek to make known that some examination results may warrant substantially different interpretation when administered in forensic contexts (American Educational Research Association, American Psychological Association, and National Council on Measurement in Education 1999).
	Forensic practitioners consider and seek to make known that forensic examination results can be affected by factors unique to, or differentially present in, forensic contexts including response style, voluntariness of participation, and situational stress associated with involvement in forensic or legal matters (American Educational Research Association, American Psychological Association, and National Council on Measurement in Education 1999).
Appreciation of individual differences	When interpreting assessment results forensic practitioners consider the purpose of the assessment as well as the various test factors, test-taking abilities, and other characteristics of the person being assessed, such as situational, personal, linguistic, and cultural differences that might affect their judgements or reduce the accuracy of their interpretations (EPPCC Standard 9.06). Forensic practitioners strive to identify any significant strengths and limitations of their procedures and interpretations.
	Forensic practitioners are encouraged to consider how the assessment process may be impacted by any disability an examinee is experiencing, make accommodations as possible, and consider such when interpreting and communicating the results of the assessment (American Psychological Association Task Force on Guidelines for Assessment and Treatment of Persons with Disabilities 2011).

Neuropsychological Ethics. Iverson (2006) provided factors to consider about ethics in neuropsychological disability evaluations, but his advice applies generally to forensic mental health disability evaluations. He considered it an ethical issue if the evaluator does not use well-researched and validated tests of response bias or effort. Evaluators should use them equally for plaintiff and defense cases and with equivalent ones chosen no matter what the referral source. They should be used the same way in every case, as well as being interpreted the same way in every case.

Table 22.5 Honesty and striving for objectivity as an ethical guide

Principle	Explanation
1	Should adhere to such principles when conducting evaluations, applying clinical data to legal criteria, and forming opinions.
2	The adversarial nature presents to the potential for unintended bias and the danger of distortion of opinion, which must be countered.
3	All forensic opinions/reports/testimony should be based on all available data are based on objectivity, soundness of procedure and, to the extent possible, verifying information/facts/"inferences"/impressions.
4	Mental health professionals should not distort their work toward the needs of the retaining party.

Adapted from American Academy of Psychiatry and the Law: Ethical Guidelines for the Practice of Forensic Psychiatry (2005)

Table 22.6 Principles of forensic mental health assessment: general

Principle	Explanation
1	Note differences between clinical and forensic areas
2	Obtain all required education, training, and experience for each aspect of one's practice
3	Do not practice outside of one's competence – in education, training, and experience – in one's areas of practice
4	Know the relevant legal, ethical, scientific, and practice sources about all aspects of FMHA (Forensic Mental Health Assessment)
5	Work with an honest approach/impartiality
6	In providing opinions, disclose all limitations and support
7	Control potential evaluator bias by monitoring case selection
8	Also engage in unbiased continuing education and consultation with unbiased colleagues
9	Know all relevant aspects of the legal system, especially communication, discovery, deposition, and testimony
10	Avoid being adversarial
11	Defend preferred opinions competently

Adapted from Heilbrun et al. (2009)

Table 22.7 Principles of forensic mental health assessment: preparation

Principle	Explanation
1	Identify all relevant forensic issues
2	Accept referrals only within area of competence
3	Decline referrals when evaluator partiality is expected
4	Clarify evaluator role with referral source
5	Clarify financial agreements
6	Obtain all appropriate authorizations
7	Avoid being both therapist and forensic evaluator
8	Determine the particular role expected in the assessment
9	Select the most appropriate model to guide data collection, interpretation, and conclusions

Adapted from Heilbrun et al. (2009)

Table 22.8 Principles of forensic mental health assessment: data gathering

Principle	Explanation
1	Inform of purpose and/or obtain appropriate authorization before starting.
2	Establish whether the evaluee understands the purpose of the evaluation.
3	Does he/she grasp the associated limits on confidentiality.
4	Evaluate in conditions that are quiet, private, and distraction-free.
5	Use multiple sources of information for each aspect being evaluated.
6	Review the relevant background information; actively seek missing relevant information.
7	Use legal concepts of relevance and reliability (psychological validity) as guides for seeking information and selecting data sources.
8	Obtain relevant history.
9	Evaluate in relevant, reliable, and valid ways.
10	Evaluate legally-relevant behavior.

Adapted from Heilbrun et al. (2009)

Table 22.9 Principles of forensic mental health assessment: data interpretation

Principle	Explanation
1	Use third party information to evaluate response style.
2	Use psychometric testing (preferentially) to assess response style.
3	Use case-specific (idiographic) evidence in evaluating evaluee condition, functional abilities, and any causal connection to the event at issue.
4	Use population level (nomothetic) evidence, too.
5	Use scientific reasoning in establishing any causal connection between evaluee condition and functional abilities.
6	Establish if there are constraints in answering the ultimate legal question. If not, always use a thorough process, using all relevant data and with clear reasoning, being prudent not to impinge on the domain of the legal decision maker.
7	Be comprehensive, accurate, science-based, and impartial in describing findings and limits, so that they can withstand scrutiny under cross-examination.

Adapted from Heilbrun et al. (2009)

Table 22.10 Principles of forensic mental health assessment: reports

Principle	Explanation
1	Note referral question
2	Attribute information to sources.
3	Without compromising the science and data involved, use plain language; avoid technical jargon.
4	Write report in sections, according to accepted model and procedures.
5	In defending conclusions, show primacy of ones offered relative to others possible or offered in other reports/testimony.

Adapted from Heilbrun et al. (2009)

Evaluators should be aware that passing these tests does not necessarily exclude the possibility of malingering or that failing one does not automatically mean that malingering is present. Whatever interpretation is given to results of such testing,

Table 22.11 Principles of forensic mental health assessment: testimony

Principle	Explanation
1	Prepare
2	Communicate effectively
3	Base testimony on all relevant data gathered
4	Control the message without altering it

Adapted from Heilbrun et al. (2009)

appropriate evidence should be provided with not more or less for different interpretive possibilities such as "a cry for help" or malingering. In arriving at their conclusions, evaluators should use tests competently and responsibly, while knowing well not only the test manuals but also the research literature.

Bush (2013) explicated clearly the ethical requirements in conducting neuropsychological evaluations that include TBI (traumatic brain injury). In describing the relevant ethical concepts applicable to the field (nonmaleficence, beneficence, respect for autonomy, justice, and general beneficence), he referred to Beauchamp and Childress (2009) and to Knapp and VandeCreek (2006). Neuropsychologists should be aspiring to "positive" ethics, which are personal and proactive. Bush (2013) developed a model of positive ethics that he referred to as the "4 A's" of ethical practice and decision-making. He defined the 4 A's as: (a) trying to *anticipate* and prepare for ethical challenges and issues; (b) attempting to *avoid* ethical misconduct; (c) *addressing* ethical challenges and issues that might arise or that are anticipated; and (d) committing to *aspire* to the highest standards of ethics in one's practice.

In elucidating the various ethical practices, Bush (2013) referred to the American Psychological Association (2002) Ethics Code. First, practitioners in the field need to adhere to ethical rules related to informed consent. Second, they need to be ethical in their selection of tests and procedures. The tests and procedures need to be "sufficient to substantiate" evaluators' findings [according to me, the ethical rule should state that professional opinions should be substantiated rather than findings].

I consider point 9.02 on Use of Assessments important enough to quote it in full:

(a) Psychologists administer, adapt, score, interpret or use assessment techniques, interviews, tests or instruments in a manner and for purposes that are appropriate in light of the research on or evidence of the usefulness and proper application of the techniques.

Note that this ethical point in the APA code of ethics refers to the appropriate use of tests in light of the research literature or other relevant evidence. A related ethical point in the code is that evaluators should not use obsolete tests and test results that are outdated.

Ethical point 9.06 concerns interpreting assessment results. It indicates that interpretation of test results and evaluations need to acknowledge "any significant limitations." Bush (2013) noted that there is no agreement among neuropsychologists about which statistical method to use in impairment determinations and, moreover, the disagreements extend into the meaning of findings in evaluations. Among other

Table 22.12 Consensus recommendations for practitioners related to assessment of response bias and malingering related to abilities

Recommendation	Explanation
1	Use of psychometric indicators is the most valid approach to identifying neuropsychological response validity
2	Stand-alone effort measures and embedded validity indicators should both be employed
3	In their reports, neuropsychologists list the symptom validity measures and procedures that are utilized in evaluations. Clinicians explain the bases of their opinions to the extent required by the forensic context, while avoiding inclusion of specific information pertaining to these measures that could preclude valid future use
4	The evaluation of self-reported symptoms is best accomplished using psychometric instruments containing proven validity measures
5	Substantial inconsistencies between test data and "real-world" activities and between self-report and historical records should be considered. When integrating various sources of information, clinicians should be mindful of incomplete or false history, which when substantially present may reflect negative response bias
6	As risk relates to the setting in which the evaluation is taking place, clinicians should be mindful of the larger context of the evaluation and the potential for litigation to develop
7	As with all types of psychological assessment, neuropsychologists routinely are expected to encourage optimal effort as a means of attaining best performance
8	Substantial discrepancy between test results and those known to occur with the alleged medical or psychiatric disorder should raise concern regarding the present of insufficient effort, response bias, and malingering
9	Because effort can vary during an evaluation, if possible clinicians should use multiple validity measures covering multiple domains distributed throughout the testing. If the circumstances are such that testing must be brief (e.g., Social Security disability evaluations), minimally, embedded effort indicators should be examined. When multiple validity indicators cannot be relied on, it is the clinician's responsibility to document the reasons and explicitly note the interpretive implications
10	As the number and extent of findings consistent with the absence or presence of response bias increases, confidence in conclusions regarding the validity of the examination is strengthened accordingly
11	Clinicians should be cognizant regarding when examinee characteristics do not match those of effort test-normative and comparison samples, and should adjust interpretations and choose measures accordingly
12	When a psychological disorder (e.g., depression) *and* ability deficits (e.g., memory) are claimed, clinicians should administer measures that can evaluate response bias related to both
13	Serial evaluations can be particularly helpful in discriminating between genuine injury and unrealistic performances or variable self-report of deficits and disabilities that reflect variable effort and/or response bias

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Table 22.13 Ethical issues and considerations in disability evaluations

Principle	Explanation
Failing to use well-researched effort tests	This concern, of course, is not limited to effort testing. It relates to assessment in general. Using tests with a poor or limited empirical foundation might significantly adversely affect (a) the accuracy of the conclusions drawn (e.g., poor effort or adequate effort) and (b) the usefulness of this information to the various parties involved.
Using effort tests only for defense cases	A clinician who uses these tests for defense cases or disability evaluations, but who chooses to omit them from plaintiff cases, is inviting criticism of bias.
Using more or fewer effort tests, systematically, depending on whether you were retained by the defendant or the plaintiff	For example, giving one effort test, such as the TOMM, during plaintiff evaluations and not examining performance patterns on other tests. In contrast, for defense evaluations, the clinician might give three effort tests and examine performance patterns on multiple tests.
Using different effort tests depending on which side retains you	For example, using the RMFIT for plaintiff cases and the WMT and the CARB for defense cases. The former test has lower sensitivity, therefore, the clinician would be systematically, with forethought, reducing the likelihood of detecting poor effort.
Using effort tests differently depending on which side retains you	An obvious example would be to give simple effort tests at the end of the evaluation or after much more difficult tests at the end of the evaluation or after much more difficult tests, such as a battery of memory tests.
Warning or prompting patients immediately before taking an effort test	It is appropriate to warn patients that methods for detecting exaggeration and poor effort are part of the evaluation process (Slick and Iverson 2003). It is not, of course, appropriate to subtly or directly warn or prompt the patient immediately before the test is administered (e.g., by saying "Most people find this test very easy" or "Be sure to try your best on this test" or "Remember, we have tests designed to detect poor effort"). Warning a patient immediately before taking an effort test can greatly reduce its sensitivity.
Interpreting effort test results differently, systematically, depending on which side retains you	The most extreme examples would be to systematically interpret effort test failure as a cry for help or "distraction due psychological factors or pain" for plaintiff cases and due to "malingering" for defense cases.
Assuming that someone who passes an effort test gave his or her "full," "complete," or "best" effort during the evaluation	There are four reasons why this assumption might not be correct. First, passing an effort test simply means the person passed the effort test. It does not mean that the person gave his or her best effort during the neuropsychological evaluation. This generalization from adequate effort on a single test to best effort across many tests is not appropriate. It is usually best to conceptualize a person's effort as "adequate" or not. The clinical inference of adequate effort is made on the basis of converging evidence (e.g., careful behavioral observations and performance on one or more effort tests). Second, in nearly every analog malingering study, there is a subset of participants who are deliberately faking deficits during testing but who are not detected with the procedure under study. False-negative rates can be quite high on tests designed to detect poor effort because researchers tend to select cutoff scores designed to minimize false positives. Third, it is entirely possible that a person chooses not to underperform, or underperforms to a small degree, on that specific test; whereas, on other tests that poor effort might be more prominent. Finally, it is possible that attorney coaching could affect how a patient performs on a specific test.

(continued)

Table 22.13 (continued)

Principle	Explanation
Interpreting effort test failure or exaggerated symptoms, in isolation, as malingering	Effort tests do not measure malingering, per se; they measure behavior that is associated with malingering. Malingering should not be inferred from a single test; rather this conclusion is derived from converging evidence that the person was deliberately exaggerating symptoms and/or performing poorly on testing to increase the probability of obtaining an obvious external incentive. It is possible that a person scoring below an empirically derived cutoff on a single test designed to detect poor effort could (a) be a false positive or (b) have performed poorly, even deliberately, for reasons other than those associated with malingering (e.g., general uncooperativeness or serious psychiatric disturbance). The clinical inference of malingering is complex and requires multiple sources of converging evidence. Often this converging evidence is not available, or when it is the inference of malingering might simply be too provocative and pejorative for the clinician's comfort. Under these circumstances, it is appropriate to discuss exaggeration and poor effort as behavior without making the inference of malingering. The clinician should consider explicitly listing all reasonably possible diagnoses or explanations that could account for the behavior and making clear the evidence that favors one more strongly than another. It might be necessary to point out that there is insufficient evidence insufficient evidence to decide among two or more alternative diagnoses or explanations. It can be helpful to use the definitional descriptors for effort (i.e., adequate effort, possible poor effort, probable poor effort, definite poor effort) and exaggeration (i.e., underendorsement of symptoms and problems, accurate reporting, possible exaggeration, probable exaggeration, and definite exaggeration). Future research will bolster and further clarify the psychometric and decision-making foundations for the definitional descriptors.
Inappropriately interpreting exaggeration as a cry for help	The underlying motivation for exaggeration (or poor effort during testing) can be very difficult to infer. Clinicians should be careful to not simply use a cry for help as a stock standard inference for the cause of the exaggeration. This explanation for the exaggeration, like any explanation (including malingering), should be based on clear and converging evidence. It could be considered biased if a clinician has a much lower threshold, and relies on much less evidence, to attribute exaggeration to a cry for help versus deliberate misrepresentation of symptoms and problems to influence the results of a forensic evaluation.
Competent, responsible, informed use of tests	As a general rule, one cannot simply rely on test manuals. The literature on specific tests is constantly evolving; clinicians should actively keep up with the literature for the specific tests used.

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Abbreviations. TOMM Test of Memory Malingering (Tombaugh 1996), *RMFIT* Rey 15-Item Memory Test (Rey 1941), *WMT* Word Memory Test (Green 2005), *CARB* Computerized Assessment of Response Bias Test (Allen et al. 1997; Conder et al. 1992)

Table 22.14 Ethical decision-making model: A 12-point approach

Point	Description
1	Describe the ethical problem/dilemma
2	Significance of the context/purpose of the service
3	Needs/roles of the evaluee/family
4	Obligations owed to involved parties (e.g., child/adolescent, parents, retaining party, trier of fact)
5	Ethical/legal resources used/needed
6	Are personal beliefs/values affecting decision-making process and decisions?
7	Possible solutions to the ethical problem/dilemma
8	Likely consequences of each possible solution
9	Best course of action
10	Outcome
11	Better solution needed (different modified)?
12	Document ethical decision-making process throughout

Adapted from Bush et al. (2012), based on Bush and MacAllister (2010)

disagreements are ones related to the meaning of SVT (symptom validity test) results in assessments, which Bush noted usually relates to the nature of the referral source (plaintiff vs. defense). To help resolve this ethical issue, Bush (2013) recommended use of reliable and valid approaches in neuropsychological assessment that meet *Daubert* (1993) standards for admissibility to court.

Bush (2013) considered other more specific aspects of ethics in SVT in MTBI (mild traumatic brain injury). He indicated that there is no agreement on cut-scores to define impairment; for example, test index criteria may be set at one or two standard deviations. Moreover, evaluators differ in the extent that they inform evaluees about the nature of SVTs. Bush maintained that informing evaluees that symptom validity testing is difficult, even when objectively it is not, does not constitute violation of ethical standards. Also, evaluators typically do not tell evaluees about the purpose of SVTs. He reasoned that without this type of deception valid results would not be obtained. For a clear exposition of Bush's ethical decision-making model (Bush et al. 2012), see Table 22.14.

Other ethical issue that were raised by Bush (2013) concerned evaluator deception, evaluator bias, and boundaries of competence. To conclude, Bush recommended that neuropsychologists should maintain the highest standards of practice in dealing with ethical issues and challenges. I would add that this approach would help their practices prosper on average over the long term.

Disability Guidelines. Tables 22.15, 22.16, 22.17, and 22.18 offer pertinent information for ethical practice in the area of psychological injury. First, Table 22.15 presents guidelines for working with persons with disability. The ones that are most important for the present book concern those on testing and assessment.

APA Principles. Table 22.16 describes the five principles at the base of the APA ethics code (2002, 2010). Other codes (e.g., Canadian Psychological Association [CPA] 2000) have different principles, but the APA's is quite inclusive.

Table 22.15 Guidelines for Assessment of and Intervention with Persons with Disability

Guideline	Explanation
Disability awareness, training, accessibility, and diversity	
1	Psychologists strive to learn about various disability paradigms and models and their implications for service provision.
2	Psychologists strive to examine their beliefs and emotional reactions toward various disabilities and determine how these might influence their work.
3	Psychologists strive to increase their knowledge and skills about working with individuals with disabilities through training, supervision, education, and expert consultation.
4	Psychologists strive to learn about federal and state laws that support and protect people with disabilities.
5	Psychologists strive to provide a barrier-free physical and communication environment in which clients with disabilities may access psychological services.
6	Psychologists strive to use appropriate language and respectful behavior toward individuals with disabilities.
7	Psychologists strive to understand both the common experiences shared by persons with disabilities and the factors that influence an individual's personal disability experience.
8	Psychologists strive to recognize social and cultural diversity in the lives of persons with disabilities.
9	Psychologists strive to learn how attitudes and misconceptions, the social environment, and the nature of a person's disability influence development across the life span.
10	Psychologists strive to recognize that families of individuals with disabilities have strengths and challenges.
11	Psychologists strive to recognize that people with disabilities are at increased risk for abuse and address abuse-related situations appropriately.
12	Psychologists strive to learn about the opportunities and challenges presented by assistive technology.
Testing and assessment	
13	In assessing persons with disabilities, psychologists strive to consider disability as a dimension of diversity together with other individual and contextual dimensions.
14	Depending on the context and goals of assessment and testing, psychologists strive to apply the assessment approach that is most psychometrically sound, fair, comprehensive, and appropriate for clients with disabilities.
15	Psychologists strive to determine whether accommodations are appropriate for clients to yield a valid test score.
16	Consistent with the goals of the assessment and disability-related barriers to assessment, psychologists in clinical settings strive to appropriately balance quantitative, qualitative, and ecological perspectives and articulate both the strengths and limitations of assessment.
17	Psychologists in clinical settings strive to maximize fairness and relevance in interpreting assessment data of clients who have disabilities by applying approaches which reduce potential bias and balance and integrate data from multiple sources.

(continued)

Table 22.15 (continued)

Guideline	Explanation
Interventions	
18	Psychologists strive to recognize that there is a wide range of individual response to disability, and collaborate with their clients who have disabilities, and when appropriate, with their clients' families to plan, develop, and implement psychological interventions.
19	Psychologists strive to be aware of the therapeutic structure and environment's impact on their work with clients and disabilities.
20	Psychologists strive to recognize that interventions with persons with disabilities may focus on enhancing well-being as well as reducing distress and ameliorating skill deficits.
21	When working with systems that support, treat, or educate people with disabilities, psychologists strive to keep the clients' perspectives paramount and advocate for client self-determination, integration, choice, and least restrictive alternatives.
22	Psychologists strive to recognize and address health promotion issues for individuals with disabilities.

Table 22.16 General principles in APA ethics code

	Principle	Explanation
A.	Beneficence/Nonmaleficence	Do good/not harm
B.	Fidelity/Responsibility	Establishing trust with clients/others with whom one works
C.	Integrity	Emphasize accuracy/honesty/truthfulness
D.	Justice	Concerns fairness, equal access and quality in services offered
E.	Respect for People's Rights/Dignity	Respect (a) "the dignity/worth of all people" and (b) "the rights of individuals to privacy/confidentiality/self-determination"

Adapted from Behnke and Jones (2012)

Table 22.17 Assumptions that help ethical practice

Assumption	Explanation
1	Ethics – a continuously active, personally responsible process with constant awareness/questioning
2	Knowledge of formal ethical codes is important, but cannot replace an active, thoughtful, creative approach
3	Relevant legislation/case law/other legal standards also important, but cannot dictate ethical responsibilities
4	No matter one's commitment to ethics, keep in mind each of us is fallible
5	Moreso than is the case for others, we need to question our own beliefs, assumptions, and actions
6	It is harder and more helpful to question ourselves about our casual, take-for-granted certainties than new uncertainties
7	Ethical dilemmas often arise without clear and easy answers

Adapted from Pope and Vasquez (2011)

Table 22.18 Ethical issues in forensic psychological practice

General	Forensic mental health practice
Who is the client?	Enhanced scrutiny
Working for the court	Transparency
Pro *se* litigants	Examination of plausible rival hypotheses
Informed consent	Impression management
Confidentiality and privilege	Scientific responsibility
Competence	Bias
	Conflict of interest and professional boundaries
	Professional responsibility
	Resisting ethical compromise
	Record keeping

Adapted from Gottlieb and Coleman (2012)

Other Foundations. Table 22.17 presents assumptions helpful for ethical practice. Table 22.18 presents ethical issues that arise in forensic psychological practice.

Conclusion. Martindale and Gould (2013) examined ethics in forensic practice from the point of view of pertinent rules, as per the APA's forensic specialty guidelines (APA 2013). It is not surprising that they first discussed adversarial roles, ethics, and advocacy. Some examples of ethical issues provided including ignoring discrepant data and suppressing relevant data or withholding data. Others included not acknowledging limitations in data gathered or in interpretation of data. Ethical decision making should be documented by careful notes, and ethical ambiguities dealt with. At the same time, Martindale and Gould (2013) concluded that the APA's ethical code itself needs improvement.

22.3 Ethical Thought and Decision Making

22.3.1 Introduction

The handbook of the American Psychological Association (APA) on ethics in psychology (Knapp et al. 2012a, b) offers an excellent treatment of the issues in the field, and in the following I review and comment upon select chapters applicable to the area of psychological injury and law. I review both chapters general to psychology and one on ethics in forensics.

22.3.2 Ethical Concepts

Kitchener and Kitchener (2012) examined the foundations of ethical thought and practice in psychology. Psychologists often confront ethical situations and dilemmas

in their practice, research, and teaching. They need professional codes and guidelines to help navigate these issues and dilemmas, but is there a role for personal values and judgments and law in ethical decision making, and are the existing professional codes justifiable and adequate? Briefly, codes such as the APA's should not be used as the sole source in ethical decision making, although they do offer a compendium of core values, moral rules, and standards that members of the profession are obligated to follow in their professional work. What they lack is a cohesive unifying ethical theory underscoring them, although they are governed by mid-level principles.

Ethical codes might express the following inadequacies. Some of the APA ethics codes' concepts and propositions are not stated clearly or are ambiguous or vague. It is incomplete; no code can cover all contingencies. There are internal inconsistencies. It conflicts with other professional codes. It conflicts with some laws or other ethical sources (e.g., religion). Therefore, individual judgment, interpretation, common sense, and wisdom are required as much as professional codes in ethical decision making. Moreover, the psychologist needs an appreciation of broader ethical conceptualizations and needs to develop moral predispositions.

Ethics is not simply determining right from wrong; for example, there are individual and group differences in such judgments. Four primary notions constitute the basic problems or questions of ethics – obligation, moral value, rights, and justice. Obligation concerns what one ought to do and the target of our obligations. Moral value concerns what is held out as morally good. Rights involve the nature, extent, and justification of the moral rights of individuals. Justice concerns fairness, equality, responsibility, blame, and punishment, and the source of just actions (e.g., institutional policy, law).

Ethical theory, especially normative ethics, should help answer these ethical problems. Normative ethics concerns which moral ideas are better than others, or worth holding, and also why this might be so. Meta-ethics is also important to consider, according to Kitchener and Kitchener. It concerns "how one should do ethics," for example, what type of reasoning should be deployed to support an ethical argument.

Normative ethics is an area marked by differing approaches and issues. These include: (a) ethical egoism vs. altruism, (b) relativism vs. absolutism, (c) skepticism vs. acceptance of moral principles as existing, (d) subjectivism vs. objectivism, (e) hedonism vs. higher-order motivations, (f) naturalism vs. conventionalism, about whether ethical principle are natural kinds or socially constructed, and (g) consequentialism vs. deontology, which concerns whether there are fundamental obligations that need to be followed no matter what the consequences, good or bad, given the inherent properties of the actions involved. Many of these different issues involve different approaches toward balancing the individual and society in terms of ethical and moral questions and answers. How ought one behave and choose among alternatives? Are norms in these regards legitimate and are deviations from them acceptable?

Normative ethics has a history of theory construction dating to the Greeks. Utilitarianism developed after the Middle Ages, and philosophers who addressed

ethics from this framework were consequentialists (Bentham, Mill), which led to "rule utilitarianism" and its application to professional ethics codes. In contrast to this approach, Kant developed a deontological view that there are absolute, unconditional duties or prohibitions. The deontological – consequentialism split reflects the empirical – rational one that marked intellectual debate at that time. Kant described the categorical imperative and basic duties while Ross (1930) referred to multiple principles and "prima facie" duties, acknowledging they could be in conflict. Rawls (1971) referred to Kantian contractualism. Finally, recent neofeminist ethics emphasizes an activist social justice, expanding beyond ethics codes.

Kitchener and Kitchener (2012) next distinguished between ethical codes and principles. The former might include entries that are in conflict, there might not be an entry that applies to a particular situation, etc. Then, professionals need to consider overlying ethical principles in their decision making, and normative ethics provides the bridge that examines the theories in the area.

22.4 Ethical Decision Making

Ethical decision making concerns determining what one ought to do and justifying the course taken. Kitchener and Kitchener (2009, 2012) have proposed a multilevel model of ethical decision making and justification (see Fig. 22.1). In the model, first, there is an immediate level of particular concrete moral behavior and judgment made in a particular case (situation) that typically is relatively automatic (ordinary moral sense, sensibilities, virtues, derived from learning and our moral character). The higher level involves four tiers or sublevels in critical, evaluative reflection: rules (code), principles, theory, and meta-ethics. Principles are more general (fundamental, aspirational) than rules, which can be gathered into codes, and they provide guidelines. Codes concern issues such as informed consent, confidentiality, privacy, dual relationships, and conditional deception. In the APA Ethics code (2002, 2010), five principles are meant to subsume the ethical rules provided (beneficence, nonmaleficence, autonomy (respect), justice, and fidelity; see Table 22.16). Theories provide grounding for moral principles (e.g., the normative theories of utilitarianism, deontology, virtue, contractarianism, natural law, natural rights, perfectionism, care ethics). However, they become difficult to use in ethical decision making in complex situations in which principles appear in conflict. Meta-ethics concerns reflection on lower levels about their adequacy. For example, one could ask at this level which ethical theory to choose for use in decision making. How could one rationally justify a moral claim? The authors support a balancing approach (Rawls 1971) of finding the best fit of the various theories and principles.

In terms of the five principles in the APA ethics code, nonmaleficence is considered prima facie. However, Kitchener and Kitchener (2012) noted that the concept is vague and ambiguous because harm in the short term might be justifiable even if regrettable. Psychologists need to undertake a cost-benefit analysis of beneficence and nonmaleficence in arriving at ethical decisions. Autonomy refers to respect, and an example

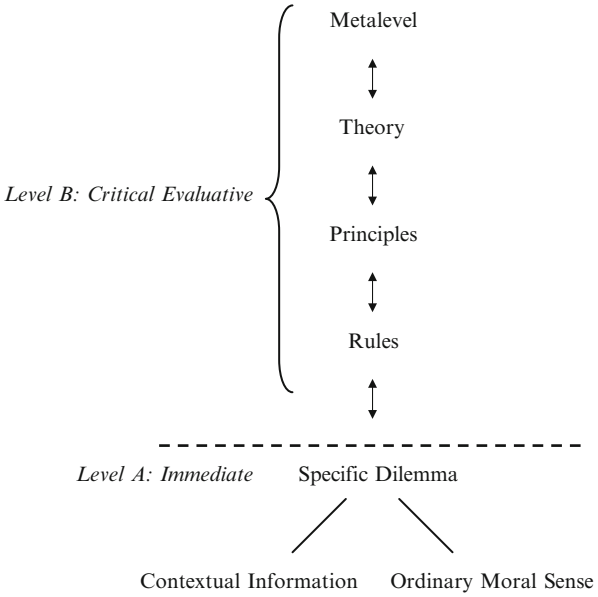

Fig. 22.1 A model of ethical decision-making
The figure presents a model of ethical decision-making that moves from the case to critical evaluation. The latter involves considering hierarchically ethical rules, principles, theory, and meta-ethics
Adapted from Kitchener and Kitchener (2012), based on Kitchener (1984) and Kitchener and Kitchener (2009)

relates to getting voluntary informed consent for participation. Fidelity refers to the fiduciary relationship with clients and involves trust. Justice refers to fairness.

Ethical methodology essentially refers whether one should use (a) a top-down deductive logic in ethics, based on concepts, (b) a bottom-up inductive one, based on cases, or (c) a combined approach, which the authors favor. The latter approach is akin to Rawls's (1971) balancing, equilibrium approach.

Kitchener and Kitchener (2012) and colleagues (King and Kitchener 1994; Kitchener and King 1981; Kitchener et al. 2006) presented a hierarchical model on the development of reflective judgment that applies to the ethical context. The model includes three phases (pre-reflective, quasi-reflective, reflective) that develop from childhood to adulthood within which are embedded seven stages or levels. The stages in the Kitchener model correspond to those of the Neo-Piagetian model of Fischer and Bidell (2006) and also to the one of Harter on stages in development of the self (Harter 2006). In the penultimate stage, which corresponds to the development of Fischerian abstract systemic principles, the person can make genuine reflective judgments on the reasonableness of evidence and solutions, and keep monitoring them. Beliefs are justified based on multiple relevant considerations, and defended accordingly. The model not only applies to the development of epistemological

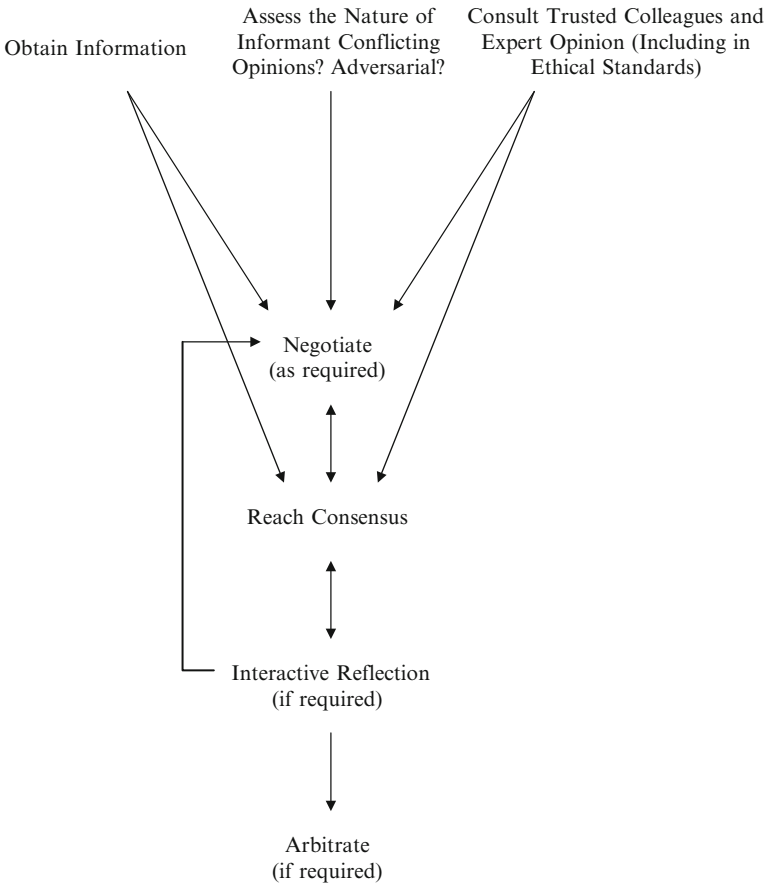

Fig. 22.2 The social process in constructing an outcome for an ethical dilemma
The figure presents a model of ethical decision-making that includes interactive reflection, similar to the model of Kitchener and Kitchener (2012), but in dialogue
Adapted from Cottone (2001, 2012)

assumptions in the intellectual domain but also to epistemological reasoning in the moral domain (but not the development of moral judgments). Making ethical decisions does not simply involve following rules, codes, or even principles and theories. The person must be actively involved and use reflective processes, and wisely so. The authors concluded that reflective ethical decision making is a practical skill that develops to maturity in engagement in particular contexts.

Note that Cottone (2012) also presented a model of ethical decision-making (see Fig. 22.2). It is based on consultation, negotiation, and reaching a consensus before interactive reflection is called into play. The end step might include arbitration.

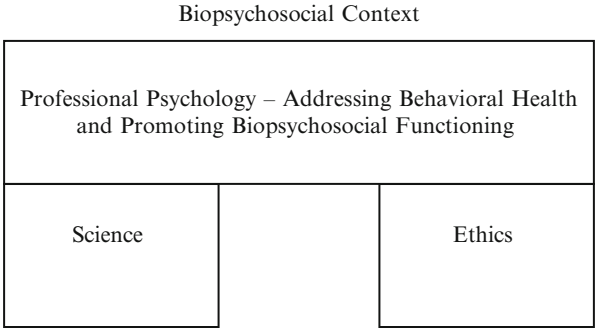

Fig. 22.3 A unified conceptual framework for professional psychology
The professional practice of psychology rests on scientific knowledge of human psychology and on professional ethics
Adopted with permission of Elsevier. Reprinted from Melchert (2011), Copyright (2011), with permission from Elsevier. [Figure 7.2, Page. 105]

Also, Cottone (2012) indicated that ethical decision-making does not only consider principles but also the person (virtue ethics) and the context (relational ethics). He supported the latter model, in particular.

As for stage models of ethical decision-making that influenced Cottone and Hare (1991) proposed a model involving intuitive thought and critical evaluation. He pointed out this resembles Kahneman's (2003) distinction between a System 1 intuition in making judgment and choice and a System 2 logical thought that is more advanced and deliberate.

22.5 Ethical Practice

Kerkhoff and Hanson (2012) also considered ethics in psychological practice. Like Cottone (2012), they considered diversity an important ethical axis. They addressed core professional competencies the mastering of which help promote ethical practice. Similarly, Stiers and colleagues considered education and training guidelines in rehabilitation psychology (Stiers et al. 2012; Stiers and Nicholson Perry 2012). Hanson and Kerkhoff (2011) advocated using the APA ethics code as a framework for foundational competency in rehabilitation psychology. Similarly, Melchert (2011) emphasized the equal footing of science and ethics in their unified conceptual framework for professional psychology (see Fig. 22.3). This speaks to a fundamental assumption of the present book.

Figure 22.3 highlights the importance of knowledge of science and of ethics in professional psychological practice. It proposes a unifying psychological approach – the biopsychosocial model. This is quite consistent with the approach of the present book.

22.6 Broad Ethics: A Model for Psychological Injury and Law

In the following, I attempt an integration of some of the major themes in ethical guidelines/practice and thought/decision-making that have been presented in this chapter. The model especially respects Melchert's (2011) model for conceptually unifying professional psychology on the foundation of science and ethics.

Figure 22.4 represents the cyclical growth of continued and dynamical ethical learning engagement, reflection, and practice. It has been constructed for the area of psychological injury and law but is general enough to apply to any area of psychological practice. The mental health professional begins a career path in graduate or professional school and learning (education, training), and continues in continuing education workshops, courses, diplomas, etc. The person acquires knowledge in mental health and related disciplines, such as psychology and psychiatry. These are scientific disciplines, and the person also acquires ethical knowledge, including of rules, regulations, guidelines, and codes that govern practice in the area. The person might want to become a clinician, researcher, or educator, or engage in various combinations thereof. The need to acquire state-of-the-art knowledge of science and ethics applies equally to all these areas. The person might learn of positive ethics, or being proactive and heading off or even constructively altering potential ethical dilemmas. In this regard, the present approach is that the optimal manner in engaging in positive ethics in mental health work is to adopt a scientifically-informed, impartial, and comprehensive approach. Throughout graduate studies and practice, one should learn about and consider at all times the up-to-date scientific knowledge and methods in the field from an unbiased stance that leads to comprehensive consideration and application, e.g., in assessments and in therapy.

The area of psychological injury and law is quite adversarial, and this positive ethics approach being described should be used right from the first contact with referral sources, patients, attorneys, and other agents and actors in the area (e.g., third party payors). In using such an approach, in conducting assessments, the tests with the best psychometric properties for the case at hand will be administered, all the reliable data will be considered, all possible interpretative hypotheses will be considered, and the conclusion that best fits this scientific, impartial, and comprehensive process and reasoning will be selected. This will facilitate ethics-consistent testimony, tort work, and court work, with evidence submitted and scrutinized being capable of meeting relevant admissibility standards. In addition, the approach will enable the person to discern ethical difficulties, conflicts, issues, and dilemmas as they arise so that appropriate steps can be taken. The person will have learned and will continue to develop appropriate ethical decision making practices, using reflective thought where extant codes and principles do not clearly apply. This might mean development of broader ethical theories and meta-reflective skills on them, including integration of relevant moral and legal factors into an overarching systemic model of ethics and practice, one that can be called a broad ethical model in psychological injury and law.

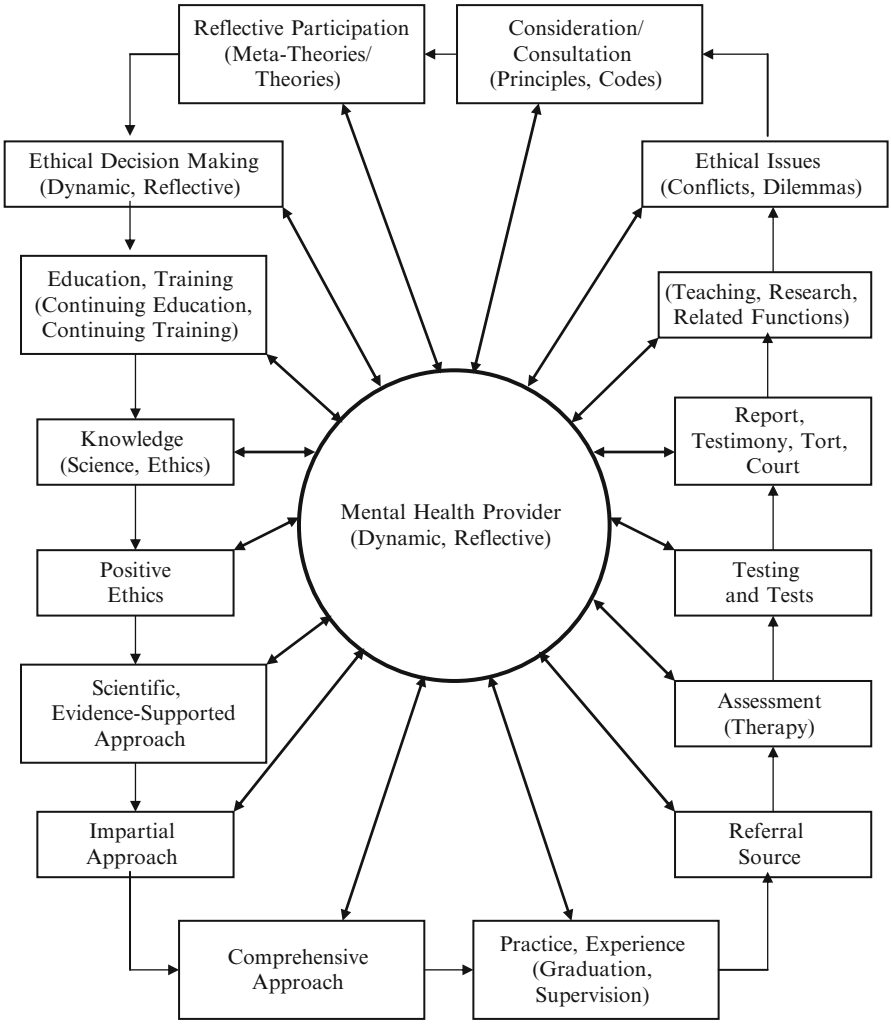

Fig. 22.4 Broad ethics in psychological injury and law
The figure outlines a broad ethical model for practice in psychological injury and law. It describes the typical steps in education and practice, and emphasizes a scientific and ethical approach to the work that is impartial and comprehensive. This way, any ethical dilemma should be resolvable by referring to ethical rules, principles, and theories

22.7 Chapter Conclusion

Ethics is integral to all areas of psychological practice. In this chapter, I have examined forensic specialty guidelines, forensic mental health assessment guidelines, disability guidelines, the APA ethics code principles, ethical thought and decision-making, and a broad model of ethics in psychological injury and law that applies to professional psychology, in general.

Throughout the present book, I have emphasized that practitioners in the area of psychological injury and law need to be (a) scientifically-informed, (b) impartial, and (c) comprehensive in their assessments. In my presentation and analysis of the principles of the various ethics codes and guidelines pertinent to the area, I have emphasized these three important undercurrents. Mental health professionals need to learn about and apply the three undercurrents to ethical and effective practice throughout the different phases of their education, training, and practice.

Education and Training. Graduate education programs need to consider the appropriate fundamentals for practice in the area of psychological injury and law. Are students made aware of (a) the scientific foundations and controversies that are particular to the area, (b) the nature of the adversarial divide in tort and related court venues, and (c) the best evidence available on assessment tests and procedures, as well as intervention and therapeutic practice? Practical experience should also emphasize (a) state-of-the-art scientific knowledge in the area, (b) unbiased presentation of material in the field, with examination of both sides of debates that take place, and (c) training and use of the best instruments in terms of relevant psychometric properties for relevant populations in supervised cases. Continuing education opportunities should also emphasize these three components to ethical and effective practice. Note that Sternberg (2012) presented an eight-step model of ethical reasoning. It applies to the present context because it concerns teaching ethics to university students.

Practice. The possible influence of the adversarial divide on both young and seasoned professionals could be powerful and needs to be continually mentioned at the ethical level without the appropriate ethical stance, it could affect (a) a dispassionate, full-scale examination of the science in the area; (b) an unbiased approach to practice (e.g., in seeking referral sources, in assessment practices, in intervention and therapeutic work); and (c) a comprehensive approach to assessment (e.g., using a multitrait-multimethod or -source approach, with the same instruments used for similar cases no matter what the referral source, with the same approach to assessment interpretations and conclusions in all cases).

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Chapter 23
A Transdiagnostic Therapeutic Module on Free Will and Change

23.1 Introduction

This chapter and the next one are exploratory, presenting modules and models for therapy and for ethics that apply specifically to psychological injury and law and generally to psychological practice. In this chapter, I present a transdiagnostic psychotherapeutic module related to belief in free will and the change process that could be used to facilitate patients making better choices and making gains in psychotherapy. The chapter consists mostly of tables with elaborate table notes. The accompanying expository text ties together the tables.

Table of Terms and Sources

Abbreviation	Name	Source(s)
DSM-IV-TR	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision	American Psychiatric Association (2000)
FACCD	Functional Analytic Clinical Case Diagrams	Haynes et al. (2011)

23.2 Free Will in Psychotherapy

Belief in free will has important consequences related to making appropriate choices, behaving more morally, and otherwise adopting better habits and a more goal-oriented lifestyle (Baumeister 2008; Baumeister et al. 2011; Baumeister and Vohs 2012). Although there is much debate about the construct philosophically in terms of whether free will exists, adopting an attitude psychologically that it does exist has import for rehabilitation and psychotherapy.

Cognitive behavior therapy is the predominant psychotherapeutic approach in rehabilitation, as shown in Chap. 21. However, approaches such as the narrative one and positive psychology can be useful adjuncts toward treating the whole person.

In this regard, I have formulated a transdiagnostic psychotherapeutic module consisting of a series of tables based on belief in free will that psychotherapists

G. Young, *Malingering, Feigning, and Response Bias in Psychiatric/Psychological Injury*, International Library of Ethics, Law, and the New Medicine 56,
DOI 10.1007/978-94-007-7899-3_23, © Springer Science+Business Media Dordrecht 2014

could use to facilitate better motivation for change. Intervention research has shown that free will belief is manipulable, even to the point of increasing the probability of cheating when the belief is undermined (Vohs and Schooler 2008). Moreover, for the module, I added tables on the change process and logical thought because patients might become unable to think rationally if stressed, ill, or hurt. The belief in free will is a general undercurrent of focus in all psychotherapy and psychological interventions. If we did not believe that our patients were amenable to change, we would not provide treatment. At the same time, as far as I know, there has not been a specific attempt to integrate free will belief directly as a module in psychotherapeutic work. The tables in this chapter accommodate to that lacunae.

The chapter concludes with a series of tables on my particular model of development (Young 2011a, b) as applied to free will belief and the change process. The chapter ends with a figure presenting an asymptotic paradoxical model of free will based on my developmental model and another figure on the posttraumatic growth that might develop in rehabilitation due to psychotherapeutic approaches such as the one described in this chapter. These tables and figures developed for the free will therapeutic module might be helpful as part of therapeutic work in clients open to the possibilities suggested.

23.3 The Transdiagnostic Psychotherapeutic Module on Free Will Belief and Change

A fundamental assumption underlying psychotherapy is that clients can learn to make better choices. The next ten tables and two figures describe therapeutic modules for promoting free will in psychotherapy, facilitating the making of better choices. In the first table of the series, I use the FACCDs (Functional Analytic Clinical Case Diagrams; Haynes et al. 2011) model to stimulate thought on working toward freeing matters related to past, present, and future.

In particular, the FACCD model individualizes causality related to psychological difficulties in immediate contexts of patients. However, the patterns found in therapy also have roots in the past. In order to facilitate their change, Table 23.1 illustrates how past patterns can be reframed. For present ones, I emphasize developing appropriate problem solving. For moving better toward the future, the table emphasizes an increasing sense of having free will.

Barriers to the development of having a sense of free will, or believing in free will, are too numerous to describe succinctly. Inevitably, they reduce to a formula involving the person, biology, and environment. In terms of personal psychology, a powerful barrier to growth resides in self-deception, self-sabotage, etc. The corollary of self-undermining is other-deception and other-sabotage.

Self deception can be moderated by having constructive compared to destructive directions in this regard, as per Table 23.2. The same applies to other-deception. The therapist analyzing and becoming cognizant of these tendencies in the patient should seek balance over them in the way indicated in the table.

Table 23.1 Facilitating free will in making life choices through psychotherapy from a functional perspective

Strategy[a]	Example[a]
Free will with respect to past:	Freeing the past:
Reframing functional causal links from perspective of choosing new ways of viewing past	Seeking in patients when some coping, growth, stress reduction, etc., had taken place; lessons that can be learned
Free will with respect to present:	Freeing the present:
Developing behavioral, cognitive, interpersonal, narrative, and other relevant strategies to work on extant relevant causal links still present from past	Helping patients to have capacity to create effective plans to deal with issues and ways of implementing/monitoring them
Free will with respect to future:	Freeing the future:
Developing capacity to choose different options, plans, behaviors, etc., with respect to issues indicated by any causal analysis of problems/predicaments/stresses that might arise in future	Explaining to patients that they are developing a sense of free will that can help them be themselves and have others be themselves
	Creating models of themselves that include not only things like self-confidence and sensitivity to others, but also sensing if one has free will and can feel free in even the most difficult of times [and that they can manage constraints that impinge on that growing feeling].

Adapted from Young and Haynes (2014)
[a] Analysis of causal links leading to patient presentation in functional analytic clinical case diagrams (FACCDs; Haynes et al. 2011)

Table 23.2 Self- and other-deception in the growth of free will for topics in psychotherapy

Type	Explanation
Self-deception, constructive	Over-valuing abilities
	Underestimating challenges
	Leads to constructive outcomes if not extreme, all else being equal
Self-deception, destructive	The above is extreme
	Or, we hide or openly lie about personal faults, conflicts, intentions, etc., that need moderation/resolution
Other-deception, constructive	As above, to the other
Other-deception, destructive	As above, to the other
Balance	The more self- and other-deception are toward the constructive, the more likely the constraints on developing a sense of free will and feeling free are minimized

Adapted from Young and Haynes (2014)
Note. The table illustrates one barrier to the growth of belief in free will – that of self- and other-deception. The table illustrates how the psychotherapist can work toward balance in these regards

The next four tables on free will in psychotherapy are based on the influential work of Roy Baumeister. He and I have developed a dimensional model of free will (see Chapter 35, Young 2011a, b). In these tables, I take the conceptions of Baumeister and colleagues on free will in everyday life and on the cognitive underpinnings to free will and apply them to the psychotherapeutic context.

In Table 23.3, I consider the work of Stillman et al. (2011) on the psychology of free will in daily life. They list folk conceptions of free will organized around major themes. They were confirmed as relevant in their empirical study. These include the adaptive value of free will and also the positive outcomes and goals that having a belief in free will facilitate. Some cognitive concomitants are listed, e.g., delay in decision making and making conscious choices. The social-affective aspect is considered, as well, e.g., morality and avoiding external control.

As for the psychotherapeutic interventions that can be used to promote free will that are given in the table, they were created partly based on Stillman et al.'s (2011) explanation of these folk psychological concepts of free will. They guide the patient toward adapting a more flexible cognitive and social approach to problem solving and daily living.

Baumeister and Vohs (2012) reviewed the cognitive capacities needed for effective self-regulation and executive function. These higher-order cognitive skills relate to self-control, problem solving, planning, working memory deployment, and so on, as presented in Table 23.4. The table also introduces Baumeister's model on ego depletion (e.g., Baumeister 2008). Behaving from a belief in free will requires energy; and research has shown that tasks that deplete or interfere with energy adversely affect belief in free will and its attendant advantages. Developing and maintaining a belief in free will requires a healthy lifestyle as well as psychological prerequisites in thinking and affect.

Baumeister et al. (2011) related free will and consciousness. In the psychotherapeutic approach in Table 23.5 based on their article, psychotherapists might ask patients to engage in exercises to promote conscious causation compared to automatic, unconscious causation, for example, by practicing, planning, reflecting, reasoning, creating, empathizing, self-valuing, reframing, and communicating. In this way, a belief in and sense of free will can be facilitated.

Table 23.6 includes work by Baumeister and colleagues on reasoning in free will (Pocheptsova et al. 2009), but also work by Inzlicht and Schmeichel (2012) on motivation and attention in self-control and resource or ego depletion. The latter emphasize focus on long term as opposed to short term goals. The former refer to using deliberate reason when there is no depletion compared to using intuition when it is present.

Tables 23.7 and 23.8 present psychotherapeutic models related to change in underlying cognition. They are based on Piagetian notions of transition from pre-operational to operational thought, which includes transition from intuitive to logical thought (Ferrari and Vuletic 2010; Morra et al. 2008; Müller et al. 2009; Young 2011a, b). The transition is akin to the distinction described for nonconscious, intuitive and conscious, deliberate thought. The central mechanisms of change in Piaget's model in this transition concern centration, egocentrism, animistic thought, irreversibility, a lack in perspective taking, etc. Based on these concepts, I provide simplified explanations on the left side of the table and then probes on the right to facilitate transitions to thinking more logically. Intuitive, automatic thought has an important role to play in behaving and choosing (Kahneman 2011; Stanovich et al. 2011). However, clients might be too engaged in this type of thinking relative to

Table 23.3 Topics of free will in Psychotherapy I: free will in everyday life

Area	Example
Free will and adaptation: In our everyday life, having a sense of free will helps us reach positive things we want for ourselves, especially social ones, such as attaining certain states/conditions, goals, or outcomes.	Think of several ways in your daily life that you show you have a sense of free will. Then, think of several ways your sense of free will can be improved, e.g., in helping you reach desired goals and outcomes. How can you help yourself increase your sense of free will in your everyday life? Think of several ways.
Positive outcomes and goal attainment	Here are some specific examples to consider.
Self-interest and time frame: Having a sense of free will can help us delay wanting benefits right away and wait for better ones later on.	For example, having a sense of free will allows us to resist temptations and delay seeking immediate gratification for better results that we could get in waiting. Would developing this skill help you in obtaining positive outcomes and attainment of desired goals? How can you develop the skill? List several ways.
Consciousness and freedom: Having a sense of free will is accompanied by the belief that our behavior is undertaken consciously rather than automatically out of our awareness.	For example, viewing our behavior as a product of conscious thought means that we can improve our awareness of it, which would help in our reasoning, problem analysis, and decision making, so that our choices appear freely chosen rather than not free. How can you increase conscious awareness of your automatic thought so that your sense of having free will increases? List some exercises that you might do in this regard.
Morality and collective benefits: Behaving morally helps the other person and the group, aside from the outcome that it is part of the behavior that enables individuals to fit into the group. However, it also might be part of human nature because it brings benefits to the person acting morally, e.g., respect of others, access to resources related to the actions involved.	Having a sense of free will means behaving toward others with a sense of having chosen freely, and this includes behaving morally, as well as following a set of group standards and prohibitions that might seem to work against our self-interest at first. However, fitting into the group brings benefits to the person, and this might be lacking. How can you improve your sense of free will in terms of the choices that you are making socially, morally, and collectively? List your ideas.
External influence: Having a sense of free will socially also means that external forces, pressures, and authorities can be overcome, resisted, or somehow controlled when their exertion of control over us is too detrimental.	For example, you might have to deal with it directly, such as presenting counter-arguments, negotiating, etc., or doing what you require and knowing how to deal with the consequences. Or, you might have to deal with it indirectly, such as manipulating toward your desired ends, getting allies to argue for you and support you. This all requires much skill, but you might have done some of this in the past. What did you do this way? How can you do more? List the ways.

Adapted from Young and Haynes (2014)

Note. The next four tables for use in promoting free will in psychotherapy are based on the work of Baumeister and colleagues. The left side of the table is adapted from Stillman et al. (2011). Their work describes the role of free will in everyday life. On the right side of the table, I indicate how free will might be promoted on the basis of their understanding of free will in everyday life

Table 23.4 Topics of free will in Psychotherapy II: self-regulation and the executive function of the self

Area	Example
Delay of gratification	Delay of gratification is important to everyday life. List several benefits in waiting for better choices later on rather than seeking immediate gratification. How can you improve this skill?
Feedback loops	We need to monitor our plans, strategies for reaching them, motivation to follow them, etc. How can you improve these skills?
Trait self-control	Maintaining good habits is a great way of keeping control. How can you work toward developing better habits and controlling bad or interfering ones?
Strengths model of self-regulation	Self-regulation requires good habits related to sleep, nutrition, exercise, etc. How can you plan effectively to reach your goals and work toward not depleting your energy by using ineffective actions toward your goals, following improper lifestyle habits, etc.?
Beyond self-regulation: choice, initiative, and free will	People can improve their sense of having free will and also their current sense of having choices and their initiative by completing brief exercises. These include … How can you apply these exercises to yourself. Can you think of others?

Adapted from Young and Haynes (2014)

Note. Left side of table adapted from Baumeister and Vohs (2012). In this free will psychotherapeutic model, I build on Baumeister and Vohs (2012) work on self-regulation and executive function. The right side of the table proposes statements and questions that can be used with clients in these regards

Table 23.5 Topics of free will in Psychotherapy III: conscious causation

Area	How can you use this knowledge to help yourself?
Mental simulation, mental practice	Mentally rehearsing important activities improves performance and reaching the goals associated with them.
Anticipating, planning, intending	Having specific behaviorally-focused plans helps arrive at goals.
Replaying, interpreting, reflecting on past events	Writing about or talking about past events that need reworking, such as traumas, improves the ability to move forward.
Reasoning, deciding, solving problems	Increasing the conscious motivation to be logical, to explain oneself, etc., improves performance.
Counterproductive, maladaptive effects	Having conscious goals to be creative enhances creativity.
Mentally simulating others' perspectives	Taking the perspective of the other, or seeing their world, view, theory, mind, etc., helps.
Manipulations of self-regard, self-affirmation	Thinking positively about the self, its core, etc., changes behavior positively.
Mental framing and goal setting	Believing that one is part of a high-performing group, e.g., being good in math, helps performance.
Communication and mutual understanding	Being good in group communication enhances the person's and the group's functioning.
Overriding automatic responses	It is easier to override automatic responses and be conscious about choice when our ego or self resources are not overtaxed.

Adapted from Young and Haynes (2014)

Note. Left-side adapted from Baumeister et al. (2011). In this table, I provide constructive suggestions and exercises that might help in becoming more conscious about causation and behaving with a belief in free will

Table 23.6 Topics of free will in Psychotherapy IV: mechanisms in motivation, attention, and reasoning

Area	Counter-Example
Shifts in motivation: I do not want to control myself	I still can control myself, if I focus and try harder. Even if my motivation lags, I can boost it. The rewards in the end will be worth it. I have the resources to shift back to being motivated.
Shifts in motivation: I want to go with my gut	I might feel that I should act impulsively, but I can get back on target and control that.
Shifts in attention: Do I need to control myself now?	I can focus on things (cues) that get me motivated again instead of on things that get in the way, like shifting to actions that bring short term rewards instead of long term ones that are much better.
Shifts in attention: I see rewards	Instead of paying attention to what is important to beneficial long term goals, attention shifts to paying attention to cues related to immediate rewards that are not as beneficial. However, I can shift back by ignoring these cues and rewards and focusing on cues related to the long term goals. It is not just about the short term pleasures but also about a different kind of pleasure related to having a job well done, and the like.
Shifts in Reasoning: Resource depletion enhances the role of intuitive reasoning by impairing deliberate careful processing	When I get tired or low, I might think less carefully and reason by intuition only instead of using good problem solving skills and seeing the big picture. But because I know that can happen, I can work hard to control it. Better to see all the choices and choose the best one, e.g., which one is best for the long term.

Adapted from Young and Haynes (2014)

Note. Left-side adapted from Inzlicht and Schmeichel (2012) for attention and motivation and from Pocheptsova et al. (2009) for reasoning. The table illustrates how knowledge of core psychological processes can lead to therapeutic affirmative self-statements that facilitate belief in free will and constructive actions therefrom

Table 23.7 Free will in psychotherapy: promoting logic and free will

Area	Example
Thinking automatically and intuitively helps, but deliberate use of logic and problem solving helps, too.	How have you used automatic thought, intuition, or fast responding without thinking through first, and it helped? When did it not? How could you have handled it differently?
Using the first thing that comes to mind to deal with something can help, but thinking through options can help, too.	How have you used the first thing that comes to mind to deal with something in a way that helped? When did it not? How could you have handled it differently?
People often have less patience than needed. Trying out different pathways in thought can help, but it means thinking through them and having patience.	How have you used patience to control the impulse to act quickly and to allow you to think through different options? When did you not? How could you use it more?
Returning to a starting point of a problem to start again in a different direction could help.	How have you used the idea of returning to a starting point to try something else? Think of a social situation, a work or school, one, or a family situation. How could you do this more?

(continued)

Table 23.7 (continued)

Area	Example
Seeing the big picture always helps. When we focus on just one dimension of a problem we become fixed on it and do not see all the ways to handle it.	Think of times when you have fixed on one aspect of a problem and missed the big picture. How could you learn to focus on more than one aspect or dimension of a problem, or even more? Will it help seeing the big picture and solving problems easier?
Pulling back to think about what is happening always helps. Taking a time out to think can lead to better solutions.	How can you encourage an attitude of stepping back to reflect? Think of times when doing this might have helped.
When we take time to understand the points of view of other people, we might get less trapped in our own views that are not helpful. This does not deny they might be the best option.	How can you increase your understanding of the points of view or perspective of others? When we understand their mind, motivations, and even ways they can help us, things could go better. How can you learn from others yet still keep your point of view in mind while you expand it, leading to the best of all possible worlds, and the best solutions to problems!
Being free to think helps solve a lot of problems.	Think of times when you were either not free to think, or could not think freely and problems only got worse rather than better. How could you have handled it differently? How could you do this more?

Adapted from Young and Haynes (2014)

Note. Piaget's developmental model includes a shift from preschool preoperational thought to child and adolescent logical thought (concrete and formal operational, respectively). The transition is based on developing decentration, perspective taking, reversibility, etc. Preoperational thought includes intuitive thought, which can be useful, but it might be used as a matter of course instead of choice, compromising logical thought and free will belief

Table 23.8 Change process and creating a better sense of having free will

Area	Example
Change means genuine transformation	Just by thinking about the answers to these questions in the prior table, you are getting there. The secret is to keep the positive changes in place so that your core thoughts, emotions, and behaviors change toward the positive on a more permanent basis. How can you help that happen?
Change means conflict, in ideas and with people	Change is never easy. Your old and new ideas will conflict and you and others will struggle toward better outcomes, solutions, and situations. How can you manage all that disruption for the better?
Change means constant communication, within the self and with others	Growth happens by exchanging ideas, talking, reflecting on the exchanges and ideas, etc. How can you keep it going so that change for the better continues or is maintained despite ups and downs over time?
Change means placing new ideas in contrast with old ideas and seeing their advantages, and perhaps keeping old ideas around for the times they still might be useful	Change does not meaning altering everything you were to develop a totally new you. It means keeping the best of the past as you change for the better. How can you ensure that happens as you change?

(continued)

Table 23.8 (continued)

Area	Example
Change means having new ideas work their way into other areas of your life and thinking beyond the original use and function for which they developed.	Can you think of new situations and places to which your new ideas can be applied socially, with family, friends, etc., in other situations, e.g., work, school, and most importantly, how you think of life, yourself, and others?
Change means being active in life and adjusting to changing situations	How can you be the source of change, initiating them or the pathways leading to them, rather than being passive all the time and letting change happen around you without your say? How can you adjust constantly to new situations so that the situations reflect you and your ideas as much as anything else, depending on the circumstances?
Having a better sense of free will means having not only better logical thought but also better automatic, intuitive thought working at solutions to problems	This therapeutic exercise is aimed at increasing logical thought in solving problems, but automatic, intuitive thought works with it. So by improving use of logical thought we are not letting go the automatic, intuitive thought. Rather, we are making available both forms of thought so they can work together. Think of some situations in your life where this would be true (e.g., for social problem, a work or school one, a family problem).

Adapted from Young and Haynes (2014)

Note. In this table, I continue using Piagetian concepts of change, but ones that are more generic. For Piaget, cognitive development refers to qualitative change in thought from one stage to the next. It is facilitated by cognitive conflict among and communication about ideas, whether internally or socially-derived, but only when the person is in a transition state. As new cognitive capacities develop and spread in the cognitive structure of the person, they might be contrasted with prior ones which still might be activated (e.g., automatic thought still can be effective). The developing person is actively involved in self-growth, through openness, curiosity, will, etc. Psychotherapy could focus on this change model to promote better logical thought and free will belief

more logical modes for certain important issues, dilemmas, bad habits in need of change, decisions that have to be made, and so on.

Table 23.9 presents a stage model of the development of intuitive and logical thought based on my Neo-Piagetian stage model (Young 2011a, b). The latter model is quite consistent with Piaget's, in that his four major stages are included (sensorimotor, pre-operational concrete operational, formal). However, in my model, I have added a beginning reflexive stage and an adult postformal or collective intelligence stage. Also, instead of referring to the combined pre-operational/concrete operational period as representational, I use the term of peri-operational.

Using this five-stage Neo-Piagetian model, and focusing on the distinction between intuitive (pre-operational) and logical thought (rational thought, concrete operational onward), I have reworked the distinction between Kahneman's (2011) and Stanovich et al.'s (2011) Type 1/System 1 thought and Type 2/System 2 thought in terms of the stages in development indicated. This approach has led to the construct that the more advanced rational, logical thought compared to intuitive thought in the type/system modes consists of three qualitatively different and successively

Table 23.9 Multiple processing intuitive and reasoning systems in thought and their development

System/type		Neo-Piagetian stage
0	Reflexive	Reflexive
1	Pre-intuitive	Sensorimotor
2	Representational	Perioperational
	2a – Intuitive	Preoperational
	2b – Rational	Concrete operational
3	Advanced rational	Abstract
4	Supra-rational	Collective

Note. The table shows the equivalent of the steps in Young's (2011a, b) Neo-Piagetian model and the concepts of thinking types in the model of dual processing, e.g., Stanovich et al. (2011) Type 1 or System 1 thinking compared to Type 2/ System 2; or Kahneman's (2011) Intuitive vs. Rational thought. Similarly, more and less refined thought types related to pre-operational, intuitive and concrete/formal (abstract) operational thought are possible according to Piaget (e.g., Barrouillet 2011). A sense of free will should grow as we enter the latter stages. However, Piagetians note that having the potential to think abstractly does not mean it happens, as would anyone else. Moreover, even when in the abstract stage, individuals might think at other, less advanced levels. I refer to this as yoking, and explain that the concept multiple intelligences refers to the co-presence of these different Neo-Piagetian modes of thinking, with the more advanced one present not necessarily being the central one yoked to. In short, thinking rationally and abstractly is a complex affair, influencing greatly the capacity to choose freely, see or create options, plan, etc. The more we gravitate to the abstract level compared to the intuitive level, the more easy we have a sense of freedom, choose appropriately, and feel free. However, factors such as developmental impacts, stress, illness, and injury could complicate the process

more advanced skill sets. These latter three rational thought systems/types are considered: (a) basic rational; (b) advanced rational; and (c) supra-rational skills, with underlying Neo-Piagetian stage acquisitions.

Therefore, belief in free will and having a sense of free will should be viewed as underwritten by an increasing cognitive sophistication in terms of improving rational, logical, and Neo-Piagetian cognitive stage acquisitions. However, factors such as illness, injury, and stress, as well as other ego depletion factors, should serve to undermine use of more logical thought processes.

Table 23.10 illustrates how Piagetian stages that develop could co-exist in thought, and how even lower-order ones, such as pre-operational thought and its intuitive component, might be hierarchically predominant in cognitive deployment. The table also indicates that patients might resort to lower-order thought processes even when they are disadvantageous, e.g., due to stress, illness, or injury. Being aware of the possibility of yoked automatic and rationale thought in patients might help psychotherapists in their effort to promote more effective, rational thought, at least when it is needed, as well as a (return to) free will.

Table 23.10 Yoking in cognitive development: how logical thought becomes subordinate

	Pre-Intuitive		Intuitive	Logical thought	
Cognitive stage	Reflexive	Sensorimotor	Perioperational	Abstract (Formal)	Collective intelligence
Reflexive	O	XX	XX	XX	XX
Sensorimotor	XX	O	XX	XX	XX
Perioperational	XX	XX	O	XX	XX
Abstract (Formal)	XX	XX	XX	O	XX
Collective intelligence	XX	XX	XX	XX	O

Note. As has been shown, yoking could lead to lower-order cognitive stages becoming predominant in various stage combinations constructed or becoming active in problem solving and thought. There are multiple advantages to use of automatic, intuitive, fast prelogical thought (Barrouillet 2011; Kahneman 2011; Stanovich et al. 2011). However, problem solving often requires higher-order thought. Aside from genetic/biological vulnerabilities leading to inappropriate use of or ability to switch to or have logical thought lead in cognitive yoking during problem solving, there might be environmental factors at play, as well, such as early childhood abuse or later injury, illness, or environmental insult and stress. When this happens in the rehabilitative context, the therapist needs to understand that ineffective problem solving might result from an inefficient, nonlogical cognitive mode of thought used habitually instead of any inability to problem solve, per se, and appropriate steps can be taken to have the patient increase logical thought processes

Yoking

The diagonal line represents the development of the five Neo-Piagetian stages of the present model. The stages that are paired by the intersection of the columns and rows and that are not on the diagonal represent the yoking of the paired stages. Developmental stage yoking means that the lower-order stage of any pair is still present in development even as the higher-order one to which it is connected emerges. Moreover, they do not remain in their original form, but both alter in their reciprocal organization through the yoking. For example, perioperational cognitive structures could be coupled with sensorimotor schemes.

Backward-Forward

When the yoking involves a higher-order structure as dominant, the yoking can be qualified as backward, but when the yoking involves the lower-order stage structure as primary, the yoking is considered forward. For example, sensorimotor skills could be yoked to concrete operational ones in the perioperational phase. The stage couplings under the diagonal represent backward yoking, and those above it represent forward yoking. Ostensibly, backward yoking is the more advanced type of stage structure yoking.

Because of backward and forward yoking, the developing person has more than one set of cognitive repertoires available for problem solving. By taking into account the possibility of triplets and larger aggregates in stage structure formations, it can be shown that the amount of potential stage structure yoking is quite large.

Multiple Intelligent

This begs the question of how many types of intelligence does the individual call forth in problem solving at any one time, and how they are organized when there are multiples. It also raises the question of multiple intelligences, because there are myriad patterns of stage structure couplings that could take place in cognitive activity. Moreover, when lower-order stages are primary in yoking, does this mean that the individual is functioning at a lower level cognitively? Perhaps not, because it is the nature of the combination that must be taken into account, e.g., the secondary stage still has an impact in determining the overall level of the couplings and it does modify the activity of the lower-order stage. As development proceeds, these lower-order coupled stages continue to improve in capacity, scope, automaticity, recruitment, refinement, and extension, but without affecting the chief characteristics of the higher-order level.

(continued)

Table 23.10 (continued)

Dual Track Stages

The implication is that each stage in cognitive development follows two tracks. First, it lays the seeds for the development of the stage that emerges from it as the next step in the qualitatively advancing series of steps in cognitive development. Second, it continues to develop for what it is at an increasing level of complexity through the stages that follow it in development. For example, sensorimotor intelligence never leaves us, and serves us in good stead throughout our lives. However, this happens as part of the adaptive strategies that we use to accomplish daily tasks, solve daily difficulties and problems, and develop expertise in areas related to it.

Multiple Intelligences

In terms of the concept of multiple intelligences, it appears that the present model can accommodate the concept. For example, the sequence of five stages in development could be used to represent five types of multiple intelligences. Because each stage persists even after others have developed having more complexity, at any one time in development after the infancy period, the developing person can draw upon, as required, at least two of the stages.

Moreover, when yoking is involved, the dual structures imply a second or combined tier of multiple intelligences. Therefore, cognitive stage structure yoking is a concept that could help explain that the any of lower level types of multiple intelligences represented by the first few of the five stages of the present model might function more or less at upper levels in cognitive activity when they are coupled with those levels.

Adapted with permission of Springer Science+Business Media. Young (2011a); with kind permission from Springer Science+Business Media B. V. [Table 17.4; Excerpt of 632 words, Pages. 408–410] Note: With the first part of the table note new to this book.

Figure 23.1 illustrates the growth of belief in free will and feeling free that takes place in development. A similar growth can take place in psychotherapy. Piaget described cognitive schemas at the basis of developing sensorimotor, pre-operational, and operational thought. Similarly, attachment theory describes internal working models and other theoretical work in information processing describes working memory (see Young 2011a, b).

I have adopted these concepts to create the concept of "free will working models." They concern the components in thought and affect that we pull together in situations related to belief in free will. They mediate growth in free will in the ways described. That is, as cognitive development proceeds and more logical thought develops, free will working models differentiate.

In optimal human development, growth toward penultimate adult psychological maturity in cognition, affect, sociality, and morality leads to psychological attributes related to Erikson's construct of generativity. The person increases the scope of responsibilities oriented to and worked for (family, society, etc.). In Young (2011a), I proposed a Neo-Eriksonian model that parallels the Neo-Piagetian one that I developed.

In terms of free will, this developmental model indicates that as we undertake more responsibilities, we should have less room for less responsible ways of living. Philosophically, Lévinas (1985) considered a critical human characteristic as striving to undertake Responsibility (Morgan 2011). In that I consider this motive a constant daily re-dedication and a motive of being that takes place in the multiple, I refer to it as Re-Responsibilities. In this regard, we are left with a paradox – the more we mature psychologically, the less we have free will for less responsible action. In this sense, the developmental model that I propose is a paradoxical one about

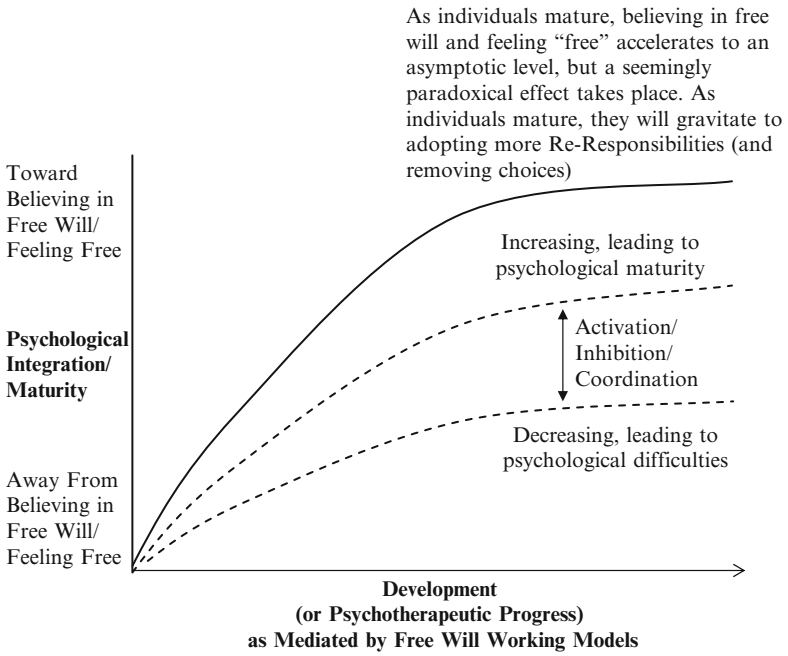

Fig. 23.1 Growth in belief in free will and sense of being free

Note.

Integration/maturity in free will working models (mindset, mode) and in free will facilitations/activations and inhibitions/constraints, and their coordinations

The concept of free will working models harkens to the concept of working memory. It is like a scratchpad in which we bring to the fore all that is needed to use extant free will capacities and associated cognitive and emotional underpinnings to help arrive at freely chosen plans and their successful implementation. There are both facilitators and constraints in its development and use, and a good balance in activations and inhibition skills can minimize interference with and successful activation of free will use and growth, and having a sense of feeling free

Free will/feeling free is a sense that can grow in development and in psychotherapy. As these feelings genuinely manifest, we are more likely than not to choose to undertake responsibilities that, in effect, limit our freedom as defined in other ways. The synthetic model of free will suggests that as we develop a sense of feeling free in the psychologically mature sense, we will choose to undertake responsibilities that, by their demands on us, diminish our sense of having choices. Given that we do not ever attain ultimate psychological maturity, we keep striving for it, and so the model is asymptotic as well as paradoxical. One of the issues confronting individuals as they develop in psychological maturity and feeling more free, or believing more in free will, is that they must navigate the tension between individualism and collective, which varies over family and culture. There are other factors, such as the effects of developmental impacts, stressors, illness, and injury

Adapted from Young and Haynes (2014)

free will; that is, the more we have free will to use because of optimal development and less constraints, the more we choose life options (responsibilities) that limit freedom of action. The free will model presented in the figure is also an asymptotic one. Because we all have constraints in development and it is never fully optimal, we never approach the ideal state of having a full sense of free will and an unfettered free will belief.

Some of the constraints on people, as they develop, concern cultural variations. One factor in this regard that might impact the development of a sense of free will and belief in free will is the dimension of individualism/collectivism. There are many more related to family, e.g., abuse.

When constraints and barriers to development are too powerful, without proper buffering, the person could suffer developmental vulnerabilities and impacts. This could serve to alter the life course sufficiently away from optimal development toward its compromise and even psychopathology. In psychotherapeutic practice, the present model might help the practitioner frame the person as stuck in certain areas related to psychological growth and work towards facilitation of change in these regards. One way of appreciating the change dynamic is to consider it an activation/inhibition coordination (Young 2011a, b). The psychotherapist could work toward activating appropriate free will components in the person's free will working model and inhibiting other maladaptive ones.

A major problem in psychological injury work concerns substance dependence and abuse, such as alcohol addiction. The concept of belief in free will and a therapeutic module aimed at promoting it could be quite beneficial to these patients. In this regard, I developed a table based on current understanding of addiction (Köpetz et al. 2013; see Table 23.11).

When people suffer setbacks in their life course and developmental path, recovering is quite possible. Psychotherapists can help patients recover from trauma, stress, illness, and injury. When the latter obtains, to what degree are individuals resilient, capable of posttraumatic growth, or both (e.g., Bonanno 2004)? Figure 23.2 presents a graphical depiction that I use with patients to help them understand and profit from the concept of posttraumatic growth. It applies readily to the prior figure (Fig. 23.1) on the growth of free will and possible problems therein. In the rehabilitation and psychological injury context, the functional goal of therapists relates to helping the patient return to prior functioning or to adapt to disability. In either case, the growth of the person qua person should be part of the goal (e.g., quality of life, sense of well-being). Helping in this way includes helping in the growth of free will, which can provide reciprocal feedback into growth, in general.

23.4 Chapter Conclusion

The transdiagnostic psychotherapeutic model on free will belief and change that has been presented can be used with patients experiencing stress, illness, injury, mood disorder, or any other relevant diagnosis, syndrome, or condition in which encouragement of proper decision making and positive change is needed. The tables in the module should be used flexibly, depending on the individual profile of the patient; certain portions might apply to one person but other portions to another. The tables in the module are on the same plane as worksheets and units involving maladaptive cognitions for which only a portion of the types of distorted thought might apply to any one individual.

Table 23.11 Freeing the will to believe in free will in addictions

Point	Application
Addiction is not a brain disease, but a whole person psychological problem that can be helped	Belief that addiction can be controlled begins with the belief that it is a condition where such control is possible; it is not only medical and biological but also psychological and social
Addiction might have a biological basis, but it is learned and can be controlled through learning	By believing that learning can help toward the control of addiction, the person is taking another important step
Addiction is a motivated behavior that becomes an end in itself. Whatever purpose the addiction was serving becomes secondary to the addiction	Behaviors underlying addictions might first function to serve goals, such as keeping friends, feeling better about yourself. But then the addiction starts and gets out of hand and becomes the goal. Seeing this "gateway" pattern helps
Addictions become easily triggered, and even spontaneously.	Addictions become so powerful that simple triggers that could not lead to its behavior at first become good triggers. But the triggers have nothing special about them and can be controlled
Addictions are not about feeling good but about the consequences it brings, e.g., feeling accepted by fellow addicts	There are other ways to obtain the consequences that addictive behaviors had brought at first, such as social acceptance. What are some of these?
Those who are most vulnerable to addiction do not have other means of getting the desired consequences, e.g., socialization, sports	You are free to think of better ways to avoid the consequences that addictions first helped to get. How can you bring out these other ways, i.e., learn of them and choose them?
Addictive behavior can be activated involuntarily, or without conscious awareness or control. Also, it can be activated by triggers/context that are selectively attended to	You will be pulled to the addictions despite your new efforts at being free from them. How can you increase your resistance?
Addictions take over and there is less energy and will (resources) for other more constructive things	How can you inhibit the addictions, e.g., by freely choosing your new ways? How can you give yourself better effort, energy, resources, social connections, new activities, etc., to do so?
Resisting addictions takes effort cognitively and motivationally	You are on your way. Your new belief in free will is helping you. But the effort needs to be continual. How can you encourage that?
Replacing addictions by constructive activities takes effort cognitively and motivationally	In the end, your new way of living that you are freely choosing, now that you believe in free will, is an immense help. It is bringing you a more satisfying life that reflects self-control. You are harming less yourself and others. Indeed, you are helping more yourself and others. How can you keep doing that?
Addictions can be controlled by growth in belief in free will. The belief in free will starts as a small idea and can grow into an all-encompassing one	How could your belief in free will become a stronger belief, a belief that applies to many parts of your life, and a belief that even makes better your values, morals, and ways of living?

Adapted from Young and Haynes (2014)

Note. Left side of the table adapted from Köpetz et al. (2013). The last entry refers to Table 24.6 in Chap. 24

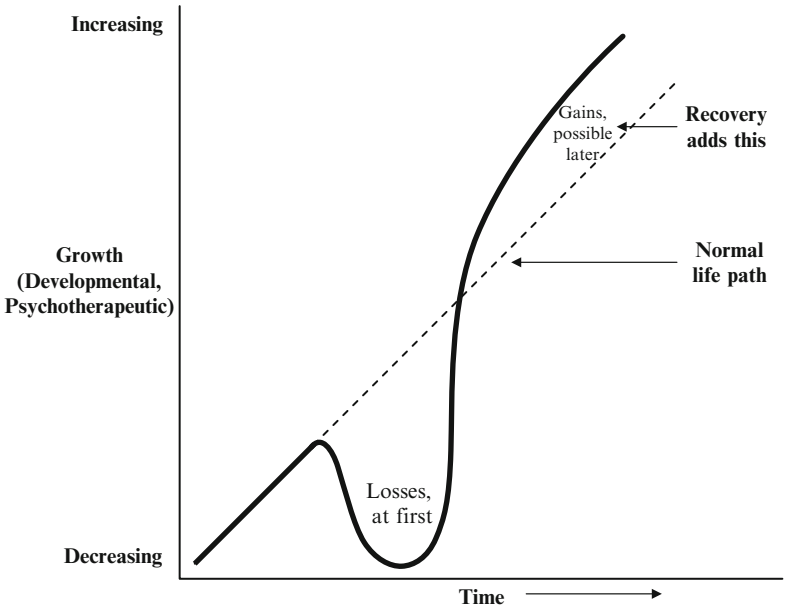

Fig. 23.2 Growing in rehabilitation
The figure emphasizes that recovery from stress, illness, or injury can bring gains that would not have been achieved without the stress, illness, or injury. Recovery in any one area can be more than partial, and it need not return only to the point where it would have been had the stress, illness, or injury not occurred. The concept of posttraumatic growth indicates that we can grow with stress, illness, or injury, that we can learn from them to the point that we are psychologically stronger, and that our life course could change for the better from having experienced them
Adapted with permission of Rejoining Joy Publishing. Young (2011b). [Figure 10–7, Page. 211]

The module deals with a variety of perspectives that cut across schools of psychotherapy, differing patient statuses, and different cognitive components underlying free will belief. In these senses, it could serve as a useful adjunct in psychotherapy for a host of rehabilitation conditions, including those prominent in psychological injury, such as PTSD (posttraumatic stress disorder), pain, and MTBI (mild traumatic brain injury). In addition, free will concerns characterize many psychotherapeutic populations, such as in addictions, and therefore the module could help facilitate change in many types of patients.

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Chapter 24
A Model of Ethical Thought and Ethical Decision-Making

24.1 Introduction

The present chapter builds on the work of Kitchener and Kitchener (2012) on ethical foundations in psychology, as described in Chap. 22 of the present book. They had developed a model of ethical decision-making (see Fig. 22.1) and presented their model of the development of reflective thought. However, they did not link the two very clearly. For example, can the critical evaluative steps in ethical decision-making map onto the steps in the growth of reflective thought?

In the present chapter, I provide alternative models of ethical decision-making and growth in ethical thought that allow for a one-to-one mapping of steps in the former and steps in the latter. I accomplished this by adding steps to both based on my Neo-Piagetian cognitive stage model in Young (2011).

Based on the stage model of Kitchener and Kitchener (2012), and its expansion according to the model of Young (2011), I develop a five-stage model in the development of ethical thought. The model is applicable both to the individual and to institutions, such as the two APAs (American Psychiatric Association, American Psychological Association) as they develop their ethical rules and codes/guidelines.

To conclude, I apply the model to the growth of thinking about psychotherapy and to an expanded golden rule that can cover ethics and also therapy, as well as daily living. That is, after presenting this revised model of the growth of ethical thought and ethical decision-making, I apply it to the growth of the helping motive and psychotherapeutic understanding in mental health work. Finally, I apply it to create a superordinate (individualized) golden rule, and show how it builds through the steps of the model that I created.

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24.2 Ethical Thought and Decision-Making

24.2.1 The Kitcheners' Model

Kitchener, Kitchener, and colleagues have developed a stage model of reflective thinking that is similar to Neo-Piagetian stage models of cognitive development (see Table 24.1). Moreover, the model has been applied to the moral domain in terms of concepts of morality, similar to Kohlberg's Piagetian extension into moral reasoning. For the Kitcheners, the developing person passes through prereflective, quasi reflective, and reflective phases, each with several stages. The model resembles those of Fischer and Bidell (2006) on Neo-Piagetian stage development and Harter (2006) on stages in self development [the stage labels in the figure of Representation, Abstract, and Principle are taken from Fischer's model].

Although Kitchener and Kitchener (2012) presented a stage model of the development of ethical thought and also described their different model of the development of reflective thought, they did not develop the former model in light of the latter, despite their prior extension of it into moral conceptualization. However, any such effort might produce an incomplete model of the development of ethical thought because it appears that the stage model of reflective thought that the Kitcheners developed contains missing steps. In this regard, the Neo-Piagetian stage model of Young (2011) for the adolescent and adult age period consists of two stages (formal, abstract and postformal, collective intelligence), each having five substages (see Table 24.2). In comparison, the Kitcheners' model has only four levels in this age period, not 10.

24.2.2 Young's Model

To be more specific about my model (Young 2011), for the adolescent, the person passes through the Neo-Piagetian stage of abstract (formal) thought and for the adult level the person passes through the stage of collective intelligence (postformal; superordinate abstract thought). The intelligence is collective not only in the cognitive sense but also in the integrated cognitive-affective (e.g., Eriksonian) sense and group sense (e.g., intellectual processes in group brainstorming), as well as the lived, experiential sense. The substages concern the cyclic repetition of coordination, hierarchization, systematization, multiplication, and integration. Therefore, the task is to determine which aspects of the Kitcheners' model is directly parallel to my own and which ones need elaboration so that there is a better fit. Table 24.2 summarizes that according to Young (2011) there are parallel Neo-Piagetian and Neo-Eriksonian stages that develop in the person.

Young's (2011) model suggests that the Kitcheners' stage model of reflective judgment, concepts of knowledge, and concepts of morality is missing two relevant steps in the period between when reflective thinking begins and principles develop

Table 24.1 Structural similarities between reflective judgment stages and moral judgment

Stage modal (Age in years)	Concepts of knowledge	Concepts of morality
Prereflective thinking		
1 (2) [Representation]	Single concrete category for knowing. Certain knowledge is gained by direct personal observation and needs no justification	Single concrete category for good and bad. Good gets rewarded; bad gets punished
2 (3.5–4.5)	Two concrete categories of knowledge. A person can know with certainty through direct observation or indirectly through an authority	Two concrete categories of morality. For me, good is what I want. For you, good is what you want. Bad is what is not wanted
3 (6–7)	Several concrete categories of knowledge are interrelated. Knowledge is assumed to be either absolutely certain or temporarily uncertain. Justification is based on authorities' views of what "feels right."	Several concrete categories of morality. For me, good is what I want. For you, good is what you want. Bad is what is not wanted
Quasi-reflective thinking (Modally in terms of education, begins in college)		
4 (10–12) [Abstract]	Knowledge is understood as a single abstraction. Knowledge is uncertain, and knowledge claims are assumed to be idiosyncratic to the individual	Morality is understood as a single abstraction. Laws are understood as a mechanism for coordinating expectations about acceptable and unacceptable behavior within communities
5 (14–15)	Two or more abstract concepts of knowledge can be related. Knowledge is seen as contextual and subjective. Beliefs are justified by using the rules of inquiry for the appropriate contexts	Two or more abstract concepts of morality can be related. The moral framework from one context (such as a community's laws or standards of conduct) can be related to the moral framework in another context (those of another community)
Reflective thinking (Modally, begins with doctorate)		
6 (19–21)	Abstract concepts of knowledge can be related. Knowledge is actively constructed by comparing evidence and opinion on different sides of an issue; solutions are evaluated by personally endorsed criteria	Abstract concepts of morality can be related. While the fairness of a given law may be interpreted differently, the well-being of people is a common consideration
7 (24–26) [Principle]	Abstract concepts of knowledge are understood as a system. The general principle is that knowledge is the outcome of the process of reasonable inquiry for constructing a well-informed understanding	Abstract concepts of morality are understood as a system. Principles such as the value of human life, justice, serving others, and contributing to the common good unify diverse concepts of morality

Adopted by permission of Oxford University Press. Kitchener et al. (2006). Reprinted by permission of Oxford University Press, USA. [Table 4.5, Page. 92] Note: Based on King and Kitchener (1994, pp. 208–209)

Table 24.2 A model of 10 steps in Neo-Piagetian cognitive development and Neo-Eriksonian social-affective development in the adolescent and adult

Level	Neo-Piagetian stage	Substage	Age range	Neo-Eriksonian stage	Neo-Eriksonian substage
1	Abstract	Coordination	11–13 years	Hyper-participatory social mutuality	Conscious vs. contraconscious acts
2		Hierarchization	13–16 years		Identity vs. identity diffusion acts
3		Systematization	16–19 years		Nurturing vs. misnurturing acts
4		Multiplication	19–22 years		Intimacy vs. isolation acts
5		Integration	22–25 years		Universal vs. self-singular acts
6	Collective intelligence	Coordination	25–28 years	Superordinate participatory collective sociality	Metacollecting vs. disillusionment acts
7		Hierarchization	28–39 years		Generativity vs. self-absorption acts
8		Systematization	39–50 years		Catalytic vs. midlife crisis acts
9		Multiplication	50–61 years		Ego integrity vs. despair acts
10		Integration	61+ years		Cathartic vs. abandonment acts

Adapted with permission of Springer Science+Business Media. Young (2011); with kind permission from Springer Science+Business Media B. V. [Table 4.3, Page. 79]

Note. The table presents a model of Neo-Piagetian stage(s) and substage(s) in cognitive development in the adolescent and adult periods. See Young (2011, 2012) for the first 15 steps in this 25-step lifespan model

In the following tables, I apply the model to ethical thought and thought about practice

(at least according to how they described moral concepts), and four more after principles develop, for a total of six missing relevant steps. In terms of how they are described in my model, I refer to these six missing substages as the abstract multiplication and integration substages and the collective intelligence substages of hierarchization, systematization, multiplication, and integration, respectively.

In applying my model to concepts of morality, the following progression makes sense. In the abstract stage, the five substages concern, respectively: (a) coordination of two single moral abstractions; (b) hierarchically relating two of them, with one primary and the other subordinate; (c) general abstract systems of moral conceptualization can develop, such as fairness; (d) the system further considers contingencies and context and propagates throughout the knowledge structure of the person along with other ones; and (e) an integrated moral conceptualization develops combining the diverse systems and their spread into the person's cognitive network.

Table 24.3 Stages in the development of broad personal and professional ethical perspectives

Stage	Substage	Ethical perspective
Collective intelligence (Neo-Piagetian postformal stage)	Integration	Superordinate ethical theories
	Multiplication	Superordinate ethical principles
	Systematization	Superordinate ethical codes
	Hierarchization	Superordinate ethical rules
	Coordination	Particular superordinate ethical cases (e.g., multiple, conflicting dilemmas)
Abstract (Piagetian formal stage)	Integration	Ethical theory
	Multiplication	Ethical principle
	Systematization	Ethical code
	Hierarchization	Ethical rule
	Coordination	Particular ethical case (dilemma)

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In the postformal stage of collective intelligence, the same five substages cyclically repeat, but in terms of superordinate principles rather than single abstractions. This 10-step model of the development of abstract and superordinate abstract thought in the moral domain is sufficiently complete to allow its extension into the development of ethical thought.

Table 24.3 and the next one build on Kitchener and Kitchener's (2009, 2012) model of ethical decision-making (see Fig. 22.1), but modifies it according to my model. In their model, particular cases constitute the immediate level and four more increasingly complex levels are involved in critical, reflective ethical decision-making. Their model is quite consistent with my own model of the development of cognitive stages and substages over the lifespan. However, my model suggests some basic changes to theirs. First, their level of case appears to reflect my level of coordination. Any ethical dilemma could be seen as a conjunction of existing and dissonant thought and practice. Second, their model lumps together the development of rules and codes. In contrast, my model considers the organized collection of rules into codes as more advanced. Third, in my model cases lead to reflection at two levels, not just one, that is, at the abstract level and then at the level of collective intelligence.

(a) In this regard, the immediate, case level in the Kitchener and Kitchener model maps onto the coordination level of the present model, considering that there is an ethical dilemma involved in which present ethical thinking (ordinary moral sense) is challenged by the case at hand and its contingencies and context.
(b) The level of ethical rules in their model is consistent with the hierarchical organization of the dilemma developing toward a new ethical rule for the case at hand, as my model would predict.
(c) An organized collection of rules is called a code, which is a level consistent with the one of systematization in my model, but an equivalent one appears absent in theirs.
(d) With further development, adding in other contingencies and contexts and areas of application and domains, an ethical principle develops, according to Kitchener and

Kitchener, which is akin to the present stage of multiplication. A loose collection of principles might develop covering many relevant domains or modules.

(e) In the next step, the system is elaborated further into a combined system covering all relevant aspects, perhaps along with other ethical principles that have developed in other contexts, to create an ethical theory, or an integrated, adaptive, dynamical, and complex ethical model.

(f) The last step of Kitchener and Kitchener's model of reflective abstraction concerns how models and theories can change further. Thinking reaches an apex in which the person, or institution/organization as the case may be, steps back and reflects on the model theory. However, in the present model, I do not consider meta-reflection as an ultimate step but a process that takes place at each level in development, leading to development toward and into the subsequent step of each step in a stage model. Meta-ethical reflection might take place at each level, thereby promoting development toward the next one in the model. That is, unlike the case for Kitchener and Kitchener (2012), I do not consider meta-ethics as the penultimate stage in development of ethical thought.

The present model differentiates between (a) development of ethical thought at the level of a single dilemma leading to a single theory and (b) development of superordinate perspectives on multiple dilemmas leading to a collective, broader vision and practice. That is, in the present model, the five-step cycle of substages repeats over stages and, therefore, the elaboration of the Kitcheners' model that has been presented in this table recycles in the adult postformal stage after development takes place in the adolescent abstract stage (ages are modal). Note that the present model of the growth of ethical thought applies equally to the individual, institutional, and societal levels. For example, beyond the question of individual ethical growth that has been emphasized, how does ethical conduct in a professional organization or society as a whole and its underlying rules, regulations, codes, principles, and theories evolve? Are they subject to reflective and meta-reflective analysis and synthesis leading to dynamical changes for the better?

Note that the field of forensic psychology is especially adversarial and filled with ethical dilemmas and conflict. One way for an individual professional to deal with the adversarial divide is to consider the opposition of plaintiff and defense, or any related adversarial opposition, as components of the coordination stage of ethical thought development, and to proceed from there to develop one's ethical rules (codes), principles, and models (theory) on how to deal with the divide from a balanced, impartial perspective.

As emphasized throughout the book, a science-first perspective in working in the area should give sufficient material to arrive at such a balance. Of course, the science in the area is subject to the same adversarial divide. In this case, respect for the scientific process in elaborating concepts and conducting research will help lead to impartial and court-admissible results and conclusions.

Finally, refer to Fig. 22.4 for the beginnings of my own broad, dynamical, integrated, superordinate model of application of reflective ethical thought processes to the ethics of and practice in psychological injury and law. It is both individuated/differentiated and generalized/universalized.

Table 24.4 Stages in the development of broad helping motives and professional therapy perspectives

Stage	Substage	Mental health perspective
Collective intelligence (Neo-Piagetian postformal stage)	Integration	Superordinate theories/orientations
	Multiplication	Superordinate therapeutic principles
	Systematization	Superordinate therapeutic guidelines/codes
	Hierarchization	Superordinate therapeutic rules/techniques/procedures
	Coordination	Particular superordinate therapeutic cases (Dilemmas)
Abstract (Piagetian formal stage)	Integration	Therapeutic theory/orientation
	Multiplication	Therapeutic principle
	Systematization	Therapeutic guideline/code
	Hierarchization	Therapeutic rule/technique/procedure
	Coordination	Particular therapeutic case (Dilemma)

Adapted with permission of Springer Science + Business Media. Young (2011); with kind permission from Springer Science + Business Media B. V. [Table 4.3, Page. 79]

24.2.3 Extensions of Young's Model

The model that I developed for the growth of ethical thought also can be applied to the growth of rehabilitative and therapeutic knowledge, theory, and practice (see Table 24.4). Just as ethical thought can be construed to develop through two advanced cognitive stages of abstract (formal) thought and postformal collective intelligence, with five substages in each, cognition about therapy can be viewed from the perspective of the same growth model.

(a) Specifically, particular cases involving helping or altruistic motives, in general, might provoke dilemmas that challenge existing concepts and procedures in ways of dealing with people's problems, difficulties, and issues. The dilemma could be (a) personal in the case of a non-professional or (b) professional in the case of a practitioner or student (e.g., in placement, in supervision). The dilemma should reflect conflict present in past psychotherapeutic modes and present ones, as well as their coordination or juxtaposition in thought (discoordination, if you will).
(b) Then, a newer system should begin to develop, which at first involves developing a clear hierarchical structure to which the past mode is subsumed under the developing one. This is equivalent to forming a therapeutic rule.
(c) A loose collection of rules should develop, leading to creation of an organized structure. As the hierarchization solidifies into a rule, or new system, with other contingencies and contexts incorporated to make it more tight yet flexible, a structured therapeutic system or guideline should develop that, for present purposes, could be considered a therapeutic "code."
(d) Therapeutic systems, once formed, extend into therapeutic practice, creating a loose collection of them involving different domains and therapeutic modules.

(e) As a therapeutic system is applied to multiple areas, expanding its use and utility, the therapeutic system should grow toward a therapeutic theory. A therapeutic theory achieves an integrated, generalized yet individualized model of therapeutic knowledge, theory, and practice that is dynamically flexible.

- At each step in the transformative process, once formed, the step is examined from a meta-reflective perspective, in a therapeutic meta-theoretical approach, rendering it open to further dynamical change.

In the next cycle, the therapeutic model developed in the prior stage transforms at a superordinate level to include second-order abstract structures and processes.

(a) Multiple dilemmas in different domains/modules are coordinated simultaneously, revealing their discoordination.
(b) This leads to the step of hierarchizing superordinate therapeutic rules.
(c) The rules develop into systemic structured guidelines or "codes" (e.g., personal practitioner or professional organizational ones).
(d) From these, therapeutic principles are distilled.
(e) As they coalesce into superordinate therapeutic theories, they gain broad application and flexibility.

Note that the model presented in the table on growth in therapeutic knowledge, modeling, and practice is applicable at six interrelated levels. First, it applies to the growth of different schools of therapy. Second, it applies to the growth of an individual's therapeutic thought and its application. Third, it applies to the growth of an institution's education and training programs related to therapy, such as in graduate school. Fourth, it even applies to any nonprofessional individual's helping or altruistic behavior as the person develops related motives and tendencies. Fifth, it could reflect the growth of dyadic thinking and effort to help and behave altruistically (e.g., couples, parents, or larger units, such as families growing). Sixth, it applies to the growth of the helping motive/tendency in society at large. The six levels described are interrelated in dynamic equilibrium and tension.

The classic golden rule is a powerful dictum on ethical behavior. In Table 24.5, I develop a more general, inclusive, and qualified golden rule by following the logical stages of the present model in the growth of collective intelligence, or superordinate abstract thought.

(a) **Coordination**. In the model, thought grows through an initial coordination of abstract ideas. For the present case, a conundrum arises in considering which is primary – the classic golden rule ("do unto others as you would have them do unto you") or the corollary inverse one also used ("do not do unto others as you would not have them do unto you"). Through the cognitive dissonance created in comparing and contrasting the two dicta, the growth of a more refined, integrated golden rule can take place. There is a similar opposition in the ethics of mental health. It has been difficult to decide whether the principle of beneficence ("strive to do good, benefit, help, and safeguard") or nonmaleficence ("do no harm") is primary.

Table 24.5 Golden rules: growth of ethical thought and practice

Level	Description
Coordination (Cases)	Do unto others as you would have them do unto you
	Do not do unto others as you would not have them do unto you
	Or,
	Strive to do good, benefit, help, and safeguard (Beneficence)
	Do no harm (Nonmaleficence)
Hierarchization (Rules)	Consider positive ethics and, therefore, place the do-strive axis as primary relative to the do-not axis
Systematization (Codes)	Consider that do/striving is more than an act; rather, it is than a whole behavior having thought and feeling. Ethics concerns meeting the other in active, lived participation by the whole person with the whole. This could be called living in a mode of being rather than only living in a mode of doing/acting
	Consider that being ethical and living wholly in the moment with the other should not expressly involve expectation of return from the other for any good, benefit, safeguarding, or helpful act, although inevitably people behaving ethically might bring it full circle with ample return
Multiplication (Principles)	Consider that the golden rule should be clearly inclusive of others of different ages, conditions (e.g., psychiatric, disability), groups (e.g., gender, race, minority, culture)
	The golden rule should reflect the individual and group difference of the person living it
	The person should live it according to not only personal experience but also education, training, and practice, such as in university study or in the helping professions. Knowledge and its application stems from both subjective and objective learning
	The golden rule could be direct but also indirect (e.g., as a role model; indeed, being a good role model might have the most inspirational influence)
	When lived and applied, the golden rule should act to promote the same good, beneficial, safeguarding, and helpful attitude in the receiving other person(s)
	The golden rule should work best when it emanates from a helpful, peaceful, and stimulating attitude, or light, that is projected and felt
	The golden rule concerns all others and, moreover, the planet as a whole, as well as beyond
	There is one proviso: living the golden rule does not mean abrogating one's responsibility to do no harm to one's self/family, etc. That is, applying the golden rule should not be done blindly or naively in a way that the person is taken advantage of

(continued)

Table 24.5 (continued)

Level	Description
Integration (Theories)	Consider that the optimal golden rule should be dynamically open and responsive to changes and growth in the person, other peoples, times and culture, and ethical understanding and models We should continuously step back reflectively to examine our ethical and moral assumptions and how to live them well Therefore, the integrative golden rule that I am proposing is the following: Be unto others, no matter their age and condition, at the highest level of good and morality as reflects your positive lived participation and positive experience in the world, as well as your academic and personal studies and exploration, while acknowledging that there are personal, familial, cultural, and other group differences, as well as changes and growth over time in people and their daily living and thinking; and, aside from being a superior role model of such for the other, encourage the same superior attitude in the other and in all others, all this being done without expecting anything for yourself nor behaving in any way that is aimed at bringing advantage to yourself (but in a way that checks for being taken advantage of); that is, an appropriate golden rule to guide ways of daily living is to be, to do, and to behave in a way that maximizes a peaceful, stimulating, and helpful attitude in yourself and shown to others, which will inevitably bear positive fruit for each and every one of us and also for the planet and beyond, by the positive light and sense of helpfulness and help that it shows and seeds

Note. The levels refer to the substages in Young's (2011) model. The integrated golden rule was partially developed with my Child Development (in French) class of 2012

(b) **Hierarchization**. In order to clarify the primacy question and elaborate further the golden rule, positive ethics, or being proactive and constructive ethically, can help. In this regard, the positive side of the opposition involving "do unto/do good" compared to "do not do unto/do not harm" should predominate, with the negative aspect subsumed under it. This sets up a hierarchical relationship preparatory to further development of the rule.

(c) **Systematization.** For creating a more system-wide understanding and application of the paired golden rules, with one predominant and positive, and one secondary as its inverse, but with both considering all relevant contingencies and contexts, one needs to consider various ethical qualifiers that serve to both differentiate and generalize the golden rule, rendering it more inclusive and nuanced. The qualifiers that I considered important in this regard relate to the following: (a) the act of doing is insufficient as ethical behavior. It should reflect a whole-being perspective; (b) doing/being in order to receive favor, in turn, is less altruistic than genuine and full giving without the expectation of return; and

(c) that being said, if all the people involved in behaving by and receiving the benefits of the golden rule abide by its moral suasion, reciprocity is inevitable.

(d) **Multiplication**. As for developing higher-order ethical and behavioral moral pathways and guiding models or theories based on principles: (a) they should allow for inclusive doing and being, or giving of the self; (b) they should integrate subjective, experiential learning and objective educational (reading/academic and, if applicable, professional) learning; and (c) they should be modeled appropriately, thereby better facilitating the same attitude in the receiving party or parties. As moral/ethical systems expand and spread into different areas of moral thought, their reach extends in a multiplicative process.

(e) **Integration**. The golden rule or "theory" that develops will not only consider these factors but also will be open to dynamic change as the person or institutions/organizations/peoples living it in active, shared participation continuously reflect on the models involved and how they were derived and can still grow, leading to a broad, integrative, changing meta-model of how to live life and participate in ways of living from the morals and ethics inherent in its changing and improving nature. It should be noted that the development of a general, dynamic model of the golden rule could take the form of the one provided, because it is consistent with the various rules, principles, and theoretical qualifiers provided in the present analysis. However, other individualized versions also could be constructed that fit the present parameters.

(f) Moreover, it should be noted that the penultimate golden rule that one constructs in this regard could serve the general meta-reflective process in the construction of personal and professional broad models of therapy and of ethics, as described in the present work.

24.3 Models of Free Will and Controversies

The last tables in the present chapter extend Young's (2011) stage model of Neo-Piagetian development into new areas, illustrating the range that the model can have. In this regard, in the prior chapter, I have also applied it to a psychotherapeutic module on promoting belief in free will. With its application in the present chapter to the growth in ethical thought and decision-making, it shows how growth models, in general, such as mine, can apply to the growth of models developed by both individual practitioners and the field of psychology, in general. It is hoped that practitioners in the area of psychological injury and law, as well as the field of psychology itself, generally, reflect on their working models in practice, ethics, and psychotherapy on the basis of the models presented in this chapter and develop more integrated ones for effective guidelines to growth.

To further illustrate the applicability of my stage model to the psychotherapeutic context, Table 24.6 shows how growth in the belief of free will might take place according to the steps of Young's (2011) stage model. Psychotherapists should be attuned to this growth model and, also, how belief in free will can be lost or degenerate, e.g., due to pain, injury, or illness.

Table 24.6 Development (and loss) of a belief in having a sense of free will

Stage	Level	Description
Abstract (Piagetian formal stage)	Coordination	The abstract idea that one could have a sense of control and determine one's options, choosing the one best for us in context, emerges. It is juxtaposed to the opposite notion of a lack of control/free will/ability to choose freely, etc.
	Hierarchization	The cognitive dissonance, compare/contrast process/ indecisions, etc., created by the juxtaposition of concepts of free will in the prior level begins to resolve, in that the concept of free will becomes the primary belief to which its deterministic opposite becomes subordinated
	Systematization	The evolving concept of free will elaborates, as contingencies and contexts are considered and incorporated into a more systemic concept. The adolescent entertains a strong belief in free will, although its lack might also hold sway, depending on circumstances, manipulation, ego depletion, resource depletion, cognitive load, etc.
	Multiplication	Once systematized, the belief in free will entrenches beyond its initial locus of application (e.g., I can go out with my friends when I want and do what I want), into other areas, perhaps related to parental input (e.g., Sure you can go out, but demonstrate you deserve it, do all your course work first, be responsible and phone in, etc.)
	Integration	The belief in free will becomes a generalized concept that characterizes abstract thought processes and is applied uniformly even if hesitantly to new contingencies and contexts. It facilitates a forward, proactive approach to planning, problem solving, etc.
Collective intelligence (Neo-Piagetian postformal stage)	Coordination	The belief in free will develops into a superordinate abstract structure, beginning an integration with other developing abstract structures, such as those related to values and morals. That is, the adult develops a higher-order conception of free will that includes the ability to create one's own value and moral system, one's life path, etc. It is more than a belief that one can have free will in a particular contingency/context but that one can create ways of living imbued throughout with free will even in the most complex choices that one has to make and the most complex situations that one has to confront. This belief is juxtaposed with times when it is not yet apparent, creating conflict, dissonance, etc.
	Hierarchization	The emerging superordinate belief in free will exhibits a dominant-submissive relationship, with the concept evident about free will that is in place primary over when it is not evident
	Systematization	As contingencies and contexts are considered, the superordinate free will belief refines into a coherent structure

(continued)

Table 24.6 (continued)

Stage	Level	Description
	Multiplication	Once fully matured, the concept spreads out throughout the cognitive architecture of the person, for example, impregnating it with its accompanying higher-order values and morals
	Integration	The superordinate free will belief ends up as an integrated whole that governs cognitive and affective life in all its vicissitudes. The process is a never-ending struggle to keep it prominent and vigilant

Note. Free will belief can be lost. In the steps described in the table, it could be that an emerging belief in free will in the abstract coordination stage becomes subservient, submissive, or controlled by its opposite belief of its lack of free will, leading to a systematic absence. Then, a belief in an absence of free will begins a propagation throughout the developing thought of the adolescent, culminating in a pervasive belief or theory that it can never exist. Or, there might be isolated free will beliefs that develop for particular domains or issues in the adolescent period, but any effort to create superordinate beliefs on the topic fails – for example, the juxtaposition in the collective intelligence stage lends to primary belief in the absence of free will. The latter belief starts dominating/subverting development of any free will belief system at this level and also at the levels of its multiplication and integration. The upshot is that there could be attendant lacks or compromises in development related to superordinate values, morals, etc.

Next, in Table 24.7, I indicate how Young's (2011) stage model can apply to controversies and related oppositions. I show the transformative effect that controversy can have in an area of thought and, conversely, how it can become entrenched, perhaps to the detriment to the area of thought. For example, the note to the table shows how "divides" can develop in an area of thought. The controversy about malingering and its detection that is described in the present book illustrates how the adversarial divide in the field of psychological injury and law has become entrenched and this has happened not only for law but also for psychology, psychiatry, and mental health, in general. The great task that we all confront is to use knowledge of how controversy grows and can be resolved in constructive ways to improve the field rather than further divide it.

Moreover, the table applies to the internal "controversies" that patients undergoing psychotherapy might express as they react to cognitive dissonance and how that can be promoted to further their progress (e.g., the belief "I can't get better" juxtaposed with the notion the person can improve). In addition, it applies to controversies and conflicts in groups of more than one person (dyads, couples, families, institutions, societies).

Lilienfeld (2007) also has valued the role of controversy in promoting growth in thought, by considering the area of scientific thought, in particular. At first, controversial ideas might be resisted, opposed, dismissed, repudiated, and shunned and their proponents criticized for their character. The controversies might be considered pseudo-controversies, at first, as science is inherently conservative and skeptical. However, even if a novel idea is wrong, it serves a useful heuristic that can lead to refinement and nuance of a standard, well-established paradigm through the legitimate doubt it engenders. Therefore, suppression of controversy is detrimental to science.

Table 24.7 The transformative effect of controversy (or its entrenchment)

Level	Description
Coordination	Controversy (or, discordant item, issue, dilemma, debate) emerges involving juxtaposition of a standard and a different approach, aspect, empirical finding, etc.
Hierarchization	Investigation and conceptualization lead to one or other component to be considered primary, dominant, e.g., with other criticized, invalidated, point by point. Of course, proponents of either side have differing opinions of which component is primary, dominant
Systematization	The controversy becomes centralized in the overall thought process, discipline, etc.
Multiplication	Further investigation and conceptualization might lead it to (a) drop out as important; or continue on and (b) remain as is and strident; (c) amplify, become reinforced; (d) transform, taking on new dimensions; or (e) otherwise extend in centralization
Integration	The controversy eventually resolves, with one view predominating and becoming standard. It has extended to the point of informing all or much of the thought process involved

Note. The five-step description of how controversies and related oppositions can invigorate or mark an area of thought can pass from consideration of isolated abstract ideas to more integrated wholes. This parallels the growth from adolescent abstract intelligence to adult collective intelligence, e.g., in the creation of subdisciplines and disciplines in an academic field, including in scientific pursuit

The transformative process described of controversies in an area of thought is framed in terms of investigation and conceptualization that is dynamic, constructive, open, comprehensive, and impartial. However, controversies can entrench negatively into an area of thought when the latter approach is not instituted

(a) Then, there is no real coordination in the first step of the process. The different approach that is juxtaposed is denied any space or role, unjustly criticized, or even condemned

(b) In the second step, hierarchization does not take the form of determining which component of the idea should be considered primary or dominant, but which secondary consideration should be primary or dominant, e.g., undue sway is given to underlying schools of thought or ideology on one side or the other; people aligned on one side or the other; supportive institutions or third parties aligned on one side or the other

(c) Next, in systematization, centralization does take place for the controversy at issue, but in a negative, vitriolic and even illogical, irrational way, absent the constructive investigation and conceptualization required to deal with it

(d) In the fourth step of multiplication, the controversy that has tilted inappropriately to one side might spread to other aspects of thought in the area involved, further damping appropriate investigation and conceptualization

(e) Finally, in integration, the marked, negative discord in the area becomes permanent to the point that one can refer to the "divide" in the area, e.g., the "adversarial divide" in the field of forensic psychology, in general, and of psychological injury and law, as an example

24.4 Chapter Conclusions

This chapter completes the first parts of the book dedicated to presenting the basics in the field of psychological injury and law. Chapters that follow are more supplementary and appendix in form. The focus of most of the chapters to this point have been on malingering and assessment, as well as other topics related to forensic

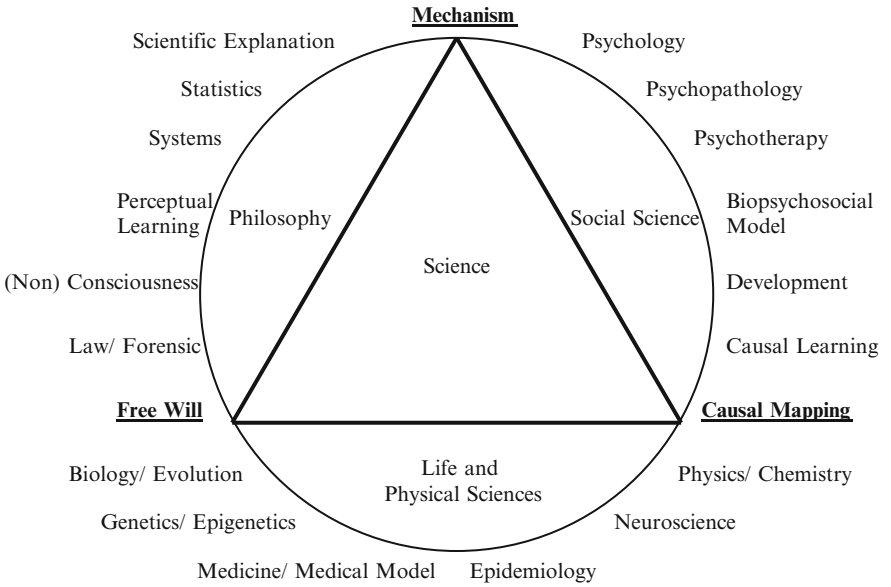

Fig. 24.1 Causality landscape: causality solitudes coming together
Adopted from Young and Haynes (2014)
*Note***.** The *central triangular* portion of the figure is taken from a model in Young (2011). This figure elaborates the full range of areas that study causality

and clinical practice in the area, such as disability. In these last four chapters, the book has extended into consideration of therapy and of ethics. This last chapter of the four presents a model of ethical thought and decision-making based on the work of Kitchener and Kitchener (2012). In addition, I extend it to thought about building psychotherapeutic understanding and helping behavior, in general.

The overall conclusion to this chapter that completes presenting the basics in the field of psychological injury and law is that it is a dynamic area of study and practice for which some of its essential questions are important to all of psychology. For example, assessment is very important in the area of psychological injury and law and advances in assessment, as described in the present book, apply to other areas of psychology. Also, the topic of causality is central to psychological injury and law from the perspective of both psychology and law. In this regard, for psychology, practitioners need to establish whether the event at claim is a material factor in the multicausal array that produces patient presentation. As for the law, the court or related venues need to establish whether the psychological conditions demonstrated would have been found absent the event at claim. This is the classic "but for" test and it reflects the general counterfactual argument of causation that appears in other areas of study of causality. In Fig. 24.1, I indicate the multiple areas in which causality is studied in science. The area of psychological injury and law stands at the nexus of some of these areas of inquiry of causality. Further advances in this study of causality in the area of psychological injury and law can serve to educate and inform other areas that consider the question.

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Part V
Supplements – Testing, Systems

Chapter 25
Selected Tests and Testing in Psychological Injury Evaluations I

25.1 Introduction

This chapter and the next one in the monograph examine in more detail testing in psychological injury evaluations and some crucial tests in the area. Previous chapters have examined important tests in the area, such as the SIRS (Structured Interview of Reported Symptoms; Rogers et al. 1992) and the MMPI-2-RF (Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form; Ben-Porath and Tellegen 2008/2011). There are five parts to the two chapters. The first begins with general testing considerations, especially with respect to validity. Then, it examines tests related to two of the three psychological injuries – PTSD (posttraumatic stress disorder) and pain. The second of these chapters examines the third major psychological injury – TBI (traumatic brain injury). Next, it examines in more detail some personality measures – the MMPI's (MMPI-2, Minnesota Multiphasic Personality Inventory, Second Edition; Butcher et al. 1989, 2001) and the Rorschach – (it presents information on the newly revised Rorschach assessment system, the R-PAS, Rorschach Performance Assessment System; Meyer et al. 2011). Finally, the chapter provides an example of an SVT (symptom validity test), the VSVT (Victoria Symptom Validity Test; Slick et al. 1997). Note that the section on PTSD includes discussion of its criteria and how it has changed in the DSM-5 (Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition; American Psychiatric Association 2013), because, as its criteria change, so must its tests.

G. Young, *Malingering, Feigning, and Response Bias in Psychiatric/Psychological Injury*, International Library of Ethics, Law, and the New Medicine 56,
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Table of Terms and Sources

Abbreviation	Name	Source(s)
ADIS	Anxiety Disorders Interview Schedule for DSM-IV	Brown et al. (1994)
ATR	Atypical Response Scale	Briere (1995)
CAPS	Clinician-Administered PTSD Scale	Blake et al. (1995)
DAPS	Detailed Assessment of Posttraumatic Stress	Briere (2001)
DSM-IV	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition	American Psychiatric Association (1994)
DSM-IV-TR	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision	American Psychiatric Association (2000)
DSM-5	Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition	American Psychiatric Association (2013)
IES-R	Impact of Event Scale, Revised	Weiss and Marmar (1996)
MCMI-III	Millon Clinical Multiaxial Inventory, Third Edition	Millon (1994) and Millon et al. (1997)
M-FAST	Miller Forensic Assessment of Symptoms	Miller (2001)
MMPI-2	Minnesota Multiphasic Personality Inventory, Second Edition	Butcher et al. (1989, 2001)
MMPI-2-RF	Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form	Ben-Porath and Tellegen (2008/2011)
PAI	Personality Assessment Inventory	Morey (1991, 2007)
PCL-C	PTSD Checklist – Civilian Version	Blanchard et al. (1996)
PCL-R	Hare's Psychopathy Checklist, Revised	Hare (1991)
PC-PTSD	Primary Care Posttraumatic Stress Disorder Screen	Prins et al. (2003)
PDRT	Portland Digit Recognition Test	Binder (1993) and Binder and Willis (1991)
PDS	Paulhus Deception Scales	Paulhus (1998)
RMFIT	Rey 15-Item Memory Test	Rey (1941)
R-PAS	Rorschach Performance Assessment System	Meyer et al. (2011)
SCID	Structured Clinical Interview for DSM-IV	First et al. (1997)
SIRS	Structured Interview of Reported Symptoms	Rogers et al. (1992)
TOMM	Test of Memory Malingering	Tombaugh (1996)
TSI	Trauma Symptom Inventory	Briere (1995)
TSI-2	Trauma Symptom Inventory, Second Edition	Briere (2011)
VSVT	Victoria Symptom Validity Test	Slick et al. (1997)

25.2 Testing

The most critical issue with respect to testing in the area of psychological injury is that the tests are standardized for the population and have adequate psychometric properties. I have reviewed the need for sensitivity and specificity elsewhere in the book. In the present chapter, I provide basics about the concepts of test validity. Sherman et al. (2011) listed basic rules of thumb about validity in neuropsychological testing that applies to any testing of all the psychological injuries. Validity concerns the degree that a test measures what it is supposed to measure. It is different than

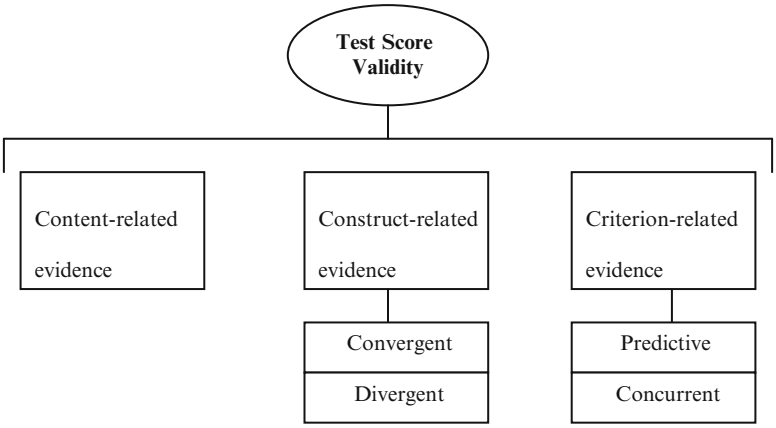

Fig. 25.1 Tripartite model of different types of evidence for determining validity of a test score Test scores are evaluated for validity, not tests, per se. The validity can be examined at three levels – content, construct, and criterion. Sherman et al. list important subtypes, too. Validity varies with population, settings, etc., and generalization should be limited and justified
Adapted with permission of Springer Science + Business Media. Sherman et al. (2011); with kind permission from Springer Science + Business Media B. V. [Figure 30.6, Page. 886]

Table 25.1 Rule of thumb: validity

Point	Explanation
1	Validity is not an "all or none" property
2	Validity is not a property of tests; it is a property of the meaning attached to a test score in the specific context of test usage
3	There are three broad categories of validity evidence to consider (tripartite model): Content-Related; Construct-Related; and Criterion-Related, but many different ways of determining the validity of test scores
4	Determining validity of a test score is an ongoing process based on information gathered in both healthy individuals and clinical populations

Adapted with permission of Springer Science + Business Media. Sherman et al. (2011); with kind permission from Springer Science + Business Media B. V. [Excerpt of 85 words, Page. 30]

reliability, which concerns consistency. They noted that validity is about meaning and relates to test scores rather than tests, per se.

There are three major kinds of validity: content-related, construct-related, and criterion-related (see Fig. 25.1). The understanding of the validity of a test is an ongoing process. Figure 25.1 further specifies that construct-related validity includes convergent and divergent validity and that criterion-related validity concerns predictive and concurrent validity. Tables 25.1 and 25.2 specify the nature of the three types of validity – content, construct, and criterion.

To conclude, I note that if a test has demonstrated validity for one population, it does not necessarily mean that it is valid for another. To begin the process of ascertaining a test's validity with a new population, appropriate norms need to be obtained.

Table 25.2 Content-related evidence for validity

Point	Explanation
Questions to ask for evaluating content-related evidence for validity	
1	Is the test based on a theoretical model
2	Is there a literature review with supporting evidence?
3	Has the construct being measured been well defined?
4	Has the operationalization of the construct (i.e., the translation of theory into test items) been done carefully (e.g., systematic review of the domain from which items are to be sampled)?
5	Does the test have a large enough sample of items to be representative of the domain measured?
6	Do the items have sufficient range of difficulty for the target population?
7	Were items generated with care, using experts in the field or items from previously validated scales?
8	Was the final item pool evaluated by experts in the field for accuracy and relevance?
9	Will examinees think the test seems valid at face value?
Questions to ask for evaluating construct-related evidence for validity	
1	Were hypotheses generated to measure the construct?
2	Is the construct reliably measured as demonstrated by high reliability coefficients?
3	Does it correlate highly with other test scores measuring the same construct?
4	Does it have low correlations with test scores measuring different constructs?
5	Do factor analytic studies support the construct measured by the test score as it is operationalized in the test?
Questions to ask for evaluating criterion-related evidence for validity	
1	Is the test score sensitive to expected developmental, demographic, or other differences in the sample?
2	Do group difference studies support the test score?
3	Is the test score sensitive to treatment effects (e.g., responsiveness)?
4	Do classification accuracy statistics (e.g., positive and negative predictive power) support the use of the test score?
5	Are there meta-analytic studies on the test score's usage in the population of interest?

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In the forensic disability and similar context related to psychological injuries, the evaluator should verify that such norms are available for any test being used in assessment, or otherwise proceed with caution.

25.3 PTSD

25.3.1 Overview

In Chap. 9, I had described that Torres et al. (2012) reported which tests are used to assess PTSD. They noted whether the respondents to their survey were licensed with no board-certifications, clinical psychologists with clinical board-certifications, or forensic psychologists with board-certification.

Table 25.3 Instruments used when evaluating for PTSD

Instrument	Frequency (%)
MMPI-2	34.9
TSI	19.4
PCL-R	17.8
PAI	17.8
CAPS	14.0
MCMI-III	14.0
SCID	10.1
SIRS	9.3
DAPS	9.3
PC-PTSD	7.0
ADIS	1.6

Adapted with permission of Springer Science + Business Media. Torres et al. (2012); with kind permission from Springer Science + Business Media B. V. [Excerpt of 22 words, Page. 6]
Note. Psychologists were asked how frequently they used specific instruments when evaluating for PTSD. Frequency data for most often (more than 50 % of the time) used instruments when evaluating for PTSD, as reported by the sample
Abbreviations. PTSD posttraumatic stress disorder, *MMPI-2* Minnesota Multiphasic Personality Inventory, Second Edition (Butcher et al. 1989, 2001), *TSI* Trauma Symptom Inventory (Briere 1995), *PCL-R* Hare's Psychopathy Checklist, Revised (Hare 1991), *PAI* Personality Assessment Inventory (Morey 1991, 2007), *CAPS* Clinician-Administered PTSD Scale (Blake et al. 1995), *MCMI-III* Million Clinical Multiaxial Inventory-, Third Edition (Millon 1994; Millon et al. 1997), *SCID* Structured Clinical Interview for DSM-IV (First et al. 1997), *DSM-IV* Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (American Psychiatric Association 1994), *DAPS* Detailed Assessment of Posttraumatic Stress (Briere 2001), *PC-PTSD* Primary Care Posttraumatic Stress Disorder Screen (Prins et al. 2003), *ADIS* Anxiety Disorders Interview Schedule for DSM-IV (Brown et al. 1994)

The survey revealed that to evaluate PTSD, the following instruments were used most frequently (see Table 25.3): MMPI-2 (Minnesota Multiphasic Personality Inventory, Second Edition; Butcher et al. 1989, 2001); TSI (Trauma Symptom Inventory; Briere 1995); PCL-R (Hare's Psychopathy Checklist, Revised; Hare 1991); PAI (Personality Assessment Inventory; Morey 1991, 2007); CAPS (Clinician-Administered PTSD Scale; Blake et al. 1995); MCMI-III (Millon Clinical Multiaxial Inventory, Third Edition; Millon 1994; Millon et al. 1997); SCID (Structured Clinical Interview for DSM-IV; First et al. 1997); SIRS (Structured Interview of Reported Symptoms; Rogers et al. 1992); DAPS (Detailed Assessment of Posttraumatic Stress; Briere 2001); and PC-PTSD (Primary Care Posttraumatic Stress Disorder Screen; Prins et al. 2003. The three types of respondents did not differ in the tests used.

As for evaluation of malingered PTSD, in their survey, Torres et al. (2012) found that the following methods and tests were used most frequently (see Table 25.4): clinical opinion (over 65 %); MMPI-2; other embedded validity indices; TSI; TOMM (Test of Memory Malingering; Tombaugh 1996); SIRS; CAPS; M-FAST (Miller Forensic Assessment of Symptoms Test; Miller 2001); RMFIT (Rey 15-Item Memory Test; Rey 1941); other tests. They noted that the forensic psychologists clearly assessed over-reporting of PTSD symptoms more than the other two groups.

Table 25.4 Assessment measures used when detecting overreporting of PTSD symptoms

Measure	Frequency (%)
Clinical opinion	65.9
MMPI-2 validity indices	41.5
Other embedded validity indices	15.4
TSI	14.6
TOMM	12.2
SIRS	11.4
CAPS	6.5
M-FAST	4.9
RMFIT	4.1
Other test	4.1
IES-R	0.8
PDEQ	0.8
STAI	0.8
PDRT	0.8
PDS	0

Adapted with permission of Springer Science + Business Media. Torres et al. (2012); with kind permission from Springer Science + Business Media B. V. [Excerpt of 36 words, Page. 7]
Note. Psychologists were asked how frequently they used specific assessment measures when detecting over reporting of PTSD symptoms. Frequency data for most often (more than 50 % of the time) used instruments when evaluating for PTSD, as reported by the sample
Abbreviations. *PTSD* posttraumatic stress disorder, *MMPI-2* Minnesota Multiphasic Personality Inventory, Second Edition (Butcher et al. 1989, 2001), *TSI* Trauma Symptom Inventory (Briere 1995), *TOMM* Test of Memory Malingering (Tombaugh 1996), *SIRS* Structured Interview of Reported Symptoms (Rogers et al. 1992), *CAPS* Clinician-Administered PTSD Scale (Blake et al. 1995), *M-FAST* Miller Forensic Assessment of Symptoms (Miller 2001), *RMFIT* Rey 15-Item Memory Test (Rey 1941), *IES-R* Impact of Event Scale, Revised (Weiss and Marmar 1996), *PDEQ* Peritraumatic Dissociative Experiences Questionnaire (Marmar et al. 1997), *STAI* State Trait Anxiety Inventory (Spielberger 1983), *PDRT* Portland Digit Recognition Test (Binder 1993; Binder and Willis 1991), *PDS* Paulhus Deception Scales (Paulhus 1998)

Ingram et al. (2012) referred to the detection of malingered PTSD as "a difficult process." They indicated that evaluators might adopt extreme positions, such as advocating for the survivor or attempting to catch the malingerer. They mentioned that its assessment is "part science and part art" and multimodal. The clinical contribution to the process should not be underrated because there is no single "magic bullet" to assess PTSD and malingered PTSD. In particular, they recommended the MMPI-2, the SIRS, and the PTSD Checklist – Civilian Version (PCL-C; Blanchard et al. 1996).

25.3.2 DAPS and TSI-2

The next portion of this section of the chapter examines more closely the DAPS and the TSI-2 (Trauma Symptom Inventory, Second Edition; Briere 2011). I note that of the specific self-report measures of PTSD, Howe (2012) recommended the DAPS in malingered PTSD evaluations. Table 25.5 provides description of its

Table 25.5 Description of the Detailed Assessment of Posttraumatic Stress (DAPS) scales

Domain/scale	Description
Validity scales	
Positive Bias (*PB*)	Evaluates the extent to which respondents deny low-level psychological symptoms or problems that most people would endorse to some degree. Individuals with high scores are likely to be especially defensive or avoidant, invested in presenting themselves as psychologically symptom-free, or otherwise unwilling to endorse commonly endorsed items
Negative Bias (*NB*)	Assesses willingness to endorse statistically unusual phenomena (e.g., going blind for several minutes at a time) or seemingly unlikely experiences (e.g., being able to read minds) that most individuals in the standardization sample rarely described. High scores on this scale may reflect an attempt to present oneself as especially symptomatic, either as a "cry for help" or as a misrepresentation for secondary gain
Trauma specification scales	
Relative Trauma Exposure (*RTE*)	Represents the sum of the first 12 trauma exposure items of the DAPS trauma specification section
Onset of Exposure (*ONSET*)	Single item that evaluates how recently the index trauma occurred, rated on a scale of 1 (*In the last day*) to 5 (*A year ago or longer*)
Peritraumatic Distress (*PDST*)	Measures the extent of distress the respondent experienced in a variety of areas at the time of the trauma, including fear, horror, helplessness, guilt, and shame
Peritraumatic Dissociation (*PDIS*)	Assesses the degree to which the respondent dissociated during the index traumatic event, primarily in terms of depersonalization or derealization
Posttraumatic stress scales	
Reexperiencing (*RE*)	Evaluates the reexperiencing symptom cluster of PTSD and ASD, including intrusive thoughts, flashbacks, memories, and dreams of the traumatic event, as well as psychological distress and autonomic reactivity to trauma-reminiscent events and stimuli
Avoidance (*AV*)	Assesses the avoidance responses found in PTSD and ASD, including attempts to avoid people, places, conversations, and situations that might trigger intrusive reexperiencing symptoms; attempts at thought suppression and feeling avoidance; and emotional numbness, foreshortened future, and loss of interest
Hyperarousal (*AR*)	Taps the autonomic hyperarousal cluster of PTSD and ASD symptoms, such as tension, sleeping difficulties, irritation, problems with attention and concentration, hyperalertness, hypervigilance, and heightened startle responses
Posttraumatic Stress-Total (*PTS-T*)	Represents the sum of *RE*, *AV*, and *AR*, and thus evaluates the overall severity of PTSD symptoms experienced by the respondent. PTSD severity is categorized as *Mild*, *Moderate*, or *Severe* based on the *PTS-T T* score
Posttraumatic Impairment (*IMP*)	Assesses the psychosocial impairment associated with PTSD and ASD, including difficulties at work, school, social situations, or in relationships as a result of posttraumatic stress

(continued)

Table 25.5 (continued)

Domain/scale	Description
Associated features scales	
Trauma-Specific Dissociation (*T-DIS*)	Evaluates dissociative responses that are directly linked to the index traumatic event. Taps those derealization, depersonalization, and detachment symptoms that often follow exposure to overwhelming trauma
Substance Abuse (*SUB*)	Measures respondents' self-reported recent use of drugs, including heroin, cocaine, stimulants, depressants, and marijuana, as well as signs of chronic alcohol abuse, including excessive drinking, blackouts, and social impairment
Suicidality (*SUI*)	Measures suicidal motives, ideations, and behaviors, including, wanting to end one's life; thinking, fantasizing, and making plans for suicide; threatening to kill oneself; engaging in dangerous acts in the hope of death; and reports of previous suicide attempts

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Abbreviations. PTSD posttraumatic stress disorder, *ASD* acute stress disorder

scales. One criticism of all these self-report measures is that they are easy to study and can be used to easily fool psychologists about claimed PTSD. However, the DAPS questionnaire is not simply about the 17 criteria of PTSD but it is a 104-item test of trauma exposure and post-traumatic response for individuals who have experienced a significant psychological stressor. The validity scale concerns items of statistically unusual phenomena that most individuals in the normative sample had rarely endorsed. The normative sample included over 400 respondents from a general population who had reported exposure to one or more traumas that meet the DSM-IV (Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition; American Psychiatric Association 1994) criteria. The normative sample was recruited by using registration of owners of automobiles or people who had listed phone numbers. In addition, university students were recruited. The validity sample consisted of trauma-exposed clinical patients recruited from 13 clinicians. The community sample consisted of residents exposed to at least one trauma. A university validity sample was also used, with the students having at least one prior trauma exposure.

It is noted that research has yet to be undertaken using the DAPS with PTSD claimants in forensic settings. However, the DAPS has many properties that make it amenable for use in PTSD malingering evaluations, as long as its used prudently and not in isolation.

As for Briere's new test, the TSI-2 (see Table 25.6), it is an improvement over the TSI but it not clearly better than to the DAPS. It has 136 items. Also, it has scales that are not present in the DAPS. Its validity indicator, the ATR (Atypical Response Scale), has been revised in order to better evaluate potential "misrepresentation" of PTSD.

Table 25.6 Trauma Symptom Inventory-2 (TSI-2) scales, subscales, and factors

Scale/subscale/factor	Domain evaluated
Validity scale	
Response Level (RL)	Bias toward underreporting or denying symptomatology
Atypical Response (ATR)	Bias toward overreporting trauma-related symptoms
Factor	
Self-Disturbance (SELF)	Difficulties associated with inadequate self-awareness and negative models of self and other
Posttraumatic Stress (TRAUMA)	Posttraumatic stress and related anxiety and dissociation
Externalization (EXT)	Tendency to engage in dysfunctional or self-destructive behaviors when distressed
Somatization (SOMA)[a]	See SOM scale
Clinical scale/subscale	
Anxious Arousal (AA)	Anxiety and hyperarousal symptoms
Anxiety (AA-A)	Symptoms of anxiety
Hyperarousal (AA-H)	Symptoms associated with posttraumatic hyperarousal
Depression (D)	Cognitive, affective, or somatic symptoms of depression
Anger (ANG)	Angry thoughts, feelings, and behaviors
Intrusive Experiences (IE)	Reliving/intrusion symptoms of posttraumatic stress
Defensive Avoidance (DA)	Avoidance of upsetting thoughts, feelings, or memories
Dissociation (DIS)	Depersonalization, derealization, detachment, amnesia, identity splits
Somatic Preoccupations (SOM)[a]	Somatic preoccupation and distress
Pain (SOM-P)	Aches and pains
General (SOM-G)	Generalized somatic complaints
Sexual Disturbance (SXD)	Sexual problems and behaviors
Sexual Concerns (SXD-SC)	Negative thoughts and feelings associated with sexuality
Dysfunctional Sexual Behavior (SXD-DSB)	Problematic sexual behaviors
Suicidality (SUI)	Suicidal thoughts and behaviours
Ideation (SUI-I)	Suicidal ideation
Behavior (SUI-B)	Suicidal behaviour
Insecure Attachment (IA)	Difficulties or insecurities regarding close relationships with others
Relational Avoidance (IA-RA)	Discomfort or avoidance regarding close relationships
Rejection Sensitivity (IA-RS)	Preoccupation with abandonment or rejection in relationships
Impaired Self-Reference (ISR)	Difficulties in accessing identity, self, or self-determination
Reduced Self-Awareness (ISR-RSA)	Lack of awareness of internal mental processes associated with a personal sense of self
Other-Directedness (ISR-OD)	Overvaluing others' views and demands in the absence of sufficient self-reference
Tension Reduction Behavior (TRB)	Use of external activities (e.g., self-injury, bingeing) as ways to avoid or distract from upsetting internal states

Note: [a]The SOMA factor score is the same as the SOM scale score

Its normative population was recruited through a survey sampling company used by the publisher of the test. The test author also examined university student samples and a combined clinical validity sample consisting of combat veterans, patients with borderline personality disorder, victims of sexual abuse, and victims of domestic violence. The author also looked at incarcerated women, a PTSD simulation group, and a genuinely distressed group. As with the DAPS, it is noted that there is no direct research with PTSD claimants in the forensic context.

To conclude, in comparing the various validity samples that were tested for the DAPS and the TSI-2, the ones used for the DAPS appear more comparable to what might be needed in the forensic disability context that is, the DAPS appears to have used a broader range of civilian trauma-exposed individuals in its validity research although the range of respondent types is larger with the TSI-2. Further research is needed on both instruments before definite conclusions can be given, especially given the new status of the recently released TSI-2.

25.3.3 PTSD Criteria

Chapter 9 had presented the DSM-IV-TR (Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision; American Psychiatric Association 2000) symptoms of PTSD. It includes three main symptom clusters – intrusions, avoidance/numbing, and hyperarousal. Gootzeit and Markon (2011) have supported a four-factor model as, have others (Simms et al. 2002) (see Table 25.7). In particular, the avoidance/numbing factor is split in this model, the numbing is called dysphoria, and it includes several of the hyper-arousal symptoms, thereby reducing the number of symptoms in the hyperarousal cluster.

It is instructive to note that the revision of the PTSD criteria in the DSM-5 (Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition; American Psychiatric Association 2013) also has four instead of three clusters of symptoms and the decision to undertake this change is reported as being based on the literature (see Tables 25.8 and 25.9; Table 25.9 clarifies the nature of the major changes in the DSM-5 for PTSD). In this regard, the four clusters in the DSM-5 refer to intrusions, avoidance, negative alterations in cognitions and mood, and arousal, in particular. However, the number of symptoms in the four clusters does not correspond exactly with the factor-analytic research. Moreover, three new symptoms (self-blame, negative belief and reckless/destructive behavior) were added without determining if they fit empirically in the clusters. Another major change refers to altering the A criterion so that it does not necessarily include having experienced a traumatic event that was considered horrific. It should be noted that First (2010) has argued that this change to the DSM criteria would lead to further difficulties in the forensic context.

Also, the DSM-5 includes a specifier of PTSD – having prominent dissociative symptoms. The dissociative symptoms are depersonalization and derealization. To my knowledge, there is yet to be research that demonstrates a fifth symptom cluster related to dissociation in conjunction with the other four clusters mentioned above.

Table 25.7 Possible symptom dimensions of PTSD

	Models		
	DSM-IV	King et al. (1998)	Simms et al. (2002)
DSM-IV PTSD symptoms	3-Factor	4-Factor	4-Factor
B1. Intrusive thoughts of trauma	Intrusions	Intrusions	Intrusions
B2. Recurrent dreams of trauma	Intrusions	Intrusions	Intrusions
B3. Flashbacks	Intrusions	Intrusions	Intrusions
B4. Emotional reactivity	Intrusions	Intrusions	Intrusions
B5. Physiological reactivity to trauma cues	Intrusions	Intrusions	Intrusions
C1. Avoiding thoughts of trauma	Avoidance/Numbing	Avoidance	Avoidance
C2. Avoiding reminders of trauma	Avoidance/Numbing	Avoidance	Avoidance
C3. Inability to recall aspects of trauma	Avoidance/Numbing	Numbing	Dysphoria
C4. Loss of interest	Avoidance/Numbing	Numbing	Dysphoria
C5. Detachment	Avoidance/Numbing	Numbing	Dysphoria
C6. Restricted affect	Avoidance/Numbing	Numbing	Dysphoria
C7. Sense of foreshortened future	Avoidance/Numbing	Numbing	Dysphoria
D1. Sleep disturbance	Hyperarousal	Hyperarousal	Dysphoria
D2. Irritability	Hyperarousal	Hyperarousal	Dysphoria
D3. Difficulty concentrating	Hyperarousal	Hyperarousal	Dysphoria
D4. Hypervigilance	Hyperarousal	Hyperarousal	Hypervigilance
D5. Exaggerated startle response	Hyperarousal	Hyperarousal	Hypervigilance

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Table 25.8 Revision of APA DSM-5 for Posttraumatic Stress Disorder (PTSD), adjusted

A. Exposure to one (or more) of these event(s): death/threatened death; actual/threatened serious injury; actual/threatened sexual violation. This happens in the following way(s):
   1. Experiencing oneself
   2. Personally witnessing it as it occurs to others
   3. Learning that it occurred to a close relative/friend; the actual/threatened death is violent/accidental
   4. Experiencing personally repeated/extreme exposure to aversive details (e.g., first responders to human body parts; police officers repeatedly to the details of child abuse); excludes exposure through electronic media/television/movies/pictures, except if work-related

B. Intrusion symptoms associated with it that began after it, as shown by the following way(s);
   1. Recurrent/involuntary/intrusive distressing memories of it
   2. Recurrent distressing dreams; their content affect, or both are related to it
   3. Dissociative reactions (e.g., flashbacks); the person feels/acts as if it is recurring (at worst, a complete loss of awareness of present surrounding)
   4. Intense/prolonged psychological distress at exposure to internal/external signals that symbolize/resemble an aspect of it
   5. Marked physiological reactions to reminders (internal/external signals symbolizing/resembling (aspect of it))

(continued)

Table 25.8 (continued)

C. Persistent avoidance of stimuli associated with it that began after it, as shown by efforts to avoid the following way(s):
   1. (Tries to) avoid distressing internal reminders (thoughts/feelings/memories) about/associated with it
   2. (Tries to) avoid external reminders (e.g., people, places, conversations, activities, objects, situations) that induce distress (thoughts/feelings/memories) about/associated with it

D. Negative alterations in cognitions/mood associated with it begins or worsened after it, as shown by three (or more) of the following way(s):
   1. Inability to remember important aspect of it (typically due to dissociative amnesia, not head injury/alcohol/drugs)
   2. Persistent/exaggerated negative beliefs/expectations about one's self, others/world (e.g., "I'm bad," "Trust no one now," "The world is totally dangerous")
   3. Persistent, distorted thoughts about the cause/consequences of it, leading to self-blame/blame of others
   4. Persistent negative emotional state, (e.g., fear/horror/anger/guilt/shame)
   5. Markedly diminished interest/participation in important life activities
   6. Feeling of detachment/estrangement from others
   7. Persistent inability to experience emotions that are positive (e.g., happiness/satisfaction/loving feelings)

E. Alterations (marked) in arousal/reactivity associated with it, having begun or worsened after it, as shown by two (or more) of the following way(s):
   1. Irritability/angry behavior (to little or no provocation), as verbal/physical aggression to people/objects
   2. Recklessness/self-destructiveness
   3. Hypervigilance behavior
   4. Exaggerated startling response
   5. Concentration problems
   6. Sleep disturbance (e.g., difficulty falling/staying asleep/restless sleep)

F. Duration lasts at least 1 month

G. The disturbance induces clinically significant distress/impairment in social/occupational/other important functional areas

H. Disturbance not due to physiological effects of a substance (e.g., medication/alcohol) or to another medical condition

Adapted from American Psychiatric Association (2013)
Specify if:
With Delayed Onset: if fully diagnosable only at 6 months or more after it
Specify if:
Dissociative symptoms present (persistent, recurrent)
1. depersonalization (detailed feelings, e.g., outside observer, in a dream, feeling unreal, moving slowly)
2. derealization (unreality in surroundings (also dreamlike/distent/distorted))
Abbreviations. DSM-5 Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition

A component to the DSM-5 draft proposal had been that the intensity of the PTSD symptoms should be evaluated using a scale, the National Stressful Events Survey PTSD Short Scale (NSESSS). However, I note that the rationale for presentation of this scale in the DSM did not include mention of its psychometric properties. Fortunately, this recommendation was not included in the final version of the DSM-5.

Table 25.9 Major revisions of the APA's DSM-5 posttraumatic stress disorder diagnosis

Criterion	Change in DSM-5
DSM-IV changes	
A1	The DSM-5 draft proposal rationale tightens the A1 criterion to make a better distinction between "traumatic" and subthreshold events
A2	According to the DSM-5 draft proposal rationale, this criterion has "No utility" and is dropped
B1	The change drops the qualifier of images/thoughts/perceptions
B2	Adds the qualifier affect/content related to event involved
B3	Qualifies that all examples are dissociative; drops the intoxication mention
B5	Minor change
C1	Replaces conversation avoidance with that of memory avoidance
C2	Adds avoidance of conversations, objects, situations
C3	Qualifies that lack of recall is due to dissociation
C6	Restricted affect range switched to persistence in not experiencing positive affect, and examples expanded to include happiness and satisfaction
C7	Sense of foreshortened future deleted and replaced by persistent negative affect (e.g., fear, horror, anger, guilt, shame)
D1	Sleep difficulty now a disturbance, and example of restless sleep added
D2	Irritability/anger now includes aggression and it can happen with little/no provocation
Acute/chronic specifier	Deleted
Delayed onset	Modified
New DSM-5 Criteria	
A3	Learning of a traumatic event for significant other
A4	Repeated/extreme exposure to trauma (with qualifiers) event's aversive details
C2	Persistent/exaggerated negative beliefs/expectations about the self/others/world
C3	Persistent, distorted thoughts → self-blame re cause/consequences
E2	Recklessness/self-destructiveness
Dissociation	Specifier added – persistent/recurrent depersonalization/derealization

Parts adapted from American Psychiatric Association (2010, August)
Abbreviations. DSM-5 Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (American Psychiatric Association 2013), *DSM-IV* Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (American Psychiatric Association 1994), *PTSD* posttraumatic stress disorder

The upshot of the DSM-5 related to PTSD and its implementation for the DSM-5 criteria for PTSD is that the various psychological/psychiatric instruments aimed at measuring the presence of PTSD will have to be changed and new normative data collected. The DSM-5 has been published in 2013, and workers in the area of psychological injury will have to tread carefully in using the existing tests before new versions are created and validated.

Table 25.10 Posttraumatic growth

Point	Explanation
1	Traditional approaches to loss and potentially traumatic events (PTEs) have emphasized psychopathology or average differences between exposed and nonexposed groups
2	Traditional approaches to PTEs assume homogeneity in outcome, whereas individual difference approaches assume outcome heterogeneity
3	The prototypical longitudinal outcome patterns after PTEs are chronic distress, gradual recovery, delayed increases in distress, and resilience
4	Resilience, when defined as an outcome, is typically the most common pattern observed
5	Latent growth modeling makes it possible to identify prototypical outcome patterns empirically
6	There are multiple, independent predictors of resilient outcomes
7	Resilience-building interventions may be ineffective and perhaps even harmful

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Note that traumatic incidents might evoke PTSD at first, but then recovery could take place. This type of resilience has been referred to as posttraumatic growth (see Table 25.10).

25.4 Chapter Conclusion

This lengthy supplementary portion of the present book has been split in two. Test and testing considerations continue in the next chapter.

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Chapter 26
Selected Tests and Testing in Psychological Injury Evaluations II

26.1 Introduction

The present chapter completes consideration of tests and testing in psychological injury and law. In these regards, it examines TBI (traumatic brain injury), personality inventories, and one SVT (symptom validity test).

Table of Terms and Sources

Abbreviation	Name	Source(s)
ACSS	Age-Corrected Scaled Score	Babikian and Boone (2007)
ASTM	Amsterdam Short Term Memory Test	Jelicic et al. (2007)
ATR	Atypical Response Scale	Briere (1995)
AVLT	Auditory Verbal Learning Test	Barrash et al. (2004)
AVLTX	Expanded Auditory Verbal Learning Test	Barrash et al. (2004)
BASC-2	Behavior Assessment System for Children, Second Edition	Reynolds and Kamphaus (2004)
BRIEF	Behavior Rating Inventory of Executive Function	Gioia et al. (2000)
b Test	b Test	Boone et al. (2002a)
CARB	Computerized Assessment of Response Bias Test	Allen et al. (1997) and Conder et al. (1992)
CT	Category Test	Tenhula and Sweet (1996)
CVLT	California Verbal Learning Test	Delis et al. (1987)
CVLT-II	California Verbal Learning Test, Second Edition	Delis et al. (2000)
DAPS	Detailed Assessment of Posttraumatic Stress	Briere (2001)
DMT	Digit Memory Test	Hiscock and Hiscock (1989)
Ds	Dissimulation Scale	Gough (1954)
F	Infrequency Scale	Butcher et al. (1989)
Fb	Infrequent Responses, back	Ben-Porath and Tellegen (2008/2011)

(continued)

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(continued)

Abbreviation	Name	Source(s)
FBS	Symptom Validity (originally called Fake Bad Scale)	Ben-Porath and Tellegen (2008/2011) and Lees-Haley et al. (1991)
FCTNA	Forced-Choice Test of Nonverbal Ability	Frederick and Foster (1991)
F-K	Dissimulation Index	Gough (1950)
Fp	Infrequent Psychopathology Responses	Ben-Porath and Tellegen (2008/2011)
Fptsd	Infrequency-Posttraumatic Stress Disorder Scale	Elhai et al. (2002)
FTT	Finger Tapping Test	Heaton et al. (1991)
HHI	Henry-Heilbronner Index	Henry et al. (2006)
JOLO	Judgment of Line Orientation Test	Meyers et al. (1999)
LMT	Letter Memory Test	Inman et al. (1998)
MAL	Malingering Index	Morey (1991)
MCMI-III	Millon Clinical Multiaxial Inventory, Third Edition	Millon (1994) and Millon et al. (1997)
MDMT	Multi-Digit Memory Test	Niccolls and Bolter (1991)
M-FAST	Miller Forensic Assessment of Symptoms	Miller (2001)
MMPI	Minnesota Multiphasic Personality Inventory	Hathaway and McKinley (1943)
MMPI-2	Minnesota Multiphasic Personality Inventory, Second Edition	Butcher et al. (1989, 2001)
MND	Malingered Neurocognitive Dysfunction	Slick et al. (1999)
MPS	Malingering Probability Scale	Silverton (1999)
MSVT	Medical Symptom Validity Test	Green (2004)
NIM	Negative Impression Management	Morey (1991)
NV-MSVT	Nonverbal Medical Symptom Validity Test	Green (2008)
O-S	Obvious-Subtle Index	Wiener (1948)
PAI	Personality Assessment Inventory	Morey (1991, 2007)
PDRT	Portland Digit Recognition Test	Binder (1993) and Binder and Willis (1991)
-r	Revised (e.g., FBS-r)	Ben-Porath and Tellegen (2008/2011)
RAVLT	Rey Auditory Verbal Learning Test	Schmidt (1996)
RBANS	Repeatable Battery for Assessment of Neuropsychological Status	Randolph (1998)
RBS	Response Bias Scale	Gervais et al. (2007)
RDCT	Rey Dot Counting Test	Rey (1941)
RDF	Roger's Discriminant Function	Rogers et al. (1996)
RDS	Reliable Digit Span	Babikian et al. (2006) and Greiffenstein et al. (1994)
RMFIT	Rey 15-Item Memory Test	Rey (1941)
RMFIT-II	Rey 15-Item Memory Test, Second Edition	Griffin et al. (1997)
RMT	Recognition Memory Test	Warrington (1984)
ROCFT	Rey-Osterreith Complex Figure Test	Rey (1941)
R-PAS	Rorschach Performance Assessment System	Meyer et al. (2011)
RWRT	Rey Word Recognition Test	Rey (1964)

(continued)

(continued)

Abbreviation	Name	Source(s)
SIMS	Structured Inventory of Malingered Symptomatology	Widows and Smith (2005)
SIRS	Structured Interview of Reported Symptoms	Rogers et al. (1992)
SIRS-2	Structured Interview of Reported Symptoms, Second Edition	Rogers et al. (2010)
SR	Sentence Repetition Test	Meyers et al. (2001)
SRT	Seashore Rhythm Test	Reitan and Wolfson (1993)
SSPT	Speech Sounds Perception Test	Reitan and Wolfson (1993)
TOMM	Test of Memory Malingering	Tombaugh (1996)
TRIN	True Response Inconsistency	Butcher et al. (1989)
TSI	Trauma Symptom Inventory	Briere (1995)
TT	Token Test	Spellacy and Spreen (1969)
VFDT	Visual Form Discrimination Test	Benton et al. (1983, 1994)
VIP	Validity Indicator Profile	Frederick (1997)
VRIN	Variable Response Inconsistency	Butcher et al. (1989)
VSVT	Victoria Symptom Validity Test	Slick et al. (1997/2005)
WAIS-III	Wechsler Adult Intelligence Scale, Third Edition	Wechsler (1997a)
WAIS-R	Wechsler Adult Intelligence Scale, Revised	Wechsler (1981)
WAIS-IV	Wechsler Adult Intelligence Scale, Fourth Edition	Wechsler (2008a, b)
WCMT	Word Completion Memory Test	Hilsabeck et al. (2001)
WCST	Wisconsin Card Sorting Test	Heaton (1981)
WMS-III	Wechsler Memory Scale, Third Edition	Wechsler (1997b)
WMS-IV	Wechsler Memory Scale, Fourth Edition	Wechsler (2008c)
WMT	Word Memory Test	Green (2005)
X Scale	Disclosure Scale	Millon (1987)
Z Scale	Debasement Scale	Millon (1987)

26.2 Testing

The tests that could be used in the neuropsychological context are too numerous to list in-depth. Pella et al. (2012) have provided a comprehensive list of tests that could be used to help in detecting malingering and suboptimal neurocognitive performance (see Tables 26.1, 26.2, and 26.3).

Table 26.1 provides tests that could be used generally in such assessments, and they include ones such as the MMPI-2 (Minnesota Multiphasic Personality Inventory, Second Edition; Butcher et al. 1989, 2001), the SIRS (Structured Interview of Reported Symptoms; Rogers et al. 1992), the DAPS (Detailed Assessment of Posttraumatic Stress; Briere 2001), and the PAI (Personality Assessment Inventory; Morey 1991, 2007), which already have been discussed. I do

Table 26.1 Self-report, informant rating, and interview scales used to calculate noncredible performance

Type	Test
Personality	MMPI-2
	Ds2
	Fb Scale
	FBS-r
	F-K
	F-Scale
	Fp Scale
	HHI
	Fptsd
	O-S
	RBS
	TRIN
	VRIN
	PAI
	MAL
	NIM
	RDF
	MCMI-III: X and Z Scales
Stand-Alone, Structured Interview	SIRS
	M-FAST
	SIMS
Stand-Alone, Self-Report (PTSD)	TSI
	ATR
	DAPS
	Negative Bias
Other	BASC-2
	F-Scale
	Response Pattern
	BRIEF
	Negativity Scale
	Credibility Scale (Lees-Haley 1990)

Adapted with permission of Springer Science+Business Media. Pella et al. (2012); with kind permission from Springer Science+Business Media B. V. [Table 3.1, Pages. 131–132]

Abbreviations. MMPI-2 Minnesota Multiphasic Personality Inventory, Second Edition (Butcher et al. 1989, 2001), *Ds* Dissimulation Scale (Gough 1954), *Fb* Infrequent Responses, back (Ben-Porath and Tellegen 2008/2011), *FBS-r* Symptom Validity Scale, Revised (Ben-Porath and Tellegen 2008/2011; Lees-Haley et al. 1991), *F-K* Dissimulation Index (Gough 1950), *F-Scale* Infrequency Scale (Butcher et al. 1989), *Fp* Infrequent Psychopathology Responses (Ben-Porath and Tellegen 2008/2011), *HHI* Henry-Heilbronner Index (Henry et al. 2006), *Fptsd* Infrequency-Posttraumatic Stress Disorder (Elhai et al. 2002), *O-S* Obvious-Subtle Index (Wiener 1948), *RBS* Response Bias Scale (Gervais et al. 2007), *TRIN* True Response Inconsistency (Butcher et al. 1989), *VRIN* Variable Response Inconsistency (Butcher et al. 1989), *PAI* Personality Assessment Inventory (Morey 1991, 2007), *MAL* Malingering Index (Morey 1991), *NIM* Negative Impression Management (Morey 1991), *RDF* Roger's Discriminant Function (Rogers et al. 1996), *MCMI-III* Millon Clinical Multiaxial Inventory, Third Edition (Millon 1994; Millon et al. 1997), *X Scale* Disclosure Scale (Millon 1987), *Z Scale* Debasement Scale (Millon 1987), *SIRS* Structured Interview of Reported Symptoms (Rogers 1992), *M-FAST* Miller Forensic Assessment of Symptoms Test (Miller 2001), *SIMS* Structured Inventory of Malingered Symptomatology (Widows and Smith 2005), *TSI* Trauma Symptom Inventory (Briere 1995), *ATR* Atypical Response Scale (Briere 1995), *DAPS* Detailed Assessment for Posttraumatic Symptoms (Briere 2001), *BASC-2* Behavior Assessment System for Children, Second Edition (Reynolds and Kamphaus 2004), *BRIEF* Behavior Rating Inventory of Executive Function (Gioia et al. 2000)

Table 26.2 Stand-alone measures of detecting malingering and suboptimal neurocognitive performance

Test	Name
1	16-Item Test (Paul et al. 1992)
2	21-Item Test (Iverson et al. 1991)
3	ASTM (Jelicic et al. 2007)
4	b Test (Boone et al. 2002a)
5	CARB (Allen et al. 1997; Conder et al. 1992)
6	DMT (Hiscock and Hiscock 1989)
7	RDCT (Rey 1941)
8	FCTNA (Frederick and Foster 1991)
9	LMT (Inman et al. 1998)
10	MSVT (Green 2004)
11	MDMT (Niccolls and Bolter 1991)
12	NV-MSVT (Green 2008)
13	PDRT (Binder 1993; Binder and Willis 1991)
14	RMT (Warrington 1984)
15	RMFIT (Rey 1941)
16	Rey 15 Plus Recognition Trial (Boone et al. 2002c)
17	RMFIT-II (Griffin et al. 1997)
18	RWRT (Rey 1964)
19	TOMM (Tombaugh 1996)
20	VIP (Frederick 1997)
21	VSVT (Slick et al. 1997/2005)
22	WCMT (Hilsabeck et al. 2001)
23	WMT (Green 2005)

Adapted with permission of Springer Science+Business Media. Pella et al. (2012); with kind permission from Springer Science+Business Media B. V. [Table 3.2, Page. 133; slightly modified]
Abbreviations. ASTM Amsterdam Short Term Memory Test, *CARB* Computerized Assessment of Response Bias Test, *DMT* Digit Memory Test, *RDCT* Rey Dot Counting Test, *FCTNA* Forced-Choice Test of Nonverbal Ability, *LMT* Letter Memory Test, *MSVT* Medical Symptom Validity Test, *MDMT* Multi-Digit Memory Test; *NV-MSVT* Nonverbal Medical Symptom Validity Test, *PDRT* Portland Digit Recognition Test, *RMT* Recognition Memory Test, *RMFIT* Rey −15-Item Memory Test, *RMFIT-II* Rey 15-Item Memory Test, Second Edition, *RWRT* Rey Word Recognition Test, *TOMM* Test of Memory Malingering, *VIP* Validity Indicator Profile, *VSVT* Victoria Symptom Validity Test, *WCMT* Word Completion Memory Test, *WMT* Word Memory Test

Table 26.3 Detecting malingering and suboptimal neurocognitive performance in existing measures

Test	Name
1	AVLT (Barrash et al. 2004)
2	CVLT (Millis et al. 1995; Millis and Volinsky 2001)
3	CVLT-II (Bauer et al. 2005; Root et al. 2006)
4	CT (Greve et al. 2007; Tenhula and Sweet 1996)
5	Dichotic Listening (Meyers et al. 1999)
6	AVLTX (Barrash et al. 2004)
7	FTT (Greiffenstein 2007)
8	FTT – Estimated FTT (Meyers and Volbrecht 2003)

(continued)

Table 26.3 (continued)

Test	Name
9	JOLO (Meyers et al. 1999)
10	RAVLT (Boone et al. 2005; Lu et al. 2007)
11	RAVLT/ROCFT (Sherman et al. 2002)
12	ROCFT Formula (Lu et al. 2003)
13	ROCFT Memory Error Patterns (Meyers and Volbrecht 2003)
14	SRT (Inman and Berry 2002; Ross et al. 2006)
15	SR (Meyers et al. 2001)
16	SSPT (Ross et al. 2006; Trueblood and Schmidt 1993)
17	TT (Meyers et al. 1999)
18	VFDT (Benton et al. 1983, 1994)
19	WAIS-R Attention/Concentration – General Memory (Iverson et al. 2000)
20	WAIS-R/III
	Digit Span Scale Score (Iverson 1991; Iverson and Franzen 1994)
	Mittenberg Index (Mittenberg et al. 1995)
	Reliable Digit Span (Greiffenstein et al. 1994)
	Vocabulary minus Digit Span (Mittenberg et al. 1995)
21	WAIS-III
	Maximum Digits Forward (Babikian et al. 2006; Heinly et al. 2005)
	Processing Speed Index (Etherton et al. 2006b)
	Working Memory (Etherton et al. 2006a)
22	WMS-III
	Rarely Missed Index (Killgore and DellaPietra 2000)
	Faces I Total Score (Glassmire et al. 2003)
	Auditory Delayed Recognition Raw Score (Langeluddecke and Lucas 2003)
	Ord et al. Index (Ord et al. 2007)
23	WCST
	Bernard et al. (1996) formula
	Suhr and Boyer (1999) formula
	Failure to maintain set

Adapted with permission of Springer Science+Business Media. Pella et al. (2012); with kind permission from Springer Science+Business Media B. V. [Table 3.3, Page. 135; slightly modified]
Abbreviations. AVLT Auditory Verbal Learning Test, *CVLT* California Verbal Learning Test, *CVLT-II* California Verbal Learning Test, Second Edition, *CT* Category Test, *AVLTX* Expanded Auditory Verbal Learning Test, *FTT* Finger Tapping Test, *JOLO* Judgment of Line Orientation Test, *RAVLT* Rey Auditory Verbal Learning Test, *ROCFT* Rey-Osterrieth Complex Figure Test, *SRT* Seashore Rhythm Test, *SR* Sentence Repetition Test, *SSPT* Speech Sounds Perception Test, *TT* Token Test, *VFDT* Visual Form Discrimination Test, *WAIS-R* Wechsler Adult Intelligence Scale, Revised, *WAIS-III* Wechsler Adult Intelligence Scale, Third Edition, *WMS-III* Wechsler Memory Scale, Third Edition, *WCST* Wisconsin Card Sorting Test

note that they also included the Credibility Scale (Lees-Haley 1990). However, reference to the scale indicates that it is experimental and, moreover, I have not seen it mentioned in any other surveys and articles examined in this area.

Table 26.2 gives Pella et al.'s recommendations for stand-alone measures related to neurocognitive performance. This appears to be a comprehensive list including the most often mentioned tests, such as the VIP (Validity Indicator Profile; Frederick 1997), the TOMM, the Green tests, and the VSVT (Victoria Symptom Validity Test; Slick et al. 1997/2005). However, some of the measures perhaps should have been left aside, such as the early Rey ones.

As for Table 26.3, Pella et al. listed the embedded neurocognitive tests that could be used for the detection of malingering and suboptimal performance. This list is quite comprehensive and I compared it to the one presented by Sollman and Berry (2011) in Chap. 3. I note that Pella et al. listed several tests not in the other list, such as the Category Test (CT; Tenhula and Sweet 1996) and the Visual Form Discrimination Test (VFDT; Benton et al. 1983, 1994). This illustrates that there is not one comprehensive accepted list of such type of measures.

Piechowski (2011) (see Table 26.4) presented the tests that could be used for cognitive screening and cognitive disorders, aside from ones for psychopathology. The tests that she recommended for psychopathology are standard and include the MMPI-2, the TSI (Trauma Symptom Inventory; Briere 1995), and the SIRS-2 (Structured Interview of Reported Symptoms, Second Edition; Rogers et al. 2010). However, I do note that more research is needed on the SIRS-2 before it definitively replaces the SIRS in this type of assessment. As for the cognitive aspect of her suggestions, she repeats that the MMPI-2 and the SIRS-2 are good tests to use. However, she also mentioned neuropsychological tests and symptom validity tests, such as the VIP and the TOMM (Test of Memory Malingering; Tombaugh 1996).

The remaining three tables in this section provide select psychometric data related to neuropsychological tests and assessment. In Table 26.5, Boone (2011) provides sensitivity rates for the more common measures of response bias and poor effort having a minimum specificity of 88 % for non-credible subjects that are "real world." She listed the appropriate cut-off scores for the particular scales or measures as well as the corresponding sensitivities. Some of the tests in the table include the TOMM and the VIP for stand-alone tests, and the CVLT (California Verbal Learning Test; Delis et al. 1987) and the RAVLT (Rey Auditory Verbal Learning Test; Schmidt 1996) for embedded tests.

Table 26.6 by Larrabee (2012a) indicates difference in performance on some basic neuropsychological tests related to possible malingering in two groups of patients – those with suspected malingering and other clinical patients without suspected malingering. The five tests used included a measure from the MMPI-2-RF (Minnesota Multiphasic Personality Inventory-2-RF; Ben-Porath and Tellegen 2008/2011) and other neuropsychological measures. In all cases, the effect size was statistically significant.

Figure 26.1 further reveals neuropsychological effect sizes in TBI (traumatic brain injury) cases and, moreover, compares the effect sizes to research on exaggeration of malingering. The figure clearly shows that results for exaggeration/malingering more closely resemble and even surpass those for moderate/severe TBI after 24 months and are about ten times as much for cases of MTBI (mild traumatic brain injury).

Table 26.4 Suggestions for test selection

Psychopathology	Psychopathology with cognitive screening	Cognitive disorder
To assess condition		
Choose one of these:	Choose one of these:	Perform a full neuropsychological assessment of these domains:
MMPI-2	MMPI-2	Intelligence
PAI	PAI	Academic
Optional (if needed)	And one of these:	Executive functions
Condition- specific instruments (e.g. TSI, MCMI-III)	Neuropsychological screening instrument (e.g., RBANS)	Attention
	WAIS-IV + WMS-IV	Concentration
		Processing speed
		Language
		Visual-spatial
		Motor
		Sensory
		Learning
		Memory
		And choose one of these:
		MMPI-2
		PAI
To assess response style		
Choose one of these:	Choose one of these:	Choose two of these:
MMPI-2: F-family scales + FBS-r + RBS	MMPI-2: F-family scales + FBS-r + RBS	VIP
PAI: NIM	PAI: NIM	CARB
And one of these:	And one of these:	TOMM
SIRS-2	SIRS-2	WMT
M-FAST	M-FAST	And choose one of these:
SIMS	SIMS	MMPI-2: F-family scales + FBS-r + RBS
MPS	MPS	PAI: NIM
	And one of these:	
	VIP	
	CARB	
	TOMM	
	WMT	

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Abbreviations. MMPI-2 Minnesota Multiphasic Personality Inventory, Second Edition (Butcher et al. 1989, 2001), *PAI* Personality Assessment Inventory (Morey 1991, 2007), *TSI* Trauma Symptom Inventory (Briere 1995), *MCMI-III* Millon Clinical Multiaxial Inventory; Third Edition (Millon 1994; Millon et al. 1997), *RBANS* Repeatable Battery for Assessment of Neuropsychological Status (Randolph 1998), *WAIS-IV* Wechsler Adult Intelligence Scale, Fourth Edition (Wechsler 2008a, b), *WMS-IV* Wechsler Memory Scale, Fourth Edition (Wechsler 2008c), *FBS-r* Symptom Validity Scale, Revised; originally called Fake Bad Scale (Ben-Porath and Tellegen 2008/2011; Lees-Haley et al. 1991), *RBS* Response Bias Scale (Gervais 2007), *NIM* Negative Impression Management (Morey 1991), *SIRS-2* Structured Interview of Reported Symptoms, Second Edition (Rogers et al. 2010), *M-FAST* Miller Forensic Assessment of Symptoms (Miller 2001), *SIMS* Structured Inventory of Malingered Symptomatology (Smith and Burger 1997), *MPS* Malingering Probability Scale (Silverton 1999), *VIP* Validity Indicator Profile (Frederick 1997), *CARB* Computerized Assessment of Response Bias Test (Allen et al. 1997; Conder et al. 1992), *TOMM* Test of Memory Malingering (Tombaugh 1996), *WMT* Word Memory Test (Green 2005)

Table 26.5 Sensitivity rates for common measures of response bias/effort with a minimum specificity of 88 % for "Real World" noncredible subjects

Effort indices	Sensitivity	References
Free-standing effort indices		
TOMM		Greve et al. (2008)
Trial 2		
Cut-off ≤48 (for TBI)	70 %	
Cut-off ≤49 (for pain)	55 %	
Retention		
Cut-off ≤48 (for TBI)	70 %	
Cut-off ≤48 (for pain)	50 %	
WMT		Greve et al. (2008)
IR		
Cut-off ≤75 (for TBI)	59 %	
Cut-off ≤87.5 (for pain)	60 %	
DR		
Cut-off ≤77.5 (for TBI)	63 %	
Cut-off ≤87.5 (for pain)	57 %	
Con 1		
Cut-off ≤72.5 (for TBI)	63 %	
Cut-off ≤82.5 (for pain)	55 %	
RMT – Words		Kim et al. (2010)
Cut-off ≤42 (for mixed sample)	90 %	
RWRT		Nitch et al. (2006)
Cut-off for combination score ≤9 (for TBI)	82 %	
Cut-off ≤5 (for male mixed sample)	63 %	
Cut-off ≤7 (for female mixed Sample)	81 %	
PDRT		Greve et al. (2008)
Easy		
Cut-off ≤24 (for TBI)	74 %	
Cut-off ≤26 (for pain)	47 %	
Hard		
Cut-off ≤19 (for TBI)	56 %	
Cut-off ≤20 (for pain)	47 %	
Total		
Cut-off ≤44 (for TBI)	70 %	
Cut-off ≤46 (for pain)	41 %	
RDCT		Boone et al. (2002b) and Boone and Lu (2007)
E-score cut-off ≥17 (for mixed sample)	73–79 %	
E-score cut-off ≥ (for TBI)	72 %	
b Test		Boone et al. (2002a)
E-score cut-off ≥150 (for mixed sample)	64 %	
E-score cut-off ≥90 (for TBI)	77 %	
VIP		Ross and Adams (1999)
Verbal invalid	27 %	
Nonverbal invalid	45 %	

(continued)

Table 26.5 (continued)

Effort indices	Sensitivity	References
RMFIT		Boone et al. (2002c) and Boone and Lu (2007)
Standard administration		
Cut-off <9 (mixed sample)	46 %	
With Recognition trial		
Cut-off <20 (mixed sample)	56–71 %	
Embedded effort indices		
CVLT forced choice recognition		Root et al. (2006)
Cut-off ≤14 (mixed sample)	44 %	
RAVLT		Boone et al. (2005)
Recognition		
Cut-off ≤9 (mixed sample)	67 %	
Equation		
Cut-off ≤12 (mixed sample)	74 %	
ROCFT Equation		Lu et al. (2003) and Boone and Lu (2007)
Cut-off ≤45 (mixed sample)	64–74 %	
Digit Span		Babikian et al. (2006) and Babikian and Boone (2007)
ACSS		
Cut-off ≤5 (mixed sample)	36–47 %	
RDS		
Cut-off ≤6 (mixed sample)	38–57 %	
Vocabulary minus Digit Span		
Cut-off ≥12 (mixed sample)	5 % (IQ ≤ 85)–50 % (IQ > 85)	
FTT (dominant – mean of 3 trials)		Arnold et al. (2005)
Men		
Cut-off ≤35 (mixed sample)	50 %	
Women		
Cut-off ≤28 (mixed sample)	61 %	

Adapted with permission of Springer Science + Business Media. Boone (2011); with kind permission from Springer Science + Business Media B. V. [Table 18.1, Pages. 557–558; slightly modified]
Note. Specificity of all indices and measures ≥88 %
Abbreviations. *TOMM* Test of Memory Malingering, *TBI* traumatic brain injury, *WMT* Word Memory Test, *IR* Immediate Recognition, *DR* Delayed Recognition, *Con 1* Control 1, *RMT* Recognition Memory Test, *RWRT* Rey Word Recognition Test, *PDRT* Portland Digit Recognition Test, *RDCT* Rey Dot Counting Test, *VIP* Validity Indicator Profile, *RMFIT* Rey 15-Item Memory Test, *CVLT* California Verbal Learning Test, *RAVLT* Rey Auditory Verbal Learning Test, *ROCFT* Rey-Osterreith Complex Figure Test, *ACSS* Age-Corrected Scaled Score, *RDS* Reliable Digit Span, *FTT* Finger Tapping Test

Once more, the value of trying to detect malingering is demonstrated in the forensic and related context. However, I note that research that mixes together exaggeration and malingering is conflating estimates of malingering and ends up confusing for purposes of practice and court purposes.

Table 26.6 Performance of litigants with definite or probable malingered neurocognitive dysfunction and clinical patients on neuropsychological tests sensitive to malingering

Test	MND[a]	Clinical patients[b]	*p*	Effect size[c]
VFDT				
M	26.39	29.89	.0005	1.02
SD	(4.58)	(2.25)		
FTT[d]				
M	69.27	83.85	.005	.70
SD	(27.95)	(13.78)		
RDS				
M	7.15	9.78	.0005	1.33
SD	(1.82)	(2.11)		
WCST[e]				
M	1.29	.56	.005	.67
SD	(1.36)	(0.84)		
FBS-r				
M	26.95	16.48	.0005	1.99
SD	(5.36)	(5.22)		

Adapted by permission of Oxford University Press. Larrabee (2012a). Reprinted by permission of Oxford University Press, USA. [Table 5.1, Page. 125]

Abbreviations. MND Malingered Neurocognitive Dysfunction (Slick et al. 1999), *M* median, *SD* standard deviation, *VFDT* Visual Form Discrimination Test (Benton et al. 1983, 1994), *FTT* Finger Tapping Test (Heaton et al. 1991), *RDS* Reliable Digit Span (Babikian et al. 2006; Greiffenstein et al. 1994), *WCST* Wisconsin Card Sorting Test (Heaton 1981; Suhr and Boyer 1999), *FBS-r* Symptom Validity Scale, Revised (Ben-Porath and Tellegen 2008/2011; Lees-Haley et al. 1991)

Note:

[a]MND = 24 litigants with definite and 17 probable litigants with neurocognitive dysfunction

[b]Clinical patients = 27 moderate/severe TBI, 14 psychiatric and 13 mixed neurologic diagnosis

[c]Effect size: in pooled SD units

[d]FTT, combined right and left hand raw scores

[e]WCST, failure to maintain set

26.3 Personality Inventories

26.3.1 MMPI-2

The MMPI-2 is the most widely used psychological instrument in forensic disability cases. I have described it extensively previously. In the present section, I examine more closely some of the evaluee validity scales included in the test. In the context of compensation and pension examinations, Worthen and Moering (2011) provided a useful table of recommended cut scores with respect to screens of exaggeration or feigning for the F family validity indicators in PTSD cases (see Table 26.7). These evaluations are for purposes of assessing veterans, but recommendations provide an axis for other types of disability evaluations. The first set of cut scores relate to evaluees in extreme distress who appear to be engaging in

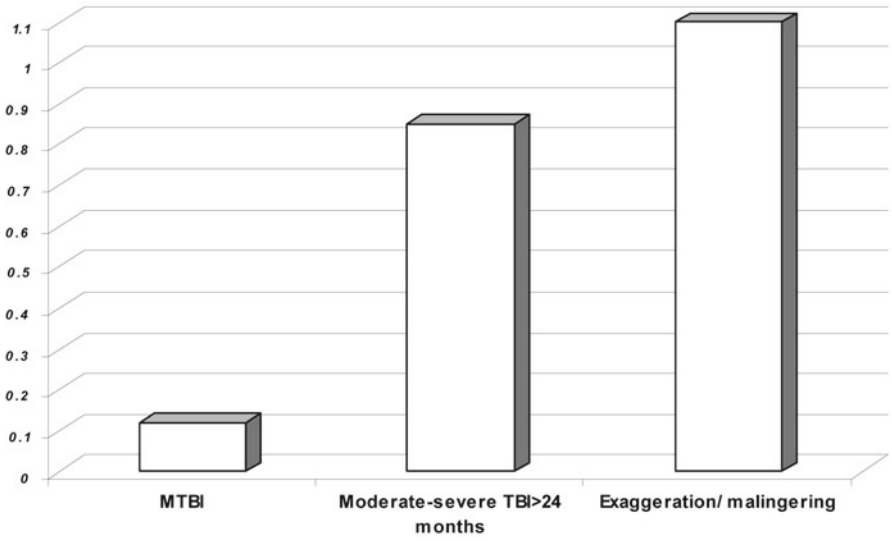

Fig. 26.1 Neuropsychological effect sizes
Neuropsychological effect sizes for MTBI at different points of recovery, in comparison to moderate-severe TBI, and various other disorders, drug use/withdrawal, litigation, and exaggeration/malingering. Effect sizes less than 0.3 are very small and difficult to detect in individual patients because the patient and control groups largely overlap (overlap for an effect of 0.3 is 78.7 %)
Abbreviations. MTBI mild traumatic brain injury, *TBI* traumatic brain injury
Adapted from Larrabee (2012b), based on Iverson (2005) and McCrea (2008)

"cry for help." Note that Worthen and Moering indicate how they altered the recommendations by Graham (2006) to account for the tendency of genuine PTSD evaluees to score higher on the MMPI-2 validity scales than other clinical populations. The intermediate cut score corresponds to the 98th percentile for a very large clinical sample in Green (2008). The conservative cut score is at the 99th percentile for that sample.

26.3.2 The Rorschach

The Rorschach has elicited much controversy, the details of which are beyond the scope of the present monograph. The R-PAS (Rorschach Performance Assessment System; Meyer et al. 2011) is a new scoring, coding, and interpretative system for the Rorschach (Meyer et al. 2011). Table 26.8 gives the major codes that can be scored in the R-PAS and the questions that they address. Erard (2012) indicated that numerous features of the R-PAS can help in forensic evaluations, including of

Table 26.7 MMPI-2 validity scale scores: screening for exaggeration or feigning re PTSD

MMPI-2 scale	Normal	Extreme distress[a]	Intermediate cut[b]	Conservative cut[c]
F	≤80	81–117	118–129	≥130 (raw ≥32)
Fb	≤80	81–117	118–139	≥140 (raw ≥24)
F-K	≤11	12–20	21–26	≥27
Fp	≤69	70–98	99–105	≥106 (raw ≥9)

Adapted with permission of Springer Science+Business Media. Worthen and Moering (2011); with kind permission from Springer Science+Business Media B. V. [Table 2; Excerpt of 331 words, Page. 200]

Abbreviations. MMPI-2 Minnesota Multiphasic Personality Inventory, Second Edition (Butcher et al. 1989, 2001), *F* Infrequency Scale (Butcher et al. 1989), *Fb* Infrequency Response, back (Ben-Porath and Tellegen 2008/2011), *F-K* Dissimulation Index (Gough 1950), *Fp* Infrequency – Psychopathology Response (Ben-Porath and Tellegen 2008/2011), *PTSD* posttraumatic stress disorder, *Ds* Dissimulation Scale (Gough 1954)

Note. *All values are T-Scores except for F-K values, which are raw scores. Raw scores are provided for the "Conservative Cut" level because T-Scores in this range are not provided on standard MMPI-2 computer-generated reports

[a]The "Extreme Distress" level indicates a range of scores which suggest that the individual probably endorsed more symptoms or problems than they actually experience but this over-endorsement is most likely due to "extreme distress" (Franklin et al. 2002) or what is often referred to as a "cry for help" response set (Graham 2006). Note that the values given are higher than those in Graham (2006) because this table takes into account the tendency of genuine PTSD patients to elevate MMPI-2 validity scales at higher levels than other clinical populations, as discussed by Frueh et al. (2000) and Franklin et al. (2002)

[b]The "Intermediate Cut" scores are at least at the 98th percentile for a very large clinical sample (Green 2008, Table 10.13, p. 180) *and* 1.5 standard deviations above the mean for genuine PTSD samples (Resnick et al. 2008, Table 7.5, p. 119). The term "Intermediate Cut" is from the Resnick et al. (2008) chapter

[c]The "Conservative Cut" scores are at or above the 99th percentile for a very large clinical sample (Green 2008, Table 10.13, p. 180) *and* at least 2.0 standard deviations above the mean for genuine PTSD samples (Resnick et al. 2008, Table 7.5, p. 119). The term "Conservative Cut" is from the Resnick et al. (2008) chapter

*****All of these MMPI-2 scales, have been validated as efficient for the detection of symptom exaggeration for combat veterans undergoing evaluation for PTSD (Tolin et al. 2010). The authors of that study found that the Ds-r scale was not a good discriminator; they did not evaluate the longer Ds scale, which has proved to be a good discriminator in other studies (e.g., Wetter et al. 1993)

psychological injuries. He specified that it provides a useful verification of exaggerated symptom presentation of evaluees. The R-PAS also incorporates a new variable, termed Complexity, which helps in interpreting whether the evaluee has engaged in the test process. Viglione et al. (2012) argued that the R-PAS yields five interpretative considerations that could be useful in PTSD assessments. These are (a) cognitive constriction, (b) trauma-related imagery, (c) trauma-related cognitive disturbances, (d) stress response, (e) and dissociation. Moreover, they pointed out that the R-PAS can be a useful supplement in understanding damage to the "inner world" of the individual that might help in pain and suffering determinations.

Table 26.8 The Rorschach Performance Assessment System (R-PAS) response level codes

Code	Explanation
Orientation of card	Card angle
Location	Where seen
Reversal of space	White space used
Space integration of space	How?
Content class	What seen
Synthesis	Meaningfully related objects
Vagueness	For all objects
Pair	Identical objects
Form quality	Fit the blot
Popularity	Frequent
Determinants	Why appear that way
Cognitive codes	Rethought processes
Thematic codes	Themes present
R-Optimized	Steps to manage R

Adapted from Meyer et al. (2011)

26.4 A Symptom Validity Test: The Victoria Symptom Validity Test

In the last section of the chapter on review of tests relevant to the area of forensic disability and related evaluations, I present in more depth SVT oriented towards detecting exaggeration and related response biases in cognitive capacity that has some attractive features – the VSVT. Like other tests of this nature, such as the TOMM, the VSVT is based on a two-alternative forced-choice approach. However, the test has incorporated several refinements that serve to optimize its sensitivity to detecting malingering. At the same time, it has been designed to minimize false positives or incorrectly specifying the person as exaggerating or feigning cognitive impairments. Specifically, unlike other tests of this nature, the VSVT contains easy and difficult items (see Fig. 26.2). Figure 26.2 shows that evaluees are given a study trial and in the recognition trial they are presented two alternatives that are very different, one of which is the correct one. As for the difficult items, the difference between the study trial stimuli and the recognition trial response alternatives is minimal, with one being the correct one. For example, in the figure, the difference involves reversing two of the middle numbers out of the five in the study trial.

For the VSVT, norms were not calculated because, in general, interpreting VSVT scores is based on binomial probability theory. Nevertheless, research on control and compensation-seeking patients has supported the reliability and validity of the tests. Guidelines are offered for interpreting invalid profiles. Results that are obtained should be framed probabilistically. Research should continue to demonstrate the efficacy and practicality of the test.

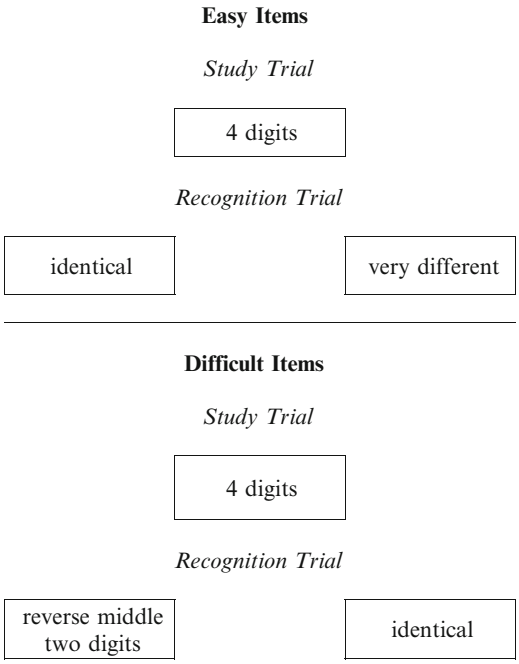

Fig. 26.2 Altered example of VSVT stimuli
Easy trials have recognition items that are either identical or very different. Difficult items involve alteration (e.g., reveral) of some digits

26.5 Chapter Conclusion

In two brief chapters, it is impossible to review all the relevant tests in the area of psychological injury. This monograph has described in depth tests in other chapters, as well, and at points has reviewed others' recommendations for tests to use in the forensic disability and related context. In this regard, I have provided my own recommendations. Nevertheless, the current standing of the research in the field does not allow elucidation of a definitive compendium of tests to use in forensic disability and related assessments. In the end, the evaluator is responsible for choosing the instruments for the particular case at hand and for defending in court and related venues the choices made for assessment purposes. To help in this regard, refer to the detailed review of tests and testing undertaken in the literature review of most recent books and journal articles in Chaps. 15, 16, and 17. Moreover, keep up-to-date with the literature. For example, McDermott (2012) published a

useful list of psychological tests for malingering detection. As for presentation and discussion cut scores for the major tests in the area in relation to PTSD, refer to Chap. 33.

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Chapter 27
Diagnostic System for Malingered PTSD Disability/Dysfunction and Related Negative Response Biases: User Version and Worksheet

27.1 Introduction

This chapter and the next two present the three malingering diagnostic systems that have been created in the present book (see Chap. 5). As a whole, the system is referred to as the Psychological Injury Disability/Dysfunction – Feigning/Malingering/Response Bias System: (PID-FMR-S).

The three systems address the three basic psychological/psychiatric injuries, and are named:

(a) Feigned Posttraumatic Stress Disorder Disability/Dysfunction (F-PTSDR-D);
(b) Feigned Neurocognitive Related Disability/Dysfunction (F-NCR-D); and
(c) Feigned Pain Related Disability/Dysfunction (F-PR-D).

The systems should have utility in practice and court, but if used instead of extant systems, it should be cautiously and in acknowledgement of their limits. That being said, I believe that other systems, such as the MND (Malingered Neurocognitive Dysfunction) and the MPRD (Malingered Pain-Related Disability) of Slick et al. (1999) and Bianchini et al. (2005), respectively, require change and research before they are considered ready for individual assessments and court purposes. In this regard, all of the systems are equally preliminary and tentative rather than of adequate reliability and validity. Given that I build on the other systems after careful analysis and a rational process, the three systems that I have developed on malingering detection have the potential to become gold standard in the field of forensic disability and related evaluations.

Relative to the MND and the MPRD, the present systems take many more pages to describe. I have added more categories of response bias compared to the other systems, more tests that could be used, more scoring rules, and more types and a greater number of inconsistencies/discrepancies to complement the testing procedures in malingering determinations. Also, I have given a central role to gray-zone, indeterminate standing in bias, and so on. Finally, the systems are almost the same for the three psychological injuries involved, except of course in the case of

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neuropsychological testing of traumatic brain injuries (TBIs), for which extra comprehensive neuropsychological assessment would be needed.

The systems are complex and I believe they would need much study and practice before they are used in practice and for court. They could become part of the curricula of graduate courses that might be created in the area, as well as being offered as part of continuing education courses. Learning how to use them would be an excellent topic for day-long continuing education seminars. Note that in developing them I used few examples and not necessarily the ones found in the MND and the MPRD systems. I look forward to practitioners sending me further examples that illustrate the various points, and even case studies in their use. These would help in the various educational initiatives being suggested. Note that the chapter concludes with a worksheet that would help practitioners in use of the systems.

Table of Terms and Sources

Abbreviation	Name	Source(s)
BASC-2	Behavior Assessment System for Children, Second Edition	Reynolds and Kamphaus (2004)
BBHI-2	Brief Battery for Health Improvement, Second Edition	Disorbio and Bruns (2002)
BHI-2	Battery for Health Improvement, Second Edition	Bruns and Disorbio (2003)
DAPS	Detailed Assessment of Posttraumatic Stress	Briere (2001)
DSM-IV-TR	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision	American Psychiatric Association (2000)
Fb	Infrequent Responses, back	Ben-Porath and Tellegen (2008/2011)
FBS	Symptom Validity Scale (originally called Fake Bad Scale)	Ben-Porath and Tellegen (2008/2011) and Lees-Haley et al. (1991)
F-NCR-D	Feigned Neurocognitive-Related Disability/Dysfunction	Young (2013); present work
Fp(-r)	Infrequent Psychopathology Responses	Ben-Porath and Tellegen (2008/2011)
F-PR-D	Feigned Pain-Related Disability/Dysfunction	Young (2013); present work
F-PTSDR-D	Feigned Posttraumatic Stress Disorder Disability/Dysfunction	Young (2013); present work
HHI	Henry-Heilbronner Index	Henry et al. (2006)
K	Adjustment Validity, Correction scale	Bianchini et al. (2005)
L	Uncommon Virtues, Lie scale	Bianchini et al. (2005)
MENT	Morel Emotional Numbing Test	Morel (1995, 1998)
M-FAST	Miller Forensic Assessment of Symptoms Test	Miller (2001)
MMPI	Minnesota Multiphasic Personality Inventory	Hathaway and McKinley (1943)
MMPI-2	Minnesota Multiphasic Personality Inventory, Second Edition	Butcher et al. (1989, 2001)

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Abbreviation	Name	Source(s)
MMPI-2-RF	Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form	Ben-Porath and Tellegen (2008/2011)
MND	Malingered Neurocognitive Dysfunction	Slick et al. (1999)
MPRD	Malingered Pain-Related Disability	Bianchini et al. (2005)
PAI	Personality Assessment Inventory	Morey (1991, 2007)
PID-FMR-S	Psychological Injury Disability/Dysfunction – Feigning/Malingering/Response Bias System	Young (2013); present work
-r	Revised (e.g., FBS-r)	Ben-Porath and Tellegen (2008/2011)
RBS	Response Bias Scale	Gervais et al. (2007)
RNBI	Ruff Neurobehavioral Inventory	Ruff and Hibbard (2003)
SIRS	Structured Interview of Reported Symptoms	Rogers et al. (1992)
SIRS-2	Structured Interview of Reported Symptoms, Second Edition	Rogers et al. (2010)
TOMM	Test of Memory Malingering	Tombaugh (1996)
TSI-2	Trauma Symptom Inventory, Second Edition	Briere (2011)
VIP	Validity Indicator Profile	Frederick (1997)
VSVT	Victoria Symptom Validity Test	Slick et al. (1997)
WMT	Word Memory Test	Green (2005)

27.2 The PID-FMR-S Systems

In the first part of the chapter, the three malingering detection systems that have been constructed in the present work – the F-PTSDR-D, F-NCR-D, and F-PR-D - are presented in depth. Note that they differ only in the examples provided for their foci – on PTSD (posttraumatic stress disorder), pain, and MTBI (mild TBI), respectively. Because of the contentious nature of these psychological injuries and the complexity of the systems, practitioners using the systems are advised to engage in the necessary due diligence to learn them adequately and to apply them meticulously. It is best to understand the major components of the systems and to learn them one-by-one and, similarly, to apply them one-by-one but, in both cases, to work from an understanding of the whole.

The second part of the chapter provides a worksheet that can be used when using the three malingering-detection systems proposed in the PID-FMR-S. The worksheet will help organize evaluations and help prepare for admissible testimony for court.

27.3 Conclusions: Review of Contributions of Part I of the Book

The three malingering detection systems (the F-PTSDR-D, F-NCR-D, and F-PR-D) that I have developed for use with cases of PTSD, TBI, and pain are rigorously constructed, and provide multiple ways of arriving at careful estimates of the degree

of malingering/feigning/response bias involved in forensic disability and related evaluations. The systems include criteria related not only to psychological testing but also to 30 different types of inconsistencies/discrepancies. Therefore, the three systems on the detection of malingering for PTSD, TBI, and chronic pain that are described can be used effectively by any mental health professional, including psychiatrists, aside from psychologists. For the testing section of the systems, 60 rules have been constructed about how to select and apply test results for system scoring purposes. This is another example that indicates that the systems proposed in the present book have the potential to be used in evaluations in the forensic disability and related context with reliability and validity, whether the referral source is either more plaintiff- or defense-oriented. Because the systems were developed rationally and cover all relevant components to malingering and related detection, and because they represent state-of-the-art developments in the science in the field and middle-of-the-road practice in it, the degree of their ultimate reliability, validity, and utility for practice and court and admissibility purposes appears elevated.

The state of affairs in the field of malingering and related bias in psychiatric/psychological injury and law, both at the research and practice levels, can be improved by adopting a middle-of-the-road, impartial, comprehensive, and rigorous, scientific approach. For example, in the present work, clear definitions and models of important concepts, such as malingering and exaggeration, have been constructed, and should be consulted. Also, because a malingering diagnostic system for PTSD has been created and, based on it, revisions of the MND and MPRD malingering diagnostic systems have been constructed, these three new models can be used in research and practice, as well as in education and practice upgrade, as mentioned. Just as with the MND and MPRD models that they are meant to supplement or replace, the three proposed systems can be used in assessments related to malingering detection. However, for any of the systems, extant or new, prudent application is needed until they are revised appropriately, if needed, and researched effectively.

In this regard, these three malingering-detection systems that I have developed have the potential to become gold standards in the field, given their comprehensive, impartial, and scientifically-informed approach. They have the potential to be applied fairly by both sides of the adversarial divide, i.e., whether they are used for plaintiff or defense purposes.

Finally, they will facilitate addressing aspects of legal and policy criteria that are difficult to address, such as what degree of negative response bias, when there is a lack of outright malingering, can be used to deny claims. Evaluators should not be pushed to attribute malingering when it is not present [or to not attribute it when it is present] merely to satisfy referral sources. Instead of succumbing to the pressure of either totally denying the presence of malingering [or totally arguing for its presence] when the evidence gathered dictates otherwise, mental health professionals should feel comfortable to refer to different degrees of credible or non-credible presentation and performance without having to outrightly attribute malingering.

If there are undue pressures to categorically arrive at conclusions one way or another about malingering without incontrovertible evidence for or against,

psychiatrists, psychologists, and other mental health professionals should stick to a precise system that is evidence-supported or scientifically-informed, and should argue that this is sufficient for court and related purposes. In this regard, mental health professionals should try to educate the court of the need to damp the pressure about proffering opinions without supporting evidence on the presence or absence of malingering, per se, and have the laws, rules, and regulations accommodate to the best systems and practices available.

Forensic mental health concerns the use of mental health evidence in court and related venues, but the use must be based on reliable, valid operations, methods, procedures, models, or systems. Moreover, these protocols must provide data that is consistent with the science available and conclusions that are consistent with the data gathered and the research literature. If not, they risk being considered inadmissible, and called junk or poor science and arbitrary, and also practitioners risk being called arbitrary or otherwise. Use of unreliable and invalid protocols jeopardizes the good standing of mental health science and its practitioners in court and related venues.

My goal in developing the models for detecting malingered PTSD, pain, and TBI/neurocognition has been to meet these important goals; that is, to have current, rigorous science lead the way in creating the systems for admissible use in practice and court. In developing the three proposed malingering-detection systems with these goals in mind, I hope that conclusions related to malingering presented to court and related venues using them do not reach the levels of contention that has characterized the field to date.

Although the present work applies to the civil forensic context (to disability/tort assessments, in particular), it is applicable to the criminal one, as well. Malingering cuts across all fields in forensics, so that the proposed models might apply to the criminal context, as well, at least for non-credible, negatively-biased presentations and performances. Equivalent models can be constructed for positive response bias in presentation and performance, which are important to decipher in the criminal context more than the forensic disability/tort one.

Finally, the present models of criteria for malingering detection in psychological injury (PTSD, TBI, pain) might have widespread utility other than in forensic disability cases (e.g., tort, worker compensation, SSA evaluations). For example, perhaps with revisions, they might be useful adjuncts to the AMA guides of permanent impairment (Rondinelli et al. 2008) in the behavioral/mental section, or in work with veterans, such as in the VA system (Worthen and Moering 2011), in other civil matters, such as competency/capacity and child custody work.

The present work on malingering and related response and presentation biases contributes to the field at the definitional, conceptual, modeling, empirical research, legal/forensic/court, and practice (testing, assessment/diagnosis) levels.

(a) It tackles various aspects of the area of malingering and related topics by delineating carefully constructed definitions and disambiguating conundrums that plague the field. It acts to point out issues that others have not seen or emphasized to the same degree, such as those related to prevalence and base

rates. It argues for caution and clarity in using the terms of malingering and related presentation and performance response biases both in research and practice. Instead of malingering, more generic terms should be used, such as non-credible feigning, except in cases where the evidence is incontrovertible for attributing malingering. Because the relevant terms are being better defined, the field can proceed with better research and modeling on malingering and related response and presentation biases.

(b) The present work undertakes reviews of the literature on prevalence or base rate of malingering and other associated biases, such as exaggeration. At times, the best estimates about the base rates derive from carefully designed studies the primary aim of which had not been to ascertain base rates. For example, actual malingering in the psychological injury context usually is found at the rate of 5–10 %, or perhaps 1–15 %, in the more rigorous research. Next, definite response bias seems to take place in double that amount, and when the percentage for probable response bias is added to the total, the figure for problematic, non-credible presentation and response bias does approach the 40 % plus or minus 10 % attributed to malingering alone (Larrabee 2012a; Larrabee et al. 2009). When the percentage of individuals falling in the indeterminate gray zone between credible and non-credible performance is taken into account (for example, about half should be judged as credible and half as non-credible), the percentage of problematic, non-credible presentation should approach or perhaps surpass 50 %.

These results and conjectures lead to a model in which the normal curve, or some variant such as a flatter one, should best represent the distribution of presentations and performances related to credible and non-credible attributions, as per Figure 3.2. For example, overt malingering and clearly credible presentation (with no presentation/performance response bias) should fall at the ends of the distribution at lower rates compared to definite patterns of mild exaggeration (minimal negative presentation/performance bias) and gross exaggerations (definite negative response presentation/performance bias) positioned next to them on the curved portions of the distribution, to the left and right, respectively. The gray zone should be at the apex of the model, with modest exaggerations, on either side, credible to the left and non-credible to the right (possible and probable negative response bias, respectively). Note that the apparent distribution described of trends in malingering and related biases is a middle-of-the-road one, in the sense it does not inflate the place and role of malingering, per se, but it does suggest that the normative base rate pattern of non-credible, feigned presentations, in general, could even pass 50 %.

(c) The present work contributes to the field in its analysis of the two already published and used models of malingering and related response and presentation biases in forensic disability and related psychiatric/psychological injury assessments, as well as the recommendations that have been made for their

change. In particular, I reviewed the MND and MPRD models for malingered neurocognitive dysfunction and pain-related disability (for the models: Slick et al. 1999; and Bianchini et al. 2005; respectively; for the recommendations: Rogers et al. 2011a, b; and Boone 2011, with respect to the MND model). In addition, I analyzed the weighting system of tests/measures addressing effort/validity in PTSD assessments developed by Rubenzer (2009). Given these excellent starting points, I extensively modified these systems after creating a new one for PTSD. After developing, the first-ever model of malingering, feigning, non-credible presentations/performances and related biases for PTSD by working with my analysis of the equivalent neurocognitive one, the MND, and the equivalent pain one, the MPRD, I then transposed the product into the neurocognitive and pain domains with only little modification. Therefore, I created comparable "diagnostic" systems of malingering and other response biases in presentation and performance for all three major psychological injuries.

(d) In particular, the present work describes in depth a new model for non-credible, feigned, or malingered posttraumatic stress disorder (F-PTSDR-D). The model includes major innovations, based on scientifically-informed procedures.

1. The present systems are based on a continuum of malingering and related negative biases having seven categories – stretching from the categories of definite malingering to absent response bias. It places the definite, probable, and possible negative response bias categories that are typically used in the field between these extremes. Also, it adds another category of minimal negative response bias and a final one for the gray zone that is intermediate between probable and possible negative response bias.
2. The system clarifies how inconsistencies/discrepancies in evaluee presentation and test results can play an important role in determining whether malingering and related response biases are present.
3. It includes in one rating scheme a variety of tests: (i) personality inventories; (ii) stand-alone validity/effort tests, including forced-choice ones and including interview schedules, and (iii) embedded measures in cognitive/neurological tests and in specialized, dedicated tests.
4. It provides multiple (60) rules for weighting the tests/measures so that they are used effectively.
5. For the question of inconsistencies/discrepancies, the system has two major types – ones related to testing and ones that do not include testing, such as in self-report, observations, and documentation.
6. The cautions given at the end of the system are elaborate, and are meant to assure the reliability and validity in the application of the system and its fairness.

(e) The other two systems developed, once the F-PTSDR-D system was completed, revised extensively the MND and MPRD models (the new ones are referred to as the F-NCR-D and F-PR-D, models, respectively). Because of their great

similarity, the three systems that I have developed can be used together in evaluees presenting with polytrauma/comorbidity. Their major difference concern the necessary use of measures related to the cognitive and neuropsychological testing for the F-NCR-D model, and the different examples of inconsistencies/discrepancies that are applicable to them.

(f) The questionnaire on malingering and various related negative response biases that I developed for survey purposes could be used to research their base rates or prevalence. Prior research had not necessarily separated malingering from exaggeration in surveys, and despite this are considered classic in the field. Therefore, in order to obtain more accurate estimates of malingering and related negative response biases, the questionnaire that I developed could be used. It should yield a normal curve type distribution, with malingering not as common as promoted in prior surveys, but with general problematic, non-credible, feigned presentation and performance even more frequent than in other surveys.

(g) The present work describes a model that indicates the pressures on all stakeholders and professionals in the field, including on mental health workers, for example, related to the adversarial divide, or legal plaintiff/defense orientation differences. It indicates that the model applies to more than patients and evaluees, because the influences also act on third parties dealing with their claims, and attorneys advocating for/defending against them.

Together, these contributions to the field of malingering and related response and presentation and performance biases question many of the basic premises that govern and qualify it. They ask researchers and practitioners to consider different perspectives that are scientifically-informed and balanced/middle-of-the-road, which will improve research and practice in the field. Collectively, the changes aim to alter conceptualization of malingering and related biases, and their modeling, empirical research, practice, and application in court. The systems that I have developed need rigorous research to demonstrate their reliability and validity. However, the same can be said for the extant systems on which they are based. This being said, the new models are meant to be clear improvements over the others on which they are based. As with any aspect of evidence proffered to court or related venues, researchers and practitioners should tread carefully and be ready to defend their choices in order to meet admissibility standards according to *Daubert* (1993). The malingering-detection systems proposed in the present book are well-positioned to meet this challenge.

Other innovations in the book relate to development of a pain feigning detection instrument and an outline of a course on psychological injury and law for both graduate courses and professional continuing education purposes. I have under taken a comprehensive literature review. It analyzes the recent research in the field toward helping practitioners understand its multiple strands, how to assess evaluees effectively, and how to function effectively in court in forensic disability and related contexts.

Table 27.1 Proposed Criteria for Non-Credible Feigned Posttraumatic Stress Disorder and Related Disability/Dysfunction (F-PTSDR-D): User's Version

Introduction

The present system has been developed to help in detection of malingering and related response bias in forensic disability and related evaluations. The system is referred to as the Psychological Injury Disability/Dysfunction – Feigning/Malingering/Response Bias System (PID-FMR-S). It is composed of three systems that are quite uniform – the Feigned Posttraumatic Stress Disorder Disability/Dysfunction (F-PTSDR-D), the Feigned Neurocognitive Related Disability/Dysfunction (F-NCR-D), and the Feigned Pain Related Disability/Dysfunction (F-PR-D) systems. These three systems cover the major psychological injuries of PTSD, pain, and TBI, respectively. The systems should be used as part of comprehensive evaluations that use state-of-the-art testing and search for inconsistencies/discrepancies. The overall system has been constructed as an impartial, middle-of-the-road one that is scientifically-informed. It is published in the book by the system's author, Gerald Young (*Malingering, Feigning, and Response Bias in Psychiatric/Psychological Injury: Implications for Practice and Court*; Springer Science+Business Media, 2014). In the book, Young considers alternate systems and builds on them (for neurocognition, the Malingered Neurocognitive Dysfunction, MND, Slick et al. 1999; for pain, the Malingered Pain-Related Disability, MPRD, Bianchini et al. 2005). In addition, the book reviews the literature on malingering, especially in Larrabee (2012b) and Reynolds and Horton (2012).

Aside from examining the MND and MPRD systems, the Young book considers the work of Larrabee (2012a), in particular. The proposals that (a) even one below-chance performance on a forced-choice test and (b) below cut-off performance on three or perhaps two validity indicators from a battery is sufficient to attribute malingering are analyzed carefully. This has led to a more conservative, middle-of-the-road approach for testing criteria in the present system. At the same time, the inconsistency/discrepancy criteria are greatly elaborated in the present system compared to other systems. Moreover, there are other checks and balances that have been included. Therefore, in many ways the present system has aspects that are comparable to the proposals by Larrabee. To conclude, even for its testing criteria, the present system does not simply dismiss the prior work but builds on it.

As an introduction to the specifics of the system and in order to reinforce the notion that it respects and builds on the work of Larrabee (2012a),

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in the following, the diverse ways that the levels in the system related to definite malingering, definite response bias, and probable response bias are summarized briefly.

Aside from cases with extremely compelling evidence, such as frank admission or indisputable videographic evidence, definite malingering can be attributed in cases in which: (a) two or more forced-choice measures are failed at the below-chance level; or (b) there are five or more test failures on other valid psychometric measures; or (c) there are three or more compelling inconsistencies; (d) any combinations of these types of evidence are found; or (e) other evidence replaces the weighting of these three types of evidence, such as extreme scores on valid psychometric tests or an overall judgment of the file that adds weight. When the latter obtains then, when numerical data can be gathered, three test failures could be sufficient to attribute malingering, everything else being equal.

As for assigning definite response bias, the criteria above apply, except that they involve one-forced choice test, not two, four other tests, not five or more, and two compelling inconsistencies, not three or more, with none of the extreme nature involved. In terms of probable response bias, the criteria exclude forced-choice test failure, but consider three other test failures, not four, and one compelling inconsistency, not two.

The reader will note that Larrabee (2012a) emphasized three if not two failures on relevant tests as very strong evidence of malingering. All things considered, the present system arrives at a protocol that might give a comparable weighting to such test failures.

Overall, those who had hoped for a system that catches either most evaluees or almost no evaluees in its malingering net will be disappointed, but those who adhere to a science-first approach will find the system rational and balanced. In this regard, the system has been constructed so that its application should yield similar ratings by different raters, or good inter-rater reliability. In addition, the system appears to have the elements needed for adequate validity (e.g., construct, content, criterion). Its state-of-the-art and middle-of-the-road approach constitute important principles underlying validity.

Given these considerations, use of the present system in practice has the potential to meet admissibility criteria in court, perhaps more so than other systems, and should serve one's practice growth in good stead. A worksheet has been developed to accompany its use. Note that through its inconsistencies/discrepancies criteria, the system should be quite helpful to mental health professionals who are not trained in psychological testing, such as psychiatrists.

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Criteria

Criterion A: Evidence of significant external incentive. At least one clearly identified and substantial external incentive for conscious exaggeration or fabrication of symptoms is present at the time of examination (e.g., personal injury litigation, workers compensation benefits, psychiatric/psychological disability pension).

Criterion B: Evidence from psychological testing. Evidence that evaluee's psychiatric, psychological, emotional, coping, and related capacities as indicated by formal psychometric testing (e.g., in the context of psychological or neuropsychological evaluation) are consistent with exaggeration or feigning of functional psychiatric/psychological disability.

A. Different Degrees of Certainty of Response Bias, According to Psychological Testing

(A1) Definite Malingering.

(i) The evidence is incontrovertible, even when the rest of the data gathered is considered. Below-chance performance ($p < .05$) on two or more forced-choice measures of psychiatric/psychological (e.g., cognitive or perceptual) function, e.g., below-chance performance on the TOMM [scores below tests' clinical/threshold cut scores but that are higher than chance performance are dealt with in the next level], the VSVT, and the WMT. Also consider the VIP.

Or,

(ii) Performance on five or more well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced-choice measures, is consistent with exaggeration of diminished functional psychiatric/psychological capacity.

(A2) Definite negative response bias.

(i) Below-chance performance ($p < .05$) on one forced-choice measure of psychiatric/psychological (e.g., cognitive or perceptual) function, e.g., below-chance performance on the TOMM [scores below tests' clinical/threshold cut scores but that are higher than chance performance are dealt with in the next level].

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Note. If only one forced-choice test is administered and the evaluee fails at the chance level, a second one is administered to determine whether the person reaches the definite malingering rating.

Or,

(ii) Performance on four well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced-choice measures, is consistent with exaggeration of diminished functional psychiatric/psychological capacity.

Note. Failure on forced-choice measures that is not below-chance but does meet pass-fail thresholds according to normative cut sores are considered for this criterion; i.e., failure to reach critical thresholds based on normative or otherwise validly-selected and justified cut-scores. That is, forced-choice test results at the latter level as opposed to the below-chance level could be included among the "well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms." Note that the same rule applies in the next categories.

(A3) Probable negative response bias.
Performance on three well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced-choice measures, is consistent with exaggeration of diminished functional psychiatric/psychological capacity.

(A3-4) Intermediate (Probable to possible, gray zone) negative response bias

(i) The data meet the requirements for classification of possible negative response bias but not the classification of probable negative response bias. Nevertheless, there are supplementary data available about the evaluee that raises the ratings to the intermediate level.

For test data, this would refer to results for extra tests that had not used for the primary ratings because of the scoring rules described below, such as on a second personality test with numerous effort/validity detector scales not all of which had been used for the primary rating, and one or two indicating performance below accepted criteria for lack of effort/validity. That is, in addition to meeting criteria for A4, there is performance on two well-validated

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supplementary and not primary tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced-choice measures, which is consistent with exaggeration of diminished functional psychiatric/psychological capacity.

Or,

(ii) The data do not even meet the requirements for classification of possible negative response bias. Nevertheless, there are supplementary data available about the evaluee that raises the ratings to this intermediate level. For test data, this would refer to results for extra tests that had not been used for the primary ratings because of the scoring rules described below, such as on a second personality test with numerous effort/validity detector scales not all of which had been used for the primary rating, and three or more indicate performance below accepted criteria for lack of effort/validity. That is, performance on three or more well-validated supplementary and not primary tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced-choice measures, is consistent with exaggeration of diminished functional psychiatric/psychological capacity.

(A4) Possible negative response bias.

(i) Performance on two well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced-choice measures, is consistent with exaggeration of diminished functional psychiatric/psychological capacity.

Or

(ii) Criteria for Definite or Probable Response Bias are met except for Criterion D (i.e., primary psychiatric, neurological, or developmental, or other etiologies cannot be fully ruled out). In such cases, the alternate etiologies that cannot be ruled out should be specified.

(A5) Minimal negative response bias.

(i) Performance on one well-validated test designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced-choice measures, is consistent with exaggeration of diminished

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functional psychiatric/psychological capacity. When only one instrument is used, and the evaluee does not reach acceptable criteria, a second one should be used to establish by performance whether the response bias is classifiable as possible or minimal.

Or,

(ii) Just-below cut score performance on two well-validated tests so that performance is at most partially consistent with exaggeration of diminished functional psychiatric/psychological capacity.

(A6) No evident response bias.

(i) Performance on not even one well-validated test designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced-choice measures, is consistent with exaggeration of diminished functional psychiatric/psychological capacity.

(ii) There might be just-below cut score performance on one well-validated test but, despite this, performance is not even partially consistent with exaggeration of diminished functional psychiatric/psychological capacity.

Weighting Rules for Test Batteries

As for the nature of the 60 rules included in the present system for test use, they have been constructed to apply equally to the system developed for PTSD and its alteration for conditions of pain and TBI. The rules were constructed according to ten pertinent principles and parameters, as specified in the following.

(a) There are two tracks in the system, Regular (for PTSD, pain) and Neuropsychological/Cognitive.

(b) There are multiple test types, including forced-choice, personality, and dedicated. They can be used in the system if scientifically supported for the question at hand.

(c–e) Some test types are more critical than others, e.g., forced-choice; some criteria more critical than others, e.g., below-chance performance; and some tests more reliable and valid than others for the purposes at hand, e.g., the MMPI-2-RF.

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(f) Any one test can provide one to several validity indicators, depending on the research findings in the area.
(g) The tests should include 10–15 primary measures specified beforehand, with 5–8 positive findings, and at most 3–4 from any one instrument, needed to conclude significant feigning or related response bias, including of malingering.
(h) Tests that are correlated can be used within specified limits and their acknowledgment.
(i) Malingering can be concluded only when there is incontrovertible evidence after examination of the full reliable data set gathered.
(j) In general, test selection and score interpretations must be undertaken scientifically, impartially, and comprehensively, while considering the limits of the evaluees.

In terms of the categories within which the 60 rules fall, they group in the following ways. (a) Pathways/tracks in the system: 1, 13, 17,-18; (b) Testing/tests: 2–9, 26–28, 56: (c) Criteria: 10–12, 25, 29; (d) Supplementary/secondary factors: 14–16; (e) Independence/correlation: 19–24; (f) Rating adjustment: 30–32; (g) Test preselection: 33–35; (h) Administration: 36–40; (i) Cognitive/Neuropsychological: 41–45; (j) Less testing: 46–50; (k) Comparison with Larrabee: 51; (l) Evaluators: 52–55; (m) Altering system: 57–58; (n) Using all the data: 59–60.

These 60 rules are quite explicit, and qualify how to obtain and use all needed validity measures to detect malingering and related response biases in the present system. However, the rules should not be used in a box score fashion to arrive at conclusions about malingering and related response biases. The evaluator needs to examine the full data set gathered in comprehensive, scientifically-informed, impartial ways. The ratings are only a guide toward this end, albeit objective ones to the degree possible.

Rule 1: Two pathways. Note that the present rating system is sufficiently flexible to accommodate (a) a Regular pathway/system in the rating without cognitive/neuropsychological testing and (b) a second pathway of cognitive/neuropsychological testing. The rules provide clear instructions on how to use one pathway, the other, or both. That being said, most of the following rules apply to the Regular system and extra ones for the cognitive/neuropsychological system are given toward the end.

Rule 2: Forced-choice. With respect to forced-choice measures, evaluators are advised to include in their assessments "well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms," and criteria have been described above for determining the level of malingering/response bias according to the results obtained on forced-choice tests. Essentially, there are two levels to consider:

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(a) below-chance performance, considered more problematic, and (b) failing to reach critical thresholds based on normative or otherwise validly-selected and justified cut-scores.

Rule 3: Tests. The inclusion in the criteria of "well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms" includes psychological tests other than forced-choice ones that might provide evidence in formal psychological evaluation that the person has significantly misrepresented current status (e.g., exaggerated or minimized psychological symptoms/distress) in a manner that emphasizes the injury for which compensation is sought.

Rule 4: MMPI family. For example, responses on self-report measures of psychological function suggest impairment in the context of elevations on well-validated validity scales or indices consistent with exaggeration of physical/somatic (e.g., MMPI-2 FBS, MMPI-2-RF FBS-r or SVT-r) or emotional symptoms (e.g., MMPI-2 F, Fb, or Fp, or related MMPI-2-RF scales), or newer effort detection scales (e.g., RBS, HHI), or, on these measures, as well, evidence of vehement denial of psychological problems in a manner consistent with extreme defensiveness regarding psychological symptoms in order to further emphasize psychological complaints (e.g., MMPI-2 L or K at noted cutoffs, or their MMPI-2-RF equivalents).

Rule 5: Other tests needed. The underlying assumption in listing all these instruments is that they provide relevant information for the present ratings; but they do vary in the information that they provide, the levels of the cut-offs used, etc. Therefore, evaluators need to be aware of further tests that could be used in evaluations; these are described below and scoring rules for them are listed.

Rule 6: Improbable symptoms, etc. Well-validated instruments might include structured interview ones that aim to detect improbable symptoms, or extreme, too frequent, or otherwise non-credible ones, such as detected on the SIRS/SIRS-2 and the M-FAST.

Rule 7: PTSD. In addition, tests might include dedicated PTSD ones, such as the DAPS or perhaps the TSI-2, that have embedded evaluee validity scales for under- and over-reporting.

Rule 8: Pain. Tests aimed at other types of disability determinations, such as the BBHI-2 for pain and the RNBI for neurobehavioral symptoms, might be applicable, depending on the nature of the evaluee's assessment taking place, given the equivalent embedded evaluee validity scales in these instruments, for under- and over-reporting.

Rule 9: Cognitive (embedded). Further, even when an assessment is not neuropsychological, good use could be made of embedded cognitive measures of invalidity/poor effort, such as for digit span.

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Rule 10: 10–15 Primary. Of all the tests/measures/scales/indicators administered that are not forced-choice tests or embedded neuropsychological/cognitive measures, 10–15 should be considered primary, or as the ones designated to furnish for the present system critical information needed for assessing malingering and related response biases.

Rule 11: 5–8 Critical. The criteria of the present system indicate that, aside from below-chance results from forced-choice and neuropsychological/cognitive testing, 5–8 invalidity results, at most, are needed from among the 10–15 primary measures to obtain maximal scores/levels in the system. Note that because there are 10–15 primary indices and doing poorly on 5–8 of them indicates significant doubt about the credibility of the evaluee, this suggests that doing poorly on about 50 % (or more) of the primary indices is critical in establishing the evaluee's performance/effort quality. This rule has face validity.

Rule 12: Not at cut-off. Note that below-chance performance on forced-choice testing is not counted in the primary indices, given its use elsewhere in the system. However, performance on these tests that do not meet cut-offs (even if higher than below-chance performance) can count as among the 10–15 primary indices of the system, if specified beforehand.

Rule 13: Neuropsychology. Aside from stand-alone forced-choice tests such as the VSVT, structured interviews such as the SIRS/SIRS-2, and tests such as the MMPI family ones, when the assessment is neurocognitive or neuropsychological, many different embedded validity/effort detector tests/measures/scales can be used, given the tens of domains tested and the utility of having more than one for each domain, as needed.

Rule 14: Supplementary tests. However, the data obtained from these instruments should not be used as part of the 10–15 primary ones needed for purposes of obtaining ratings in the present system. That is, essentially, they should be used separately from the Regular system, and stand apart from them for use in the cognitive/neuropsychological one.

Rule 15: Secondary information. That is, these extra data sources might contribute secondary information to the Regular rating system, at best, aside from any data that they furnish for purposes outside the Regular rating system to the cognitive/neuropsychological one.

Rule 16: Pattern analysis. The same applies for neurocognitive/neuropsychological test pattern analysis deriving from these tests; normally, they should not be considered for use in the Regular system.

Rule 17: Limited cognitive testing. Note that if limited cognitive testing is given, rather than full-blown cognitive/neuropsychological testing, and there are not many validity indicators/tests/measures/scales available because of this decision, it might be best to consider them for rating of the Regular and not cognitive/neuropsychological path.

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Rule 18: Neuropsychological path. That being said, there are rules given below (see Rules 41–44) that apply to rating the present system for the second path when full-blown cognitive/neurocognitive testing is administered.

Rule 19: Test independence. The selection of instruments chosen in an assessment must be carefully organized so that, to the degree possible, they are relatively independent and tapping different aspects of psychological function/response bias.

Rule 20: Prioritizing. For example, if two similar results are obtained for two tests that are aimed at measuring the same type of response bias, they should not both be considered as primary in the present rating system and both used to inflate the ratings.

Rule 21: Exception 1. One exception to this rule is when the better measure of the two yields negative results and the second one yields positive results; perhaps valid arguments are possible to justify using the secondary measure as the primary one.

Rule 22: Exception 2. Moreover, tests are never perfectly correlated, and even if they are substantially correlated, they might reflect different constructs to a degree. Therefore, consistent with the multitrait-multimethod approach, two very similar tests having positive results could be used in the ratings with the present system, if this decision can be appropriately justified.

Rule 23: Exception 3. Nevertheless, in general, to repeat, evaluators should avoid such reduplication in obtaining scores from tests administered in their batteries for rating purposes. They can accomplish this, by selecting measures that are relatively independent and aimed at different categories of psychological function/response bias. For example, if the MMPI-2-RF is administered, any scores from another personality inventory that might be administered should not be considered as primary in calculating level of response bias in the present system. That being said, if a secondary omnibus instrument, such as a personality inventory, has a useful scale that is considered better for the purposes of the evaluation relative to those in the primary one, that scale in the secondary one can be used in ratings with the present system.

Rule 24: Exception 4. Note that this rule about generally trying to avoid duplication/overlap/correlated tests in establishing ratings with the present system does not apply to the needed use of several stand-alone, forced-choice tests, because they are cardinal in determining the presence of malingering.

Rule 25: Maximum use 1. For instruments that have more than one scale aimed at detecting effort or feigning, such as the MMPI family of tests, or in cognitive evaluation, the rule should be that any instrument of this type should

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contribute at most 3–4 primary measures among the 10–15 maximum that are needed in the present system to arrive at ratings, even if there are more than 3–4 of them that are included in the instrument and that have been scored. This rule needs implementation to avoid using only one of these instruments to obtain the needed results for all of the 5 primary validity indicators among the 10–15 required for obtaining results that can be used for a maximum rating in the present system.

Rule 26: Omnibus tests. In cases where assessors use two or more omnibus instruments with more than one relevant validity measure, as mentioned, one must be considered primary, with its validity scores used rather than any of the others. For this rule, everything else being equal, the MMPI family of tests is considered primary in such cases for rating with the present system.

Rule 27: Dedicated Tests. For PTSD or pain assessments, when two or more dedicated tests, such as the DAPS for PTSD, are used, normally only one should provide scores as primary measures for purposes of the present ratings.

Rule 28: Nondedicated tests. When validity indicators of feigning are used in tests that do not directly apply to PTSD or pain, or when they do not have associated with them research showing their applicability to the population at hand, their use must be justified. Moreover, for any one assessment, only one test from among them and, further, only one score from it should be used in the ratings.

Rule 29: Maximum use 2. If these tests are dedicated ones to detecting feigning, such as the SIRS, as long as they are validated for the population at hand, weighting of 2–3 of their measures could be used as part of the 10–15 primary ones for rating in the present system.

Rule 30: Adjusted rating, lowering it. When evaluees (a) score in the superior range for good effort on a validity indicator, if applicable, and/or (b) pass a majority of the validity tests/measures/scales given in the full battery, and/or (c) score positive for measures related to symptom minimization or underreporting of post-event symptoms at claim, they should be credited a half-level for each case in the reverse direction on the rating scale, up to a maximum of one full level in the reverse direction on the scale.

Rule 31: Adjusted rating, raising it. When evaluees (a) score in the superior range (e.g., 98th percentile) for poor effort on a validity indicator, if applicable, and/or (b) fail a majority of the validity tests/measures/scales given in the full battery, and/or (c) score positive for measures related to symptom minimization or underreporting of pre-event symptoms at claim, they should be credited a half-level for each case in the higher direction on the rating scale, up to a maximum of one full level in the higher direction on the scale.

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Rule 32: Patterns. Clinical scales might prove informative for their patterns, such as on personality inventories. For example, in the MMPI family of tests, certain codes are associated with problematic clinical presentations with respect to effort and evaluee validity. Patterns such as this should be considered for half-level adjustment (lower, higher), as part of the prior two rules.

Rule 33: Preselection. In choosing usable measures from batteries that had been administered for rating purposes, decisions about which measures to use should be made beforehand, including the weightings involved, as justified and based on the scientific literature.

Rule 34: Fishing expeditions. Evaluators should avoid fishing expeditions of selecting just-right tests, and once the data are gathered, just-right scores, in order to get just-right conclusions to assessments, thereby lacking impartiality, comprehensiveness, and scientific underpinnings.

Rule 35: No exceptions. Evaluators should not ignore pre-selected measures, ones chosen for use beforehand according to the requirements of the present system, and they should not avoid administering obvious ones to use for rating in the battery, such as the MMPI family ones.

Rule 36: Ecological validity. Evaluators should administer the tests in a way that has ecological validity, e.g., spreading them out and not giving one after the other.

Rule 37: Warnings. Evaluators should consider the issue of advising evaluees about tests, especially forced-choice ones, according to prevailing professional guidelines.

Rule 38: Qualifications. Only mental health professionals who are professionally qualified should select, administer, and interpret psychological tests.

Rule 39: State-of-the-art. It is important to note that the evaluator needs to use the most current, psychometrically and forensically valid instruments available, and not just the ones mentioned in this version of the F-PTSDR-D written in 2014.

Rule 40: No harm. In short, aside from using an appropriate battery of measures for the ratings that can be derived from the present system, each instrument selected should be administered in a way that does not harm the evaluee, while still permitting that the information required is gathered.

Rule 41: Cognitive/Neuropsychological testing. When an evaluation includes cognitive/neuropsychological testing, the procedures described in the present system can be complemented by a second path or track. Typically, in cognitive/neuropsychological testing, there are tens of evaluee validity indicators/tests/measures/scales that might be administered. The present system allows for 10–15 primary measures outside of cognitive/neuropsychological testing and, from among these, 5–8 critical validity indicators/tests/measures/scales with (positive) data are selected. In this regard, from among the

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cognitive/neuropsychological tests administered, an additional 10–15 primary measures and 5–8 critical validity indicators/tests/measures/scales can be selected from among the cognitive/neuropsychological tests administered.

Rule 42: Rating cognitive/neuropsychological tests. The rules of the present system should be applied to the cognitive/neuropsychological primary measures and critical results that are derived from application of Rule 41. That is, they will help arrive at evaluations of Definite to Probable Response Bias, in particular.

Rule 43: Cognitive/Neuropsychological and Regular rating. When both the Regular path in using the present rating system and the supplementary cognitive/neuropsychological one are both positive and lead to high ratings of response bias for an evaluee, this should be indicated.

Rule 44: Positive results for only one of the two paths. When either cognitive/neuropsychological or Regular rating leads to high ratings of response bias for an evaluee, but not both, this should be indicated. Conclusions to evaluations should note the difference in the two ratings and its implications.

Rule 45: Cognitive/Neuropsychological path alone. Of course, evaluators might want to proceed with just cognitive/neuropsychological testing in the second pathway of the system, and not use at all the Regular pathway. In this regard, they would use simply the embedded cognitive/neuropsychological validity indicators/tests/measures/scales with forced-choice measures, and none of the personality, structured interviews, and specific dedicated measures.

Rule 46: Test selection. The system is very flexible and, when testing is involved, the amount of tests/measures/scales administered can be as low as several to as high as multiples of 10.

Rule 47: Minimal testing. Minimally, at least when the Regular path or track is taken, appropriate use of the system requires a good omnibus personality test, such as the MMPI-2-RF or the PAI, a good feigning detection interview instrument, such as the SIRS/SIRS-2 or M-FAST, a specific, dedicated test, and one or more stand-alone forced-choice measures, such as the VSVT or the TOMM. (Recommendations for 2014.)

Rule 48: Less than minimal testing. If evaluators choose to administer even less testing than this, they risk not having the option of getting sufficient critical tests/measures/scales/indicators that can be used to rate the upper levels of the rating system.

Rule 49: Less testing yet doing enough. That being said, there are both testing and non-testing rules that could be used to supplement below-minimum test use, for example, the one concerning especially high failure performance on tests (98 % percentile or more; see above) and the one for the whole file (see below).

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Rule 50: Justify less testing. A problematic practice is that evaluators who are trained in psychological testing use less testing in assessments than the recommended minimum even when more testing can be administered. For example, it is conceivable that partially sufficient information can be gathered just in administering an MMPI family test, a structured interview one, or one forced-choice test. However, this option is strongly recommended against, unless it can be clearly justified, e.g., due to the level of concomitant physical or brain injuries, language barriers, etc. In such cases, it might be sufficient to use less that the recommended minimum of tests.

Rule 51: Larrabee (2012a). As an aside, it is noted that the structure established in the present system through its rules enables evaluators to arrive at high ratings on the present rating system in terms of malingering and definite response bias. For example, the system enables high ratings when there are positive results or performance on three or even two tests/measures/scales/validity indicators, which is consistent with the spirit of the work of Larrabee (2012a). Indeed, the system created might even be more sensitive to obtaining results at these higher levels compared to Larrabee's procedures, given the rules developed. That being said, consideration of the whole file and alternative explanations, such as a cry for help, might render it less sensitive. This illustrates perfectly the middle-of-the-road, balanced approach that characterizes the present system. It was constructed with good rationale and logical perspectives, good scientific and practical ones, and consideration of other systems, published recommendations for their change, and other state-of-the-art literature. Evaluators should function from the same middle-of-the-road and state-of-the-art perspective in applying the system to their evaluees. Evaluators might want to check the conclusions derived from using the present system with those of Larrabee (e.g., likelihood ratios, positive predictive power, probability of multiple positive findings), or any other system of an acturial, algorithmic nature for malingering detection, assuming the literature supports their use, using a compare-contrast format to help justify the use of the present system and the conclusions it allows for any assessment at hand.

Rule 52: Supplementary evaluators. Evaluators not trained in testing can acquire the services of those trained and competent to administer the types of tests recommended for use in the present system.

Rule 53: Seconding team work. Note that the evaluator who acquires such testing services is responsible for applying the present system to the case at hand, but only the testing evaluator can be responsible for interpreting the test data portion of the evaluation.

Rule 54: Leading team work. Or, evaluators might be trained and competent in testing, but prefer to have a second evaluator (help) seek inconsistencies/discrepancies in the file. The testing evaluator would be responsible for the

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inconsistencies/discrepancies noted and for combining all the information gathered for present rating purposes.

Rule 55: Interdisciplinary assessments. Evaluators using the present system might be functioning within the context of interdisciplinary teams of assessors. In contributing to and/or signing any executive summary, they are responsible as much as the others for how the ratings are used and for any overall alterations in equivalent ratings by the team.

Rule 56: Specific dedicated tests. [As of 2014.] If test dedicated to specific psychological injuries are administered, such as in the Regular track, the DAPS and perhaps the TSI-2 make sense for PTSD, and the BBHI-2 or BHI-2 would be good for pain. In this regard, there are multiple cognitive or related measures that could be used. Other tests. Some other relevant instruments include the RNBI, the VIP, the WMT, and the MENT.

Rule 57: Altering rules on testing and test battery. As of 2014, the test battery rules and the testing procedures and tests indicated in the present system are the ones that can be scientifically and practically justified. However, as concepts and research accumulate, recommendations to change the present system might appear in the scientific literature and research that are both reliable and valid. Or, assessors might alter a rule or rules or use of the present system and its proposed testing battery in a way that is scientifically and practically justified. For example, the number of primary and critical tests and measures, presently are set at 10–15 and 5–8, respectively, but slight variations in these amounts might be acceptable at the scientific and practical levels.

Rule 58: Special populations. The usual cautions about using the correct norms for scoring and being sensitive to gender, minorities, age, and related differences apply to testing for the present system. Note that for children, the BASC-2 has appropriate validity checks.

Rule 59: Consider whole file. The rating of any level of negative response bias that is attributed to an evaluee according to the present system can be adjusted higher or lower by one-half to one full rating level on the scale depending on any additional reliable information in the assessment that is not considered elsewhere. These factors might include evaluator ones, evaluee ones, or systemic ones. The rationale for this decision must be documented. For example, litigation distress might be evident, but that could reflect either (a) non-merited factors, such as apprehension at continued evaluations that have reliably found difficulties with presentation/performance in the evaluee, or (b) genuine externally-generated stress related to the case, e.g., by third parties.

Rule 60: Combining test data with inconsistencies/discrepancies. Criterion C elaborates rules for combining test data with inconsistencies/discrepancies after presentation of 30 possible inconsistencies/discrepancies.

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Criterion C: Evidence from Inconsistencies/Discrepancies, With or Without Test Data Considered.

Inconsistency/discrepancy criteria can be used separately from those of the B set, or in conjunction with them, as presented in the second part of the C criteria. Inconsistencies/discrepancies can be found at two levels. Either marked/substantial or moderate/nontrivial evidence of inconsistency/discrepancy is possible. Moreover, marked/substantial inconsistencies/discrepancies can be divided into those that are less or most extremely compelling, such as in cases of frank admission, videographic evidence of working after being at work has been denied, and frank evidence elsewhere in the file, e.g., related to collateral information. Trivial evidence in these regards should be ignored. For the two levels of inconsistencies/discrepancies possible, with the more blatant ones receiving the highest rating, there is a subjective element in classifying them. Therefore, evaluators should be conservative when characterizing them as marked or substantial relative to moderate or nontrivial, and justify all classifications in these regards with clear material from the file and careful argument. Note that in section B3-4ii below, 15 examples are provided of possible inconsistencies/discrepancies, aside from the few examples provided in the sections that follow.

(a) Inconsistencies/Discrepancies in Conjunction with Testing

(a1) Inconsistency/Discrepancy between cognitive/neurocognitive test data and known patterns of brain functioning (e.g., as related to PTSD). In this regard, a pattern of test performance that is either markedly/substantially or moderately/nontrivially inconsistent/discrepant from currently accepted models of normal and abnormal central nervous system (CNS) function. The inconsistency/discrepancy must be consistent with an attempt to exaggerate or fabricate psychological dysfunction in testing (e.g., patient reports that she/he does not sleep at all). (Inconsistency #1)

(a2) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of PTSD-related symptoms after event at claim and known patterns of physiological reactivity. (Inconsistency #2)

(a2i) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of PTSD-related symptoms after event at claim and known patterns of physiological reactivity in the ambulance, at the hospital, or shortly thereafter (e.g., no heart-rate increase with significant change in subjective traumatic reaction report). (Inconsistency #2, first example)

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(a2ii) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of PTSD-related symptoms after event at claim and known patterns of physiological reactivity in psychotherapy (e.g., no increase in neurovegetative signs during exposure therapy or systematic desensitization).

(a2iii) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of PTSD-related symptoms after event at claim and known patterns of physiological reactivity to psychotropic medication (e.g., no decrease in neurovegetative signs to symptom-relevant medication).

(a3) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data and self-report. (Inconsistency #3)

(a3i) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data on psychological status prior to event at claim and self-reported background history in interview. (Inconsistency #3, first example)

(a3ii) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of PTSD-related symptoms after event at claim and self-reported behavior/symptoms/complaints/limitations/functions in interview.

(a4) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of PTSD-related symptoms after event at claim and verbal and/or nonverbal observed behavior/symptoms/complaints/limitations/functions. (Inconsistency #4)

(a4i) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of PTSD-related symptoms after event at claim and observed behavior/symptoms/complaints/limitations/functions while unaware of being observed. (Inconsistency #4, first example)

(a4ii) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of PTSD-related symptoms after event at claim and observed behavior/symptoms/complaints/limitations/functions while aware of being observed (e.g., evaluee endorses items indicating extreme fear in driving, yet is observed to/indicates that driving to and from the session was okay).

(a5) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data and information reported by reliable informants/collaterals. (Inconsistency #5)

(a5i) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of PTSD-related symptoms on psychological status prior to event at claim and information reported by

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reliable informants/collaterals, such as primary care physicians and spouses, about background history. (Inconsistency #5, first example)

(a5ii) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of PTSD-related symptoms after event at claim and information reported by reliable informants/collaterals, such as primary care physicians and spouses, about behavior/symptoms/complaints/limitations/functions (e.g., evaluee endorses items indicating extreme fear in driving yet is reported by spouse to drive without a problem).

(a6) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data and information reported in reliable documents. (Inconsistency #6)

(a6i) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data on psychological status prior to event at claim and information reported in reliable documents, such as by primary care physicians and other mental health professionals, about background history. (Inconsistency #6, first example)

(a6ii) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of PTSD-related symptoms after event at claim and information reported in reliable documents, such as by primary care physicians and other mental health professionals, about behavior/symptoms/complaints/limitations/functions (e.g., there is no documented history of psychological trauma in the ambulance or ER reports yet the evaluee consistently endorses extreme traumatic reactions in the ambulance, at the hospital, or shortly thereafter).

(b) <u>Inconsistencies/Discrepancies in Conjunction with Self-Report (other than with testing)</u>

Evidence that the evaluee's self-reported behaviors, symptoms, complaints, or limitations and functions related to PTSD and related disorder/dysfunction are clearly consistent with exaggeration or feigning of physical, cognitive, or emotional/psychological components of the PTSD-related disability in that there is either a marked/substantial or moderate/nontrivial inconsistency/discrepancy between such self-report and any of the following:

(b1) Known patterns of brain function. (Inconsistency #7)

(b2) Known patterns of physiological function. (Inconsistency #8)
[Self-reported PTSD-related symptoms are clearly discrepant with known patterns of physiological or neurological functioning (e.g., PTSD complaints by themselves should not be able to elicit marked/substantial or moderate/nontrivial complaints of remote memory loss;

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PTSD complaints should not be able to elicit repetitive nightmares that exactly repeat the traumatic event and no other nightmares).]

(b3) Observed behavior/symptoms/complaints/limitations/functions. (Inconsistency #9)

(b3i) Observed behavior/symptoms/complaints/limitations/functions while unaware of being observed. (Inconsistency #9, first example)

(b3ii) Observed behavior/symptoms/complaints/limitations/functions while aware of being observed.

[Self-reported PTSD-related symptoms are clearly inconsistent/discrepant with reliable observations of behavior. Reported symptoms in a given behavioral domain (i.e., physical, cognitive, emotional; PTSD-related) are markedly/substantially or moderately/nontrivially inconsistent/discrepant with behavioral observations (e.g., patient complains of being unable to sleep well but appears quite alert). Such observation may occur in the context of formal evaluation.]

(b4) Information reported by reliable informants/collaterals, such as primary care physicians and spouses. (Inconsistency #10)

(b4i) Information reported by reliable informants/collaterals, such as primary care physicians and spouses, about background history. (Inconsistency #10, first example)

(b4ii) Information reported by reliable informants/collaterals, such as primary care physicians and spouses, about behavior/symptoms/complaints/limitations/functions.

[Self-reported PTSD-related symptoms are clearly discrepant with reliable observations of behavior. Reported symptoms in a given behavioral domain (i.e., physical, cognitive, emotional; PTSD-related) are markedly/substantially or moderately/nontrivially inconsistent/discrepant with behavioral observations (e.g., patient complains of being unable to sleep well but appears quite alert). Such observation may derive from the report of reliable collateral informants (e.g., evaluee's friends or relatives).]

(b5) Information reported in reliable documents, such as by primary care physicians and other mental health professionals. (Inconsistency #11)

(b5i) Information reported in reliable documents, such as by primary care physicians and other mental health professionals, about background history. (Inconsistency #11, first example)

(b5ii) Information reported in reliable documents, such as primary care physicians and other mental health professionals, about behavior/symptoms/complaints/limitations/functions.

[Self-reported history is clearly inconsistent/discrepant with documented history, the evidence for which is reliable. For example,

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minimization or denial of marked/substantial or moderate/nontrivial concurrent or prior illness/injury (broadly defined) in a manner that emphasizes the injury for which compensation is sought. Also included would be marked/substantial or moderate/nontrivial overstatement of academic, vocational, or other achievement in a way that exaggerates the magnitude of loss due to the injury in question.]

(c) Inconsistencies/Discrepancies in Conjunction with Observations (other than with testing and with self-report)
Evidence that the evaluee's verbal and/or nonverbal observed behaviors, symptoms, complaints, or limitations and functions related to PTSD and related disorder/dysfunction are clearly consistent with exaggeration or feigning of physical, cognitive, or emotional/psychological components of the PTSD-related disability in that there is either a marked/substantial or moderate/nontrivial inconsistency/discrepancy between such observations and any of the following:

(c1) Known patterns of brain function. (Inconsistency #12)
(c2) Known patterns of physiological function. (Inconsistency #13)
(c3) Information reported by reliable informants/collaterals, such as primary care physicians and spouses. (Inconsistency #14)
(c3i) Information reported by reliable informants/collaterals, such as primary care physicians and spouses, about background history. (Inconsistency #14, first example)
(c3ii) Information reported by reliable informants/collaterals, such as primary care physicians and spouses, about behavior/symptoms/complaints/limitations/functions.
(c4) Information reported in reliable documents, such as by primary care physicians and other mental health professionals. (Inconsistency #15)
(c4i) Information reported in reliable documents, such as by primary care physicians and other mental health professionals, about background history. (Inconsistency #15, first example)
(c4ii) Information reported in reliable documents, such as by primary care physicians and other mental health professionals, about behavior/symptoms/complaints/limitations/functions.

(d) Inconsistencies/Discrepancies in Conjunction with Collateral Information (other than with testing, self-report, and observations)
Evidence that the evaluee's collaterally reported behaviors, symptoms, complaints, or limitations and functions related to PTSD and related disorder/dysfunction are clearly consistent with exaggeration or feigning of physical, cognitive, or emotional/psychological components of the PTSD-related disability in that there is either a marked/substantial or

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moderate/nontrivial inconsistency/discrepancy between such reports and any of the following:

(d1) Known patterns of brain function. (Inconsistency #16)
(d2) Known patterns of physiological function. (Inconsistency #17)
(d3) Information reported in reliable documents, such as by primary care physicians and other mental health professionals. (Inconsistency #18)
(d3i) Information reported in reliable documents, such as by primary care physicians and other mental health professionals, about background history. (Inconsistency #18, first example)
(d3ii) Information reported in reliable documents, such as by primary care physicians and other mental health professionals, about behavior/symptoms/complaints/limitations/functions.

(e) Inconsistencies/Discrepancies in Conjunction with Documentation (other than with testing, self-report, observations, and collateral information) Evidence that the evaluee's documented behaviors, symptoms, complaints, or limitations and functions related to PTSD and related disorder/dysfunction are clearly consistent with exaggeration or feigning of physical, cognitive, or emotional/psychological components of the PTSD-related disability in that there is either a marked/substantial or moderate/nontrivial inconsistency/discrepancy between such documentation and any of the following:

(e1) Known patterns of brain function. (Inconsistency #19)
(e2) Known patterns of physiological function. (Inconsistency #20)

(f) Inconsistencies/Discrepancies Within Major Data Sources (not between them, which are scored above)

(f1) Known patterns of brain function. (Inconsistency #21)
(f2) Known patterns of physiological function. (Inconsistency #22)
(f3) Self-report. (Inconsistency #23)
(f3i) Self-report of background history. (Inconsistency #23, first example)
(f3ii) Self-report of behavior/symptoms/complaints/limitations/functions.
(f4) Observed behavior/symptoms/complaints/limitations/functions. (Inconsistency #24)
(f4i) Observed behavior/symptoms/complaints/limitations/functions while unaware of being observed. (Inconsistency #24, first example)
[Compelling self-presentation inconsistency/discrepancy. Compelling self-presentation inconsistencies/discrepancies occur when the difference in the way an evaluee presents verbally and/or nonverbally when being evaluated compared with when not aware of being evaluated is marked/substantial or moderate/nontrivial and such that it is not reasonable to believe the evaluee is not purposely controlling the difference and other explanations do not readily apply.]

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(f4ii) Observed behavior/symptoms/complaints/limitations/functions while aware of being observed.
(f5) Information reported by reliable informants/collaterals. (Inconsistency #25)
(f5i) Information reported by reliable informants/collaterals, such as primary care physicians and spouses, about background history. (Inconsistency #25, first example)
(f5ii) Information reported by reliable informants/collaterals, such as primary care physicians and spouses, about behavior/symptoms/complaints/limitations/functions.
(f6) Information reported in reliable documents. (Inconsistency #26)
(f6i) Information reported in reliable documents, such as by primary care physicians and other mental health professionals, about background history. (Inconsistency #26, first example)
(f6ii) Information reported in reliable documents, such as primary care physicians and other mental health professionals, about behavior/symptoms/complaints/limitations/functions.

(g) Other, Miscellaneous Inconsistencies/Discrepancies (e.g., there is evidence of no material causation for alleged psychological/psychiatric effects of event at claim)
[Self-reported symptoms are clearly discrepant with claimed causal factors, such as an index event. There are marked/substantial or moderate/nontrivial multiple pre-existing and concurrent, but incidental, extraneous factors, reliably ascertained, that can clearly account for the evaluee's presentation pertaining to the diagnosis and disorder/disability at issue much more than an event at claim or even fully, but the evaluee keeps insisting that the event at claim explains all of or a good portion of the sequelae to the event in his/her presentation. Arguments of this nature must be made clearly by the evaluator, given the confounding counter-arguments possible.]

(g1) No causality attributable to the event at claim, despite the evaluee's insistence. (Inconsistency #27)
(g2) Only minimal causality attributable, and out of the material range, despite the evaluee's insistence. (Inconsistency #28)
(g3) Material-level causality attributable to the event at claim, but not to the degree insisted by the evaluee. (Inconsistency #29)
(g4) Other. (Inconsistency #30)

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B. Different Degrees of Certainty of Response Bias, According to Inconsistencies/Discrepancies

(B1) Definite Malingering.

(i) One extremely compelling inconsistency/discrepancy that takes the form of (a) outright admission, (b) incontrovertible evidence on videographic surveillance, such as working after denial that it is taking place, or (c) or reliable collateral information in these regards. Other compelling inconsistencies of a less red-handed, extreme nature require three pieces of evidence for consideration at this level.

Or,

(ii) The evidence is incontrovertible (blatant, indisputable) when all the data gathered are considered. Three or more marked/substantial inconsistencies/discrepancies from items a–g above,

Or,

(iii)

(a) One marked/substantial inconsistency/discrepancy from items a–g, and

(b) Performance on four (not five) well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced-choice measures, is consistent with exaggeration of diminished functional psychiatric/psychological capacity.

Or,

(iv)

(a) Two marked/substantial inconsistencies/discrepancies from items a–g, and

(b) Performance on three (not five) well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced-choice measures, is consistent with exaggeration of diminished functional psychiatric/psychological capacity.

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(B2) Definite negative response bias.

(i) Two marked/substantial inconsistencies/discrepancies from items a–g,

Or,

(ii)

(a) One marked/substantial inconsistency/discrepancy from items a–g, and

(b) Performance on three (not four) well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced-choice measures, is consistent with exaggeration of diminished functional psychiatric/psychological capacity.

(B3) Probable negative response bias.

(i) One marked/substantial inconsistency/discrepancy from items a–g,

Or,

(ii)

(a) Five moderate/nontrivial inconsistencies/discrepancies from items a–g, and

(b) Performance on two (not three) well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced-choice measures, is consistent with exaggeration of diminished functional psychiatric/psychological capacity.

(B3-4) Intermediate (Probable to possible, gray zone) negative response bias. The data meet the requirements for classification of possible negative response bias but not the classification of probable negative response bias. Nevertheless, there are supplementary data available about the evaluee that raises the ratings. For inconsistencies/discrepancies that have not been considered elsewhere in the system rating as marked/substantial or moderate/nontrivial, this could refer to:

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(i) Inconsistencies/discrepancies are reliably found in other assessments, such as different specialists in a multidisciplinary assessment of the evaluee that address pertinent mental health issues.

Or,

(ii) There is clear evidence of or other confounding factors that might cast doubt on the validity of either the evaluee's presentation on performance validity, although this would have to be clearly documented. In this regard, the evaluee would have to show five or more of the following 15 factors, as supported by clear evidence (five of these are needed because often they are hard to determine, so that even with some evidence in their support, five is considered the minimum needed to use this option in the present scoring system).

That being said, when one to four of these criteria are evident instead of five or more, and so they cannot be used as part of the data for rating Probable Response Bias, as per the above, the evaluator should use these as part of the ratings for Possible Negative Response bias, as per below, including them with the other inconsistencies/discrepancies in items a–g therein. Also, if the rating of Probable Negative Response Bias is almost attained but one or more moderate/nontrivial inconsistencies/discrepancies from items a–g are lacking, the ones from this list for Intermediate Negative Response Bias can be used.

(a) Personality disorder of a problematic nature, e.g., (i) antisocial personality disorder according to the DSM, or (ii) features of/subsyndromal expressions of one, or (iii) confrontational/uncooperative, resisting/refusing, without clear signs that the behavior is related to the claimed injury or other conditions such as schizophrenia, etc.
(b) Blaming everyone and anything, overly suspicious, etc., without clear signs that the behavior is related to the claimed injury or other conditions, such as schizophrenia, etc.
(c) Not trying to mitigate loss; not being active in recommended therapy; not being a compliant patient adhering to treatment regimens, etc.
(d) Unduly adopting the sick role, accepting overly solicitious behavior, etc.
(e) Somatization effects not related to the influences of the claimed psychiatric/psychological injury.

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(f) Failure to treat substance abuse impeding progress, whether pre-event or post-event related, including of abuse of prescribed event-related medications.
(g) Failure to take recommended medications, such as anti-depressants or needed pain medications, if applicable, for invalid medical reasons.
(h) Refusing a work-hardening trial, refusing modified duties, refusing training for new work within residual capacities and transferable skills, etc., as long as these options are psychiatrically/psychologically (and medically) indicated.
(i) Catastrophizing/crying out for help at a level clearly beyond the nature of the injuries, even after education about it (if not used elsewhere).
(j) Any other confound that is documentable, such as attorney or similar coaching

As well, five factors derived from the pre-event background are considered as possible confounding factors that might cast doubt on the validity of the evaluee, although resilience to these stressors should be considered in balance:

(k) Psychiatric/self harm/substance abuse history.
(l) Criminal/legal/problematic military history; history of deceit/fraud.
(m) History of, irregularity in/dissatisfaction with work or other role at issue.
(n) History of, irregularity in/dissatisfaction with family, partners, friends, social life.
(o) History of, financial stresses/bankruptcies/unsupported claims.

(B4) Possible negative response bias.

(i) Four moderate, non-trivial inconsistencies/discrepancies from items a–g,

Or,

(ii)

(a) Three moderate, nontrivial inconsistencies/discrepancies from items a–g, and
(b) Performance on one (not two) well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced-choice measures, is consistent with exaggeration of diminished functional psychiatric/psychological capacity.

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(B5) Minimal negative response bias.

(i) Two moderate, nontrivial inconsistencies/discrepancies from items a–g

Or,

(ii)

(a) One moderate, nontrivial inconsistency/discrepancy from items a–g, and

(b) Just-below cut score performance on one (not two or more) well-validated tests so that performance is at most partially consistent with exaggeration of diminished functional psychiatric/psychological capacity.

(B6) No evident response bias.

Not even one moderate, nontrivial inconsistency/discrepancy from items a–g.

Criterion D: Behaviors meeting necessary criteria from groups B and C are not fully accounted for by psychiatric, neurologic, or developmental, or other factors.

The behaviors meeting the above criteria represent a likely *(inferred but evident)* volitional act aimed at achieving some secondary gain and cannot be fully accounted for by other disorders that result in significantly diminished capacity to appreciate laws or mores against malingering or inability to conform behavior to such standards. The simple presence of objectively documented pathology, illness, or injury (including psychiatric illness) expressly does not preclude a diagnosis of malingering. However, the "diagnostic" system presented should be used conservatively and prudently, especially because of the harm to evaluees that can be caused by false attributions of malingering and related presentation/performance and response biases. For example, the options of probable, intermediate, and possible levels of response bias expressly do not preclude validity of the evaluee's presentation, at least in part. Moreover, in arriving at conclusions about definite response bias, the evaluator is reminded (a) to evaluate the full data gathered for the evaluee and not just scores on one or more psychometric measures or computer interpretations of test results, and (b) the data must be gathered comprehensively, scientifically, and impartially. For example, an evaluee failing according to cut-off on three validity indicators might pass many more in the full battery administered and allowances could be made for these credible results, depending on other factors, such as their pattern. Importantly, attributions of overt malingering must especially take these factors and other relevant ones into account

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before concluding that malingering is present with incontrovertible evidence, or that other high ratings in the system are present at the level of "more likely than not" in the evaluee. That being said, when warranted, the astute evaluator can use language that clearly denies the credibility of the evaluee, even to significant degrees (despite having a lack of clear evidence about or knowledge of underlying motivation, and therefore without imputing directly motivation).

Note. This present rating system to evaluate non-credible, feigning/malingering and other response biases and presentations/performances in the psychiatric/psychological injury context is meant to be applicable to adult evaluees, in particular. It can be used with adolescents, though, but with caution, e.g., in terms of using different tests/measures/scales of validity/effort. An important general reminder is that any assessment and interpretation of instrument results need to be sensitive to relevant age, gender, cultural/minority, and related differences.

Adapted from Bianchini et al. (2005), which in turn was adapted from Slick et al. (1999)

Note for practice use of the table. The F-PTSDR-D rating present rating system allows for evaluation of non-credible, feigned, or malingered evaluee presentation/performance by either (a) psychometric testing, (b) finding major inconsistencies/discrepancies in an evaluee's data, or both. As such, **the present F-PTSDR-D system is a malingering-related "diagnostic" system, or classificatory model, that is usable by psychiatrists, psychologists, and other mental health professionals.**

Also, for evaluees presenting with simultaneous neuropsychological/cognitive, pain-related, and/or polytrauma disorder/disability/dysfunction in conjunction with PTSD claims, aside from the present PTSD-related system, the assessor should consult the revised systems that have been developed to replace the MND (Malingered Neurocognitive Dysfunction) and MPRD (Malingered Pain Related Disability) systems of Slick et al. (1999) and Bianchini et al. (2005), respectively. See tables on (the F-NCR-D and F-PR-D systems, respectively) and the recommendations for their simultaneous use

Abbreviations. PTSD posttraumatic stress disorder, *TBI* traumatic brain injury, *TOMM* Test of Memory Malingering (Tombaugh 1996), *VSVT* Victoria Symptom Validity Test (Slick et al. 1997), *WMT* Word Memory Test (Green 2005), *VIP* Validity Indicator Profile (Frederick 1997), *MMPI* Minnesota Multiphasic Personality Inventory (Hathaway and McKinley 1943), *MMPI-2* Minnesota Multiphasic Personality Inventory, Second Edition (Butcher et al. 1989, 2001), *FBS (SVS)* Fake Bad Scale (Symptom Validity Scale) (Ben-Porath and Tellegen 2008/2011; Lees-Haley et al. 1991), *MMPI-2-RF* Minnesota Multiphasic

Personality Inventory, Second Edition, Restructured Form (Ben-Porath and Tellegen 2008/2011), *r* revised (Ben-Porath and Tellegen 2008/2011), *F* Infrequency Scale (Butcher et al. 1989), *Fb* Infrequent Responses, back (Ben-Porath and Tellegen 2008/2011), *Fp* Infrequent Psychopathology Responses (Ben-Porath and Tellegen 2008/2011), *RBS* Response Bias Scale (Gervais et al. 2007), *HHI* Henry Heilbronner Index (Henry et al. 2006), *L* Uncommon Virtues, Lie scale (Bianchini et al. 2005), *K* Adjustment Validity, Correction scale (Bianchini et al. 2005), *SIRS* Structured Inventory for Reported Symptoms (Rogers et al. 1992), *SIRS-2* Structured Inventory of Reported Symptoms, Second Edition; Rogers et al. 2010), *M-FAST* Miller Forensic Assessment of Symptoms Test (Miller 2001), *DAPS* Detailed Assessment of Posttraumatic Stress (Briere 2001), *TSI-2* Trauma Symptom Inventory, Second Edition (Briere 2011), *BBHI-2* Brief Battery for Health Improvement, Second Edition (Disorbio and Bruns 2002), *RNBI* Ruff Neurobehavioral Inventory (Ruff and Hibbard 2003), *PAI* Personality Assessment Inventory (Morey 1991, 2007), *BHI-2* Battery for Health Improvement, Second Edition (Bruns and Disorbio 2003), *MENT* Morel Emotional Numbing Test (Morel 1995, 1998), *BASC-2* Behavior Assessment System for Children, Second Edition (Reynolds and Kamphaus 2004), *DSM-IV-TR* Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (American Psychiatric Association 2000).

Worksheet

Worksheet for Non-Credible System Feigned Posttraumatic Stress Disorder and Related Disability/Dysfunction

Instructions

This worksheet will make it easier to use the systems in practice. Moreover, it will help in teaching and continuing education. After becoming sufficiently familiar with the PID-FMR-S system, the evaluator should be using the appropriate psychological tests, measures, and scales as indicated in the system and then score them appropriately according to the rules of the system. Then, for the particular assessment being undertaken, the evaluator should seek the inconsistencies/discrepancies described in the system. The results of the tests and the inconsistencies/discrepancies found should be transferred to the appropriate locations in the worksheet to facilitate using the system in order to arrive at ratings of malingering and related biases in presentation and performance by the evaluee. The worksheet offers sufficient space to fill in the required details obtained in the evaluation and, if needed, supplementary pages can be added. These should be kept on file for report writing, testimony, and other assessment and court needs. The worksheet will facilitate arriving at appropriate conclusions and meeting all professional and legal requirements in using the system. As needed, use blank pages to elaborate comments in the notes section.

Worksheet Items

I. The System(s)

1. System Used (check one)
   ☐ F-PTSDR-D ☐ F-NCR -D ☐ F-PR-D
2. Tests Used to Rate System
   (a) Forced-choice measures
   _____
   (b) Structured inventory measures
   _____
   (c) Personality measures
   _____
   (d) Dedicated PTSD measures
   _____
   (e) Dedicated pain measures
   _____
   (f) Cognitive/Neuropsychological measures
   _____
   Other measures
   _____
3. The pathways followed (please check one(s) used):
   ☐ Regular ☐ Cognitive/neuropsychological
4. The 10–15 primary measures used for Regular pathway:
   _____
   _____
5. The 10–15 primary measures used for cognitive/neuropsychological pathway:
   _____
   _____
6. The 5–8 critical measures used for Regular pathway:
   _____
7. The 5–8 critical measures used for cognitive/neuropsychological pathway:
   _____
   _____

II. The Criteria/Rules

Criterion A: Evidence of significant external incentive. ☐ check √ or X
Criterion B: Evidence from *psychological* testing. ☐ check √ or X

A. Different Degrees of Certainty of Response Bias, According to Psychological Testing

(A1) Definite Malingering.
(i) Below chance performance ($p < .05$) on two or more forced-choice, tests, etc. ☐
(ii) Performance on five or more well-validated tests. ☐

(A2) Definite negative response bias.
(i) Below chance performance ($p < .05$) on one forced-choice measure. ☐
(ii) Performance on four well-validated tests. ☐

(A3) Probable negative response bias.
(i) Performance on three well-validated tests. ☐
(A3-4) Intermediate (Probable to possible, gray zone) negative response bias.
(i) Supplementary data available, results for extra tests, meeting criteria for A4, and performance on two well-validated supplementary and not primary tests. ☐
(ii) Performance on three or more well-validated supplementary and not primary tests. ☐
(A4) Possible negative response bias.
(i) Performance on two well-validated tests. ☐
(ii) Criteria for Definite or Probable Response Bias are met except for Criterion D.
(A5) Minimal negative response bias.
(i) Performance on one well-validated test. ☐
(ii) Just below cut-off performance on two well-validated tests. ☐
(A6) No evident response bias.
(i) Performance on not even one well-validated test. ☐
(ii) There might be just below cut-off performance on one well-validated test. ☐

Weighting Rules for Test Batteries

Indicate	√ Accounted For	X Not Applicable
☐ Rule 1: Two pathways.	☐ Rule 2: Forced-choice.	☐ Rule 3: Tests.
☐ Rule 4: MMPI family.	☐ Rule 5: Others needed.	☐ Rule 6: Improbable symptoms.
☐ Rule 7: PTSD.	☐ Rule 8: Pain.	☐ Rule 9: Cognitive (embedded).
☐ Rule 10: 10–15 Primary.	☐ Rule 11: 5–8 Critical.	☐ Rule 12: Not at cut-off.
☐ Rule 13: Neuropsychology.	☐ Rule 14: Supplementary tests.	
☐ Rule 15: Secondary information.	☐ Rule 16: Pattern analysis.	
☐ Rule 17: Limited cognitive testing.	☐ Rule 18: Neuropsychological path.	
☐ Rule 19: Test independence.	☐ Rule 20: Prioritizing.	☐ Rule 21: Exception 1.
☐ Rule 22: Exception 2.	☐ Rule 23: Exception 3.	☐ Rule 24: Exception 4.
☐ Rule 25: Maximum use 1.	☐ Rule 26: Omnibus tests.	☐ Rule 27: Dedicated tests.
☐ Rule 28: Nondedicated tests.	☐ Rule 29: Maximum use 2.	☐ Rule 30: Adjusted rating, lowering it.
☐ Rule 31: Adjusted rating, raising it	☐ Rule 32: Patterns.	☐ Rule 33: Preselection.
☐ Rule 34: Fishing expeditions.	☐ Rule 35: No exceptions.	☐ Rule 36: Ecological validity.
☐ Rule 37: Warnings.	☐ Rule 38: Qualifications.	☐ Rule 39: State-of-the-art.
☐ Rule 40: No harm.	☐ Rule 41: Cognitive/Neuropsychological testing.	
☐ Rule 42: Rating cognitive/neuropsychological tests.		

☐ Rule 43: Cognitive/Neuropsychological and Regular rating.
☐ Rule 44: Positive results for only one of the two paths.
☐ Rule 45: Cognitive/Neuropsychological path alone.
☐ Rule 46: Test selection.
☐ Rule 47: Minimal testing.
☐ Rule 48: Less than minimal testing.
☐ Rule 49: Less testing yet doing enough.
☐ Rule 50: Justify less testing.
☐ Rule 51: Larrabee (2012a).
☐ Rule 52: Supplementary evaluators.
☐ Rule 53: Seconding team work.
☐ Rule 54: Leading team work.
☐ Rule 55: Interdisciplinary assessments.
☐ Rule 56: Specific dedicated tests.
☐ Rule 57: Altering rules on testing and test battery.
☐ Rule 58: Special populations.
☐ Rule 59: Consider whole file.
☐ Rule 60: Combining test data with consistencies/discrepancies.

Criterion C: Evidence from Inconsistencies/Discrepancies. ☐ check √ or X

(a) Inconsistencies/Discrepancies in Conjunction with Testing.
  (a1) Inconsistency/Discrepancy between cognitive/neurocognitive test data and known patterns of brain functioning. (Inconsistency #1) ☐
  (a2) Inconsistency/Discrepancy between test data of PTSD-related symptoms after event at claim and known patterns of physiological reactivity. (Inconsistency #2) ☐
  (a3) Inconsistency/Discrepancy between test data self-report. (Inconsistency #3) ☐
  (a4) Inconsistency/Discrepancy between test data of PTSD-related symptoms after event at claim and verbal and/or nonverbal observed behavior/symptoms/complaints/limitations/functions. (Inconsistency #4) ☐
  (a5) Inconsistency/Discrepancy between test data and information reported by reliable informants/collaterals. (Inconsistency #5) ☐
  (a6) Inconsistency/Discrepancy between test data and information reported in reliable documents. (Inconsistency #6) ☐
(b) Inconsistencies in Conjunction with Self-Report.
  (b1) Known patterns of brain function. (Inconsistency #7) ☐
  (b2) Known patterns of physiological function. (Inconsistency #8) ☐
  (b3) Observed behavior/symptoms/complaints/limitations/functions. (Inconsistency #9) ☐
  (b4) Information reported by reliable informants/collaterals. (Inconsistency #10) ☐
  (b5) Information reported in reliable documents. (Inconsistency #11) ☐
(c) Inconsistencies/Discrepancies in Conjunction with Observations (other than with testing and with self-report).
  (c1) Known patterns of brain function. (Inconsistency #12) ☐
  (c2) Known patterns of physiological function. (Inconsistency #13) ☐
  (c3) Information reported by reliable informants/collaterals. (Inconsistency #14) ☐
  (c4) Information reported in reliable documents. (Inconsistency #15) ☐

(d) Inconsistencies/Discrepancies in Conjunction with Collateral Information (other than with testing, self-report, and observations).
  (d1) Known patterns of brain function. (Inconsistency #16) ☐
  (d2) Known patterns of physiological function. (Inconsistency #17) ☐
  (d3) Information reported in reliable documents. (Inconsistency #18) ☐
(e) Inconsistencies/Discrepancies in Conjunction with Documentation (other than with testing, self-report, observations, and collateral information).
  (e1) Known patterns of brain function. (Inconsistency #19) ☐
  (e2) Known patterns of physiological function. (Inconsistency #20) ☐
(f) Inconsistencies/Discrepancies Within Major Data Sources (not between them which are scored above)
  (f1) Known patterns of brain function. (Inconsistency #21) ☐
  (f2) Known patterns of physiological function. (Inconsistency #22) ☐
  (f3) Self-report. (Inconsistency #23) ☐
  (f4) Observed behavior/symptoms/complaints/limitations/functions. (Inconsistency #24) ☐
  (f5) Information reported by reliable informants/collaterals. (Inconsistency #25) ☐
  (f6) Information reported in reliable documents. (Inconsistency #26) ☐
(g) Other, Miscellaneous Inconsistencies/Discrepancies
  (g1) No causality attributable to the event at claim. (Inconsistency #27) ☐
  (g2) Only minimal causality attributable. (Inconsistency #28) ☐
  (g3) Material-level causality attributable to the event at claim, but not to the degree insisted by the evaluee. (Inconsistency #29) ☐
  (g4) Other. (Inconsistency #30) ☐

B. Different Degrees of Certainty of Response Bias According to Inconsistencies/Discrepancies

(B1) Definite Malingering.
  (i) One extremely compelling inconsistency/discrepancy. ☐
  (ii) The evidence is incontrovertible. ☐
  (iii) (a) One marked, substantial inconsistency/discrepancy from items a–g. ☐
  (iii) (b) Performance on four (not five) well-validated tests.
  (iv) (a) Two marked/substantial inconsistencies/discrepancies. ☐
  (iv) (b) Performance on three (not five) well-validated tests. ☐

(B2) Definite negative response bias.
  (i) Two marked, substantial inconsistencies/discrepancies from items a–g. ☐
  (ii) (a) One marked, substantial inconsistency/discrepancy from items a–g. ☐
  (ii) (b) Performance on three (not four) well-validated tests. ☐

(B3) Probable negative response bias.
  (i) One marked, substantial inconsistency/discrepancy from items a–g. ☐
  (ii) (a) Five moderate/nontrivial inconsistencies/discrepancies from items a–g. ☐
  (ii) (b) Performance on two (not three) well-validated tests. ☐

(B3-4) Intermediate (Probable to possible, gray zone) negative response bias the data meet the requirements for classification of possible negative response bias; supplementary data available about the evaluee that raises the rating.

(i) Inconsistencies/discrepancies are reliably found in other assessments. ☐

(ii) There is clear evidence of or other confounding factors the evaluee would have to show five or more of the following 15 factors when one to four of these criteria are evident instead of five or more and so they cannot be used as part of the data for rating Probable Response Bias, as per the above, the evaluator should use these as part of the ratings for Possible Negative Response bias, as per below.

(a) Personality disorder. ☐

(b) Blaming. ☐

(c) Not trying. ☐

(d) Sick Role. ☐

(e) Somatization. ☐

(f) Failure to treat substance abuse. ☐

(g) Failure to take recommended medications. ☐

(h) Refusing a work-hardening trial, modified duties, and training. ☐

(i) Catastrophizing/crying out for help. ☐

(j) Any other from the pre-event background. ☐

(k) Psychiatric. ☐

(l) Criminal. ☐

(m) Work or other role. ☐

(n) Family, partners, friends, and social life. ☐

(o) Financial stresses. ☐

(B4) Possible negative response bias.

(i) Four moderate, non-trivial inconsistencies/discrepancies. ☐

(ii) (a) Three moderate, nontrivial inconsistencies/discrepancies from items a–g. ☐

(ii) (b) Performance on one (not two) well-validated tests. ☐

(B5) Minimal negative response bias.

(i) Two moderate, nontrivial inconsistencies/discrepancies. ☐

(ii) (a) One moderate, nontrivial inconsistency/discrepancy from items a–g. ☐

(ii) (b) Just below cut-off performance on one (not two or more) well-validated tests. ☐

(B6) No evidence response bias.

Criterion D: Behaviors meeting necessary criteria from groups B and C are not fully accounted for by psychiatric, neurologic, developmental, or other factors.

Notes for Comments

Number ____ Comment: _____

Number ____ Comment: _____

Number ____ Comment: _____

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Chapter 28
Diagnostic System for Malingered Neurocognitive Disability/Dysfunction and Related Negative Response Biases

28.1 Introduction

This chapter presents a table giving the F-NCR-D system for detecting malingering (Feigned Neurocognitive-Related Disability/Dysfunction). See Chap. 5 where it is described.

Table of Terms and Sources

Abbreviation	Name	Source(s)
BASC-2	Behavior Assessment System for Children, Second Edition	Reynolds and Kamphaus (2004)
BBHI-2	Brief Battery for Health Improvement, Second Edition	Disorbio and Bruns (2002)
BHI-2	Battery for Health Improvement, Second Edition	Bruns and Disorbio (2003)
DAPS	Detailed Assessment of Posttraumatic Stress	Briere (2001)
DSM-IV-TR	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision	American Psychiatric Association (2000)
Fb	Infrequent Responses, back	Ben-Porath and Tellegen (2008/2011)
FBS	Symptom Validity Scale (originally called Fake Bad Scale)	Ben-Porath and Tellegen (2008/2011) and Lees-Haley et al. (1991)
F-NCR-D	Feigned Neurocognitive-Related Disability/ Dysfunction	Young (2013); present work
Fp(-r)	Infrequent Psychopathology Responses	Ben-Porath and Tellegen (2008/2011)
F-PR-D	Feigned Pain-Related Disability/Dysfunction	Young (2014); present work
F-PTSDR-D	Feigned Posttraumatic Stress Disorder Disability/Dysfunction	Young (2014); present work

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G. Young, *Malingering, Feigning, and Response Bias in Psychiatric/Psychological Injury*, International Library of Ethics, Law, and the New Medicine 56,
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Abbreviation	Name	Source(s)
HHI	Henry-Heilbronner Index	Henry et al. (2006)
K	Adjustment Validity, Correction scale	Bianchini et al. (2005)
L	Uncommon Virtues, Lie scale	Bianchini et al. (2005)
MENT	Morel Emotional Numbing Test	Morel (1995, 1998)
M-FAST	Miller Forensic Assessment of Symptoms Test	Miller (2001)
MMPI	Minnesota Multiphasic Personality Inventory	Hathaway and McKinley (1943)
MMPI-2	Minnesota Multiphasic Personality Inventory, Second Edition	Butcher et al. (1989, 2001)
MMPI-2-RF	Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form	Ben-Porath and Tellegen (2008/2011)
MND	Malingered Neurocognitive Dysfunction	Slick et al. (1999)
MPRD	Malingered Pain-Related Disability	Bianchini et al. (2005)
PAI	Personality Assessment Inventory	Morey (1991, 2007)
PID-FMR-S	Psychological Injury Disability/Dysfunction – Feigning/Malingering/Response Bias System	Young (2014); present work
-r	Revised (e.g., FBS-r)	Ben-Porath and Tellegen (2008/2011)
RBS	Response Bias Scale	Gervais et al. (2007)
RNBI	Ruff Neurobehavioral Inventory	Ruff and Hibbard (2003)
SIRS	Structured Interview of Reported Symptoms	Rogers et al. (1992)
SIRS-2	Structured Interview of Reported Symptoms, Second Edition	Rogers et al. (2010)
TOMM	Test of Memory Malingering	Tombaugh (1996)
TSI-2	Trauma Symptom Inventory, Second Edition	Briere (2011)
VIP	Validity Indicator Profile	Frederick (1997)
VSVT	Victoria Symptom Validity Test	Slick et al. (1997)
WMT	Word Memory Test	Green (2005)

Table 28.1 Proposed Criteria for Non-Credible Feigned Neurocognitive Related Disability/Dysfunction (F-NCR-D)

Introduction

The present system has been developed to help in detection of malingering and related response bias in forensic disability and related evaluations. The system is referred to as the Psychological Injury Disability/Dysfunction – Feigning/Malingering/Response Bias System (PID-FMR-S). It is composed of three systems that are quite uniform – the Feigned Posttraumatic Stress Disorder Disability/Dysfunction (F-PTSDR-D), the Feigned Neurocognitive

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Related Disability/Dysfunction (F-NCR-D), and the Feigned Pain Related Disability/Dysfunction (F-PR-D) systems. These three systems cover the major psychological injuries of PTSD, pain, and TBI, respectively. The systems should be used as part of comprehensive evaluations that use state-of-the-art testing and search for inconsistencies/discrepancies. The overall system has been constructed as an impartial, middle-of-the-road one that is scientifically-informed. It is published in the book by the system's author, Gerald Young (*Malingering, Feigning, and Response Bias in Psychiatric/Psychological Injury: Implications for Practice and Court*; Springer Science+Business Media, 2014). In the book, Young considers alternate systems and builds on them (for neurocognition, the Malingered Neurocognitive Dysfunction, MND, Slick et al. 1999; for pain, the Malingered Pain-Related Disability, MPRD, Bianchini et al. 2005). In addition, the book reviews the literature on malingering, especially in Larrabee (2012b) and Reynolds and Horton (2012).

Aside from examining the MND and MPRD systems, the Young book considers the work of Larrabee (2012a), in particular. The proposals that (a) even one below-chance performance on a forced-choice test and (b) below cut-off performance on three or perhaps two validity indicators from a battery is sufficient to attribute malingering are analyzed carefully. This has led to a more conservative, middle-of-the-road approach for testing criteria in the present system. At the same time, the inconsistency/discrepancy criteria are greatly elaborated in the present system compared to other systems. Moreover, there are other checks and balances that have been included. Therefore, in many ways the present system has aspects that are comparable to the proposals by Larrabee. To conclude, even for its testing criteria, the present system does not simply dismiss the prior work but builds on it.

As an introduction to the specifics of the system and in order to reinforce the notion that it respects and builds on the work of Larrabee (2012a), in the following, the diverse ways that the levels in the system related to definite malingering, definite response bias, and probable response bias are summarized briefly.

Aside from cases with extremely compelling evidence, such as frank admission or indisputable videographic evidence, definite malingering can be attributed in cases in which: (a) two or more forced-choice measures are failed at the below-chance level; or (b) there are five or more test failures on other valid psychometric measures; or (c) there are three or more compelling inconsistencies; (d) any combinations of these types of evidence are found; or (e) other evidence replaces the weighting of these three types of evidence, such as extreme scores on valid psychometric tests or an overall judgment of the file that adds weight. When the latter obtains then, when numerical data

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can be gathered, three test failures could be sufficient to attribute malingering, everything else being equal.

As for assigning definite response bias, the criteria above apply, except that they involve one-forced choice test, not two, four other tests, not five or more, and two compelling inconsistencies, not three or more, with none of the extreme nature involved. In terms of probable response bias, the criteria exclude forced-choice test failure, but consider three other test failures, not four, and one compelling inconsistency, not two.

The reader will note that Larrabee (2012a) emphasized three if not two failures on relevant tests as very strong evidence of malingering. All things considered, the present system arrives at a protocol that might give a comparable weighting to such test failures.

Overall, those who had hoped for a system that catches either many evaluees or very few evaluees in its malingering net will be disappointed, but those who adhere to a science-first approach will find the system rational and balanced. In this regard, the system has been constructed so that its application should yield similar ratings by different raters, or good inter-rater reliability. In addition, the system appears to have the elements needed for adequate validity (e.g., construct, content, criterion). Its state-of-the-art and middle-of-the-road approach constitute important principles underlying validity.

Given these considerations, use of the present system in practice has the potential to meet admissibility criteria in court, perhaps more so than other systems, and should serve one's practice growth in good stead. A worksheet has been developed to accompany its use. Note that through its inconsistencies/discrepancies criteria, the system should be quite helpful to mental health professionals who are not trained in psychological testing, such as psychiatrists.

Criteria

Criterion A: Evidence of significant external incentive. At least one clearly identified and substantial external incentive for conscious exaggeration or fabrication of symptoms is present at the time of examination (e.g., personal injury litigation, workers compensation benefits, psychiatric/psychological disability pension).

Criterion B: Evidence from psychological testing. Evidence that evaluee's psychiatric, psychological, emotional, coping, and related capacities as indicated by formal psychometric testing (e.g., in the context of psychological or neuropsychological evaluation) are consistent with exaggeration or feigning of functional psychiatric/psychological disability.

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A. Different Degrees of Certainty of Response Bias, According to Psychological Testing

(A1) Definite Malingering.

(i) The evidence is incontrovertible, even when the rest of the data gathered is considered. Below-chance performance ($p < .05$) on two or more forced-choice measures of psychiatric/psychological (e.g., cognitive or perceptual) function, e.g., below-chance performance on the TOMM [scores below tests' clinical/threshold cut scores but that are higher than chance performance are dealt with in the next level], the VSVT, and the WMT. Also consider the VIP.

Or,

(ii) Performance on five or more well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced-choice measures, is consistent with exaggeration of diminished functional psychiatric/psychological capacity.

(A2) Definite negative response bias.

(i) Below-chance performance ($p < .05$) on one forced-choice measure of psychiatric/psychological (e.g., cognitive or perceptual) function, e.g., below-chance performance on the TOMM [scores below tests' clinical/threshold cut scores but that are higher than chance performance are dealt with in the next level].

Note. If only one forced-choice test is administered and the evaluee fails at the chance level, a second one is administered to determine whether the person reaches the definite malingering rating.

Or,

(i) Performance on four well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced-choice measures, is consistent with exaggeration of diminished functional psychiatric/psychological capacity.

Note. Failure on forced-choice measures that is not below-chance but does meet pass-fail thresholds according to normative cut sores are considered for this criterion; i.e., failure to reach critical thresholds based on normative or otherwise validly-selected and justified cut-scores. That is, forced-choice test results at the latter level as opposed to the below-chance level could be included among the "well-validated tests designed to

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measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms." Note that the same rule applies in the next categories.

(A3) Probable negative response bias.
Performance on three well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced-choice measures, is consistent with exaggeration of diminished functional psychiatric/psychological capacity.

(A3-4) Intermediate (Probable to possible, gray zone) negative response bias

(i) The data meet the requirements for classification of possible negative response bias but not the classification of probable negative response bias. Nevertheless, there are supplementary data available about the evaluee that raises the ratings to the intermediate level.

For test data, this would refer to results for extra tests that had not used for the primary ratings because of the scoring rules described below, such as on a second personality test with numerous effort/validity detector scales not all of which had been used for the primary rating, and one or two indicating performance below accepted criteria for lack of effort/validity. That is, in addition to meeting criteria for A4, there is performance on two well-validated supplementary and not primary tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced-choice measures, which is consistent with exaggeration of diminished functional psychiatric/psychological capacity.

Or,

(ii) The data do not even meet the requirements for classification of possible negative response bias. Nevertheless, there are supplementary data available about the evaluee that raises the ratings to this intermediate level. For test data, this would refer to results for extra tests that had not been used for the primary ratings because of the scoring rules described below, such as on a second personality test with numerous effort-validity detector scales not all of which had been used for the primary rating, and

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three or more indicate performance below accepted criteria for lack of effort/validity. That is, performance on three or more well-validated supplementary and not primary tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced-choice measures, is consistent with exaggeration of diminished functional psychiatric/psychological capacity.

(A4) Possible negative response bias.

(ii) Performance on two well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced-choice measures, is consistent with exaggeration of diminished functional psychiatric/psychological capacity.

Or

(ii) Criteria for Definite or Probable Response Bias are met except for Criterion D (i.e., primary psychiatric, neurological, or developmental, or other etiologies cannot be fully ruled out). In such cases, the alternate etiologies that cannot be ruled out should be specified.

(A5) Minimal negative response bias.

(i) Performance on one well-validated test designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced-choice measures, is consistent with exaggeration of diminished functional psychiatric/psychological capacity. When only one instrument is used, and the evaluee does not reach acceptable criteria, a second one should be used to establish by performance whether the response bias is classifiable as possible or minimal.

Or,

(ii) Just-below cut score performance on two well-validated tests so that performance is at most partially consistent with exaggeration of diminished functional psychiatric/psychological capacity.

(A6) No evident response bias.

(i) Performance on not even one well-validated test designed to measure exaggeration or fabrication of psychiatric/psychological

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(e.g., cognitive or perceptual) symptoms, including forced-choice measures, is consistent with exaggeration of diminished functional psychiatric/psychological capacity.

(ii) There might be just-below cut score performance on one well-validated test but, despite this, performance is not even partially consistent with exaggeration of diminished functional psychiatric/psychological capacity.

Weighting Rules for Test Batteries

As for the nature of the 60 rules included in the present system for test use, they have been constructed to apply equally to the system developed for PTSD and its alteration for conditions of pain and TBI. The rules were constructed according to ten pertinent principles and parameters, as specified in the following.

(a) There are two tracks in the system, Regular (for PTSD, pain) and Neuropsychological/Cognitive.

(b) There are multiple test types, including forced-choice, personality, and dedicated. They can be used in the system if scientifically supported for the question at hand.

(c–e) Some test types are more critical than others, e.g., forced-choice; some criteria more critical than others, e.g., below-chance performance; and some tests more reliable and valid than others for the purposes at hand, e.g., the MMPI-2-RF.

(f) Any one test can provide one to several validity indicators, depending on the research findings in the area.

(g) The tests should include 10–15 primary measures specified beforehand, with 5–8 positive findings, and at most 3–4 from any one instrument, needed to conclude significant feigning or related response bias, including of malingering.

(h) Tests that are correlated can be used within specified limits and their acknowledgment.

(i) Malingering can be concluded only when there is incontrovertible evidence after examination of the full reliable data set gathered.

(j) In general, test selection and score interpretations must be undertaken scientifically, impartially, and comprehensively, while considering the limits of the evaluees.

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In terms of the categories within which the 60 rules fall, they group in the following ways. (a) Pathways/tracks in the system: 1, 13, 17,-18; (b) Testing/tests: 2–9, 26–28, 56: (c) Criteria: 10–12, 25, 29; (d) Supplementary/secondary factors: 14–16; (e) Independence/correlation: 19–24; (f) Rating adjustment: 30–32; (g) Test preselection: 33–35; (h) Administration: 36–40; (i) Cognitive/Neuropsychological: 41–45; (j) Less testing: 46–50; (k) Comparison with Larrabee: 51; (l) Evaluators: 52–55; (m) Altering system: 57–58; (n) Using all the data: 59–60.

These 60 rules are quite explicit, and qualify how to obtain and use all needed validity measures to detect malingering and related response biases in the present system. However, the rules should not be used in a box score fashion to arrive at conclusions about malingering and related response biases. The evaluator needs to examine the full data set gathered in comprehensive, scientifically-informed, impartial ways. The ratings are only a guide toward this end, albeit objective ones to the degree possible.

Rule 1: Two pathways. Note that the present rating system is sufficiently flexible to accommodate (a) a Regular pathway/system in the rating without cognitive/neuropsychological testing and (b) a second pathway of cognitive/neuropsychological testing. The rules provide clear instructions on how to use one pathway, the other, or both. That being said, most of the following rules apply to the Regular system and extra ones for the cognitive/neuropsychological system are given toward the end.

Rule 2: Forced-choice. With respect to forced-choice measures, evaluators are advised to include in their assessments "well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms," and criteria have been described above for determining the level of malingering/response bias according to the results obtained on forced-choice tests. Essentially, there are two levels to consider: (a) below-chance performance, considered more problematic, and (b) failing to reach critical thresholds based on normative or otherwise validly-selected and justified cut-scores.

Rule 3: Tests. The inclusion in the criteria of "well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms" includes psychological tests other than forced-choice ones that might provide evidence in formal psychological evaluation that the person has significantly misrepresented current status (e.g., exaggerated or minimized psychological symptoms/distress) in a manner that emphasizes the injury for which compensation is sought.

Rule 4: MMPI family. For example, responses on self-report measures of psychological function suggest impairment in the context of elevations on

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well-validated validity scales or indices consistent with exaggeration of physical/somatic (e.g., MMPI-2 FBS, MMPI-2-RF FBS-r or SVT-r) or emotional symptoms (e.g., MMPI-2 F, Fb, or Fp, or related MMPI-2-RF scales), or newer effort detection scales (e.g., RBS, HHI), or, on these measures, as well, evidence of vehement denial of psychological problems in a manner consistent with extreme defensiveness regarding psychological symptoms in order to further emphasize psychological complaints (e.g., MMPI-2 L or K at noted cutoffs, or their MMPI-2-RF equivalents).

Rule 5: Other tests needed. The underlying assumption in listing all these instruments is that they provide relevant information for the present ratings; but they do vary in the information that they provide, the levels of the cut-offs used, etc. Therefore, evaluators need to be aware of further tests that could be used in evaluations; these are described below and scoring rules for them are listed.

Rule 6: Improbable symptoms, etc. Well-validated instruments might include structured interview ones that aim to detect improbable symptoms, or extreme, too frequent, or otherwise non-credible ones, such as detected on the SIRS/SIRS-2 and the M-FAST.

Rule 7: PTSD. In addition, tests might include dedicated PTSD ones, such as the DAPS or perhaps the TSI-2, that have embedded evaluee validity scales for under- and over-reporting.

Rule 8: Pain. Tests aimed at other types of disability determinations, such as the BBHI-2 for pain and the RNBI for neurobehavioral symptoms, might be applicable, depending on the nature of the evaluee's assessment taking place, given the equivalent embedded evaluee validity scales in these instruments, for under- and over-reporting.

Rule 9: Cognitive (embedded). Further, even when an assessment is not neuropsychological, good use could be made of embedded cognitive measures of invalidity/poor effort, such as for digit span.

Rule 10: 10–15 Primary. Of all the tests/measures/scales/indicators administered that are not forced-choice tests or embedded neuropsychological/cognitive measures, 10–15 should be considered primary, or as the ones designated to furnish for the present system critical information needed for assessing malingering and related response biases.

Rule 11: 5–8 Critical. The criteria of the present system indicate that, aside from below-chance results from forced-choice and neuropsychological/cognitive testing, 5–8 invalidity results, at most, are needed from among the 10–15 primary measures to obtain maximal scores/levels in the system. Note that because there are 10–15 primary indices and doing poorly on 5–8 of them indicates significant doubt about the credibility of the evaluee, this suggests

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that doing poorly on about 50 % (or more) of the primary indices is critical in establishing the evaluee's performance/effort quality. This rule has face validity.

Rule 12: Not at cut-off. Note that below-chance performance on forced-choice testing is not counted in the primary indices, given its use elsewhere in the system. However, performance on these tests that do not meet cut-offs (even if higher than below-chance performance) can count as among the 10–15 primary indices of the system, if specified beforehand.

Rule 13: Neuropsychology. Aside from stand-alone forced-choice tests such as the VSVT, structured interviews such as the SIRS/SIRS-2, and tests such as the MMPI family ones, when the assessment is neurocognitive or neuropsychological, many different embedded validity/effort detector tests/measures/scales can be used, given the tens of domains tested and the utility of having more than one for each domain, as needed.

Rule 14: Supplementary tests. However, the data obtained from these instruments should not be used as part of the 10–15 primary ones needed for purposes of obtaining ratings in the present system. That is, essentially, they should be used separately from the Regular system, and stand apart from them for use in the cognitive/neuropsychological one.

Rule 15: Secondary information. That is, these extra data sources might contribute secondary information to the Regular rating system, at best, aside from any data that they furnish for purposes outside the Regular rating system to the cognitive/neuropsychological one.

Rule 16: Pattern analysis. The same applies for neurocognitive/neuropsychological test pattern analysis deriving from these tests; normally, they should not be considered for use in the Regular system.

Rule 17: Limited cognitive testing. Note that if limited cognitive testing is given, rather than full-blown cognitive/neuropsychological testing, and there are not many validity indicators/tests/measures/scales available because of this decision, it might be best to consider them for rating of the Regular and not cognitive/neuropsychological path.

Rule 18: Neuropsychological path. That being said, there are rules given below (see Rules 41–44) that apply to rating the present system for the second path when full-blown cognitive/neurocognitive testing is administered.

Rule 19: Test independence. The selection of instruments chosen in an assessment must be carefully organized so that, to the degree possible, they are relatively independent and tapping different aspects of psychological function/response bias.

Rule 20: Prioritizing. For example, if two similar results are obtained for two tests that are aimed at measuring the same type of response bias, they

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should not both be considered as primary in the present rating system and both used to inflate the ratings.

Rule 21: Exception 1. One exception to this rule is when the better measure of the two yields negative results and the second one yields positive results; perhaps valid arguments are possible to justify using the secondary measure as the primary one.

Rule 22: Exception 2. Moreover, tests are never perfectly correlated, and even if they are substantially correlated, they might reflect different constructs to a degree. Therefore, consistent with the multitrait-multimethod approach, two very similar tests having positive results could be used in the ratings with the present system, if this decision can be appropriately justified.

Rule 23: Exception 3. Nevertheless, in general, to repeat, evaluators should avoid such reduplication in obtaining scores from tests administered in their batteries for rating purposes. They can accomplish this, by selecting measures that are relatively independent and aimed at different categories of psychological function/response bias. For example, if the MMPI-2-RF is administered, any scores from another personality inventory that might be administered should not be considered as primary in calculating level of response bias in the present system. That being said, if a secondary omnibus instrument, such as a personality inventory, has a useful scale that is considered better for the purposes of the evaluation relative to those in the primary one, that scale in the secondary one can be used in ratings with the present system.

Rule 24: Exception 4. Note that this rule about generally trying to avoid duplication/overlap/correlated tests in establishing ratings with the present system does not apply to the needed use of several stand-alone, forced-choice tests, because they are cardinal in determining the presence of malingering.

Rule 25: Maximum use 1. For instruments that have more than one scale aimed at detecting effort or feigning, such as the MMPI family of tests, or in cognitive evaluation, the rule should be that any instrument of this type should contribute at most 3–4 primary measures among the 10–15 maximum that are needed in the present system to arrive at ratings, even if there are more than 3–4 of them that are included in the instrument and that have been scored. This rule needs implementation to avoid using only one of these instruments to obtain the needed results for all of the 5 primary validity indicators among the 10–15 required for obtaining results that can be used for a maximum rating in the present system.

Rule 26: Omnibus tests. In cases where assessors use two or more omnibus instruments with more than one relevant validity measure, as mentioned, one must be considered primary, with its validity scores used rather than any of the others. For this rule, everything else being equal, the MMPI family of tests is considered primary in such cases for rating with the present system.

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Rule 27: Dedicated Tests. For PTSD or pain assessments, when two or more dedicated tests, such as the DAPS for PTSD, are used, normally only one should provide scores as primary measures for purposes of the present ratings.

Rule 28: Nondedicated tests. When validity indicators of feigning are used in tests that do not directly apply to PTSD or pain, or when they do not have associated with them research showing their applicability to the population at hand, their use must be justified. Moreover, for any one assessment, only one test from among them and, further, only one score from it should be used in the ratings.

Rule 29: Maximum use 2. If these tests are dedicated ones to detecting feigning, such as the SIRS, as long as they are validated for the population at hand, weighting of 2–3 of their measures could be used as part of the 10–15 primary ones for rating in the present system.

Rule 30: Adjusted rating, lowering it. When evaluees (a) score in the superior range for good effort on a validity indicator, if applicable, and/or (b) pass a majority of the validity tests/measures/scales given in the full battery, and/or (c) score positive for measures related to symptom minimization or underreporting of post-event symptoms at claim, they should be credited a half-level for each case in the reverse direction on the rating scale, up to a maximum of one full level in the reverse direction on the scale.

Rule 31: Adjusted rating, raising it. When evaluees (a) score in the superior range (e.g., 98th percentile) for poor effort on a validity indicator, if applicable, and/or (b) fail a majority of the validity tests/measures/scales given in the full battery, and/or (c) score positive for measures related to symptom minimization or underreporting of pre-event symptoms at claim, they should be credited a half-level for each case in the higher direction on the rating scale, up to a maximum of one full level in the higher direction on the scale.

Rule 32: Patterns. Clinical scales might prove informative for their patterns, such as on personality inventories. For example, in the MMPI family of tests, certain codes are associated with problematic clinical presentations with respect to effort and evaluee validity. Patterns such as this should be considered for half-level adjustment (lower, higher), as part of the prior two rules.

Rule 33: Preselection. In choosing usable measures from batteries that had been administered for rating purposes, decisions about which measures to use should be made beforehand, including the weightings involved, as justified and based on the scientific literature.

Rule 34: Fishing expeditions. Evaluators should avoid fishing expeditions of selecting just-right tests, and once the data are gathered, just-right scores, in order to get just-right conclusions to assessments, thereby lacking impartiality, comprehensiveness, and scientific underpinnings.

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Rule 35: No exceptions. Evaluators should not ignore pre-selected measures, ones chosen for use beforehand according to the requirements of the present system, and they should not avoid administering obvious ones to use for rating in the battery, such as the MMPI family ones.

Rule 36: Ecological validity. Evaluators should administer the tests in a way that has ecological validity, e.g., spreading them out and not giving one after the other.

Rule 37: Warnings. Evaluators should consider the issue of advising evaluees about tests, especially forced-choice ones, according to prevailing professional guidelines.

Rule 38: Qualifications. Only mental health professionals who are professionally qualified should select, administer, and interpret psychological tests.

Rule 39: State-of-the-art. It is important to note that the evaluator needs to use the most current, psychometrically and forensically valid instruments available, and not just the ones mentioned in this version of the F-PTSDR-D written in 2014.

Rule 40: No harm. In short, aside from using an appropriate battery of measures for the ratings that can be derived from the present system, each instrument selected should be administered in a way that does not harm the evaluee, while still permitting that the information required is gathered.

Rule 41: Cognitive/Neuropsychological testing. When an evaluation includes cognitive/neuropsychological testing, the procedures described in the present system can be complemented by a second path or track. Typically, in cognitive/neuropsychological testing, there are tens of evaluee validity indicators/tests/measures/scales that might be administered. The present system allows for 10–15 primary measures outside of cognitive/neuropsychological testing and, from among these, 5–8 critical validity indicators/tests/measures/scales with (positive) data are selected. In this regard, from among the cognitive/neuropsychological tests administered, an additional 10–15 primary measures and 5–8 critical validity indicators/tests/measures/scales can be selected from among the cognitive/neuropsychological tests administered.

Rule 42: Rating cognitive/neuropsychological tests. The rules of the present system should be applied to the cognitive/neuropsychological primary measures and critical results that are derived from application of Rule 41. That is, they will help arrive at evaluations of Definite to Probable Response Bias, in particular.

Rule 43: Cognitive/Neuropsychological and Regular rating. When both the Regular path in using the present rating system and the supplementary cognitive/neuropsychological one are both positive and lead to high ratings of response bias for an evaluee, this should be indicated.

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Rule 44: Positive results for only one of the two paths. When either cognitive/neuropsychological or Regular rating leads to high ratings of response bias for an evaluee, but not both, this should be indicated. Conclusions to evaluations should note the difference in the two ratings and its implications.

Rule 45: Cognitive/Neuropsychological path alone. Of course, evaluators might want to proceed with just cognitive/neuropsychological testing in the second pathway of the system, and not use at all the Regular pathway. In this regard, they would use simply the embedded cognitive/neuropsychological validity indicators/tests/measures/scales with forced-choice measures, and none of the personality, structured interviews, and specific dedicated measures.

Rule 46: Test selection. The system is very flexible and, when testing is involved, the amount of tests/measures/scales administered can be as low as several to as high as multiples of 10.

Rule 47: Minimal testing. Minimally, at least when the Regular path or track is taken, appropriate use of the system requires a good omnibus personality test, such as the MMPI-2-RF or the PAI, a good feigning detection interview instrument, such as the SIRS/SIRS-2 or M-FAST, a specific, dedicated test, and one or more stand-alone forced-choice measures, such as the VSVT or the TOMM. (Recommendations for 2014.)

Rule 48: Less than minimal testing. If evaluators choose to administer even less testing than this, they risk not having the option of getting sufficient critical tests/measures/scales/indicators that can be used to rate the upper levels of the rating system.

Rule 49: Less testing yet doing enough. That being said, there are both testing and non-testing rules that could be used to supplement below-minimum test use, for example, the one concerning especially high failure performance on tests (98 % percentile or more; see above) and the one for the whole file (see below).

Rule 50: Justify less testing. A problematic practice is that evaluators who are trained in psychological testing use less testing in assessments than the recommended minimum even when more testing can be administered. For example, it is conceivable that partially sufficient information can be gathered just in administering an MMPI family test, a structured interview one, or one forced-choice test. However, this option is strongly recommended against, unless it can be clearly justified, e.g., due to the level of concomitant physical or brain injuries, language barriers, etc. In such cases, it might be sufficient to use less that the recommended minimum of tests.

Rule 51: Larrabee (2012a). As an aside, it is noted that the structure established in the present system through its rules enables evaluators to arrive at high ratings on the present rating system in terms of malingering and definite

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response bias. For example, the system enables high ratings when there are positive results or performance on three or even two tests/measures/scales/validity indicators, which is consistent with the spirit of the work of Larrabee (2012a). Indeed, the system created might even be more sensitive to obtaining results at these higher levels compared to Larrabee's procedures, given the rules developed. That being said, consideration of the whole file and alternative explanations, such as a cry for help, might render it less sensitive. This illustrates perfectly the middle-of-the-road, balanced approach that characterizes the present system. It was constructed with good rationale and logical perspectives, good scientific and practical ones, and consideration of other systems, published recommendations for their change, and other state-of-the-art literature. Evaluators should function from the same middle-of-the-road and state-of-the-art perspective in applying the system to their evaluees. Evaluators might want to check the conclusions derived from using the present system with those of Larrabee (e.g., likelihood ratios, positive predictive power, probability of multiple positive findings), or any other system of an acturial, algorithmic nature for malingering detection, assuming the literature supports their use, using a compare-contrast format to help justify the use of the present system and the conclusions it allows for any assessment at hand.

Rule 52: Supplementary evaluators. Evaluators not trained in testing can acquire the services of those trained and competent to administer the types of tests recommended for use in the present system.

Rule 53: Seconding team work. Note that the evaluator who acquires such testing services is responsible for applying the present system to the case at hand, but only the testing evaluator can be responsible for interpreting the test data portion of the evaluation.

Rule 54: Leading team work. Or, evaluators might be trained and competent in testing, but prefer to have a second evaluator (help) seek inconsistencies/discrepancies in the file. The testing evaluator would be responsible for the inconsistencies/discrepancies noted and for combining all the information gathered for present rating purposes.

Rule 55: Interdisciplinary assessments. Evaluators using the present system might be functioning within the context of interdisciplinary teams of assessors. In contributing to and/or signing any executive summary, they are responsible as much as the others for how the ratings are used and for any overall alterations in equivalent ratings by the team.

Rule 56: Specific dedicated tests. [As of 2014.] If test dedicated to specific psychological injuries are administered, such as in the Regular track, the DAPS and perhaps the TSI-2 make sense for PTSD, and the BBHI-2 or BHI-2 would be good for pain. In this regard, there are multiple cognitive or related

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measures that could be used. Other tests. Some other relevant instruments include the RNBI, the VIP, the WMT, and the MENT.

Rule 57: Altering rules on testing and test battery. As of 2014, the test battery rules and the testing procedures and tests indicated in the present system are the ones that can be scientifically and practically justified. However, as concepts and research accumulate, recommendations to change the present system might appear in the scientific literature and research that are both reliable and valid. Or, assessors might alter a rule or rules or use of the present system and its proposed testing battery in a way that is scientifically and practically justified. For example, the number of primary and critical tests and measures, presently are set at 10–15 and 5–8, respectively, but slight variations in these amounts might be acceptable at the scientific and practical levels.

Rule 58: Special populations. The usual cautions about using the correct norms for scoring and being sensitive to gender, minorities, age, and related differences apply to testing for the present system. Note that for children, the BASC-2 has appropriate validity checks.

Rule 59: Consider whole file. The rating of any level of negative response bias that is attributed to an evaluee according to the present system can be adjusted higher or lower by one-half to one full rating level on the scale depending on any additional reliable information in the assessment that is not considered elsewhere. These factors might include evaluator ones, evaluee ones, or systemic ones. The rationale for this decision must be documented. For example, litigation distress might be evident, but that could reflect either (a) non-merited factors, such as apprehension at continued evaluations that have reliably found difficulties with presentation/performance in the evaluee, or (b) genuine externally-generated stress related to the case, e.g., by third parties.

Rule 60: Combining test data with inconsistencies/discrepancies. Criterion C elaborates rules for combining test data with inconsistencies/discrepancies after presentation of 30 possible inconsistencies/discrepancies.

Criterion C: Evidence from Inconsistencies/Discrepancies, With or Without Test Data Considered.

Inconsistency/discrepancy criteria can be used separately from those of the B set, or in conjunction with them, as presented in the second part of the C criteria. Inconsistencies/discrepancies can be found at two levels. Either marked/substantial or moderate/nontrivial evidence of inconsistency/discrepancy is possible. Moreover, marked/substantial inconsistencies/discrepancies can be divided into those that are less or most extremely compelling, such as in cases of frank admission, videographic evidence of working after being at

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work has been denied, and frank evidence elsewhere in the file, e.g., related to collateral information. Trivial evidence in these regards should be ignored. For the two levels of inconsistencies/discrepancies possible, with the more blatant ones receiving the highest rating, there is a subjective element in classifying them. Therefore, evaluators should be conservative when characterizing them as marked or substantial relative to moderate or nontrivial, and justify all classifications in these regards with clear material from the file and careful argument. Note that in section B3–4ii below, 15 examples are provided of possible inconsistencies/discrepancies, aside from the few examples provided in the sections that follow.

(a) Inconsistencies/Discrepancies in Conjunction with Testing

(a1) Inconsistency/Discrepancy between cognitive/neurocognitive test data and known patterns of brain functioning (e.g., as related to cognition). In this regard, a pattern of test performance that is either markedly/substantially or moderately/nontrivially inconsistent/discrepant from currently accepted models of normal and abnormal central nervous system (CNS) function. The inconsistency/discrepancy must be consistent with an attempt to exaggerate or fabricate psychological dysfunction in testing (e.g., patient reports that she/he does not sleep at all). (Inconsistency #1)

(a2) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of cognition-related symptoms after event at claim and known patterns of physiological reactivity, e.g., that are associated with cognitive interference. (Inconsistency #2)

(a2i) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of cognition-related symptoms after event at claim and known patterns of physiological reactivity in the ambulance, at the hospital, or shortly thereafter (e.g., that are associated with cognitive interference). (Inconsistency #2)

(a2ii) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of cognition-related symptoms after event at claim and in cognitive rehabilitation (e.g., no increase in fatigue signs during extensive cognitive tasks).

(a2iii) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of cognition-related symptoms after event at claim and physiological reactivity to psychotropic medication (e.g., no decrease in neurovegetative signs to symptom-relevant medication).

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(a3) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data and self-report. (Inconsistency #3)

(a3i) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of cognition-related symptoms prior to event at claim and self-reported background history in interview. (Inconsistency #3, first example)

(a3ii) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of cognition-related symptoms after event at claim and self-reported behavior/symptoms/complaints/limitations/functions in interview.

(a4) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of cognition-related symptoms after event at claim and verbal and/or nonverbal observed behavior/symptoms/complaints/limitations/functions. (Inconsistency #4)

(a4i) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivially, between test data of cognition-related symptoms after event at claim and observed behavior/symptoms/complaints/limitations/functions while unaware of being observed. (Inconsistency #4, first example)

(a4ii) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of cognition-related symptoms after event at claim and observed behavior/symptoms/complaints/limitations/functions while aware of being observed (e.g., a well-educated patient who presents with no significant visual-perceptual deficits or language disturbance in conversational speech performs in the severely impaired range on verbal fluency and confrontation naming tests).

(a5) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data and information reported by reliable informants/collaterals. (Inconsistency #5)

(a5i) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of cognition-related symptoms prior to event at claim and information reported by reliable informants/collaterals, such as primary care physicians and spouses, about background history. (Inconsistency #5, first example)

(a5ii) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of cognition-related symptoms after event at claim and information reported by reliable informants/collaterals, such as primary care physicians and spouses, about behavior/symptoms/complaints/limitations/functions (e.g., a patient

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handles all family finances but is unable to perform simple math problems in testing).

(a6) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data and information reported in reliable documents. (Inconsistency #6)

(a6i) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of cognition-related symptoms prior to event at claim and information reported in reliable documents, such as by primary care physicians and other mental health professionals, about background history. (Inconsistency #6, first example)

(a6ii) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of cognition-related symptoms after event at claim and information reported in reliable documents, such as by primary care physicians and other mental health professionals, about behavior/symptoms/complaints/limitations/functions (e.g., a patient with no documented history of CNS trauma or disease consistently obtains verbal memory scores in the severely impaired range after a motor vehicle accident).

(b) Inconsistencies/Discrepancies in Conjunction with Self-Report (other than with testing)

Evidence that the evaluee's self-reported behaviors, symptoms, complaints, or limitations and functions related to cognition and related disorder/dysfunction are clearly consistent with exaggeration or feigning of physical, cognitive, or emotional/psychological components of the cognition-related disability in that there is either a marked/substantial or moderate/nontrivial inconsistency/discrepancy between such self-report and any of the following:

(b1) Known patterns of brain function. (Inconsistency #7)

(b2) Known patterns of physiological function. (Inconsistency #8)
[Self-reported cognition-related symptoms are clearly discrepant with known patterns of physiological or neurological functioning (e.g., marked/substantial, or moderate/nontrivial complaints of remote memory loss; extensive fatigue during easiest of cognitive tasks despite no reported sleep loss and no sign of even the claimed MTBI).]

(b3) Observed behavior/symptoms/complaints/limitations/functions. (Inconsistency #9)

(b3i) Observed behavior/symptoms/complaints/limitations/functions while unaware of being observed. (Inconsistency #9, first example)

(b3ii) Observed behavior/symptoms/complaints/limitations/functions while aware of being observed.

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[Self-reported cognition-related symptoms are clearly discrepant with reliable observations of behavior. Reported symptoms in a given behavioral domain (i.e., physical, cognitive, emotional; cognition-related) are markedly/substantially or moderately/nontrivially inconsistent with behavioral observations (e.g., patient complains of being unable to sleep well but appears quite alert). Such observation may occur in the context of formal evaluation.]

(b4) Information reported by reliable informants/collaterals, such as primary care physicians and spouses. (Inconsistency #10)

(b4i) Information reported by reliable informants/collaterals, such as primary care physicians and spouses, about background history. (Inconsistency #10, first example)

(b4ii) Information reported by reliable informants/collaterals, such as primary care physicians and spouses, about behavior/symptoms/complaints/limitations/functions.

[Self-reported cognition-related symptoms are clearly discrepant with reliable observations of behavior. Reported symptoms in a given behavioral domain (i.e., physical, cognitive, emotional; cognition-related) are markedly/substantially or moderately/nontrivially inconsistent with behavioral observations (e.g., patient complains of being unable to sleep well but appears quite alert). Such observation may derive from the report of reliable collateral informants (e.g., patient's friends or relatives).]

(b5) Information reported in reliable documents, such as by primary care physicians and other mental health professionals. (Inconsistency #11)

(b5i) Information reported in reliable documents, such as by primary care physicians and other mental health professionals, about background history. (Inconsistency #11, first example)

(b5ii) Information reported in reliable documents, such as primary care physicians and other mental health professionals, about behavior/symptoms/complaints/limitations/functions.

[Self-reported history is clearly discrepant with documented history, the evidence for which is reliable. For example, minimization or denial of marked/substantial or moderate/nontrivial concurrent or prior illness/injury (broadly defined) in a manner that emphasizes the injury for which compensation is sought. Also included would be marked/substantial or moderate/nontrivial overstatement of academic, vocational, or other achievement in a way that exaggerates the magnitude of loss due to the injury in question.]

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(c) Inconsistencies/Discrepancies in Conjunction with Observations (other than with testing and with self-report)
Evidence that the evaluee's verbal and/or nonverbal observed behaviors, symptoms, complaints, or limitations and functions related to cognition and related disorder/dysfunction are clearly consistent with exaggeration or feigning of physical, cognitive, or emotional/psychological components of the cognition-related disability in that there is either a marked/substantial or moderate/nontrivial inconsistency/discrepancy between such observations and any of the following:

(c1) Known patterns of brain function. (Inconsistency #12)
(c2) Known patterns of physiological function. (Inconsistency #13)
(c3) Information reported by reliable informants/collaterals, such as primary care physicians and spouses. (Inconsistency #14)
(c3i) Information reported by reliable informants/collaterals, such as primary care physicians and spouses, about background history. (Inconsistency #14, first example)
(c3ii) Information reported by reliable informants/collaterals, such as primary care physicians and spouses, about behavior/symptoms/complaints/limitations/functions.
(c4) Information reported in reliable documents, such as by primary care physicians and other mental health professionals. (Inconsistency #15)
(c4i) Information reported in reliable documents, such as by primary care physicians and other mental health professionals, about background history. (Inconsistency #15, first example)
(c4ii) Information reported in reliable documents, such as by primary care physicians and other mental health professionals, about behavior/symptoms/complaints/limitations/functions.

(d) Inconsistencies in Conjunction with Collateral Information (other than with testing, self-report, and observations)
Evidence that the evaluee's collaterally reported behaviors, symptoms, complaints, or limitations and functions related to cognition and related disorder/dysfunction are clearly consistent with exaggeration or feigning of physical, cognitive, or emotional/psychological components of the cognition-related disability in that there is either a marked/substantial or moderate/nontrivial inconsistency/discrepancy between such reports and any of the following:

(d1) Known patterns of brain function (Inconsistency #16)
(d2) Known patterns of physiological function (Inconsistency #17)
(d3i) Information reported in reliable documents, such as by primary care physicians and other mental health professionals, about background history. (Inconsistency #18, first example)

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(d3ii) Information reported in reliable documents, such as by primary care physicians and other mental health professionals, about behavior/symptoms/complaints/limitations/functions.

(e) Inconsistencies/Discrepancies in Conjunction with Documentation (other than with testing, self-report, observations, and collateral information)
Evidence that the evaluee's documented behaviors, symptoms, complaints, or limitations and functions related to cognition and related disorder/dysfunction are clearly consistent with exaggeration or feigning of physical, cognitive, or emotional/psychological components of the cognition-related disability in that there is either a marked/substantial or moderate/nontrivial discrepancy between such documentation and any of the following:

(e1) Known patterns of brain function. (Inconsistency #19)
(e2) Known patterns of physiological function. (Inconsistency #20)

(f) Inconsistencies Within Major Data Sources (not between them which are scored above)

(f1) Known patterns of brain function. (Inconsistency #21)
(f2) Known patterns of physiological function. (Inconsistency #22)
(f3) Self-report. (Inconsistency #23)
(f3i) Self-report of background history. (Inconsistency #23, first example)
(f3ii) Self-report of behavior/symptoms/complaints/limitations/functions.
(f4) Observed behavior/symptoms/complaints/limitations/functions. (Inconsistency #24)
(f4i) Observed behavior/symptoms/complaints/limitations/functions while unaware of being observed. (Inconsistency #24, first example)
[Compelling self-presentation inconsistency/discrepancy. Compelling self-presentation inconsistencies/discrepancies occur when the difference in the way a evaluee presents verbally and/or nonverbally when being evaluated compared with when not aware of being evaluated is marked/substantial or moderate/nontrivial and such that it is not reasonable to believe the evaluee is not purposely controlling the difference and other explanations do not readily apply.]
(f4ii) Observed behavior/symptoms/complaints/limitations/functions while aware of being observed.
(f5) Information reported by reliable informants/collaterals. (Inconsistency #25)
(f5i) Information reported by reliable informants/collaterals, such as primary care physicians and spouses, about background history. (Inconsistency #25, first example)

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(f5ii) Information reported by reliable informants/collaterals, such as primary care physicians and spouses, about behavior/symptoms/complaints/limitations/functions.

(f6) Information reported in reliable documents. (Inconsistency #26)

(f6i) Information reported in reliable documents, such as by primary care physicians and other mental health professionals, about background history. (Inconsistency #26, first example)

(f6ii) Information reported in reliable documents, such as primary care physicians and other mental health professionals, about behavior/symptoms/complaints/limitations/functions.

(g) Other, Miscellaneous Inconsistencies/Discrepancies (e.g., there is evidence of no material causation for alleged psychological/psychiatric effects of event at claim)
[Self-reported symptoms are clearly discrepant with claimed causal factors, such as an index event. There are marked/substantial or moderate/nontrivial multiple pre-existing and concurrent, but incidental, extraneous factors, reliably ascertained, that can clearly account for the evaluee's presentation pertaining to the diagnosis and disorder/disability at issue much more than an event at claim or even fully, but the evaluee keeps insisting that the event at claim explains all of or a good portion of the sequelae to the event in his/her presentation. Arguments of this nature must be made clearly by the evaluator, given the confounding counter-arguments possible.]

(g1) No causality attributable to the event at claim, despite the evaluee's insistence. (Inconsistency #27)

(g2) Only minimal causality attributable, and out of the material range, despite the evaluee's insistence. (Inconsistency #28)

(g3) Material-level causality attributable to the event at claim, but not to the degree insisted by the evaluee. (Inconsistency #29)

(g4) Other. (Inconsistency #30)

B. Different Degrees of Certainty of Response Bias, According to Inconsistencies/Discrepancies

(B1) Definite Malingering.

(i) One extremely compelling inconsistency/discrepancy that takes the form of (a) outright admission, (b) incontrovertible evidence on videographic surveillance, such as working after denial that it is taking place, or (c) or reliable collateral information in these regards. Other compelling inconsistencies of a less red-handed, extreme nature require three pieces of evidence for consideration at this level.

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Or,

(ii) The evidence is incontrovertible when all the data gathered are considered. Three or more marked/substantial inconsistencies/discrepancies from items a–g above,

Or,

(iii)

(a) One marked/substantial inconsistency/discrepancy from items a–g, and

(b) Performance on four (not five) well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced choice measures, is consistent with exaggeration of diminished functional cognitive capacity.

Or,

(iv)

(a) Two marked/substantial inconsistencies/discrepancies from items a–g, and

(b) Performance on three (not five) well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced-choice measures, is consistent with exaggeration of diminished functional psychiatric/psychological capacity.

(B2) Definite negative response bias.

(i) Two marked/substantial inconsistencies/discrepancies from items a–g,

Or,

(ii)

(a) One marked/substantial inconsistency from items a–g, and

(b) Performance on three (not four) well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced choice measures, is consistent with exaggeration of diminished functional cognitive capacity.

(B3) Probable negative response bias.

(i) One marked/substantial inconsistency/discrepancy from items a–g,

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Or,

(ii)

(a) Five moderate/nontrivial inconsistencies/discrepancies from items a–g, and

(b) Performance on two (not three) well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced choice measures, is consistent with exaggeration of diminished functional cognitive capacity.

(B3-4) Intermediate (Probable to possible, gray zone) negative response bias

The data meet the requirements for classification of possible negative response bias but not the classification of probable negative response bias. Nevertheless, there are supplementary data available about the evaluee that raises the rating. For inconsistencies/discrepancies that have not been considered elsewhere in the system rating as marked/substantial or moderate/nontrivial, this could refer to:

(i) Inconsistencies/discrepancies are reliably found in other assessments, such as different specialists in a multidisciplinary assessment of the evaluee that address pertinent mental health issues.

Or,

(ii) There is clear evidence of or other confounding factors that might cast doubt on the validity of either the evaluee's presentation or some of the results that do not support the conclusion of a lack of effort or absent evaluee validity, although this would have to be clearly documented. The evaluee would have to show five or more of the following 15 factors, as supported by clear evidence (five of these are needed because often they are hard to determine, so that even with evidence in their support, five is considered the minimum needed to use this option in the present scoring system).

That being said, when one to four of these criteria are evident instead of five or more, and so they cannot be used as part of the data for rating Probable Response Bias, as per the above, the evaluator should use these as part of the ratings for Possible Negative Response bias, as per below, including them with the other inconsistencies/discrepancies in

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items a–g therein. Also, if the rating of Probable Negative Response Bias is almost attained but one or more moderate/nontrivial inconsistencies/discrepancies from items a–g are lacking, the ones from this list for Intermediate Negative Response Bias can be used.

(a) Personality disorder of a problematic nature, e.g., (i) antisocial personality disorder according to the DSM, or (ii) features of/subsyndromal expressions of one, or (iii) confrontational/uncooperative, resisting/refusing, without clear signs that the behavior is related to the claimed injury or other conditions such as schizophrenia, etc.
(b) Blaming everyone and anything, overly suspicious, etc., without clear signs that the behavior is related to the claimed injury or other conditions, such as schizophrenia, etc.
(c) Not trying to mitigate loss; not being active in recommended therapy; not being a compliant patient adhering to treatment regimens, etc.
(d) Unduly adopting the sick role, accepting overly solicitious behavior, etc.
(e) Somatization effects not related to the influences of the claimed psychiatric/psychological injury.
(f) Failure to treat substance abuse impeding progress, whether pre-event or post-event related, including of abuse of prescribed event-related medications.
(g) Failure to take recommended medications, such as anti-depressants or needed pain medications, if applicable, for invalid medical reasons.
(h) Refusing a work-hardening trial, refusing modified duties, refusing training for new work within residual capacities and transferable skills, etc., as long as these options are psychiatrically/psychologically (and medically) indicated.
(i) Catastrophizing/crying out for help at a level clearly beyond the nature of the injuries, even after education about it (if not used elsewhere).
(j) Any other confound that is documentable, such as attorney or similar coaching.

As well, five factors derived from the pre-event background are considered as possible confounding factors that might cast doubt on the validity of the evaluee, although resilience to these stressors should be considered in balance:

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(k) Psychiatric/self harm/substance abuse history.
(l) Criminal/legal/problematic military history; history of deceit/fraud.
(m) History of, irregularity in/dissatisfaction with work or other role at issue.
(n) History of, irregularity in/dissatisfaction with family, partners, friends, social life.
(o) History of, financial stresses/bankruptcies/unsupported claims.

(B4) Possible negative response bias.

(i) Four moderate, non-trivial inconsistencies/discrepancies from items a–g,

Or,

(ii)

(a) Three moderate, nontrivial inconsistencies/discrepancies from items a–g, and
(b) Performance on one (not two) well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced choice measures, is consistent with exaggeration of diminished functional cognitive capacity.

(B5) Minimal negative response bias.

(i) Two moderate, nontrivial inconsistencies/discrepancies from items a–g,

Or,

(ii)

(a) One moderate, nontrivial inconsistency from items a–g, and
(b) Just-below cut score performance on one (not two or more) well-validated tests so that performance is at most partially consistent with exaggeration of diminished functional cognitive capacity.

(B6) No evident response bias.
Not even one moderate, nontrivial inconsistency from items a–g.

Criterion D: Behaviors meeting necessary criteria from groups B and C are not fully accounted for by psychiatric, neurologic, or developmental factors.

The behaviors meeting the above criteria represent a likely (*inferred but evident*) volitional act aimed at achieving some secondary gain and cannot be fully accounted for by other disorders that result in significantly

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diminished capacity to appreciate laws or mores against malingering or inability to conform behavior to such standards. The simple presence of objectively documented pathology, illness, or injury (including psychiatric illness) expressly does not preclude a diagnosis of malingering. However, the "diagnostic" system presented should be used conservatively and prudently, especially because of the harm to evaluees that can be caused by false attributions of malingering and related presentation/performance and response biases. For example, the options of probable, intermediate, and possible levels of response bias expressly do not preclude validity of the evaluee's presentation, at least in part. Moreover, in arriving at conclusions about definite response bias, the evaluator is reminded (a) to evaluate the full data gathered for the evaluee and not just scores on one or more psychometric measures or computer interpretations of test results, and (b) the data must be gathered comprehensively, scientifically, and impartially. For example, an evaluee failing according to cutoff on three validity indicators might pass many more in the full battery administered and allowances could be made for these credible results, depending on other factors, such as their pattern. Importantly, attributions of overt malingering must especially take these factors and other relevant ones into account before concluding that malingering is present with incontrovertible evidence, or that other high ratings in the system are present at the level of "more likely than not" in the evaluee. That being said, when warranted, the astute evaluator can use language that clearly denies the credibility of the evaluee, even to significant degrees (despite having a lack of clear evidence about or knowledge of underlying motivation, and therefore without imputing directly motivation).

Note. This present rating system to evaluate non-credible, feigning/malingering and other response biases and presentations/performances in the psychiatric/psychological injury context is meant to be applicable to adult evaluees, in particular. It can be used with adolescents, though, but with caution, e.g., in terms of using different tests/measures/scales of validity/effort. An important general reminder is that any assessment and interpretation of instrument results need to be sensitive to relevant age, gender, cultural/minority, and related differences.

Adapted from Bianchini et al. (2005), which in turn was adapted from Slick et al. (1999)

Note for practice use of the table. The F-PNCR-D rating system allows for evaluation of non-credible, feigned, or malingered evaluee presentation by either psychometric testing, finding major inconsistencies/discrepancies in an evaluee's data, or both. As such, **the F-PNCR-D "diagnostic" system, or classificatory model, is usable by psychiatrists, psychologists, and other mental health professionals**.

Also, for evaluees presenting with simultaneous neuropsychological/cognitive, pain-related, or polytrauma disorder/disability/dysfunction in conjunction with cognition claims, aside from the present system, the assessor should consult the revised MND (Malingered Neurocognitive Dysfunction) and MPRD (Malingered Pain Related Disability) systems of Slick et al. (1999) and Bianchini et al. (2005), respectively. See tables on the F-NCR-D and F-PR-D systems, and the recommendations for their simultaneous use.

Abbreviations. PTSD posttraumatic stress disorder, *TBI* traumatic brain injury, *TOMM* Test of Memory Malingering (Tombaugh 1996), *VSVT* Victoria Symptom Validity Test (Slick et al. 1997), *WMT* Word Memory Test (Green 2005), *VIP* Validity Indicator Profile (Frederick 1997), *MMPI* Minnesota Multiphasic Personality Inventory (Hathaway and McKinley 1943), *MMPI-2* Minnesota Multiphasic Personality Inventory, Second Edition (Butcher et al. 1989, 2001), *FBS (SVS)* Fake Bad Scale (Symptom Validity Scale) (Ben-Porath and Tellegen 2008/2011; Lees-Haley et al. 1991), *MMPI-2-RF* Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form (Ben-Porath and Tellegen 2008/2011), *r* revised (Ben-Porath and Tellegen 2008/2011), *F* Infrequency Scale (Butcher et al. 1989), *Fb* Infrequent Responses, back (Ben-Porath and Tellegen 2008/2011), *Fp* Infrequent Psychopathology Responses (Ben-Porath and Tellegen 2008/2011), *RBS* Response Bias Scale (Gervais et al. 2007), *HHI* Henry Heilbronner Index (Henry et al. 2006), *L* Uncommon Virtues, Lie scale (Bianchini et al. 2005), *K* Adjustment Validity, Correction scale (Bianchini et al. 2005), *SIRS* Structured Inventory for Reported Symptoms (Rogers et al. 1992), *SIRS-2* Structured Inventory of Reported Symptoms, Second Edition; (Rogers et al. 2010), *M-FAST* Miller Forensic Assessment of Symptoms Test (Miller 2001), *DAPS* Detailed Assessment of Posttraumatic Stress (Briere 2001), *TSI-2* Trauma Symptom Inventory, Second Edition (Briere 2011), *BBHI-2* Brief Battery for Health Improvement, Second Edition (Disorbio and Bruns 2002), *RNBI* Ruff Neurobehavioral Inventory (Ruff and Hibbard 2003), *PAI* Personality Assessment Inventory (Morey 1991, 2007), *BHI-2* Battery for Health Improvement, Second Edition (Bruns and Disorbio 2003), *MENT* Morel Emotional Numbing Test (Morel 1995, 1998), *BASC-2* Behavior Assessment System for Children, Second Edition (Reynolds and Kamphaus 2004), *DSM-IV-TR* Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (American Psychiatric Association 2000)

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Chapter 29
Diagnostic System for Malingered Pain Disability/Dysfunction and Related Negative Response Biases

29.1 Introduction

This chapter presents a table giving the F-PR-D system for detecting malingering (Feigned Pain-Related Disability/Dysfunction). See Chap. 5 where it is described.

Table of Terms and Sources

Abbreviation	Name	Source(s)
BASC-2	Behavior Assessment System for Children, Second Edition	Reynolds and Kamphaus (2004)
BBHI-2	Brief Battery for Health Improvement, Second Edition	Disorbio and Bruns (2002)
BHI-2	Battery for Health Improvement, Second Edition	Bruns and Disorbio (2003)
DAPS	Detailed Assessment of Posttraumatic Stress	Briere (2001)
DSM-IV-TR	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision	American Psychiatric Association (2000)
Fb	Infrequent Responses, back	Ben-Porath and Tellegen (2008/2011)
FBS	Symptom Validity Scale (originally called Fake Bad Scale)	Ben-Porath and Tellegen (2008/2011) and Lees-Haley et al. (1991)
F-NCR-D	Feigned Neurocognitive-Related Disability/ Dysfunction	Young (2014); present work
Fp(-r)	Infrequent Psychopathology Responses	Ben-Porath and Tellegen (2008/2011)
F-PR-D	Feigned Pain-Related Disability/Dysfunction	Young (2014); present work
F-PTSDR-D	Feigned Posttraumatic Stress Disorder Disability/ Dysfunction	Young (2014); present work
HHI	Henry-Heilbronner Index	Henry et al. (2006)
K	Adjustment Validity, Correction scale	Bianchini et al. (2005)

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G. Young, *Malingering, Feigning, and Response Bias in Psychiatric/Psychological Injury*, International Library of Ethics, Law, and the New Medicine 56,
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Abbreviation	Name	Source(s)
L	Uncommon Virtues, Lie scale	Bianchini et al. (2005)
MENT	Morel Emotional Numbing Test	Morel (1995, 1998)
M-FAST	Miller Forensic Assessment of Symptoms Test	Miller (2001)
MMPI	Minnesota Multiphasic Personality Inventory	Hathaway and McKinley (1943)
MMPI-2	Minnesota Multiphasic Personality Inventory, Second Edition	Butcher et al. (1989, 2001)
MMPI-2-RF	Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form	Ben-Porath and Tellegen (2008/2011)
MND	Malingered Neurocognitive Dysfunction	Slick et al. (1999)
MPRD	Malingered Pain-Related Disability	Bianchini et al. (2005)
PAI	Personality Assessment Inventory	Morey (1991, 2007)
PID-FMR-S	Psychological Injury Disability/Dysfunction – Feigning/Malingering/Response Bias System	Young (2014); present work
-r	Revised (e.g., FBS-r)	Ben-Porath and Tellegen (2008/2011)
RBS	Response Bias Scale	Gervais et al. (2007)
RNBI	Ruff Neurobehavioral Inventory	Ruff and Hibbard (2003)
SIRS	Structured Interview of Reported Symptoms	Rogers et al. (1992)
SIRS-2	Structured Interview of Reported Symptoms, Second Edition	Rogers et al. (2010)
TOMM	Test of Memory Malingering	Tombaugh (1996)
TSI-2	Trauma Symptom Inventory, Second Edition	Briere (2011)
VIP	Validity Indicator Profile	Frederick (1997)
VSVT	Victoria Symptom Validity Test	Slick et al. (1997)
WMT	Word Memory Test	Green (2005)

Table 29.1 Proposed Criteria for Non-Credible Feigned Pain Related Disability/Dysfunction (F-PR-D)

Introduction

The present system has been developed to help in detection of malingering and related response bias in forensic disability and related evaluations. The system is referred to as the Psychological Injury Disability/Dysfunction – Feigning/Malingering/Response Bias System (PID-FMR-S). It is composed of three systems that are quite uniform – the Feigned Posttraumatic Stress Disorder Disability/Dysfunction (F-PTSDR-D), the Feigned Neurocognitive Related Disability/Dysfunction (F-NCR-D), and the Feigned Pain Related Disability/Dysfunction (F-PR-D) systems. These three systems cover the major

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psychological injuries of PTSD, pain, and TBI, respectively. The systems should be used as part of comprehensive evaluations that use state-of-the-art testing and search for inconsistencies/discrepancies. The overall system has been constructed as an impartial, middle-of-the-road one that is scientifically-informed. It is published in the book by the system's author, Gerald Young (*Malingering, Feigning, and Response Bias in Psychiatric/Psychological Injury: Implications for Practice and Court*; Springer Science+Business Media, 2014). In the book, Young considers alternate systems and builds on them (for neurocognition, the Malingered Neurocognitive Dysfunction, MND, Slick et al. 1999; for pain, the Malingered Pain-Related Disability, MPRD, Bianchini et al. 2005). In addition, the book reviews the literature on malingering, especially in Larrabee (2012b) and Reynolds and Horton (2012).

Aside from examining the MND and MPRD systems, the Young book considers the work of Larrabee (2012a), in particular. The proposals that (a) even one below-chance performance on a forced-choice test and (b) below cut-off performance on three or perhaps two validity indicators from a battery is sufficient to attribute malingering are analyzed carefully. This has led to a more conservative, middle-of-the-road approach for testing criteria in the present system. At the same time, the inconsistency/discrepancy criteria are greatly elaborated in the present system compared to other systems. Moreover, there are other checks and balances that have been included. Therefore, in many ways the present system has aspects that are comparable to the proposals by Larrabee. To conclude, even for its testing criteria, the present system does not simply dismiss the prior work but builds on it.

As an introduction to the specifics of the system and in order to reinforce the notion that it respects and builds on the work of Larrabee (2012a), in the following, the diverse ways that the levels in the system related to definite malingering, definite response bias, and probable response bias are summarized briefly.

Aside from cases with extremely compelling evidence, such as frank admission or indisputable videographic evidence, definite malingering can be attributed in cases in which: (a) two or more forced-choice measures are failed at the below-chance level; or (b) there are five or more test failures on other valid psychometric measures; or (c) there are three or more compelling inconsistencies; (d) any combinations of these types of evidence are found; or (e) other evidence replaces the weighting of these three types of evidence, such as extreme scores on valid psychometric tests or an overall judgment of the file that adds weight. When the latter obtains then, when numerical data can be gathered, three test failures could be sufficient to attribute malingering, everything else being equal.

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As for assigning definite response bias, the criteria above apply, except that they involve one-forced choice test, not two, four other tests, not five or more, and two compelling inconsistencies, not three or more, with none of the extreme nature involved. In terms of probable response bias, the criteria exclude forced-choice test failure, but consider three other test failures, not four, and one compelling inconsistency, not two.

The reader will note that Larrabee (2012a) emphasized three if not two failures on relevant tests as very strong evidence of malingering., All things considered, the present system arrives at a protocol that might give a comparable weighting to such test failures.

Overall, those who had hoped for a system that catches either many evaluees or very few evaluees in its malingering net will be disappointed, but those who adhere to a science-first approach will find the system rational and balanced. In this regard, the system has been constructed so that its application should yield similar ratings by different raters, or good inter-rater reliability. In addition, the system appears to have the elements needed for adequate validity (e.g., construct, content, criterion). Its state-of-the-art and middle-of-the-road approach constitute important principles underlying validity.

Given these considerations, use of the present system in practice has the potential to meet admissibility criteria in court, perhaps more so than other systems, and should serve one's practice growth in good stead. A worksheet has been developed to accompany its use. Note that through its inconsistencies/discrepancies criteria, the system should be quite helpful to mental health professionals who are not trained in psychological testing, such as psychiatrists.

Criteria

Criterion A: Evidence of significant external incentive. At least one clearly identified and substantial external incentive for conscious exaggeration or fabrication of symptoms is present at the time of examination (e.g., personal injury litigation, workers compensation benefits, psychiatric/psychological disability pension).

Criterion B: Evidence from psychological testing. Evidence that evaluee's psychiatric, psychological, emotional, coping, and related capacities as indicated by formal psychometric testing (e.g., in the context of psychological or neuropsychological evaluation) are consistent with exaggeration or feigning of functional psychiatric/psychological disability.

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A. Different Degrees of Certainty of Response Bias, According to Psychological Testing

(A1) Definite Malingering.

(i) The evidence is incontrovertible, even when the rest of the data gathered is considered. Below-chance performance ($p < .05$) on two or more forced-choice measures of psychiatric/psychological (e.g., cognitive or perceptual) function, e.g., below-chance performance on the TOMM [scores below tests' clinical/threshold cut scores but that are higher than chance performance are dealt with in the next level], the VSVT, and the WMT. Also consider the VIP.

Or,

(ii) Performance on five or more well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced-choice measures, is consistent with exaggeration of diminished functional psychiatric/psychological capacity.

(A2) Definite negative response bias.

(i) Below-chance performance ($p < .05$) on one forced-choice measure of psychiatric/psychological (e.g., cognitive or perceptual) function, e.g., below-chance performance on the TOMM [scores below tests' clinical/threshold cut scores but that are higher than chance performance are dealt with in the next level].

Note. If only one forced-choice test is administered and the evaluee fails at the chance level, a second one is administered to determine whether the person reaches the definite malingering rating.

Or,

(ii) Performance on four well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced-choice measures, is consistent with exaggeration of diminished functional psychiatric/psychological capacity.

Note. Failure on forced-choice measures that is not below-chance but does meet pass-fail thresholds according to normative cut sores are considered for this criterion; i.e., failure to reach critical thresholds based on normative or otherwise validly-selected

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and justified cut-scores. That is, forced-choice test results at the latter level as opposed to the below-chance level could be included among the "well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms." Note that the same rule applies in the next categories.

(A3) Probable negative response bias.
Performance on three well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced-choice measures, is consistent with exaggeration of diminished functional psychiatric/psychological capacity.

(A3-4) Intermediate (Probable to possible, gray zone) negative response bias

(i) The data meet the requirements for classification of possible negative response bias but not the classification of probable negative response bias. Nevertheless, there are supplementary data available about the evaluee that raises the ratings to the intermediate level.

For test data, this would refer to results for extra tests that had not used for the primary ratings because of the scoring rules described below, such as on a second personality test with numerous effort/validity detector scales not all of which had been used for the primary rating, and one or two indicating performance below accepted criteria for lack of effort/validity. That is, in addition to meeting criteria for A4, there is performance on two well-validated supplementary and not primary tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced-choice measures, which is consistent with exaggeration of diminished functional psychiatric/psychological capacity.

Or,

(ii) The data do not even meet the requirements for classification of possible negative response bias. Nevertheless, there are supplementary data available about the evaluee that raises the ratings to this intermediate level. For test data, this would refer to results for extra tests that had not been used for the primary ratings because of the scoring rules described

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below, such as on a second personality test with numerous effort-validity detector scales not all of which had been used for the primary rating, and three or more indicate performance below accepted criteria for lack of effort/validity. That is, performance on three or more well-validated supplementary and not primary tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced-choice measures, is consistent with exaggeration of diminished functional psychiatric/psychological capacity.

(A4) Possible negative response bias.

(i) Performance on two well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced-choice measures, is consistent with exaggeration of diminished functional psychiatric/psychological capacity.

Or

(ii) Criteria for Definite or Probable Response Bias are met except for Criterion D (i.e., primary psychiatric, neurological, or developmental, or other etiologies cannot be fully ruled out). In such cases, the alternate etiologies that cannot be ruled out should be specified.

(A5) Minimal negative response bias.

(i) Performance on one well-validated test designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced-choice measures, is consistent with exaggeration of diminished functional psychiatric/psychological capacity. When only one instrument is used, and the evaluee does not reach acceptable criteria, a second one should be used to establish by performance whether the response bias is classifiable as possible or minimal.

Or,

(ii) Just below cut-off performance on two well-validated tests so that performance is at most partially consistent with exaggeration of diminished functional psychiatric/psychological capacity.

(A6) No evident response bias.

(i) Performance on not even one well-validated test designed to measure exaggeration or fabrication of psychiatric/psychological

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(e.g., cognitive or perceptual) symptoms, including forced-choice measures, is consistent with exaggeration of diminished functional psychiatric/psychological capacity.

(ii) There might be just-below cut score performance on one well-validated test but, despite this, performance is not even partially consistent with exaggeration of diminished functional psychiatric/psychological capacity.

Weighting Rules for Test Batteries

As for the nature of the 60 rules included in the present system for test use, they have been constructed to apply equally to the system developed for PTSD and its alteration for conditions of pain and TBI. The rules were constructed according to ten pertinent principles and parameters, as specified in the following.

(a) There are two tracks in the system, Regular (for PTSD, pain) and Neuropsychological/Cognitive.
(b) There are multiple test types, including forced-choice, personality, and dedicated. They can be used in the system if scientifically supported for the question at hand.
(c–e) Some test types are more critical than others, e.g., forced-choice; some criteria more critical than others, e.g., below-chance performance; and some tests more reliable and valid than others for the purposes at hand, e.g., the MMPI-2-RF.
(f) Any one test can provide one to several validity indicators, depending on the research findings in the area.
(g) The tests should include 10–15 primary measures specified beforehand, with 5–8 positive findings, and at most 3–4 from any one instrument, needed to conclude significant feigning or related response bias, including of malingering.
(h) Tests that are correlated can be used within specified limits and their acknowledgment.
(i) Malingering can be concluded only when there is incontrovertible evidence after examination of the full reliable data set gathered.
(j) In general, test selection and score interpretations must be undertaken scientifically, impartially, and comprehensively, while considering the limits of the evaluees.

In terms of the categories within which the 60 rules fall, they group in the following ways. (a) Pathways/tracks in the system: 1, 13, 17,-18; (b) Testing/

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tests: 2–9, 26–28, 56: (c) Criteria: 10–12, 25, 29; (d) Supplementary/secondary factors: 14–16; (e) Independence/correlation: 19–24; (f) Rating adjustment: 30–32; (g) Test preselection: 33–35; (h) Administration: 36–40; (i) Cognitive/Neuropsychological: 41–45; (j) Less testing: 46–50; (k) Comparison with Larrabee: 51; (l) Evaluators: 52–55; (m) Altering system: 57–58; (n) Using all the data: 59–60.

These 60 rules are quite explicit, and qualify how to obtain and use all needed validity measures to detect malingering and related response biases in the present system. However, the rules should not be used in a box score fashion to arrive at conclusions about malingering and related response biases. The evaluator needs to examine the full data set gathered in comprehensive, scientifically-informed, impartial ways. The ratings are only a guide toward this end, albeit objective ones to the degree possible.

Rule 1: Two pathways. Note that the present rating system is sufficiently flexible to accommodate (a) a Regular pathway/system in the rating without cognitive/neuropsychological testing and (b) a second pathway of cognitive/neuropsychological testing. The rules provide clear instructions on how to use one pathway, the other, or both. That being said, most of the following rules apply to the Regular system and extra ones for the cognitive/neuropsychological system are given toward the end.

Rule 2: Forced-choice. With respect to forced-choice measures, evaluators are advised to include in their assessments "well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms," and criteria have been described above for determining the level of malingering/response bias according to the results obtained on forced-choice tests. Essentially, there are two levels to consider: (a) below-chance performance, considered more problematic, and (b) failing to reach critical thresholds based on normative or otherwise validly-selected and justified cut-scores.

Rule 3: Tests. The inclusion in the criteria of "well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms" includes psychological tests other than forced-choice ones that might provide evidence in formal psychological evaluation that the person has significantly misrepresented current status (e.g., exaggerated or minimized psychological symptoms/distress) in a manner that emphasizes the injury for which compensation is sought.

Rule 4: MMPI family. For example, responses on self-report measures of psychological function suggest impairment in the context of elevations on well-validated validity scales or indices consistent with exaggeration of physical/somatic (e.g., MMPI-2 FBS, MMPI-2-RF FBS-r or SVT-r) or emotional symptoms (e.g., MMPI-2 F, Fb, or Fp, or related MMPI-2-RF scales), or

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newer effort detection scales (e.g., RBS, HHI), or, on these measures, as well, evidence of vehement denial of psychological problems in a manner consistent with extreme defensiveness regarding psychological symptoms in order to further emphasize psychological complaints (e.g., MMPI-2 L or K at noted cutoffs, or their MMPI-2-RF equivalents).

Rule 5: Other tests needed. The underlying assumption in listing all these instruments is that they provide relevant information for the present ratings; but they do vary in the information that they provide, the levels of the cut-offs used, etc. Therefore, evaluators need to be aware of further tests that could be used in evaluations; these are described below and scoring rules for them are listed.

Rule 6: Improbable symptoms, etc. Well-validated instruments might include structured interview ones that aim to detect improbable symptoms, or extreme, too frequent, or otherwise non-credible ones, such as detected on the SIRS/SIRS-2 and the M-FAST.

Rule 7: PTSD. In addition, tests might include dedicated PTSD ones, such as the DAPS or perhaps the TSI-2, that have embedded evaluee validity scales for under- and over-reporting.

Rule 8: Pain. Tests aimed at other types of disability determinations, such as the BBHI-2 for pain and the RNBI for neurobehavioral symptoms, might be applicable, depending on the nature of the evaluee's assessment taking place, given the equivalent embedded evaluee validity scales in these instruments, for under- and over-reporting.

Rule 9: Cognitive (embedded). Further, even when an assessment is not neuropsychological, good use could be made of embedded cognitive measures of invalidity/poor effort, such as for digit span.

Rule 10: 10–15 Primary. Of all the tests/measures/scales/indicators administered that are not forced-choice tests or embedded neuropsychological/cognitive measures, 10–15 should be considered primary, or as the ones designated to furnish for the present system critical information needed for assessing malingering and related response biases.

Rule 11: 5–8 Critical. The criteria of the present system indicate that, aside from below-chance results from forced-choice and neuropsychological/cognitive testing, 5–8 invalidity results, at most, are needed from among the 10–15 primary measures to obtain maximal scores/levels in the system. Note that because there are 10–15 primary indices and doing poorly on 5–8 of them indicates significant doubt about the credibility of the evaluee, this suggests that doing poorly on about 50 % (or more) of the primary indices is critical in establishing the evaluee's performance/effort quality. This rule has face validity.

Rule 12: Not at cut-off. Note that below-chance performance on forced-choice testing is not counted in the primary indices, given its use elsewhere in

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the system. However, performance on these tests that do not meet cut-offs (even if higher than below-chance performance) can count as among the 10–15 primary indices of the system, if specified beforehand.

Rule 13: Neuropsychology. Aside from stand-alone forced-choice tests such as the VSVT, structured interviews such as the SIRS/SIRS-2, and tests such as the MMPI family ones, when the assessment is neurocognitive or neuropsychological, many different embedded validity/effort detector tests/measures/scales can be used, given the tens of domains tested and the utility of having more than one for each domain, as needed.

Rule 14: Supplementary tests. However, the data obtained from these instruments should not be used as part of the 10–15 primary ones needed for purposes of obtaining ratings in the present system. That is, essentially, they should be used separately from the Regular system, and stand apart from them for use in the cognitive/neuropsychological one.

Rule 15: Secondary information. That is, these extra data sources might contribute secondary information to the Regular rating system, at best, aside from any data that they furnish for purposes outside the Regular rating system to the cognitive/neuropsychological one.

Rule 16: Pattern analysis. The same applies for neurocognitive/neuropsychological test pattern analysis deriving from these tests; normally, they should not be considered for use in the Regular system.

Rule 17: Limited cognitive testing. Note that if limited cognitive testing is given, rather than full-blown cognitive/neuropsychological testing, and there are not many validity indicators/tests/measures/scales available because of this decision, it might be best to consider them for rating of the Regular and not cognitive/neuropsychological path.

Rule 18: Neuropsychological path. That being said, there are rules given below (see Rules 41 to 44) that apply to rating the present system for the second path when full-blown cognitive/neurocognitive testing is administered.

Rule 19: Test independence. The selection of instruments chosen in an assessment must be carefully organized so that, to the degree possible, they are relatively independent and tapping different aspects of psychological function/response bias.

Rule 20: Prioritizing. For example, if two similar results are obtained for two tests that are aimed at measuring the same type of response bias, they should not both be considered as primary in the present rating system and both used to inflate the ratings.

Rule 21: Exception 1. One exception to this rule is when the better measure of the two yields negative results and the second one yields positive results;

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perhaps valid arguments are possible to justify using the secondary measure as the primary one.

Rule 22: Exception 2. Moreover, tests are never perfectly correlated, and even if they are substantially correlated, they might reflect different constructs to a degree. Therefore, consistent with the multitrait-multimethod approach, two very similar tests having positive results could be used in the ratings with the present system, if this decision can be appropriately justified.

Rule 23: Exception 3. Nevertheless, in general, to repeat, evaluators should avoid such reduplication in obtaining scores from tests administered in their batteries for rating purposes. They can accomplish this, by selecting measures that are relatively independent and aimed at different categories of psychological function/response bias. For example, if the MMPI-2-RF is administered, any scores from another personality inventory that might be administered should not be considered as primary in calculating level of response bias in the present system. That being said, if a secondary omnibus instrument, such as a personality inventory, has a useful scale that is considered better for the purposes of the evaluation relative to those in the primary one, that scale in the secondary one can be used in ratings with the present system.

Rule 24: Exception 4. Note that this rule about generally trying to avoid duplication/overlap/correlated tests in establishing ratings with the present system does not apply to the needed use of several stand-alone, forced-choice tests, because they are cardinal in determining the presence of malingering.

Rule 25: Maximum use 1. For instruments that have more than one scale aimed at detecting effort or feigning, such as the MMPI family of tests, or in cognitive evaluation, the rule should be that any instrument of this type should contribute at most 3–4 primary measures among the 10–15 maximum that are needed in the present system to arrive at ratings, even if there are more than 3–4 of them that are included in the instrument and that have been scored. This rule needs implementation to avoid using only one of these instruments to obtain the needed results for all of the 5 primary validity indicators among the 10–15 required for obtaining results that can be used for a maximum rating in the present system.

Rule 26: Omnibus tests. In cases where assessors use two or more omnibus instruments with more than one relevant validity measure, as mentioned, one must be considered primary, with its validity scores used rather than any of the others. For this rule, everything else being equal, the MMPI family of tests is considered primary in such cases for rating with the present system.

Rule 27: Dedicated Tests. For PTSD or pain assessments, when two or more dedicated tests, such as the DAPS for PTSD, are used, normally only one should provide scores as primary measures for purposes of the present ratings.

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Rule 28: Nondedicated tests. When validity indicators of feigning are used in tests that do not directly apply to PTSD or pain, or when they do not have associated with them research showing their applicability to the population at hand, their use must be justified. Moreover, for any one assessment, only one test from among them and, further, only one score from it should be used in the ratings.

Rule 29:Maximum use 2. If these tests are dedicated ones to detecting feigning, such as the SIRS, as long as they are validated for the population at hand, weighting of 2–3 of their measures could be used as part of the 10–15 primary ones for rating in the present system.

Rule 30: Adjusted rating, lowering it. When evaluees (a) score in the superior range for good effort on a validity indicator, if applicable, and/or (b) pass a majority of the validity tests/measures/scales given in the full battery, and/or (c) score positive for measures related to symptom minimization or underreporting of post-event symptoms at claim, they should be credited a half-level for each case in the reverse direction on the rating scale, up to a maximum of one full level in the reverse direction on the scale.

Rule 31: Adjusted rating, raising it. When evaluees (a) score in the superior range (e.g., 98th percentile) for poor effort on a validity indicator, if applicable, and/or (b) fail a majority of the validity tests/measures/scales given in the full battery, and/or (c) score positive for measures related to symptom minimization or underreporting of pre-event symptoms at claim, they should be credited a half-level for each case in the higher direction on the rating scale, up to a maximum of one full level in the higher direction on the scale.

Rule 32: Patterns. Clinical scales might prove informative for their patterns, such as on personality inventories. For example, in the MMPI family of tests, certain codes are associated with problematic clinical presentations with respect to effort and evaluee validity. Patterns such as this should be considered for half-level adjustment (lower, higher), as part of the prior two rules.

Rule 33: Preselection. In choosing usable measures from batteries that had been administered for rating purposes, decisions about which measures to use should be made beforehand, including the weightings involved, as justified and based on the scientific literature.

Rule 34: Fishing expeditions. Evaluators should avoid fishing expeditions of selecting just-right tests, and once the data are gathered, just-right scores, in order to get just-right conclusions to assessments, thereby lacking impartiality, comprehensiveness, and scientific underpinnings.

Rule 35: No exceptions. Evaluators should not ignore pre-selected measures, ones chosen for use beforehand according to the requirements of the present system, and they should not avoid administering obvious ones to use for rating in the battery, such as the MMPI family ones.

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Rule 36: Ecological validity. Evaluators should administer the tests in a way that has ecological validity, e.g., spreading them out and not giving one after the other.

Rule 37: Warnings. Evaluators should consider the issue of advising evaluees about tests, especially forced-choice ones, according to prevailing professional guidelines.

Rule 38: Qualifications. Only mental health professionals who are professionally qualified should select, administer, and interpret psychological tests.

Rule 39: State-of-the-art. It is important to note that the evaluator needs to use the most current, psychometrically and forensically valid instruments available, and not just the ones mentioned in this version of the F-PTSDR-D written in 2014.

Rule 40: No harm. In short, aside from using an appropriate battery of measures for the ratings that can be derived from the present system, each instrument selected should be administered in a way that does not harm the evaluee, while still permitting that the information required is gathered.

Rule 41: Cognitive/Neuropsychological testing. When an evaluation includes cognitive/neuropsychological testing, the procedures described in the present system can be complemented by a second path or track. Typically, in cognitive/neuropsychological testing, there are tens of evaluee validity indicators/tests/measures/scales that might be administered. The present system allows for 10–15 primary measures outside of cognitive/neuropsychological testing and, from among these, 5–8 critical validity indicators/tests/measures/scales with (positive) data are selected. In this regard, from among the cognitive/neuropsychological tests administered, an additional 10–15 primary measures and 5–8 critical validity indicators/tests/measures/scales can be selected from among the cognitive/neuropsychological tests administered.

Rule 42: Rating cognitive/neuropsychological tests. The rules of the present system should be applied to the cognitive/neuropsychological primary measures and critical results that are derived from application of Rule 41. That is, they will help arrive at evaluations of Definite to Probable Response Bias, in particular.

Rule 43: Cognitive/Neuropsychological and Regular rating. When both the Regular path in using the present rating system and the supplementary cognitive/neuropsychological one are both positive and lead to high ratings of response bias for an evaluee, this should be indicated.

Rule 44: Positive results for only one of the two paths. When either cognitive/neuropsychological or Regular rating leads to high ratings of response bias for an evaluee, but not both, this should be indicated. Conclusions to evaluations should note the difference in the two ratings and its implications.

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Rule 45: Cognitive/Neuropsychological path alone. Of course, evaluators might want to proceed with just cognitive/neuropsychological testing in the second pathway of the system, and not use at all the Regular pathway. In this regard, they would use simply the embedded cognitive/neuropsychological validity indicators/tests/measures/scales with forced-choice measures, and none of the personality, structured interviews, and specific dedicated measures.

Rule 46: Test selection. The system is very flexible and, when testing is involved, the amount of tests/measures/scales administered can be as low as several to as high as multiples of 10.

Rule 47: Minimal testing. Minimally, at least when the Regular path or track is taken, appropriate use of the system requires a good omnibus personality test, such as the MMPI-2-RF or the PAI, a good feigning detection interview instrument, such as the SIRS/SIRS-2 or M-FAST, a specific, dedicated test, and one or more stand-alone forced-choice measures, such as the VSVT or the TOMM. (Recommendations for 2014.)

Rule 48: Less than minimal testing. If evaluators choose to administer even less testing than this, they risk not having the option of getting sufficient critical tests/measures/scales/indicators that can be used to rate the upper levels of the rating system.

Rule 49: Less testing yet doing enough. That being said, there are both testing and non-testing rules that could be used to supplement below-minimum test use, for example, the one concerning especially high failure performance on tests (98 % percentile or more; see above) and the one for the whole file (see below).

Rule 50: Justify less testing. A problematic practice is that evaluators who are trained in psychological testing use less testing in assessments than the recommended minimum even when more testing can be administered. For example, it is conceivable that partially sufficient information can be gathered just in administering an MMPI family test, a structured interview one, or one forced-choice test. However, this option is strongly recommended against, unless it can be clearly justified, e.g., due to the level of concomitant physical or brain injuries, language barriers, etc. In such cases, it might be sufficient to use less that the recommended minimum of tests.

Rule 51: Larrabee (2012a). As an aside, it is noted that the structure established in the present system through its rules enables evaluators to arrive at high ratings on the present rating system in terms of malingering and definite response bias. For example, the system enables high ratings when there are positive results or performance on three or even two tests/measures/scales/validity indicators, which is consistent with the spirit of the work of Larrabee (2012a). Indeed, the system created might even be more sensitive to obtaining

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results at these higher levels compared to Larrabee's procedures, given the rules developed. That being said, consideration of the whole file and alternative explanations, such as a cry for help, might render it less sensitive. This illustrates perfectly the middle-of-the-road, balanced approach that characterizes the present system. It was constructed with good rationale and logical perspectives, good scientific and practical ones, and consideration of other systems, published recommendations for their change, and other state-of-the-art literature. Evaluators should function from the same middle-of-the-road and state-of-the-art perspective in applying the system to their evaluees. Evaluators might want to check the conclusions derived from using the present system with those of Larrabee (e.g., likelihood ratios, positive predictive power, probability of multiple positive findings), or any other system of an acturial, algorithmic nature for malingering detection, assuming the literature supports their use, using a compare-contrast format to help justify the use of the present system and the conclusions it allows for any assessment at hand.

Rule 52: Supplementary evaluators. Evaluators not trained in testing can acquire the services of those trained and competent to administer the types of tests recommended for use in the present system.

Rule 53: Seconding team work. Note that the evaluator who acquires such testing services is responsible for applying the present system to the case at hand, but only the testing evaluator can be responsible for interpreting the test data portion of the evaluation.

Rule 54: Leading team work. Or, evaluators might be trained and competent in testing, but prefer to have a second evaluator (help) seek inconsistencies/discrepancies in the file. The testing evaluator would be responsible for the inconsistencies/discrepancies noted and for combining all the information gathered for present rating purposes.

Rule 55: Interdisciplinary assessments. Evaluators using the present system might be functioning within the context of interdisciplinary teams of assessors. In contributing to and/or signing any executive summary, they are responsible as much as the others for how the ratings are used and for any overall alterations in equivalent ratings by the team.

Rule 56: Specific dedicated tests. [As of 2014.] If test dedicated to specific psychological injuries are administered, such as in the Regular track, the DAPS and perhaps the TSI-2 make sense for PTSD, and the BBHI-2 or BHI-2 would be good for pain. In this regard, there are multiple cognitive or related measures that could be used. Other tests. Some other relevant instruments include the RNBI, the VIP, the WMT, and the MENT.

Rule 57: Altering rules on testing and test battery. As of 2014, the test battery rules and the testing procedures and tests indicated in the present system are the ones that can be scientifically and practically justified.

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However, as concepts and research accumulate, recommendations to change the present system might appear in the scientific literature and research that are both reliable and valid. Or, assessors might alter a rule or rules or use of the present system and its proposed testing battery in a way that is scientifically and practically justified. For example, the number of primary and critical tests and measures, presently are set at 10–15 and 5–8, respectively, but slight variations in these amounts might be acceptable at the scientific and practical levels.

Rule 58: Special populations. The usual cautions about using the correct norms for scoring and being sensitive to gender, minorities, age, and related differences apply to testing for the present system. Note that for children, the BASC-2 has appropriate validity checks.

Rule 59: Consider whole file. The rating of any level of negative response bias that is attributed to an evaluee according to the present system can be adjusted higher or lower by one-half to one full rating level on the scale depending on any additional reliable information in the assessment that is not considered elsewhere. These factors might include evaluator ones, evaluee ones, or systemic ones. The rationale for this decision must be documented. For example, litigation distress might be evident, but that could reflect either (a) non-merited factors, such as apprehension at continued evaluations that have reliably found difficulties with presentation/performance in the evaluee, or (b) genuine externally-generated stress related to the case, e.g., by third parties.

Rule 60: Combining test data with inconsistencies/discrepancies. Criterion C elaborates rules for combining test data with inconsistencies/discrepancies after presentation of 30 possible inconsistencies/discrepancies.

Criterion C: Evidence from Inconsistencies/Discrepancies, With or Without Test Data Considered.

Inconsistency/discrepancy criteria can be used separately from those of the B set, or in conjunction with them, as presented in the second part of the C criteria. Inconsistencies/discrepancies can be found at two levels. Either marked/substantial or moderate/nontrivial evidence of inconsistency/discrepancy is possible. Moreover, marked/substantial inconsistencies/discrepancies can be divided into those that are less or most extremely compelling, such as in cases of frank admission, videographic evidence of working after being at work has been denied, and frank evidence elsewhere in the file, e.g., related to collateral information. Trivial evidence in these regards should be ignored. For the two levels of inconsistencies/discrepancies possible, with the more blatant ones receiving the highest rating, there is a subjective element in classifying them. Therefore, evaluators should be conservative when characterizing them as marked or substantial relative to moderate or nontrivial, and

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justify all classifications in these regards with clear material from the file and careful argument. Note that in section B3–4ii below, 15 examples are provided of possible inconsistencies/discrepancies, aside from the few examples provided in the sections that follow.

(a) Inconsistencies/Discrepancies in Conjunction with Testing

(a1) Inconsistency/Discrepancy between cognitive/neurocognitive test data and known patterns of brain functioning (e.g., as related to pain). In this regard, a pattern of test performance that is either markedly/substantially or moderately/nontrivially discrepant from currently accepted models of normal and abnormal central nervous system (CNS) function. The discrepancy must be consistent with an attempt to exaggerate or fabricate psychological dysfunction in testing (e.g., evaluee reports that she/he does not sleep at all). (Inconsistency #1)

(a2) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of pain-related symptoms after event at claim and known patterns of physiological reactivity. (Inconsistency #2)

(a2i) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of pain-related symptoms after event at claim and known patterns of physiological reactivity in the ambulance, at the hospital, or shortly thereafter (e.g., endorses items related to extreme pain but there is no report of pain expressions/need for analgesic medications in the ambulance, at the hospital, or shortly thereafter). (Inconsistency #2, first example)

(a2ii) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of pain-related symptoms after event at claim and in psychotherapy (e.g., endorses items related to extreme pain but there is no postural adjustment at all in a 1-h psychotherapy session).

(a2iii) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of pain-related symptoms after event at claim and physiological reactivity to psychotropic medication (e.g., no decrease in neurovegetative signs to symptom-relevant medication).

(a3) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data and self-report. (Inconsistency #3)

(a3i) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of pain-related symptoms prior to event at claim and self-reported background history in interview. (Inconsistency #3, first example)

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(a3ii) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of pain-related symptoms after event at claim and self-reported behavior/symptoms/complaints/limitations/functions in interview.

(a4) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of pain-related symptoms after event at claim and verbal and/or nonverbal observed behavior/symptoms/complaints/limitations/functions. (Inconsistency #4)

(a4i) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of pain-related symptoms after event at claim and observed behavior/symptoms/complaints/limitations/functions while unaware of being observed. (Inconsistency #4, first example)

(a4ii) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of pain-related symptoms after event at claim and observed behavior/symptoms/complaints/limitations/functions while aware of being observed (e.g., evaluee endorses items indicating extreme pain in driving yet is observed to/indicates that driving to and from the session was okay).

(a5) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data and information reported by reliable informants/collaterals. (Inconsistency #5)

(a5i) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of pain-related symptoms after event at claim and information reported by reliable informants/collaterals, such as primary care physicians and spouses, prior to background history. (Inconsistency #5, first example)

(a5ii) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of pain-related symptoms after event at claim and information reported by reliable informants/collaterals, such as primary care physicians and spouses, about behavior/symptoms/complaints/limitations/functions (e.g., evaluee endorses items indicating extreme pain in driving yet is reported by spouse to drive without a problem).

(a6) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data and information reported in reliable documents. (Inconsistency #6)

(a6i) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of pain-related symptoms prior to event at claim and information reported in reliable documents, such as by primary care physicians and other mental health professionals, about background history. (Inconsistency #6, first example)

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(a6ii) Inconsistency/Discrepancy, either marked/substantial or moderate/nontrivial, between test data of pain-related symptoms after event at claim and information reported in reliable documents, such as by primary care physicians and other mental health professionals, about behavior/symptoms/complaints/limitations/functions (e.g., there is no documented history of psychological trauma in the ambulance or ER reports yet the evaluee consistently endorses items of extreme pain in the ambulance and hospital).

(b) Inconsistencies/Discrepancies in Conjunction with Self-Report (other than with testing)
Evidence that the evaluee's self-reported behaviors, symptoms, complaints, or limitations and functions related to pain and related disorder/dysfunction are clearly consistent with exaggeration or feigning of physical, cognitive, or emotional/psychological components of the pain-related disability in that there is either a marked/substantial or moderate/nontrivial inconsistency/discrepancy between such self-report and any of the following:

(b1) Known patterns of brain function. (Inconsistency #7)

(b2) Known patterns of physiological function. (Inconsistency #8)
[Self-reported pain-related symptoms are clearly discrepant with known patterns of physiological or neurological functioning (e.g., pain complaints by themselves should not be able to elicit marked/substantial or moderate/nontrivial complaints of remote memory loss; repetitive nightmares that exactly repeat the traumatic event and no other nightmares).]

(b3i) Observed behavior/symptoms/complaints/limitations/functions while unaware of being observed. (Inconsistency #9, first example)

(b3ii) Observed behavior/symptoms/complaints/limitations/functions while aware of being observed.
[Self-reported pain-related symptoms are clearly discrepant with reliable observations of behavior. Reported symptoms in a given behavioral domain (i.e., physical, cognitive, emotional; pain-related) are markedly/substantially or moderately/nontrivially inconsistent with behavioral observations (e.g., patient complains of being unable to sleep well but appears quite alert). Such observation may occur in the context of formal evaluation.]

(b4i) Information reported by reliable informants/collaterals, such as primary care physicians and spouses, about background history. (Inconsistency #10, first example)

(b4ii) Information reported by reliable informants/collaterals, such as primary care physicians and spouses, about behavior/symptoms/complaints/limitations/functions.

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(continued)

[Self-reported pain-related symptoms are clearly discrepant with reliable observations of behavior. Reported symptoms in a given behavioral domain (i.e., physical, cognitive, emotional; pain-related) are markedly/substantially or moderately/nontrivially inconsistent with behavioral observations (e.g., patient complains of being unable to sleep well but appears quite alert). Such observation may derive from the report of reliable collateral informants (e.g., patient's friends or relatives).]

(b5) Information reported in reliable documents, such as by primary care physicians and other mental health professionals. (Inconsistency #11)

(b5i) Information reported in reliable documents, such as by primary care physicians and other mental health professionals, about background history. (Inconsistency #11, first example)

(b5ii) Information reported in reliable documents, such as primary care physicians and other mental health professionals, about behavior/symptoms/complaints/limitations/functions.
[Self-reported history is clearly inconsistent/discrepant with documented history, the evidence for which is reliable. For example, minimization or denial of marked/substantial or moderate/nontrivial concurrent or prior illness/injury (broadly defined) in a manner that emphasizes the injury for which compensation is sought. Also included would be marked/substantial or moderate/nontrivial overstatement of academic, vocational, or other achievement in a way that exaggerates the magnitude of loss due to the injury in question.]

(c) Inconsistencies/Discrepancies in Conjunction with Observations (other than with testing and with self-report)
Evidence that the evaluee's verbal and/or nonverbal observed behaviors, symptoms, complaints, or limitations and functions related to pain and related disorder/dysfunction are clearly consistent with exaggeration or feigning of physical, cognitive, or emotional/psychological components of the pain-related disability in that there is either a marked/substantial or moderate/nontrivial inconsistency/discrepancy between such observations and any of the following:

(c1) Known patterns of brain function. (Inconsistency #12)

(c2) Known patterns of physiological function. (Inconsistency #13)

(c3i) Information reported by reliable informants/collaterals, such as primary care physicians and spouses, about background history. (Inconsistency #14, first example)

(c3ii) Information reported by reliable informants/collaterals, such as primary care physicians and spouses, about behavior/symptoms/complaints/limitations/functions.

(continued)

(continued)

(c4i) Information reported in reliable documents, such as by primary care physicians and other mental health professionals, about background history. (Inconsistency #15, first example)

(c4ii) Information reported in reliable documents, such as by primary care physicians and other mental health professionals, about behavior/symptoms/complaints/limitations/functions.

(d) Inconsistencies/Discrepancies in Conjunction with Collateral Information (other than with testing, self-report, and observations)
Evidence that the evaluee's collaterally reported behaviors, symptoms, complaints, or limitations and functions related to pain and related disorder/dysfunction are clearly consistent with exaggeration or feigning of physical, cognitive, or emotional/psychological components of the pain-related disability in that there is either a marked/substantial or moderate/nontrivial inconsistency/discrepancy between such reports and any of the following:

(d1) Known patterns of brain function. (Inconsistency #16)

(d2) Known patterns of physiological function. (Inconsistency #17)

(d3i) Information reported in reliable documents, such as by primary care physicians and other mental health professionals, about background history. (Inconsistency #18, first example)

(d3ii) Information reported in reliable documents, such as by primary care physicians and other mental health professionals, about behavior/symptoms/complaints/limitations/functions.

(e) Inconsistencies/Discrepancies in Conjunction with Documentation (other than with testing, self-report, observations, and collateral information)
Evidence that the evaluee's documented behaviors, symptoms, complaints, or limitations and functions related to pain and related disorder/dysfunction are clearly consistent with exaggeration or feigning of physical, cognitive, or emotional/psychological components of the pain-related disability in that there is either a marked/substantial or moderate/nontrivial inconsistency/discrepancy between such documentation and any of the following:

(e1) Known patterns of brain function. (Inconsistency #19)

(e2) Known patterns of physiological function. (Inconsistency #20)

(f) Inconsistencies/Discrepancies Within Major Data Sources (not between them which are scored above)

(f1) Known patterns of brain function. (Inconsistency #21)

(f2) Known patterns of physiological function. (Inconsistency #22)

(f3) Self-report. (Inconsistency #23)

(f3i) Self-report of background history. (Inconsistency #23, first example)

(continued)

(continued)

(f3ii) Self-report of behavior/symptoms/complaints/limitations/functions.

(f4) Observed behavior/symptoms/complaints/limitations/functions. (Inconsistency #24)

(f4i) Observed behavior/symptoms/complaints/limitations/functions while unaware of being observed. (Inconsistency #24, first example) [Compelling self-presentation inconsistency/discrepancy. Compelling self-presentation inconsistencies/discrepancies occur when the difference in the way a evaluee presents verbally and/or nonverbally when being evaluated compared with when not aware of being evaluated is marked/substantial or moderate/nontrivial and such that it is not reasonable to believe the evaluee is not purposely controlling the difference and other explanations do not readily apply.]

(f4ii) Observed behavior/symptoms/complaints/limitations/functions while aware of being observed.

(f5) Information reported by reliable informants/collaterals. (Inconsistency #25)

(f5i) Information reported by reliable informants/collaterals, such as primary care physicians and spouses, about background history. (Inconsistency #25, first example)

(f5ii) Information reported by reliable informants/collaterals, such as primary care physicians and spouses, about behavior/symptoms/complaints/limitations/functions.

(f6) Information reported in reliable documents. (Inconsistency #26)

(f6i) Information reported in reliable documents, such as by primary care physicians and other mental health professionals, about background history. (Inconsistency #26, first example)

(f6ii) Information reported in reliable documents, such as primary care physicians and other mental health professionals, about behavior/symptoms/complaints/limitations/functions.

(g) Other, Miscellaneous Inconsistencies/Discrepancies (e.g., there is evidence of no material causation for alleged psychological/psychiatric effects of event at claim)
[Self-reported symptoms are clearly discrepant with claimed causal factors, such as an index event. There are marked/substantial or moderate/nontrivial multiple pre-existing and concurrent, but incidental, extraneous factors, reliably ascertained, that can clearly account for the evaluee's presentation pertaining to the diagnosis and disorder/disability at issue much more than an event at claim or even fully, but the evaluee keeps insisting that the event at claim explains all of or a good portion of the sequelae to the event in his/her presentation. Arguments of this nature must be made clearly by the evaluator, given the confounding counter-arguments possible.]

(continued)

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(g1) No causality attributable to the event at claim, despite the evaluee's insistence. (Inconsistency #27)
(g2) Only minimal causality attributable, and out of the material range, despite the evaluee's insistence. (Inconsistency #28)
(g3) Material-level causality attributable to the event at claim, but not to the degree insisted by the evaluee (Inconsistency #29)
(g4) Other (Inconsistency #30)

B. Different Degrees of Certainty of Response Bias, According to Inconsistencies/Discrepancies

(B1) Definite Malingering.

(i) One extremely compelling inconsistency/discrepancy that takes the form of (a) outright admission, (b) incontrovertible evidence on videographic surveillance, such as working after denial that it is taking place, or (c) or reliable collateral information in these regards. Other compelling inconsistencies of a less red-handed, extreme nature require three pieces of evidence for consideration at this level.

Or,

(ii) The evidence is incontrovertible when all the data gathered are considered. Three or more marked/substantial inconsistencies/discrepancies from items a–g above,

Or,

(iii)

(a) One marked/substantial inconsistency/discrepancy from items a–g, and
(b) Performance on four (not five) well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced choice measures, is consistent with exaggeration of diminished functional psychiatric/psychological capacity.

Or,

(iv)

(a) Two marked/substantial inconsistencies/discrepancies from items a–g, and
(b) Performance on three (not five) well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced-choice measures, is consistent with exaggeration of diminished functional psychiatric/psychological capacity.

(continued)

(continued)

(B2) Definite negative response bias.

(i) Two marked/substantial inconsistencies/discrepancies from items a–g,

Or,

(ii)

(a) One marked/substantial inconsistency/discrepancies from items a–g, and

(b) Performance on three (not four) well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced choice measures, is consistent with exaggeration of diminished functional psychiatric/psychological capacity.

(B3) Probable negative response bias.

(i) One marked/substantial inconsistency/discrepancy from items a–g,

Or,

(ii)

(a) Five moderate/nontrivial inconsistencies/discrepancies from items a–g, and

(b) Performance on two (not three) well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced choice measures, is consistent with exaggeration of diminished functional psychiatric/psychological capacity.

(B3-4) Intermediate (Probable to possible, gray zone) negative response bias.

The data meet the requirements for classification of possible negative response bias but not the classification of probable negative response bias. Nevertheless, there are supplementary data available about the evaluee that raises the rating. For inconsistencies/discrepancies that have not been considered elsewhere in the system rating as marked/substantial or moderate/nontrivial, this could refer to:

(i) Inconsistencies/discrepancies are reliably found in other assessments, such as different specialists in a multidisciplinary assessment of the evaluee that address pertinent mental health issues.

Or,

(continued)

(continued)

(ii) There is clear evidence of or other confounding factors that might cast doubt on the validity of either the evaluee's presentation on performance validity, although this would have to be clearly documented. In this regard, the evaluee would have to show five or more of the following 15 factors, as supported by clear evidence (five of these are needed because often they are hard to determine, so that even with some evidence in their support, five is considered the minimum needed to use this option in the present scoring system).

That being said, when one to four of these criteria are evident instead of five or more, and so they cannot be used as part of the data for rating Probable Response Bias, as per the above, the evaluator should use these as part of the ratings for Possible Negative Response bias, as per below, including them with the other inconsistencies/discrepancies in items a–g therein. Also, if the rating of Probable Negative Response Bias is almost attained but one or more moderate/nontrivial inconsistencies/discrepancies from items a–g are lacking, the ones from this list for Intermediate Negative Response Bias can be used.

(a) Personality disorder of a problematic nature, e.g., (i) antisocial personality disorder according to the DSM, or (ii) features of/subsyndromal expressions of one, or (iii) confrontational/uncooperative, resisting/refusing, without clear signs that the behavior is related to the claimed injury or other conditions, such as schizophrenia, etc.
(b) Blaming everyone and anything, overly suspicious, etc., without clear signs that the behavior is related to the claimed injury or other conditions such as schizophrenia, etc.
(c) Not trying to mitigate loss; not being active in recommended therapy; not being a compliant patient adhering to treatment regimens, etc.
(d) Unduly adopting the sick role, accepting overly solicitious behavior, etc.
(e) Somatization effects not related to the influences of the claimed psychiatric/psychological injury.
(f) Failure to treat substance abuse impeding progress, whether pre-event or post-event related, including of abuse of prescribed event-related medications.
(g) Failure to take recommended medications, such as anti-depressants or needed pain medications, if applicable, for invalid medical reasons.
(h) Refusing a work-hardening trial, refusing modified duties, refusing training for new work within residual capacities and transferable skills, etc., as long as these options are psychiatrically/psychologically (and medically) indicated.
(i) Catastrophizing/crying out for help at a level clearly beyond the nature of the injuries, even after education about it (if not used elsewhere).
(j) Any other confound that is documentable, such as attorney or similar coaching.

(continued)

(continued)

As well, five factors derived from the pre-event background are considered as possible confounding factors that might cast doubt on the validity of the evaluee, although resilience to these stressors should be considered in balance:

(k) Psychiatric/self harm/substance abuse history.
(l) Criminal/legal/problematic military history; history of deceit/fraud.
(m) History of irregularity in/dissatisfaction with work or other role at issue.
(n) History of irregularity in/dissatisfaction with family, partners, friends, social life.
(o) History of financial stresses/bankruptcies/unsupported claims.

(B4) Possible negative response bias.

(i) Four moderate, non-trivial inconsistencies/discrepancies from items a–g,

Or,

(ii)

(a) Three moderate, nontrivial inconsistencies/discrepancies from items a–g, and
(b) Performance on one (not two) well-validated tests designed to measure exaggeration or fabrication of psychiatric/psychological (e.g., cognitive or perceptual) symptoms, including forced-choice measures, is consistent with exaggeration of diminished functional psychiatric/psychological capacity.

(B5) Minimal negative response bias.

(i) Two moderate, nontrivial inconsistencies/discrepancies from items a–g,

Or,

(ii)

(a) One moderate, nontrivial inconsistency/discrepancy from items a–g, and
(b) Just-below cut score performance on one (not two or more) well-validated tests so that performance is at most partially consistent with exaggeration of diminished functional psychiatric/psychological capacity.

(B6) No evident response bias.

Not even one moderate, nontrivial inconsistency/discrepancy from items a–g.

(continued)

(continued)

Criterion D: Behaviors meeting necessary criteria from groups B and C are not fully accounted for by psychiatric, neurologic, or developmental factors.

The behaviors meeting the above criteria represent a likely *(inferred but evident)* volitional act aimed at achieving some secondary gain and cannot be fully accounted for by other disorders that result in significantly diminished capacity to appreciate laws or mores against malingering or inability to conform behavior to such standards. The simple presence of objectively documented pathology, illness, or injury (including psychiatric illness) expressly does not preclude a diagnosis of malingering. However, the "diagnostic" system presented should be used conservatively and prudently, especially because of the harm to evaluees that can be caused by false attributions of malingering and related presentation/performance response biases. For example, the options of probable, intermediate, and possible levels of response bias expressly do not preclude validity of the evaluee's presentation, at least in part. Moreover, in arriving at conclusions about definite response bias, the evaluator is reminded (a) to evaluate the full data gathered for the evaluee and not just scores on one or more psychometric measures or computer interpretations of test results, and (b) the data must be gathered comprehensively, scientifically, and impartially. For example, an evaluee failing according to cut-off on three validity indicators might pass many more in the full battery administered and allowances could be made for these credible results, depending on other factors, such as their pattern. Importantly, attributions of overt malingering must especially take these factors and other relevant ones into account before concluding that malingering is present with incontrovertible evidence, or that other high ratings in the system are present at the level of "more likely than not" in the evaluee. That being said, when warranted, the astute evaluator can use language that clearly denies the credibility of the evaluee, even to significant degrees (despite having a lack of clear evidence about or knowledge of underlying motivation, and therefore without imputing directly motivation).

Note. This present rating system to evaluate non-credible, feigning/malingering and other response biases and presentations/performances in the psychiatric/psychological injury context is meant to be applicable to adult evaluees, in particular. It can be used with adolescents, though, but with caution, e.g., in terms of using different tests/measures/scales of validity/effort. An important general reminder is that any assessment and interpretation of instrument results need to be sensitive to relevant age, gender, cultural/minority, and related differences.

Adapted from Bianchini et al. (2005), which in turn was adapted from Slick et al. (1999)

Note for practice use of the table. The F-PR-D rating system allows for evaluation of non-credible, feigned, or malingered evaluee presentation by either psychometric testing, finding major inconsistencies/discrepancies in a evaluee's data, or both. As such, **the F-PR-D "diagnostic" system, or classificatory model, is usable by psychiatrists, psychologists, and other mental health professionals**

Also, for evaluees presenting with simultaneous neuropsychological/cognitive, pain-related, or polytrauma disorder/disability/dysfunction in conjunction with pain claims, aside from the present system, the assessor should consult the revised MND (Malingered Neurocognitive Dysfunction) and MPRD (Malingered Pain Related Disability) systems of Slick et al. (1999) and Bianchini et al. (2005), respectively. See tables on the F-NCR-D and F-PR-D systems, and the recommendations for their simultaneous use

Abbreviations. PTSD posttraumatic stress disorder, *TBI* traumatic brain injury, *TOMM* Test of Memory Malingering (Tombaugh 1996), *VSVT* Victoria Symptom Validity Test (Slick et al. 1997), *WMT* Word Memory Test (Green 2005), *VIP* Validity Indicator Profile (Frederick 1997), *MMPI* Minnesota Multiphasic Personality Inventory (Hathaway and McKinley 1943), *MMPI-2* Minnesota Multiphasic Personality Inventory, Second Edition (Butcher et al. 1989, 2001), *FBS (SVS)* Fake Bad Scale (Symptom Validity Scale) (Ben-Porath and Tellegen 2008/2011; Lees-Haley et al. 1991), *MMPI-2-RF* Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form (Ben-Porath and Tellegen 2008/2011), *r* revised (Ben-Porath and Tellegen 2008/2011), *F* Infrequency Scale (Butcher et al. 1989), *Fb* Infrequent Responses, back (Ben-Porath and Tellegen 2008/2011), *Fp* Infrequent Psychopathology Responses (Ben-Porath and Tellegen 2008/2011), *RBS* Response Bias Scale (Gervais et al. 2007), *HHI* Henry Heilbronner Index (Henry et al. 2006), *L* Uncommon Virtues, Lie scale (Bianchini et al. 2005), *K* Adjustment Validity, Correction scale (Bianchini et al. 2005), *SIRS* Structured Inventory for Reported Symptoms (Rogers et al. 1992), *SIRS-2* Structured Inventory of Reported Symptoms, Second Edition; Rogers et al. 2010), *M-FAST* Miller Forensic Assessment of Symptoms Test (Miller 2001), *DAPS* Detailed Assessment of Posttraumatic Stress (Briere 2001), *TSI-2* Trauma Symptom Inventory, Second Edition (Briere 2011), *BBHI-2* Brief Battery for Health Improvement, Second Edition (Disorbio and Bruns 2002), *RNBI* Ruff Neurobehavioral Inventory (Ruff and Hibbard 2003), *PAI* Personality Assessment Inventory (Morey 1991, 2007), *BHI-2* Battery for Health Improvement, Second Edition (Bruns and Disorbio 2003), *MENT* Morel Emotional Numbing Test (Morel 1995, 1998), *BASC-2* Behavior Assessment System for Children, Second Edition (Reynolds and Kamphaus 2004), *DSM-IV-TR* Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (American Psychiatric Association 2000)

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Part VI
Terms, Education, Study, Conclusions

Chapter 30
Glossary and Discussion of Terms

30.1 Introduction

This chapter provides definitions and discussion of some key terms in the monograph. In particular, it clarifies terms for the book's penultimate contribution, the diagnostic systems presented in Chap. 5 for malingered and related response biases in PTSD (posttraumatic stress disorder), pain, and TBI (traumatic brain injury) presentations and performances. In addition, the glossary focuses on causality because of the complexity of the topic. Several recent sources were consulted for definitions, in particular, and I quote from them when necessary (Cohen and Swerdlik 2010; Drogin et al. 2011; Garner 2009; Melton et al. 2007; Kane and Dvoskin 2011; Mish 2003; VandenBos 2007; Young and Shore 2007). Note that I try to avoid presenting terms that have been defined/discussed in other chapters.

Legal Glossary

Admissibility (according to *Daubert*) Prior to the SCOTUS decision of *Daubert* (1993), the most common legal standard for admissibility of evidence related to *Frye* (1923), which addressed the general acceptance of the methods and procedures used in the professional community at issue. *Daubert* altered the scientific criteria that trial judges needed to consider and, moreover, emphasized their role as gatekeepers of the evidence. The criteria included whether the proffered scientific evidence: (a) is testable (falsifiable) and has been tested; (b) … has been published and, if so, whether by peer review; (c) … is generally accepted within the appropriate scientific community; (d) …has a known error rate; and the criterion asks whether there is a probability that using the methodology/procedure will result in an error. Despite these criteria, the courts remain uncertain of how to carefully evaluate scientific evidence. The court did not provide guidelines for trial judges to use in determining admissibility of scientific evidence. How many criteria need to be met

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for evidence to be considered admissible? How should they be weighted in arriving at decisions? Moreover, *Daubert* scientific standards apply with difficulty to clinical testimony, which is often the type of the evidence that is furnished by psychologists to court. It is "difficult to nearly impossible" to use some *Daubert* criteria with respect to clinical testimony (Krauss and Sales 2003). *Daubert* also leaves each judge to identify the relevant criteria in a specific case, adding to the ambiguity in the application of *Daubert* to psychiatric/psychological testimony (Young and Shore 2007).

Admissible evidence Evidence relevant to the case at hand that is not prejudicial in an unfair manner; rather, it is probative or helpful. It should not be based on hearsay. It should not be considered legally privileged in nature (Garner 2009).

Adversarial system A procedural system in which all parties in a legal case have an opportunity to present their views and cross-examine opposing views in front of a tribunal that decides on the matter, without conducting an investigation into the facts (Melton et al. 2007).

Attorney coaching Legal representatives either explain directly how to present and perform in evaluations, or provide material to learn, which might even be posted on a firm's website. To be fair, coaching works both ways – defense attorneys might "train" or entrain third parties and also senior third party executives might train or entrain not only claims adjusters/adjudicators how to handle cases to their advantage but also independent medical examination (IME) evaluators.

Bias As implied above, bias, in general, could be rampant in the system on all sides. Typically, this refers to evaluee bias, such as response bias in testing, but also it could refer to the adversarial divide in which workers must navigate, including evaluators, and to the specific types of biases that might influence them, such as confirmatory bias.

Burden of proof Bearing the responsibility of "proving" a fact/facts in dispute, consisting both of "burden of production" and "burden of persuasion" (Melton et al. 2007).

Bystander proximity rule The courts used to consider only physical injury as tortious, but this gradually expanded to emotional injury and, moreover, the injury needed not be directly experienced. Therefore, a plaintiff could claim for psychological "damage" for having observed someone with whom he/she had a relationship suffer a physical injury as a result of an event at claim, even though the person making the claim as a "bystander" had not suffered a physical injury and was not him/herself within the putative zone of danger (Kane and Dvoskin 2011; Young and Shore 2007).

Causality The principle of causal relation; the relationship between cause and effect (Garner 2009, p. 249). Garner noted the equivalence of the term "causation" and "causality." Mish (2003; Merriam-Webster's dictionary) added two elements: (a) causality refers to a causal quality or agency and (b) it concerns not only the

relation between a cause and its effect but also between regularly correlated events or phenomena (p. 196). The first aspect refers to the philosophical concept of causality. The second refers to the standard concept of relation, but adds that it might involve observed correlations or associations (Young and Shore 2007). Garner (2009) added a legal argument that causality involves the legal "foreseeability" test. Pearl (2009) noted that although the concept of causality is fundamental to human thought, it is embedded in mystery and controversy, given the difficulty in establishing when agents genuinely causes effects.

Causation Garner noted that causation refers to causality and defined it as the causing or producing of an effect (Garner 2009). I add that the effect must be produced by an agent, act, or process. Generally, causation refers to anything that contributes to a given outcome (Garner 1995). Garner (2009) noted that causation refers to all the factors that contribute to an effect but, from a legal standpoint, what matters is liability, or whether an individual's actions had played a role in eliciting an actionable outcome. Romano (1999) noted that the negligence involved might be errors of omission and not commission, or inactions instead of actions. The causative source needs to be the proximate or dominant one legally, or at least contributory, substantive, or material, and not tangential or "de minimus." Tellingly, Romano (1999) maintained that "[c]ausation is an intricate part of virtually every case a trial advocate or litigation specialist will ever handle …" (p. 101). In other words, the issue of causality is at the heart of every psychiatric/psychological injury case and it is indispensable to understand the vagaries and controversies involved [see Young and Shore (2007)].

-general causation Refers to whether the event at claim is capable of inducing the alleged harm (Young and Shore 2007).

-proximate causation The "essential" or "dominant and responsible" cause that "necessarily" sets any others in operation, resulting in a natural, continuous sequence that is not intervened with or broken in the chain; so that any other cause, if present, does not supersede or replace the index one (Young and Shore 2007).

-specific causation The event at issue had "actually caused" the alleged harm (Young and Shore 2007).

-but-for cause A necessary cause, without which the event at issue could not have occurred (Garner 2009). A condition would not have existed "but for" the occurrence of the index event (Cocchiarella and Lord 2001). Other terms: *actual cause; cause in fact; factual cause* (Garner 2009). If it can be determined that, "on a balance of probabilities," the harm at claim would not have occurred "*but for*" the negligence of the defending party, this is sufficient to establish causation (Douglas et al. 1999).

-material cause Material cause can refer either to the sole legal or legitimate cause of an event at claim or a factor that is part of it (a contribution). In either case, material causes constitute causal factors that are necessary and sufficient. The material argument in adjudicating a case at hand might be more relevant to it than the "but-for" test (Douglas et al. 1999).

-proximate cause Young and Shore (2007) asked the following questions about proximate cause, which inevitably resembles the terms of proximate causality/causation. Is there an act of omission or commission that led to the event at claim? Does the act result in an injury (physical, psychological, both)? Is there a sequence of events involved in the causal analysis and, if so, is it interrupted; if not, which event is the dominant one, or primary, producing, moving, substantial one, or considered to have directly precipitated the injury more than the others, being so closely connected to it that, without it, the injury would not have occurred? Does the act at issue meet legal, compensable thresholds? The court requires that a proximate cause is not too "remote" or removed from the effect at issue, or speculative, or, if it is, liability will be denied (Solomon et al. 1996; Slovenko 2003; Wecht 1995). Also referred to as *direct cause; direct and proximate cause; efficient proximate cause; efficient cause; efficient adequate cause; first cause; initial cause; legal cause; producing cause; primary cause; jural cause* (Garner 2009). According to Garner (1995), the term has become "indispensable," but the confusion about the term has led it to lose respect (Young and Shore 2007).

-Hill's causation criteria In epidemiology: (1) association strength (2) temporality (3) consistency in the research (4) biological gradient (5) experimental evidence (6) biologic mechanism plausible (7) evidence coherent (8) analogy to a similar effect produced by a similar agent (9) outcome specificity. These criteria fail to provide a framework that examines the multifactorial, interactive, or synergistic nature of injury and disease (Cocchiarella and Lord 2001).

Cause of action A legal claim (Melton et al. 2007).

Compensation A legally determined payment of damages, or of other means of helping injured parties return toward their pre-event condition or otherwise make them "whole" (Garner 2009).

Compensation neurosis A complainant becomes "cured" of psychological symptoms once litigation ends (adapted from Kane and Dvoskin 2011).

Complaint An initiatory pleading of the general alleged fact, in which the plaintiff in a civil case or law suit, such as a tort claim, presents allegations against the defendant of the causal action (Melton et al. 2007; Young and Shore 2007).

Crumbling skull case According to Young and Shore (2007), in Canadian law and in at least one American state, "crumbling skull" cases refer to cases with preexisting vulnerabilities that leave no room for additional effects of any sort due to an event in question (Douglas et al. 1999). However, the symptoms might be serious but still worsened or aggravated by an event at issue, or, new symptoms/disorders/diagnoses might arise that are different from those pre-existing. The "thin-skull" case involves lesser pre-existing vulnerabilities that do not cast doubt on causality. These doctrines reflect the principle that the plaintiff/victim/survivor should be returned to the position in which he or she would have been had the event at claim not occurred (Douglas et al. 1999). In crumbling skull cases, the defendant is liable for all losses stemming from the event at issue, but not any that place the plaintiff/victim/survivor

in a position better than the pre-event one; i.e., loss determination takes into account any preexisting problems that had been evident (Bogoroch and Chandler 2002).

Damage Legally, damage involves penalties, including monetarily, for a loss or impairment suffered by an individual as a direct result of a tortious act. Damage could include special damage, e.g., to pay for any psychotherapy needed. Psychologically, damages refer to the nature of the harm, impairment or loss created by the event at claim (Drogin et al. 2011; Kane and Dvoskin 2011; Slovenko 2003). Therefore, it can be noted that after an event at claim the more the mental health damages, the more the legal damage sought. This opposition in wording differs from the equivalent wording related to recovery, for which it can be noted that the more the psychological recovery, the *less* the financial and related recovery (Young and Shore 2007). Types of financial damage include past and future loss of earning capacity, medical and other care costs, and pain and suffering (Douglas et al. 1999). Geistfeld (2001) noted that causal issues in the damage context might be subject to less demanding standards of proof than those required for causal issues concerning liability.

Defendant The alleged tortfeasor (wrongdoer) in a tort action against whom the action is brought (Melton et al. 2007).

Disability The psychological definition of disability is presented in Chap. 11. Legally, Drogin et al. (2011) noted that disability refers to a lack of a legally-defined capacity that has resulted from a specified mental condition.

Eggshell client *See Thin Skull case.*

Evidence Information (items such as testimony, documents, exhibits, and tangible objects) submitted to court in support of legal arguments (Garner 2009). Generally, hearsay evidence is judged inadmissible, but it might be admitted if it is "reasonably relied upon" by experts in the field at issue as they form opinions or inferences (Federal Rule of Evidence, 703) (The Committee on the Judiciary 2011; Young and Shore 2007).

Expert witness A witness, by virtue of acquired knowledge, skill, education, training, or experience, can provide special assistance to the trier of fact or fact finder, and is allowed to offer opinions before the court (Drogin et al. 2011). A specialized or professional degree does not in and of itself confer expert status, but having the appropriate scientific, technical, or other specialized knowledge will. The testimony should be based upon sufficient facts or data that result from reliable application of reliable principles and methods to the facts of the case (Federal Rule of Evidence 702; The Committee on the Judiciary 2011). Generally, a fact or lay witness is not permitted to offer opinions about evidence proffered to court (Melton et al. 2007).

Falsifiability From *Daubert* (1993). Also called Testability. Refers to whether assertions can be subject to tests that could support or refute them as "true" (Kane and Dvoskin 2011).

Fit Fit refers to the degree to which expert testimony relates scientific evidence to the facts in a case in a way that helps the trier of fact in decision-making. Fitness

addresses the helpfulness standard, or the degree to which evidence addresses in a reliable way the legal question at hand, or is valid for that purpose (Krauss and Sales 2003).

Fitness for duty It refers to the capability to engage safely and effectively in a particular line of work or role (Drogin et al. 2011). Fitness for duty evaluations require the same prudence as forensic disability ones, e.g., in tort action.

Forensic psychiatry/psychology The application of psychiatric/psychological principles and techniques to legal situations (criminal, civil) for provision of expert professional services toward possible adjudication in court or related venues (e.g., concerning assessment of abnormal behavior and mental disorders as they relate to legal issues, testimony hearings, trials, and consulting for court) (after VandenBos 2013; Varela and Conroy 2012).

Foreseeability test An action at issue might be determined as negligent only when the negligent individual should have anticipated the injurious consequences (Reid 1999).

Gatekeeping controls Trial judges have been instructed by *Daubert* (1993) to refuse admissibility to unqualified experts or those who might base testimony on poor or "junk" science (irrelevant or inadequate evidence). There are also "corresponding *psychological gatekeeping controls* articulated in psychology's ethical principles … and forensic guidelines" (Weissman and DeBow 2003, p. 47; Young and Shore 2007).

General acceptance According to *Frye* (1923), and equivalently adopted in *Daubert* (1993), general acceptance refers to whether a test or procedure involved in expert testimony has gained in the field at issue a status as a widely acknowledged part of/reputation as being part of/contributing to the field. [Garner's (2009) definition is circular, so I tried to find non-circular terms.]

Idiographic evidence Data gathered on an individual evaluee for the case at hand.

Impact rule The event in question has led to an actionable, compensable physical injury.

Impairment Legally, impairment refers to a state of diminished mental capacity (Drogin et al. 2011; see Chap. 11 for the psychological definition).

Junk science The theory, concepts, definitions, research designs, operations, procedures, methods, measures, instruments used, statistics, resulting data, and/or conclusions deriving from the theory, research, or methods/operations are poor/invalid, for example, with respect to the *Daubert* (1993) criteria and, therefore, not worthy of admissibility in court relative to the canons and expectations of good or valid science, thereby compromising the relevance, reliability, fit, and helpfulness requirements of the testimony on which it is based.

Liability The liable person for whom the burden of proof has been ascertained in a civil proceeding, and, therefore, who is in a legal obligation, accountability, or

responsibility, to pay compensation to the injured party in claim, often through a third party. Joint liability reflects joint responsibility in this regard, by two or more individuals or entities.

Litigation A lawsuit (Melton et al. 2007).

Mitigation-of-damages doctrine Tort action usually is undertaken after the complainant has had enough time to attempt to alleviate her or his post-event condition by appropriate remedial intervention, taking reasonable steps to alleviate the effects that had ensued or to avoid aggravating the injury and thereby increasing damages/damage. When complainants fail to reasonably attempt to mitigate losses, damage might be reduced (Garner 2009) or denied (Young and Shore 2007).

Negligence When the tortfeasor or negligent party, through either action or inaction, as the case may be, fails to exercise the degree of diligence and care that a reasonably and ordinarily prudent person would exercise under the same or similar circumstances, the negligence becomes the basis for a legal suit due to the breach of a legal duty that had proximately caused the injury at issue, for which the law recognizes as meriting compensation and for which the unreasonable risk and effects should have been foreseen (Douglas et al. 1999; Koocher 1998; Young and Shore 2007).

Nomothetic (group) evidence Data obtained through the research investigation of groups similar to the population to which the evaluee belongs. Data such as this would not be more applicable to a particular individual than to any other member of the group in the research undertaken (Kane and Dvoskin 2011).

Opinion testimony Testimony about what the witness infers from the facts in dispute in a case, which is distinct from personal knowledge of the facts themselves. Generally, only an expert witness may offer an opinion in court (Melton et al. 2007).

Pain and suffering An important component of a tort action; it is capped in jurisdictions in Canada but not necessarily in the United States. Element of 'compensatory' nonpecuniary damages sought for the mental harm and/or physical pain endured by the complainant stemming from injury for which this party seeks compensation (Koocher 1998; Young and Shore 2007).

Peer review A process by which editors/granting agencies seek knowledgeable/expert professionals to critically review submitted work (e.g., articles, chapters, books; grant applications) by an author or authors to determine its publishability. Journals, book publishers, granting agencies, etc., vary in the number of reviewers for any one submission and the overall rejection/acceptance rate. Authors might resubmit, making recommended corrections or explaining why they are not doing so. Publication might proceed without typical peer review, e.g., by having authors make the best case possible in preparation for a response-rebuttal format. Even with peer review, there is no guarantee of increased validity or trustworthiness (Kane and Dvoskin 2011). However, I would add that without it or its equivalent, junk or poor science would enter the research and legal arenas at an unprecedented rate.

Reviewers should be independent to the degree possible and, as with authors, disclose any conflict of interest. There is a movement afoot to avoid blind reviews and publish with commentary/criticism invited on publications after they appear online. Also, journals are moving to open access format, having scientists pay for the publication costs with monies received for such purposes in grant applications, etc., so the field is in great flux. Part of the issues relates to the increased detection of scientific fraud and retraction of the research involved, although this happens more in the medical field. The court, in its gatekeeping Daubertian function, remains the last bar to in admissibility of poor or junk compared to good science in court, taking precedence over peer review.

Personal injury See *Tort*.

Plaintiff In civil cases, the person who initiates the litigation or court action by filing a complaint in order to seek redress/damage, monetary or otherwise, for an alleged harm.

Preexisting condition The presence of a physical or mental disorder/dysfunction or other vulnerability to harm that existed prior to the onset of the injury at issue in the event at claim.

Prejudicial A biased judgment having no factual justification (Garner 2009).

Preponderance of evidence In civil cases, the standard of proof requires sufficient evidence to show that a given proposition is more likely or probable than not, or proven to an extent that is even slightly more convincing than the contrary proposition, i.e., greater than 50 %, without having to show that the evidence is an overwhelming likelihood or scientifically certain (Drogin et al. 2011; Melton et al. 2007; Young and Shore 2007). The evidence should be convincing, credible, and reasonable, outweighing the evidence against it by being the majority of the evidence. For an expert's opinion to be admissible, the expert needs to demonstrate that the opinion proffered is supported by a preponderance of the evidence that the expert has considered and relied upon (Greenberg 2003). The credibility and probative value of an expert's testimony are abetted further when the expert identifies and discusses alternative hypotheses for one's data with well-reasoned bases defending the preferred opinion proffered (Weissman and DeBow 2003).

Probative A helpful judgment that has factual justification, does not have elements that are preconceived, and is not prejudicial (Garner 2009).

Relevance Concerns evidence having sufficient applicability and utility for the task of the trier of fact to evaluate the facts or assertions made in the context of legal proceedings, toward resolving the legal question.

Reliability Relates to the value of the scientific standards, methods, and reasoning used in testimony for court, whether they are scientifically valid, grounded, and not speculative, and can be properly applied to the facts at issue. According to *Daubert* (1993; footnote 9), whereas scientists "distinguish between 'validity'… and 'reliability'…. our reference here is to evidentiary reliability — that is,

trustworthiness." The equivalent concept of legal "reliability" in psychology is "validity," and not "reliability" (which refers to consistency), thereby constituting a contrast in terminology that can be confusing (Young and Shore 2007, p. 103). In admissibility challenges, the judge must determine evidentiary reliability and then relevance (Krauss and Sales 2003).

Settlement Agreement made between the parties to a lawsuit, resolving the dispute at issue (Koocher 1998).

Symptom Validity Test (SVT) Psychological instruments that help determine the degree to which an evaluee's performance or test responses are valid, usually by comparing the test results with the results of normative testees known to have a specific disorder, e.g., traumatic brain injury (TBI). Other SVTs use a forced-choice testing procedure whereby evaluees who score significantly below chance (i.e., below 50 % when there are two alternative choices) are considered to be have malingered, everything else being equal or ruled out (e.g., poor reading comprehension, culturally inappropriate tests, fatigue, disinterest in the task, or headaches or other problems that interfere with performance) (Kane and Dvoskin 2011).

Testimony Evidence given by a witness when under oath or sworn, compared to written or other tangible evidence (Melton et al. 2007), e.g., at trial, in an affidavit, or in a deposition, by a witness deemed competent (Garner 2009).

Theory of the case A theory proposed as the cause of a complainant's injuries, either by plaintiff or defense; usually, it simplifies the typical multiple causes involved to – either the index event and its consequences or an absence of any liable cause (Young and Shore 2007).

Thin skull The event at issue and its subsequent effects/injuries occurred in a complainant not fully healthy previously in that it worsened or complicated a preexisting condition or released/activated a vulnerable, latent one, resulting in unforeseeable, uncommon, and unexpectedly or dramatically severe symptoms. "Thin skull" cases do not reduce liability, at least in jurisdictions where the principle is upheld; a thin skull case might increase overall cost relative to a "normal skull" case, given the need for extra treatment, the augmented degree of disability, etc. The underlying principle is that the defendant must take the complainant/victim/survivor as she or he had been before the causal event in question, or as "found." The distinction between thin and crumbling (or more serious) skulls (or personalities, psyches, e.g., eggshells) is becoming obscured in the primary jurisdiction where it is in effect, Canada (Young and Shore 2007).

Third party An entity – other than the object of civil proceedings or the one being sued – with some relevant relationship to the legal matter in court or a related venue; for example, an insurer that might be financially liable for the negligent action and its consequences that are at issue (Drogin et al. 2011).

Tort A civil wrong or action/inaction, intentional or otherwise negligent, which caused harm to another person and in which the tortfeasor had breached a duty to the person, to whom a legal duty was owed, and by which through the proximate

cause of action or contribution to causality that was induced, the harm that resulted was sufficiently serious to be compensable (Young and Shore 2007). (Old French: harm, wrong; from Latin *tortus*, twisted or crooked, Greenberg 2003.)

Tortfeasor The person who commits a tort (Kane and Dvoskin 2011).

Trier of fact Judge or jury in a case, or administrative-law judges in a hearing, whose responsibility is to determine whether certain events or situations occurred or existed at a given time by hearing testimony and reviewing evidence, to rule on the factual question at issue, which is distinct from determining whether applicable legal standards have been met (Drogin et al. 2011; Young and Shore 2007). Also termed *Fact-finder* (Garner 2009).

Ultimate issue The actual legal matter or question that a court/trier of fact is addressing; some jurisdictions maintain that expert witnesses should not be allowed to address directly the question of ultimate issue but, for mental health testimony, the ultimate issues that arise are usually eligible for proffering opinions. Nevertheless, the general principle is that experts should provide opinion on such matters only when allowed by the law for the particular case at hand, and only after weighing all the evidence (Drogin et al. 2011; Young and Shore 2007).

Mental Health Glossary

Actuarial prediction The prediction of behavior based on the application of empirically-demonstrated statistical rules and probabilities; in contrast to clinical prediction and mechanical prediction (Cohen and Swerdlik 2010).

Base rate An index, such as the frequency (relative to the relevant population amount or a proportion) of the extent to which a particular trait, behavior, characteristic, or attribute exists in the population at issue in a specified time frame (Cohen and Swerdlik 2010).

Below-chance performance On a two-alternative forced-choice testing procedure, performance below 50 %, as statistically determined. If there are more than two choices, Bayesian probabilities also are used to determine performance below threshold ($p = 0.05$).

Biopsychosocial model A systematic and simultaneous interaction or integration of biological psychological, and social factors in the study of mental health and specific mental disorders (VandenBos 2013). In the forensic context, the model is referred to as the biopsychosocial-forensic model (e.g., Young et al. 2007).

Chronic pain Chronic pain persists, because pain signals keep firing beyond the expected recovery time for the injury sustained in the initial mishap; or, some people experience chronic pain in the absence of any past injury or evidence of body damage (Drogin et al. 2011).

Conscious The content of mind of which the person is aware (Melton et al. 2007).

Construct validity An evaluation about the appropriateness of inferences drawn from test scores regarding an evaluee's standings on a variable termed a construct, or the central concept underlying the test's goals (Cohen and Swerdlik 2010).

Contaminate Corrupt, taint (Mish 2003).

Content validity An evaluation regarding how adequately a test/measure samples behavior considered representative of the total behavior that it was designed to sample (Cohen and Swerdlik 2010).

Credible Offering reasonable grounds for being believed (Mish 2003).

Cut score Also referred to as a *cut-off* or *cutting* score. A reference point (usually numerical), usually derived by judgment, used to divide a set of data into two or more classifications/categories, and allowing some action to be taken or some inference to be made on its basis (Cohen and Swerdlik 2010).

Cry for help Originally, cry for help referred to exaggerating/feigning psychiatric symptoms on the personality inventories, the MMPIs (MMPI-2; Minnesota Multiphasic Personality Inventory, Second Edition; Butcher et al. 1989, 2001; and MMPI-2-RF; Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form; Ben-Porath and Tellegen 2008/2011), for reasons other than apparent secondary gain. But in the forensic disability context, it came to refer to patients engaging in this dramatizing behavior in order to ensure that their complaints are "appreciated" by the evaluating professional (Boone 2013). Corsini (2002) refers to crying for help as behavior that could be unconscious for secondary gain. In this volume, rather than considering it conscious feigning for secondary gain in the forensic disability or related litigation context expressed to the evaluating or treating professional, third party system/other relevant organizational entity, or court or related venue, I consider it as an unconscious act of desperation, feeling helpless, catastrophizing, and thinking the worst, leading to symptom exaggeration or creation (unconsciously produced in full by somatization or a related process).

Disability See Chap. 11. An enduring physical or mental impairment that noticeably interferes with function in core areas of life, such as self-care, mobility, communication, social interaction, sexual activity, studying, parenting, or employment (Young and Shore 2007).

Dysfunction Any impairment, disturbance, or deficiency in behavior or functioning (VandenBos 2007).

Etiology Causation/cause/causality/origin, particularly with reference to disease/disorder.

Effort Estimate of the extent the evaluee tries best on a task at hand. Effort that is less than optimal might be considered sub-optimal, poor, etc. However, recent conceptualization refers to invalid or problematic performance rather than effort, per se, because the term is more objective. In this regard, I have referred to performance

and presentation together, because invalidity might be evident in evaluations in which testing was not used, or is inappropriate to use, and presentation might provide the clues needed for attributing problematic evaluee behavior.

Exaggeration Genuine symptoms or impairments caused by the injury at claim are present, but the patient represents them to be worse than they truly are (Drogin et al. 2011), embellishing or overstating (VandenBos 2007), thereby enlarging beyond bounds the truth (Mish 2003).

External validity Results of a study can be generalized to the real world (Melton et al. 2007).

Fabricate To make up, to represent, or to invent in a wholesale way, for purposes of deception (Drogin et al. 2011; Mish 2003). Symptoms fabricated might be atypical, inconsistent, or bizarre. Or, the symptoms might be exact copies of descriptions of "accepted" symptoms (Drogin et al. 2011).

Face validity Whether a test/measure makes sense, or measures what it is supposed to in terms of "appearances," or looking good, such as in item content, to test takers/untrained personnel, etc., as opposed to test constructors/experts (Cohen and Swerdlik 2010; Groth-Marnat 2009).

False negative An erroneous opinion of the presence of normal behavior when a mental disorder is actually present (Melton et al. 2007).

False-negative rate The proportion of cases in which a diagnostic test/measure indicates an absence of an illness/disease for an ill-/diseased patient (Drogin et al. 2011).

False positive An erroneous, inaccurate diagnosis, e.g., of mental illness (Melton et al. 2007).

False-positive rate The proportion of cases in which a diagnostic test/measure indicates the presence of an illness/disease for a patient without the illness/disease (Drogin et al. 2011).

Feign To give a false appearance of, induce a false impression of (Mish 2003).

Forced-choice test A test/measure that provides options for response after presentation of stimuli.

Functional limitation Limits in the ability to perform/undertake basic activities of daily living.

Gray zone Indeterminate, intermediate, ambiguous.

Hit rate The proportion of accurate positives and negatives.

Iatrogenic illness A disorder precipitated, aggravated, or induced by a treating professional's attitude, examination, comments, or treatment (Melton et al. 2007).

IME Refers to independent medical evaluation/examination, which are supposed to be completely objective (Drogin et al. 2011).

Impression management Attempting to manipulate the opinions and impressions of other people by selecting some information, including false information and/or suppressing other information, e.g., in responding to self-report measures; also referred to as "fake good" or "fake bad" for positive and negative impression management, respectively (Cohen and Swerdlik 2010).

Incentive An external stimulus, condition object, etc., that enhances/motivates behavior (VandenBos 2007).

Inconsistency/discrepancy Incompatible, incoherent, illogical, distorted aspects in the same information set.

Incremental validity Indicates explanatory power of additional predictors beyond predictors already used (Cohen and Swerdlik 2010).

Malingering The intentional production of false/grossly exaggerated physical/psychological symptoms, motivated by external incentives (DSM-IV-TR, Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision; American Psychiatric Association 2000).

Marked/substantial Significant, excessively notable, attention-demanding.

Misrepresent Giving a false or misleading representation of the usual, with intent to deceive or to be unfair (Mish 2003).

Miss rate The proportion of inaccurate positives and negatives.

Moderate/nontrivial Notable, but not excessively so or minimally so.

Multitrait-multimethod Using enough measures to permit evaluating construct validity by simultaneously examining both convergent and divergent data (Cohen and Swerdlik 2010).

Nonconscious Refers to anything that is not available to conscious report (VandenBos 2007).

Normative sample A group of people presumed to represent all people who might take a particular test and whose test results are used as a reference source or context for evaluating individual test results (Cohen and Swerdlik 2010).

Performance On a test/measure, the scores or results obtained.

Performance (in)validity The scores/results on a test/measure might be within the confines of normal variations in performance or too extreme relative to test standards set up for purposes of evaluating individual scores for their validity.

Persistent postconcussion syndrome (PPCS) A set of symptoms that persist (apparently unexplainably) after a concussion/mild TBI, in particular.

Preconscious Thoughts not in immediate awareness but that still might be recalled by conscious effort (Melton et al. 2007).

Premorbid functioning The person's psychological status prior to the onset of illness or disorder (and/or prior to an injury-producing event at claim) (Cohen and Swerdlik 2010).

Presentation The collective verbal and nonverbal behavior of evaluees in assessment; their evident actions, emotions, and cognitive expressions, and the personality aspects and other mental conditions that they are revealing for which attributions such as inferences about personality, disorders/dysfunctions, and truth value might be inferred, at least from this portion of the evaluation.

Psychological trauma Mental damage due to a traumatic event (Drogin et al. 2011).

Rehabilitation An integrated program of interventions, including the psychosocial, which empowers individuals presenting with disability to achieve personally fulfilling, socially meaningful, and functionally effective "participation" in daily contexts (Young and Shore 2007). Rehabilitation involves, to the fullest possible degree, restoration through redevelopment and compensation, by providing appropriate resources, treatment, and training, the individual's independence, functional activity, and well-being (VandenBos 2007).

Reliability The test/measure needs to demonstrate stability, consistency, predictability, and accuracy.

Response bias A tendency to give one response more than others regardless of differing stimulus conditions (VandenBos 2007). It could be due to careless responding, or factors that do not reflect external incentives when these are at issue. However, it could range up to malingering for financial gain. At the other extreme are nonconscious reasons for the bias, such as catastrophizing and a cry for help, assuming that everything else is considered, e.g., ruling out factitious disorder.

Response style A more general term than response bias that does not necessarily imply untoward motivations such as malingering; for example, an acquiescent response style or a socially desirable response style (Cohen and Swerdlik 2010).

Risk factor An element that is either directly or indirectly causally associated with a disease, abnormality, or dysfunction (Corsini 2002).

Secondary gain The external gain derived from any illness or injury, such as receiving personal attention and service, getting monetary gain/disability benefits, or release from unpleasant responsibilities (Melton et al. 2007). If the person is deliberately exaggerating symptoms for personal gain, malingering is attributed. However, secondary gain might rather reflect an unconscious psychological component of symptoms and disorders (Drogin et al. 2011).

Sensitivity The degree to which a test/measure can select the individuals who possess the trait or exhibit the behavior of which the test is designed to measure (Melton et al. 2007). The percentage of true positives that the test/measure has identified (Groth-Marnat 2009).

Specificity The degree to which a test/measure can select those individuals not possessing the trait or expressing the behavior that the test is designed to detect, or

the relative percentage of true negatives that the test/measure has identified (Groth-Marnat 2009; Melton et al. 2007). A test/measure might be quite sensitive, accurately identifying 90 % of the target trait/behavior/disorder. However, it may not be sufficiently specific in that, for example, 30 % of the evaluees might be incorrectly classified as either normal or having some other diagnosis (Groth-Marnat 2009; Young and Shore 2007).

Somatization The expression or displacement of psychological/psychiatric disturbance/conflict by way of physical/bodily symptoms or their exacerbation in psychophysiological/psychosomatic conditions (modified from VandenBos 2013).

Symptom A specific manifestation of an evaluee's condition indicative of an abnormal physical or mental state; a deviation from normal function in the evaluee as part of a pattern indicative of a disorder or of the need for therapy; the evaluee's subjective perception of her/his illness (Melton et al. 2007; Young and Shore 2007).

Test standardization A process of test development in which the test is administered to a representative sample of test takers, under clearly specified conditions, and the resultant data are scored and interpreted, establishing a context for testing individuals after the standardization is complete (Cohen and Swerdlik 2010).

True negative An accurate opinion that something at issue is not present or will not be present (Melton et al. 2007).

True positive An accurate opinion that something at issue is or will be present (Melton et al. 2007).

Type I error Attesting that the null hypothesis is true but, as a result of the test of significance, it is rejected, or declared false (Melton et al. 2007).

Type II error Attesting that the null hypothesis is false but, as a result of the test of significance, it is not rejected, or declared false (Melton et al. 2007).

Unconscious intention Goals/motivation structures that influence thought/behavior, but without evidence of becoming conscious/being reportable (VandenBos 2007).

Validity Accuracy, soundness, truth value, measuring what it is supposed to. The degree to which a type of measurement is related to a construct or criterion (Melton et al. 2007), or a study accurately reflects or assesses the particular concept that the researcher is attempting to investigate (Drogin et al. 2011).

Validity scale A subscale of a test/measure designed to assist in judgments regarding how honestly the test taker had responded and whether observed responses reflected cautionary response styles, carelessness, unintentional misunderstanding, or deliberate effort to feign/malinger (Cohen and Swerdlik 2010).

Vulnerability The degree to which a person is susceptible to developing a behavior disorder/dysfunction, given the occurrence of particular causal nexi that yield a relatively higher probability of developing a disorder/dysfunction when exposed to particular conditions (Haynes 1992).

30.2 Chapter Conclusion

This dictionary chapter helps review the major areas of psychological injury and law, and their relation to malingering. The major areas, as presented in the masthead of the journal *Psychological Injury and Law*, involve: law, forensics, assessment, malingering and SVTs, disability and return to work, practice affairs, PTSD, pain, TBI, rehabilitation, and general interest and controversies. Malingering is an essential axis for all these topics, as are response biases and threats to validity, in general. In typical clinical practice, malingering might not be an issue. However, in forensic disability and related evaluations concerning psychological injuries, estimates of malingering range toward 50 %. I have disputed this high estimate because of the problematic definitions used in the research arriving at it, for example, conflating even mild exaggeration with clear fabrication and gross exaggeration. However, I have also argued that this estimate does reflect general problematic, non-credible, or feigned invalid presentations and performances (effort) in evaluations in the area, so that careful consideration of the full spectrum of such difficulties is necessary in evaluations.

For results and conclusions of evaluations to meet admissibility criteria of good instead of poor or junk science for court and related venues, they must meet admissibility standards promulgated in the *Daubert* (1993) trilogy, which has augmented the general acceptance criterion in *Frye* (1923). The same applies to the procedures, methodologies, tests (e.g.; personality, embedded, stand-alone, symptom validity, validity scales; and their psychometric properties; e.g., reliability, validity, sensitivity, specificity, false and true negatives and positives information, cut scores), and arguments and standards of proof used in arriving at malingering attributions.

This area is a contested one, with no gold standard test or attribution procedure, so that in proffering opinion for court purposes and related venues, the process followed must be able to resist any challenge or cross examination. How one has integrated data from observations, interview, self-report, records, collateral information, testing, and the literature needs careful specification (e.g.; in testing, how the multitrait-multimethod approach was used; in prediction, how clinical, actuarial, and mixed methods were used). In addition, rule-out procedures must be clearly specified, including of alternative diagnoses and alternative explanations.

Causality is central to any case, and when malingering is not evident in an incontrovertible way, given that intention and incentive are difficult to determine, alternate problematic response styles and biases can be invoked, as long as careful wording is used to frame them, and causal determination is applied to the reliable (ideographic) data in the case at hand. Problematic issues in this regard might include so-called thin or crumbling skull pre-existing vulnerabilities/disorders/dysfunctions, anti-social personality, criminal record, and so on, or post-event factors, such as failure to mitigate loss, evidence of attorney coaching, etc. Nevertheless, with or without such complications, the issue of disability might have to be addressed, and this depends not on the diagnoses and disorders specified but on the functional interaction of the symptoms/impairments evident and their context, including role demands, such as at work.

In all phases of evaluation in the area, the nomothetic or research base should be considered, e.g., about definition of malingering, base rates, tests and other instruments, normative results, and the science in the area, in general. By adhering to these practices, by being impartial, comprehensive, and scientifically-informed in all phases of the evaluation process, the practitioner in the area will better ensure adherence to professional and ethical guidelines, success in any court challenges and cross examinations, and that one's practice continues and prospers.

This review of the chapter has not considered legal terms such as reliability, damage, and standard of proof. I have chosen on purpose these three terms out of the many, because they reflect difficulties in translating terms from law into psychology, and vice versa. Reliability in law means validity in science, which can be quite confusing. Damages are losses in psychology but restorative compensation in law. As for standard of proof, in civil matters, the preponderance of the evidence standard refers to a probability of above 50 % certainty. Of course, in psychology, research results are considered significant at the alpha level of 5 % (or 1 %), quite a difference. Cut scores in tests might be this low, but are generally higher and not necessarily statistically derived, further complicating the issue of probability as used for evaluation and court purposes. As is evident from these examples, having a good grounding both in science and in law is essential for work in this area, and education, training, and licensing criteria should assure that the full knowledge needed for practice in the area is acquired. This book is dedicated to that proposition. Note that the area of psychological injury and law is also briefly discussed in the next chapter. Together, these brief discussions of the area complement the longer description in Chap. 1.

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Chapter 31
Education

31.1 Introduction

This chapter presents an outline for a graduate course in the area of psychological injury and law. Also, useful in this regard the next chapter provides a compilation of study guide questions to help review and use the book. The general conclusions through the book is that both students and professionals will find it relevant to their research and evaluations in forensic disability, psychological injury, and related contexts for law, court, and related purposes.

The course syllabus also can serve for professional continuing education (CE) purposes. To date, as far as is known, there is not one such graduate course offered anywhere in the world, nor such a comprehensive CE course. If adopted by a graduate program, it could serve as the basis for a certificate to add to a clinical psychology degree, facilitating later licensing to practice professionally in the field. In addition, in terms of its value for CE purposes, it could help increase the professional education and standing of practitioners wishing to extend the scope of their practice. Even established workers might find the course valuable as an upgrade. In addition, the proposed course could address the stated need for better education both for students and professionals in the area of evaluating psychiatric disability (Anfang 2011; Christopher et al. 2011).

The suggested course proposal emphasizes underlying concepts, scientific findings, and practice implications, while promoting a balanced approach to the controversies in the field and its adversarial divide. It gives carefully delineated learning objectives that cover the major topics in the field. Before presenting the course proposal, the chapter begins with hypothetical cases that represent the type of cases likely encountered in the field, and to which instructors can refer in making their teaching points.

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Table of Terms and Sources

Abbreviation	Name	Source(s)
CVLT	California Verbal Learning Test	Delis et al. (1987)
DAPS	Detailed Assessment of Posttraumatic Stress	Briere (2001)
DSM	Diagnostic and Statistical Manual of Mental Disorders	American Psychiatric Association (2000)
DSM-IV	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition	American Psychiatric Association (1994)
DSM-IV-TR	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision	American Psychiatric Association (2000)
DSM-5	Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition	American Psychiatric Association (2013)
FBS	Symptom Validity Scale (originally called Fake Bad Scale)	Ben-Porath and Tellegen (2008/2011) and Lees-Haley et al. (1991)
ICD-10	The International Statistical Classification of Diseases and Related Health Problems, Tenth Revision	World Health Organization (2007)
MCMI-III	Millon Clinical Multiaxial Inventory, Third Edition	Millon (1994) and Millon et al. (1997)
MMPI-2	Minnesota Multiphasic Personality Inventory, Second Edition	Butcher et al. (1989, 2001)
MMPI-2-RF	Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form	Ben-Porath and Tellegen (2008/2011)
MND	Malingered Neurocognitive Dysfunction	Slick et al. (1999)
MPRD	Malingered Pain-Related Disability	Bianchini et al. (2005)
PAI	Personality Assessment Inventory	Morey (1991, 2007)
RDS	Reliable Digit Span	Babikian et al. (2006) and Greiffenstein et al. (1994)
R-PAS	Rorschach Performance Assessment System	Meyer et al. (2011)
SIRS	Structured Interview of Reported Symptoms	Rogers et al. (1992)
SIRS-2	Structured Interview of Reported Symptoms, Second Edition	Rogers et al. (2010)
TOMM	Test of Memory Malingering	Tombaugh (1996)
WMT	Word Memory Test	Green (2005)

31.2 Case Examples (Hypothetical)

Case 1 – single, Caucasian male, 20, community college student, looking forward to career in travel industry, catastrophic impairments, quadraplegic, spinal cord injury, traumatic brain injury, moderate, burns, pre-existing alcohol social drinking not a factor in motor vehicle accident, motivated to return to school, but devastated psychologically, needs extensive team rehabilitation and psychological treatment right from beginning, including cognitive rehabilitation and family counseling; a comprehensive assessment reveals few personality factors of note, no prior

psychopathology or risk factors, e.g., in the family, much psychological distress on various scales, and neuropsychological findings implicating attentional, memory, and frontal executive system deficits.

Case 2 – married, African American, 30, 2 young children, working as filing clerk, doing much lifting of boxes of files and walking around among cabinets, along with her paperwork, with ongoing company upgrade certificates available to facilitate future promotions, supervisor had been harassing her, leading to a 6-month stress leave 2 years ago, work accident, cabinet tips, crushing leg, pre-existing depressive disorder had been under control with medications, now needs increased psychiatric monitoring/medication, psychological treatment for chronic pain disorder, is in multidisciplinary pain clinic, can go back to work later on, but only on modified duties; a psychovocational assessment is indicated.

Case 3 – divorced, Asian American, 45, teenage children, construction worker, history of drug abuse, motor vehicle accident in which passenger, a close cousin, died, 1 month later, ASD (Acute Stress Disorder) and then posttraumatic stress disorder (PTSD), still in pain from whiplash, psychological treatment authorized after an independent assessment recommended 3 months maximum of treatment; after treatment plan completed where therapist used Eye Movement Desensitization and Reprocessing (EMDR), client discharged, with little progress made; he never recovers sufficiently to return to work; after 2 years, tort action undertaken by attorney for plaintiff; attorney for defendant launches *Daubert* (1993) or admissibility challenge, claiming junk science behind EMDR.

Case 4 – minor car accident where all passengers claiming serious pain, known cocaine abuser, spotty prior work record, minor injuries, the effects of which are lasting beyond normative expectations, assessment reveals antisocial personality disorder, with over-reporting of symptoms on two instruments, along with signs of malingering; no diagnosis, impairment, or disability found; attorney of complainant threatens legal action against psychologist.

31.3 Psychology Graduate Course Proposal

31.3.1 Fundamentals of Psychological Injury and Law

Purpose. The primary aim of this half-course is to provide the theoretical/conceptual foundation of the area of psychological injury, which deals with rehabilitation of injuries [e.g., PTSD, chronic pain, TBI (traumatic brain injury)] in relation to court and related venues (e.g., workers compensation). The course is organized into two half-course components, one introductory and one applied.

Rationale. The area of psychological injury and law is a new and fast emerging one academically, but it has a longstanding practice base in terms of disability assessments and treatment of MVA (motor vehicle accident) and worker compensation cases. The students graduating from universities need to know about the

theoretical/conceptual bases in the area and elements of successful work in it. Graduate schools teach aspects of it, such as assessment as well as psychotherapy, but there is no focused course on the topic. It will provide a good optional course for students in the clinical streams without drawing away much students from other courses. Rather, it could become a focus in drawing students to the university, as it would be the first course in the world directly on the topic, or among them, as far as is known. Moreover, the course is structured so that psychologists wishing to upgrade their skills as part of their continuing education can take the course on a pass-fail basis.

First half-course expanded description. This half-course on the area of psychological injury and law provides the theoretical and conceptual bases for understanding the area from both the psychological and legal perspectives. The area stands at the intersection of rehabilitation, trauma psychology, forensics, assessment/psycho-diagnostics, and law. Psychological injury involves conditions such as PTSD, traumatic brain injury, and chronic pain. Typical cases in the area involve working with survivors of motor vehicle collisions or work injuries. The physical and psychological injuries that they experience often are comorbid, rendering complex assessment, diagnosis, and treatment. Often, there are pre-existing physical and psychological factors that make the cases difficult, as well. The student will learn how to deal with straightforward cases but also complex ones from the perspective of the biopsychosocial model.

However, forensic issues are important at each step of the work, for example, assessing for response biases such as symptom exaggeration and for possible malingering, and assuring treatment adherence and compliance once psychotherapy starts. The student will learn about court and related venues and how they impact work in the area. For example, reports are scrutinized every step of the way, and if they get to court, they must meet admissibility standards, which relate to criteria for good as opposed to poor or junk science. Was the assessment and treatment undertaken in the case at hand comprehensive, scientifically informed, and impartial? Were the best available psychological tests used, and were the conclusions offered consistent with all the data gathered. Or, were there undue pressures from the adversarial divide (the referral source) placed on the psychologist?

Aside from being able to use the DSM-IV-TR (Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision; American Psychiatric Association 2000) and DSM-5 (Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition; American Psychiatric Association 2013) for the types of psychological injuries that arise in events at claim, the student needs to learn about other tomes that are basic to the field, such as the AMA Guides to permanent impairment (Rondinelli et al. 2008), which are used in assessing "catastrophic" injury/impairment and treatment guidelines. The student will learn some practical lessons, such as how the MMPI-2-RF (Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form; Ben-Porath and Tellegen 2008/2011) applies to these types of cases and how to use basic symptom validity tests (SVTs), such as the TOMM (Test of Memory Malingering; Tombaugh 1996).

31.4 Syllabus

31.4.1 A Half-Course in 30 Modules (2–3 Modules per Lecture)

31.4.1.1 The 30 Modules and Key Questions

NB. The learning objectives give a point-by-point summary of the course, and are written at the level of the student or those who might take the course on a continuing education basis.

Week 1

1. **Introduction (Module 1)**
   - A. (a) To be able to differentiate the psychological and legal versions of the definition of psychological/psychiatric injury. (b) To be able to differentiate psychological injury from personal injury.
   - B. To be able to (a) list the key areas of psychological injury and law and (b) explain why they are all needed for good practice and testimony. Would there be any difference if one works for plaintiff or defense?
   - C. (a) To be able to list the different type of workers in mental health that deal with psychological injuries, the differences in their specialties, and the limitations on their roles (e.g., treating professional vs. forensic assessor). (b) To know the credentialing, registration, and licensing requirements to work in the field for each type of worker who practices in it.
   - D. (a) To be able to present the history of the field, and when it emerged as a distinct area of study. (b) To be able to list the key psychological and legal developments that contributed to its emergence.

2–3. **Law and Psychological/Psychiatric Injury (2 modules)**
   - A. (a) To be able to identify the steps in the legal process in court and related venues. (b) To be able to fathom the so-called adversarial divide in the field and its influence on mental health practitioners.
   - B. (a) To list the various venues in which cases of psychological injury might arise. (b) To differentiate the criteria or thresholds of what constitutes a psychological injury in these venues.
   - C. To be able to identify (a) relevant evidence law, (b) and whether gatekeeping of admissibility of evidence is by judges or by response to expert testimony. Is poor or junk science admissible in court?
   - D. (a) To be able to explain in detail the major criteria of acceptable or good science according to the SCOTUS ruling *Daubert* (1993): testability, peer review, error rate, and general acceptance. (b) To understand how other relevant rulings in the *Daubert* trilogy affect psychological evidence presented to court.
   - E. (a) To be able to qualify the differences between evidence, tort, and insurance law. (b) To appreciate the roles that can be played by mental health

professionals with respect to these laws (e.g., assessor, consultant, expert witness, treatment provider).

F. To be able to ascertain whether (a) terms in psychology are readily translatable into equivalent ones in law, and (b) vice versa, giving examples of terms with and without problems in these regards.

Week 2

4–5. **Forensics and Psychological/Psychiatric Injury (2 modules)**

A. (a) To be able to provide the key components communication with clients in psychological injury cases, such as for informed consent, communications with attorneys, and communication with third party payors. (b) To absorb ways of communicating in these regards that could lead to professional complaints, or worse.

B. To be able to supply the professional codes and guidelines that govern work in the area, such as those from (a) the American Psychological Association, (b) one's local state or province, and (c) work on the scientific approach to forensic mental health assessment. Are the specialty guidelines for forensic psychology aspirational or mandatory?

C. To be able to identify (a) the range of rate of estimated malingering in the field and (b) the major tests used in detecting possible malingering, including newer versions of classic tests, such as the MMPI-2-RF. How accurate is the estimate and how effective are the tests?

D. To be able to learn to deal with and resist pressures on the maintenance of impartiality in cases of psychological injury, such as from the (a) adversarial divide and (b) other biases, including hindsight and confirmatory biases.

E. (a) To be able to list critical ethical issues in the field, e.g., about confidentiality, practicing within one's limits of competence, and professional-patient boundaries. (b) To understand the ethical issues involving other stakeholders in the field, e.g., institutions (which are financially-driven), and society (bias against injured workers, perceiving handicaps rather than disability).

Overview

Why does an article/webinar on psychological injury need to start with a good introduction to (a) law and (b) forensic psychology?

Week 3

6–8. **Assessment/Testing and Diagnosis of Psychological/Psychiatric Injury (3 modules)**

A. (a) To be able to list the basic components of a scientifically-informed and comprehensive psychological assessment (e.g., interview, testing, document review). (b) To be able to list the basic components of a scientifically-informed and comprehensive report. Should computer-generated reports from scoring services be used directly in reports? Should raw data on tests be included in them with the questions of the tests?

B. To know (a) the principles of test construction and (b) the types of psychometric reliability and validity. Do they differ in the area of psychological injury?

C. (a) To be able to work with the basic personality tests used in the field and (b) their revisions [MMPI-2 (Minnesota Multiphasic Personality Inventory, Second Edition;, Butcher et al. 1989, 2001); MMPI-2-RF; Personality Assessment Inventory (PAI; Morey 1991, 2007); Millon Clinical Multiaxial Inventory, Third Edition (MCMI-III; Millon 1994; Millon et al. 1997); Rorschach Performance Assessment System (R-PAS; Meyer et al. 2011)].
D. To be able to explain the rationale for (a) the newer versions of tests that are being revised in the field, such as the MMPI-2-RF, and (b) the newer versions of scoring systems of older ones, such as for the Rorschach.
E. To be able to (a) describe in depth some current research on the MMPI-2-RF on psychological injury populations and (b) know how to use the MMPI-2-RF in their assessments. Is there firm evidence yet to support using the MMPI-2-RF without using the MMPI-2 for psychological injury cases?
F. A series of articles in 2008–2010 was published on the value of FBS scale (Symptom Validity Scale; Ben-Porath and Tellegen 2008/2011; Lees-Haley et al. 1991) of the MMPI-2 in the journal *Psychological Injury and Law*. To be able to describe whether sufficient evidence was provided in the debate by (a) proponents and (b) those who oppose the use of the FBS in psychological injury assessments. What has further research demonstrated?
G. To be able to compare the (a) DSM-IV (Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, American Psychiatric Association 1994), DSM-IV-TR (Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revised, American Psychiatric Association 2000), (b) the DSM-5 (Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, American Psychiatric Association, 2013), and (c) the ICD-10 (The International Statistical Classification of Diseases and Related Health Problems, Tenth Revision; World Health Organization 2007) in terms of their utility, research base, working groups, major diagnostic categories, etc., especially as they relate to categories pertinent to psychological injury.
H. To be able to determine which of the DSM-IV-TR or the DSM-5 to use for any particular disorder, based on their criticisms in the literature.
I. In the psychological injury context, to be able to explain the appropriate use of (a) differential diagnosis and the rule-out and (b) subsyndromal, partial, or "features of" diagnoses.
J. To be able to delineate other basic instruments in the field, such as (a) intellectual and achievement tests, and (b) vocational assessment and interest instruments.

Week 4

9–11. **Response Bias and Malingering (3 modules)**

A. (a) To be able to explain the differences between effort, response bias, invalid performance, and malingering. (b) To be able to list the different types of response bias that are not malingering.
B. (a) To be able to discuss the validity of the DSM approach to malingering. (b) To be able to describe alternate approaches to addressing malingering, and whether even the term should be employed generally (e.g., should feigning be used?).

C. (a) To be able to describe and discuss the criteria of Slick et al. (1999) on feigned cognitive impairment or malingering (the MND model, Malingered Neurocognitive Dysfunction) and of Bianchini et al. (2005) on feigned pain-related disability (the MPRD model, Malingered Pain-Related Disability).
(b) To describe their extension into different areas of psychological injury.
D. (a) To be able to describe the categories of questions in the SIRS/SIRS-2 (Structured Interview of Reported Symptoms; Rogers et al. 1992, 2010, for the SIRS–Second Edition) used to detect feigning and their applicability to the psychological injury context. (b) To be able to discuss whether Roger's model of malingering as adaptational stance make sense in the psychological injury context?
E. To be able to discuss (a) non-testing detection strategies of response bias and malingering, such as seeking inconsistencies, and (b) their validity.
F. (a) To be able to specify how SVTs work (b) and how embedded client validity scales in more omnibus tests work.
G. (a) To be able to present the criticisms of McGrath et al. (2010) on SVT and related testing. (b) To be able to list the dangers of not using such testing, despite their limitations.
H. To be able to (a) describe the meta-analysis by Nelson et al. (2010) on the validity of the FBS and (b) indicate whether it adds to the support or does not support the FBS, along with other research.
I. In the area of malingering, (a) is there one gold standard test or approach, (b) does failing one test or even several that are administered mean that malingering is the only interpretation possible, and (c) what should one do when one has some evidence of malingering but it is not incontrovertible?

Overview

A. Before any conclusions in assessments can be undertaken about psychological injuries and disability, a scientifically informed assessment needs to be undertaken that is comprehensive and impartial. Do psychologists and mental health workers have enough tools to (a) adequately assess, test, and diagnose the various psychological injuries, and (b) rule out malingering and other response biases?
B. (a) Do their tests meet acceptable standards for court in terms of sensitivity, specificity, hit rate, false positives, false negatives, and consideration of error rate and base rate in their calculations? (b) Or, do their tests give false impressions of a stable fund of knowledge that is acceptable to court?

Week 5

12–13. **Disability and Return to Work (2 modules)**

A. To be able to describe (a) the disability epidemic and (b) its costs to society.

B. To be able to separate (a) the terms: symptoms, impairments, disorders, diagnoses, functional impacts, activities of daily living, and disabilities or handicaps, and (b) terms in the return to work area, such as residual and transferable skills, environmental demands, and supports for return to work.
C. (a) To be able to explain terms relevant to functionality such as restrictions and limitations and functional supports and accommodations. (b) To be able to explain the difference between rehabilitation and habilitation, recovery and loss, barriers to recovery and how to deal with the barriers.
D. (a) To be able to determine why disability individually-determined with no one test of disability that applies to all cases equally. (b) To be able to distinguish the different roles for which patients might be disabled other than at work.
E. (a) To be able to differentiate the psychological and legal approaches to disability and how to deal with them in court. (b) To know how to explain the difference between disability from one's work at the 2-year mark and disability from any work later on in terms of all relevant education, training, and experience.
F. (a) To be able to explain mitigation of loss, adherence to treatment regimen, and pain and suffering and their role in the legal context. (b) To be able to explain functional outcome (measures), QOL (quality of life), wellness, and maximum medical (psychological/psychiatric recovery) in the legal context.
G. (a) To be able to implement strategies in work hardening, return to work, and job accommodation for disabilities. (b) Where the patient is disabled from the prior job, to be able to effect needed job searches, volunteer or supported placements, and placements for retraining and reeducation, and so on.

14. **The AMA Guides**
A. To be able to (a) decipher the role in mental health practice of the AMA Guides (Rondinelli et al. 2008) on the evaluation of permanent impairment and (b) evaluate the value and validity of the Guides.
B. To be able to (a) use the sections of the Guides on psychological/psychiatric (behavioral and mental), chronic pain, and neuropsychological aspects of impairment, and (b) determine whether the sections in the present version are improvements on prior versions.
C. In particular, the student will learn how the Guides are used in the university's jurisdiction. (a) For example, they are used to determine whether injured claimants reach the threshold of being "catastrophically impaired." (b) The student will learn about the four major psychological/psychiatric spheres that need to be evaluated in this regard.

Overview

(a) Is there a gold standard disability instrument? (b) Mental health professionals need to assess residual functionality according to the essential duties of the roles that they are investigating, such as for work. How can this be best accomplished?

Week 6

15. **Posttraumatic Stress Disorder**
    A. To be able to identify (a) difficulties with the A criterion of PTSD, and (b) the major clusters in its diagnosis in the DSM-IV/DSM-5 and whether research supports the criterion and the clusters identified.
    B. To determine whether (a) the explosion of court cases involving PTSD is valid or a product of its deficient definition/criteria and their loosening in use such as in court (bracket creep), and (b) whether biomarker research will have a place in court.
    C. To be able to evaluate whether one needs to query: (a) the changes to the DSM-IV approach to PTSD found in the DSM-5 are reliable and valid, and supported by contemporary research, and (b) are others needed, in relation to PTSD for example, with respect to forensic issues?

16. **Pain**
    A. (a) To be able to distinguish the phases in the pain process, such as tissue damage, inflammation, nociception, spinal cord transmission, central processing, and feedback and amplification or de-amplification processes. (b) To be able to distinguish the difference between acute and chronic pain, and the stages in chronic pain.
    B. To be able to differentiate (a) the medical model of pain from the biopsychosocial one and (b) simple from more complex cases involving co-morbidities.
    C. When chronic pain persists, (a) is it real and is it treatable or is it the result of a "pain-prone personality" or "all in the head"?
    D. To be able to evaluate whether the changes to the DSM-IV approach to chronic pain (Pain Disorder) found in the DSM-5 (included are a specifier in Somatic Symptoms Disorder).

17. **Traumatic Brain Injury**
    A. To be able to differentiate (a) mild from moderate and severe TBI and (b) straightforward from more complex cased involving co-morbidities. Can mild TBI persist (e.g., persistent postconcussive syndromes) and, if so, how can the symptoms of the "miserable minority" with it be explained?
    B. To be able to list (a) the major areas tested in neuropsychological assessments and (b) the major tests used for each area. Are fixed or flexible batteries equally preferred and what is their status in court?
    C. To be able to elucidate how neuropsychologists can help (a) individuals with TBI and (b) their families.
    D. TO be able to evaluate the validity and utility of the DSM-5's Neurocognitive Disorder is reliable, valid, supported in the research, and in need of modification forensically.

Week 7
Midterm Examination

Week 8

18. **Other Psychological Injury Conditions**
    A. To be able to note (a) other conditions in psychological injury (e.g., depression, generalized anxiety disorder, adjustment disorder) and (b) their differential diagnosis. Does stress provide a common denominator in the various psychological injuries and, if so, how?
    B. To be able to discern the extent of psychological injuries that might accompany the most serious physical injuries and conditions, such as spinal cord injury and amputations, and their effects, such as increased substance abuse, self-medication, etc.
    C. To be able to ascertain the role in the area of (a) pre-existing vulnerabilities and psychopathologies in cases of psychological injury and (b) pre-existing personality disorders. Can treatment help the psychological injuries that emerge post-event in cases having these contingencies?
    D. To be able to discuss the role of (a) psychophysiological/psychosomatic/somatoform disturbances and other related confounds, including substance abuse, as well as (b) factitious disorder and related confounds.

19. **Overview**
    A. (a) What is the base rate distribution or epidemiology of the various disorders involved in psychological injury and (b) do they vary with gender, culture-minority, and age?
    B. What are (a) the risk and predictive factors for poor course and functional outcome, and (b) typical prognosis with and without optimal treatment?
    C. Psychological injuries are controversial conditions that are under constant criticism and in need of constant research. Depending on the conclusions one offers in testimony, how can one minimize criticism of one's conclusions about (a) their diagnoses, or (b) absence of such, in court?

Week 9

20. **Guidelines**
    A. To be able to list (a) the advantages and disadvantages of moving toward treatment guidelines, and (b) what they involve.
    B. To know the complicating factors in cases of psychological injury that qualify the use of the guides in terms of calling for (a) no or less therapy than average or (b) more therapy than average.

21–22. **Treatment (2 modules)**
    A. To be able to use (a) standard cognitive-behavioral and (b) other accepted psychotherapeutic techniques with psychological injury patients.
    B. (a) To be able to specify how to promote patient compliance toward good coping, post-traumatic growth, adjustment, and full recovery. (b) To be able to specify how to promote patient and family acceptance when full recovery is not possible, especially when the injuries are serious, marked, and severely disabling.

C. To be able to discuss in depth (a) the evidence-based or empirically-supported movement in treatment, and (b) whether developments about evidence/empirical treatments help or hinder the field.

Overview

A. Is the field sufficiently advanced to develop treatment protocols for the various psychological injuries, without taking away from (a) the needed therapist flexibility and (b) appreciation of non-treatment factors such as therapist-patient rapport?

Week 10

23. **Causality**
    A. (a) To be able to distinguish psychological and legal approaches to causality, as well as those in medicine and philosophy. (b) To be able to list the multiple factors involved in psychological explanations of causality, and to know which ones are more relevant for court.
    B. (a) To be able to work with legal approaches to causality (specific vs. general causation; proximate cause, theory of the case; substantial, material, but-for tests). (b) To be able to apply the thin-skull and crumbling-skull rules.
    C. (a) To be able to discern the difference between (a) litigation distress and (b) compensation neurosis as causal influences.
    D. (a) To understand in which type of venues dealing with psychological injury one is permitted to offer conclusions on ultimate issues such as causality. (b) To be able to differentiate the legal tests for causality in these different venues, for example, whether the presence of pre-existing factors disqualifies a case.

24. **Models**
    A. To be able to explain in court that there are (a) pre-event, event, post-event, and auxiliary factors to consider in apportioning cause in psychological injury cases, (b) but the research reveals that that the multifactorial array of influences on complainant presentation is far more complex than this.
    B. To be able to explain other models (a) such as the insurance model and the workplace model, and (b) the approach of other types of professionals in the area, including attorneys

Overview

The study of causality and models in psychological injury seems far removed from evaluation. However, the combined biopsychosocial-forensic approach has much to offer the clinician. How?

Week 11

25. **Multicultural, Gender, and Developmental Considerations**
    (a) To be able to describe the recent research on cultural, gender, and age differences in psychological injury. (b) To be able to discuss whether changes in the DSM-5 consider cultural and other differences, such as gender and age.

26. **Diagnostic Manual of Statistical and Mental Disorders 5**
    (a) To discuss knowledgeably whether the DSM-IV diagnostic categories regarding psychological injuries are valid. (b) Similarly, to be able to discuss knowledgeably whether the changes in the DSM-5 are valid.

Overview

(a) Does the DSM-IV-TR (Diagnostic and Statistical Manual of Mental Disorders; Fourth Edition, Text Revised American Psychiatric Association 2000) project lean toward clinical utility at the sacrifice of scientific rigor? (b) Were the DSM-5 working groups too laden with politics and undisclosed influences to arrive at a valid diagnostic system (including one that considers different ages, cultures and other populations)?

Week 12

27. Conclusions and Recommendations
    A. To be able to (a) describe conclusions in crucial literature and CE pieces, and (b) advise on the recommendations made for the field, for example, for research, practice, and education.
    B. To know that it is a great privilege to study and work in the area of psychological injury and law. (a) It combines not only the two fields of psychology and law, but also (b) combines working with patients, their families, other treating professionals, and institutions, such as the workplace, third party payors, and the court and related venues. (c) It combines so many areas of psychology (clinical, abnormal, rehabilitation, trauma, neuropsychology/neuroscience, brain-body-behavior relationships, forensic, assessment/tests and measurement, differential/developmental), and (d) it demands that the patient is seen as a whole, complex person living in a complex systems context. (e) Psychology and law have much to offer each other, and although in this type of work psychology is meant to serve court purposes, we have an important role to play in the rehabilitation and treatment process, as well, and can educate the law about our superb profession and its underlying science.

APPENDICES: Putting it Together

28. Sample Cases and Approaches to the Cases (see above)
29. Sample Test Results and Interpretations
30. Sample Office Forms and Sample Reports

31.4.2 Psychological Injury and Law Practicum

Purpose. The primary aim of this course is to provide the theoretical and conceptual bases for effective professional practice in the area of psychological injury (e.g., PTSD, chronic pain, TBI) and law, including practice experience, case study analysis, and supervision.

Second Half-Course Expanded Description. This half-course on the area of psychological injury and law follows up on the half-course that provides the foundational material in the area. Students will be placed with practitioners in the area, but they will not be assigned patients directly. Rather, using case studies, they will learn first-hand from their supervisors the manner in which both assessments and psychotherapy are undertaken with patients who have physical and psychological injuries from events such as motor vehicle collisions and workplace accidents. Students will meet patients, review their files, and be asked to score endorsements of items on some psychological tests in parallel with their supervisors, getting valuable feedback. Students will learn how to analyze psychological and psychiatric reports pertaining to their psychological injury case studies for their merit and to write quality reports on such cases based on best practices in assessments. Importantly, they will learn how to decipher client validity checks on psychological tests, such as the F family of scales on the MMPI-2-RF, as they pertain to psychological injury populations. They will learn the range of stand-alone symptom validity tests, as well, including the TOMM and the WMT (Word Memory Test; Green 2005). Finally, they will learn how standard cognitive behavioral therapy needs to be adjusted for rehabilitation with event survivors presenting with psychological conditions and how working in teams often becomes necessary, either in assessment or treatment. The course director will coordinate with supervisors of students to assure that supervisors are meeting standard expectations in supervision. The course director will lead classes in which students share their experiences. However, most course work will relate to writing up for grade purposes supervisory meetings, the case studies, and the literature related to questions that arise from them. One particular focus will be to have students study the application of the AMA Guides to permanent impairment for determination of "catastrophic" injuries/impairments (Rondinelli et al. 2008). Another will be to study the OPA's treatment guidelines for PTSD, chronic pain, and TBI (Smith and OPA Auto Task Force 2011).

31.5 Chapter Conclusion

Students and professionals working in the area of psychological injury and law need comprehensive education and training to assure that their (eventual) practice in the area meets graduating requirements, and regulatory, ethical, and professional standards and guidelines. Organizing a graduate course and a continuing education program in the area of psychological injury and law is a vast undertaking because of the many facets and components to its study and practice. The course that has been described consists of 30 modules and each one lends itself to chapter-length if not book-length treatment. However, the primary areas in the field can be reduced to the following, which are the sections in the journal *Psychological Injury and Law*.

(a) First, practitioners in the area need to be educated about forensics. Forensics concerns the relationship between psychology and law and the use of psychological

knowledge and assessments in court or court-related venues. The student and practitioner in the area of psychological injury and law needs to be grounded in basic forensic psychology principles. For example, they have to know how to deal with attorneys and the court, the nature of their relationship to the client and how does that differ from the typical clinician case, and what are the court procedures that are followed in psychological injury cases. Working with attorneys and court can be a minefield, and students and practitioners need to be well-versed on all these and other related manners.

(b) The second important section in the study and practice of psychological injury and law relates to law itself. The main areas of law that are relevant to this specialty area concerns (i) evidence law, (ii) torts, (iii) insurance law, (iv) worker compensation, (v) disability law, and (vi) other laws relating to different types of cases in the field, such as veterans' administration and police work. Each area has different tests or thresholds, and consequently present different referral questions and ultimate issues to address.

(c) The third major area in the field of psychological injury and law concerns assessment. I emphasize throughout that practitioners should undertake comprehensive, impartial, and scientifically-informed assessments and students should learn the ways to undertake such quality assessments. Assessments need to be comprehensive both in terms of the types of data gathered (e.g., interview data, test data, collaterals) and the tests used in the assessment. Typically, in psychological injury cases, there should be a good personality inventory used, such as the MMPI-2-RF, good stand-alone validity tests used, such as the SIRS and the TOMM, good disorder-specific tests used, such as the DAPS (Detailed Assessment of Posttraumatic Stress; Briere 2001) for PTSD, and various embedded tests in neuropsychological matters, such as the RDS (Reliable Digit Span, Babikian et al. 2006; Greiffenstein et al. 1994) and the CVLT (California Verbal Learning Test; Delis et al. 1987). Students and practitioners need to understand that good tests are those that are both reliable and valid, have other necessary psychometric properties, such as related to sensitivity and specificity, are appropriately standardized and normed, for example, with respect to forensic disability/psychological injury populations, and demonstrate utility and incremental validity in arriving at scientifically-informed conclusions to reports and testimony.

(d) In the area of psychological injury and law, a critical component relates to the assessment of malingering and related response styles and biases in presentation and performance. Unless malingering is demonstrated introconvertibly, other ways of indicating problematic presentations and performances should be used. Moreover, the latter might reflect non-conscious intent rather than conscious intent to fabricate or grossly exaggerate symptoms, disorders, impairments, and functionality for monetary or other material gain. For example, there might be careless responding to tests, interference of comorbid pain or poor sleep, a cry for help, and/or distress at the litigation process. Evaluations in the area of psychological injury and law should necessarily involve tests, measures, scales, or indicators that can potentially detect malingering and related response biases.

Compelling, marked, or substantial discrepancies or inconsistencies in the file of a case at hand constitute a second way by which malingering and other problematic presentations and performances can be detected. In the end, the attribution of malingering is a serious allegation and the evidence must be clearly present for its detection. Two-alternative forced-choice testing that involves below chance or chance performance constitutes one important source of evidence, and symptom validity testing, in general, is important to consider in cases of forensic disability and related contexts.

(e) Evaluations in the area of psychological injury and law often deal with the question of disability. Students and practitioners need to know that disability refers to an inability to function in the role at issue, such as work, studying, or parenting, and that assessments have to examine carefully evaluee roles and functions in light of symptoms and impairments. To what extent do the symptoms that are expressed constitute impairments, how do the impairments affect the components of the functions in the roles that have been enumerated, and do they reach thresholds for disability, especially at the typical critical mark of 2 years post-event? Deciding upon the diagnoses and disorders that have been attributed to the evaluee is insufficient for determining functionality and its loss.

As for return to work, when there is no disability or it is only partial, the evaluator needs to assess residual and transferable skills, the role context, such as at work, the evaluee's personality, interests, etc., and supportive factors related to the role at issue, such as the attitude of the workplace, in order to arrive at a realistic plan. For example, there might have to be work accommodation, such as light duties and reduced hours in the short or long term. Or, there might have to be recommendations for retraining in other areas and support offered to make the training successful. Or, if the evaluee is returning to the prior employment, work hardening might need to be recommended. Note that for disability determinations, the AMA Guides constitute an important resource and are used to quantify whole-body impairments, including for psychological/psychiatric conditions. However, the Guides suffer from issues with respect to reliability and validity, including in the behavioral and mental health sections.

The next areas in the journal *Psychological Injury and Law* that are important to consider and know relate to major psychological injuries themselves – PTSD, pain, and TBI. The three conditions are considered controversial, require careful assessment in their evaluation, and are often subject to dispute in court and related venues. The student and practitioner should learn about these controversies and about best practices in evaluating them, including of malingered presentations. They should know best evidence-based treatment practices that encourage adherence to treatment and mitigation of loss. There are also questions of understanding polytrauma or comorbid presentations involving these psychological injuries, individual differences in how they are expressed, and finally, relevant age, cultural, minority, and sex differences.

Other sections of the journal *Psychological Injury and Law* concern practice affairs, and general interest issues and controversies. Some of the topics in the

practice affair section relate to how to use various psychological tests in practice and how to navigate working in organizational structures such as veterans' administration. As for general interest and controversies in the field, they concern issues such as neurolaw, ethics, and understanding *Daubert* (1993), which is the critical evidence law in the field.

The student and professional in the area of psychological injury and law should not feel overwhelmed by its multiple areas and the complexities in its science and practice. Rather, it is a challenging area that is inspiring and rewarding. Further study and continuing education in it offers the basis for navigating its difficulties and having a productive career in it.

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Chapter 32
Study Guide Questions, Teaching Objectives, and Learning Outcomes

32.1 Introduction

The chapter consists of a compilation of study guide questions that can be used for education, course, study, professional, and court purposes in conjunction with the book. The questions help review the major themes of the book. I have created questions that cover the multitude of specific substantive facts and considerations for each of the chapters. [In addition, the reader can consult the chapter summaries and conclusions, as well as any interim conclusions in the chapters, in order to get a survey of specifics in the book]. For example, the questions refer to the different types of response bias, the extant malingering detection systems, the best tests available, relevant evidence laws, confusions in the literature, difficulties with the current approach to malingering, innovations suggested in the book, major literature reviewed, and best practices in conducting comprehensive, impartial, and science-first assessments. All the questions in this chapter can be altered into learning objectives and associated learning outcomes, for example, by starting them with phrases such as "To use critical thinking skills to analyze"; "to use critical skill analysis …," "To differentiate/apply/ascertain/determine/list/delineate/explain with examples," etc.

Table of Terms and Sources

Abbreviation	Name	Source(s)
BAPQ	Behavioral Assessment of Pain Questionnaire	Tearnan and Lewandowski (1992)
BBHI-2	Brief Battery for Health Improvement, Second Edition	Disorbio and Bruns (2002)
CAPS	Clinician-Administered PTSD Scale	Blake et al. (1995)
CARB	Computerized Assessment of Response Bias Test	Allen et al. (1997) and Conder et al. (1992)
CMAP	Comprehensive Muscular Activity Profile	Medical Technologies Unlimited (2008)

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DOI 10.1007/978-94-007-7899-3_32, © Springer Science+Business Media Dordrecht 2014

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Abbreviation	Name	Source(s)
DAPS	Detailed Assessment of Posttraumatic Stress	Briere (2001)
DSM	Diagnostic and Statistical Manual of Mental Disorders	American Psychiatric Association (2000)
DSM-IV-TR	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision	American Psychiatric Association (2000)
DSM-5	Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition	American Psychiatric Association (2013)
F	Infrequency Scale	Butcher et al. (1989)
FBS	Symptom Validity Scale (originally called Fake Bad Scale)	Ben-Porath and Tellegen (2008/2011) and Lees-Haley et al. (1991)
Fp(−r)	Infrequent Psychopathology Responses	Ben-Porath and Tellegen (2008/2011)
Fs	Infrequent Somatic Responses	Ben-Porath and Tellegen (2008/2011)
HAPA	Health Action Process Approach	Schwarzer (2008)
HHI	Henry-Heilbronner Index	Henry et al. (2006)
ICF	International Classification of Functioning, Disability and Health	World Health Organization (2001)
LAQ	Life Assessment Questionnaire	Tearnan and Ross (2012)
MCMI-III	Millon Clinical Multiaxial Inventory, Third Edition	Millon (1994) and Millon et al. (1997)
MENT	Morel Emotional Numbing Test	Morel (1995, 1998)
M-FAST	Miller Forensic Assessment of Symptoms	Miller (2001)
MMDS	Malingered Mood Disordered Scale	Henry et al. (2008)
MMPI-2	Minnesota Multiphasic Personality Inventory, Second Edition	Butcher et al. (1989, 2001)
MMPI-2-RF	Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form	Ben-Porath and Tellegen (2008/2011)
MND	Malingered Neurocognitive Dysfunction	Slick et al. (1999)
MPRD	Malingered Pain-Related Disability	Bianchini et al. (2005)
MSVT	Medical Symptom Validity Test	Green (2004)
NV-MSVT	Nonverbal Medical Symptom Validity Test	Green (2008)
PAI	Personality Assessment Inventory	Morey (1991, 2007)
PCL	PTSD (Posttraumatic Stress Disorder) Checklist	Weathers et al. (1993)
PCP:EA	Profile of Chronic Pain: Extended Assessment	Ruelman et al. (2005a, b)
PDRT	Portland Digit Recognition Test	Binder (1993) and Binder and Willis (1991)

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Abbreviation	Name	Source(s)
PDS	Psychosocial Distress Scale	Henry et al. (2011)
PFDT	Pain Feigning Detection Test	Young (2014); present work
PSR-2	Pain Symptoms Ratings, Version 2	Duhamel (2012)
-r	Revised (e.g., FBS-r)	Ben-Porath and Tellegen (2008/2011)
RBS	Response Bias Scale	Gervais et al. (2007)
RCT	Randomized Clinical Trial	Resick et al. (2007)
RDS	Reliable Digit Span	Babikian et al. (2006) and Greiffenstein et al. (1994)
RMFIT	Rey 15-Item Memory Test	Rey (1941)
RNBI	Ruff Neurobehavioral Inventory	Ruff and Hibbard (2003)
R-PAS	Rorschach Performance Assessment System	Meyer et al. (2011)
SIRS	Structured Interview of Reported Symptoms	Rogers et al. (1992)
SIRS-2	Structured Interview of Reported Symptoms, Second Edition	Rogers et al. (2010)
SSA	Social Security Administration	Social Security Administration (2006)
TOMM	Test of Memory Malingering	Tombaugh (1996)
TSI	Trauma Symptom Inventory	Briere (1995)
TSI-2	Trauma Symptom Inventory, Second Edition	Briere (2011)
VIP	Validity Indicator Profile	Frederick (1997)
VSVT	Victoria Symptom Validity Test	Slick et al. (1997)
WMT	Word Memory Test	Green (2005)

32.2 Overview

The questions in this chapter deal with the most important topics and contents of the present book. In the first section, they are not organized by chapter-by-chapter, per se; rather, they are organized by themes. The next section of the chapter is based on a chapter-by-chapter analysis of detailed points rather than general ones. However, I do include some thinking questions as the questions proceed. Note that in chapters having many study questions, I starred the 10–20 that I considered most important. Also, there are no questions on some of the supplementary chapters. On the one hand, there is a group of questions on Tests and Testing in the General Questions that cover Chaps. 25 and 26. On the other hand, questions related to Chaps. 27, 28, and 29 are covered in the Core Questions in the General Questions (as is the supplementary appendix, Chap. 6).

32.3 General, Review, and Thinking Questions

32.3.1 General Questions (Chaps. 1, 2, 3, and 4 Mostly)

1. How can the present book apply to psychiatrists and other mental health professionals?
2. Why are psychological injuries critical to the area of forensic disability and related assessments?
3. Why should forensic psychologists/psychiatrists and other practitioners wishing to train in this area be trained rigorously?
4. Does their education, training, and experience guarantee that they will neither have biases nor feel the pressure of the plaintiff/defense, or adversarial, divide in court?
5. What are the best ways to remain impartial for court?
6. The author of the present book refers to court and related venues. Which are the latter and do they have different legal requirements?
7. Why does the author of the present book refer to not only malingering but also to other related terms, such as related response biases?
8. What are the components of the definition of malingering in the DSM (Diagnostic and Statistical Manual of Mental Disorders) approach?
9. In comparison to malingering, what is meant by feigning/noncredible performance, etc.?
10. What is meant by secondary gain, conscious motivations, and incentives?
11. What is meant by the statement that malingering should be attributed only when the evidence is incontrovertible?
12. Why are malingering and related biases important in psychiatric/psychological and related mental health practice?
13. Why are these terms important to law, the court, and attorneys?
14. Does malingering involve exaggeration to any degree, or should the definition be limited to certain types of exaggeration?
15. Is malingering a categorical (all-or-none) attribution?
16. Can it vary in degree and co-exist with valid presentations and with other types of negative response bias?
17. Can mental health professionals infer intent and actually attribute malingering at all?
18. What do we mean by prevalence or base rate and why is that important to the field, given that practice evaluations concern assessment of individuals and not groups?
19. Is the prevalence or base rate of malingering in forensic disability and related evaluations as high as 50 % or so, as some have claimed?
20. What is the percentage of problematic presentations and performances not only of malingering but of any type?
21. Have research surveys of the prevalence of malingering been undertaken with sufficient scientific rigor?

22. Does the author's model and questionnaire based on it account for any difficulties in these regards?
23. Why and to whom is it important for the prevalence or base rate of malingering to be around 50 %?
24. Why and to whom is it important for the prevalence or base rate of malingering to be around 1 %?
25. Diagnostic systems for malingering are being changed. Does the revision by Slick and Sherman (2013) of the MND for neurocognition improve it?
26. Is it appropriate to extend the MPRD for pain into use for PTSD, as proposed by Bianchini et al. (2013)?
27. When evidence for malingering is not incontrovertible, can effective ways be found by astute evaluators to describe, with alternate language, the non-credible feigning involved?

32.3.2 Core Questions (Chaps. 5 and 6 Mostly)

28. What components of an assessment are needed to make it comprehensive?
29. What are the best tests or measures to use in forensic disability and related assessments?
30. What criteria determine if they are the best?
31. Do they have limits?
32. Are they used universally?
33. Why does the author of the present book refer to a scientific approach for assessment, and also being scientifically-informed?
34. Where does clinical experience fit it?
35. What if science has not addressed the issue at claim?
36. Are the best malingering detection systems that are available in these contexts already gold standard (MND, MPRD)?
37. What criteria determine if they are the best?
38. Do they have limits?
39. Are they used universally?
40. The author uses frequently the term "inconsistencies." Does this refer to inconsistencies in evaluee presentation/performance, the patient file, or to both?
41. What do inconsistencies refer to in each of these areas?
42. What are other types of inconsistencies?
43. Can inconsistencies provide data with respect to malingering that is as effective as data gathered on tests?
44. Do many evaluees express indeterminate, ambiguous, grey-zone presentation and performance?
45. Are there malingering detection systems for PTSD, just as there are for neurcognition/TBI and pain-related assessments of disability/dysfunction?
46. Does it make sense to extrapolate from the latter systems to make one for PTSD?

47. What are the names of the three malingering detection systems developed by the author and of the overall system?
48. The three systems are almost identical. How do they differ?
49. What are the major tracks and components in each of them?
50. Is malingering equated with definite negative response bias in the systems?
51. How many types of response bias are included in the systems?
52. How many testing and weighting rules are listed in the systems?
53. How many inconsistencies/discrepancies are listed?
54. What is meant by compelling/substantial/marked inconsistencies/discrepancies?
55. Can the systems integrate both test and clinical information?
56. Can the systems be used by psychiatrists and other mental health professions not versed in testing?
57. Do the systems accommodate to and account for any criticisms levied at extant systems?
58. Why is causality of central importance in forensic disability and related determinations, including in terms of malingering attribution?
59. Do experts who are more plaintiff- and more defense-oriented agree on the nature of malingering and how to detect it?
60. What cautions/suspicions about malingering might be evident in the various components of an assessment of an evaluee of which evaluators should be aware?

32.3.3 Assessment

61. Describe how a structured interview on malingered symptoms (e.g., the SIRS/SIRS-2) can be used in malingering detection?
62. Are there valid personality inventories in this regard? Describe the kinds of scales each test should have.
63. What does a stand-alone test mean for this purpose (e.g., cognitive)?
64. Describe what are embedded neurocognitive measures of performance invalidity.
65. Are there other types of measures that can be used in malingering detection?
66. What does below-chance performance mean and how is it calculated?
67. What does cut-score mean and how is it calculated?
68. Can an evaluator use the results of only one test or measure to attribute malingering?
69. If so, what are the constraints on this practice?
70. Can test results be combined to improve the chances of detecting malingering?
71. If so, what are some constraints on this practice?
72. Can test results and clinical judgment be used together to improve the chances of detecting malingering?
73. If so, what are some constraints on this practice?
74. The field has been marked by some debates and exchanges that have been informative. What have we learned from the one on the FBS/SVT in the PIL journal in 2008–2010?

75. Similarly, what have we learned from the one on the MND criteria of malingering in the PIL journal in 2011, e.g., recommendations for their change?
76. Does the exchange in the journal *Psychological Bulletin* in 2010–2011 on the validity of response bias testing shed light on the matter?

32.3.4 Tests

77. Explain true positives, true negatives, false positives, false negatives, hit rate, sensitivity, specificity, PPP (positive predictive power), NPP (negative predictive power), Type I error, and Type II error.
78. What does research on PTSD symptom clusters show? What does it mean for the DSM-5?
79. What is the DSM-5 proposed revision for PTSD? What are its implications?
80. Is the SIRS-2 an improvement on the SIRS?
81. The TSI-2, for assessing PTSD, on the TSI?
82. The MMPI-2-RF, a personality inventory, on the MMPI-2?
83. Which test(s) for PTSD include respondent validity indicators, or attempt to address the question?
84. Is there a good instrument for persistent postconcussive syndrome (PPCS)?
85. What are the main advantages and disadvantages of the MMPI-2-RF compared to the PAI?
86. What are the best forced-choice SVT instruments? Describe the psychometric properties of the TOMM, WMT, VSVT, VIP, MSVT, NV-MSVT, PDRT, CARB, and RMFIT as part of your answer. Are any of these worse than the others?
87. Is the MCMI-III as effective as the MMPI-2 in the forensic disability and related context?
88. There are other omnibus instruments, such as the RNBI (for neurocognition). How does it fare?
89. There are other structured interviews for signs of malingering, such as the M-FAST. How does it fare?
90. For PTSD, there is the CAPS. How does it fare?
91. Describe the F family of respondent validity indicators, and related ones, on the MMPI-2 (e.g., F, Fp, FBS).
92. The MMPI-2-RF (e.g., FBS-r; also Fs)?
93. What functions does each serve?
94. And on the PAI?
95. What about relatively new ones for the MMPI family, the RBS and the HHI? How do they fare?
96. Are embedded measures in neuropsychological assessment as effective as SVTs?
97. What are their advantages and disadvantages?
98. Which one fares best?
99. There are tens of them, what are the best ones that are like forced-choice tests?

100. What are ones on attention, the area that appears best to test other than the area of memory?
101. What are some new indices suggested for the TOMM?
102. What are some new cut-scores suggested for the RDS?
103. Is there an extant pain-feigning detection instrument, just as there is for PTSD, that examines pain-related symptoms as opposed to their effects on disability?
104. Does the LAQ have good respondent validity indicators for pain?
105. The BBHI-2 (for pain)?
106. For pain, are there good instruments on disability with respondent validity indicators?
107. Multiple regression and Bayesian techniques are being increasingly researched. In examining combinations of validity indicators/tests, do they have advantages?
108. Disadvantages?
109. What about LR (likelihood ratio) techniques, do they have advantages?
110. Disadvantages?
111. What are acceptable standards of test reliability in this area?
112. What are acceptable standards of test validity in this area?
113. How would you defend use of a certain test in court?
114. Are tests fallible?
115. Are evaluators using tests fallible in their use?
116. What are standards of good science according to *Daubert* (1993)?
117. Which tests or measures cannot meet these standards in the area of forensic disability and related assessments?
118. When tests change, do all the standards have to be met again?
119. Do their norms have to be recalculated?
120. When a test is renormed, what are the implications for court?
121. Which tests in the area of psychological injury are normed especially well with psychological injury populations for use in the area?
122. Which ones are not?
123. Which ones have good test manuals for court purposes?
124. Which ones do not?
125. Will biomarkers of malingering and related response styles be found that will replace the need for testing?
126. What is the future of neurolaw in the area? Will it replace the need for some neuropsychological or lie detecting testing?
127. Does the known-groups design help or hinder understanding malingering and related negative response biases?
128. How can one learn more about indeterminate, ambiguous, gray zone cases in these types of assessments?

32.3.5 Terms

129. Why is it important to have clear definitions of key terms and analyze inconsistencies/ambiguities in definitions, terms, and concepts in the area?

130. In general, how do we translate terms from the mental health to legal arena, or vice versa?
131. What is a disability and how does it differ from impairments and diagnoses/disorders?
132. Is disability a legal or psychiatric/psychological term?
133. Should malingering attribution, an ultimate issue, be left only to triers of fact, such as juries?
134. What do we mean by admissible evidence?
135. What do we mean by poor or junk science?
136. What do we mean by judges as gatekeepers?
137. Do the answers to these types of questions vary by jurisdictions (e.g., federal, different states)?
138. How do (a) the forensic disability and (b) the psychological injury and law specializations relate to each other?
139. What are the major areas in psychological injury and law, e.g., in the journal PIL, or *Psychological Injury and Law*? Why is each area important to the field?

32.3.6 Overview

140. Why does the author of the present book often engage in either a compare/contrast or comment format of recent literature instead of the typical approach of a narrative survey of the history of the field leading to the present?
141. Does this help or hinder having a state-of-the-art perspective of the field?
142. If there is one thing that you would want to change in the area of science for the better, what would it be (or two, or three, or…)?
143. If there is one thing that you would want to change in your practice in the area, what would it be (or two, or three, or…)?
144. What are good ways to keep one's practice thriving and to have one's evidence admitted to court and, to the contrary, to not meet these objectives?
145. To meet these objectives, what should graduate students learn as well as those attending continuing education workshops/courses?
146. How much should malingering be a focus in such courses?
147. What are critical ethical points that apply to this area of assessment, both for general ethical issues and ones specifically relevant to practice in this area?
148. What are critical practice points raised by the licensing body or bodies in your jurisdiction or jurisdictions of practice that apply to this area of assessment, both for general ethical issues and ones specifically relevant to practice in this area?
149. If you were teaching a course on psychological injury, malingering, ethics, and law, what major points would you emphasize?
150. If you were conducting research in the area of psychological injury and law, what topics would seem to require important research right away long-term?

32.4 Specific Study Questions (on Details, Some Thinking Questions)

32.4.1 Chapter 1

1. * Define psychological/psychiatric injury.
2. * Give examples.
3. * Give court-related venues in which is it considered.
4. * What legal tests for it need to be met to be considered admissible?
5. * Can its presence be confirmed by testing in assessment?
6. * Its absence, or malingering?
7. * Can it lead to disability?
8. * Can it be treated?
9. * What are some gray zones controversies, or psychological disputes in the field?
10. * What does the adversarial divide refer to legally?
11. To what does the concept of "middle-of-the-road" refer?
12. Is "bias" more prevalent in any one area of the field of psychiatric/psychological injury and law (e.g., defense vs. plaintiff; one test vs. another)?
13. To what does the concept of "gold standard" refer? Are there psychometric tests that meet this standard, and, if not, how much does it matter?
14. Why is it important to consider and know the law and court in assessing and treating psychiatric/psychological injuries?
15. What is the DSM-IV-TR and the DSM-5?
16. Are there other psychiatric diagnostic systems of which you are aware?
17. Is there agreement on the major psychiatric diagnoses that should be included in them?
18. What are the malingering diagnostic systems?
19. What is the difference between attributing malingering and ruling it out?
20. Is there agreement on the major malingering and related terms that should be included in diagnostic systems?

32.4.2 Chapter 2

1. * Is there only one definition of malingering?
2. * How does malingering differ in the criminal and psychological injury context? (Hint: one usually involves presenting positively, the other presenting negatively.)
3. * What are the problematic elements of the DSM approach to defining malingering?
4. * Do you think that even mild exaggerations should be part of the umbrella term malingering? (Hint: the book's opinion might not be yours.)
5. * How do the concepts of primary gain and secondary gain differ?

6. How do the terms poor effort and symptom exaggeration differ?
7. Should a referral to conduct an IME (independent medical examination) be considered an insurance medical examination even if the referral comes from an insurer, or an injured's medical examination if the referral comes from the plaintiff attorney?
8. * What does Roger mean when he refers to malingering as reflecting an adaptational model?
9. Is malingering a criminal act?
10. If so, what is the court's standard of proof?
11. In the civil arena, is the standard of proof the same?
12. Do you think attributing malingering should meet the civil or criminal standard of proof? (Hint: your answer might differ from the book's.)
13. What do consensus statements in the neuropsychological context indicate about detecting malingering?
14. Should these be applied to testing for other psychiatric/psychological injuries?
15. What are SVTs in neuropsychological testing, and to what does failing them refer?
16. Is there agreement on how many failed SVTs indicate malingering and how many are needed to have confidence in the results? 2? 3? 4? 5? (Hint: your answer might differ from mine; hint: the answer of different workers in the field might differ; hint: a worker might have one opinion in earlier publications and another later on.)
17. * Can one arrive at a definitive attribution of malingering by examining the test results of one SVT? If that result appears incontrovertible, would you use it without looking at all the reliable data gathered in an assessment?
18. The use of clinical judgment and nontest information in an assessment reflective of science or art?
19. How has the concept of construct drift been applied to the definition of malingering?
20. Are the concepts of suboptimal or inadequate effort valid?
21. Can conscious symptom feigning lead to unconscious symptom conviction and denial of malingering?
22. * Why should inconsistencies in definition affect research on prevalence rate, e.g., in malingering?
23. What is the psychometric advantage of working with a phenomenon that has a base rate more toward 50 % that toward 10 % or even less?
24. * Why is malingering important to attribute from a defense perspective rather than a more generic term, such as noncredible or feigning?
25. * Could one lose one's license if malingering is the clear attribution to give because of incontrovertible evidence, yet a less direct term is used, such as noncredible presentation and performance? What if it is not clearly attributable but given anyway?
26. Could you jeopardize your professional standing or even license (a) by administering psychometric tests restricted to qualified individuals among whom you are not included by the test publisher, and/or (b) because their demand characteristics are beyond your competence/education/training that you have had within your mental health profession and/or career path?

27. Could you jeopardize your professional standing or even your license by administering psychometric tests for which you are clearly qualified to administer, but the organizational entity involved (e.g., health management organization, veteran administration, social security) discourages their use for political and/or economic reasons?
28. Does the Chafetz (2011) data support an estimate of malingering toward the 1–10 % level or the 40–50 % level? Or in between?
29. And for Fishbain et al. (1999)?
30. Greve et al. (2009)?
31. Wygant et al. (2011)?
32. Lee et al. (2012)?
33. According to Chafetz et al. (2011), is IQ a factor to consider in SVT performance?
34. In Chafetz (2011), how many SVT failures lead to 100 % reliable attribution of malingering (no false positive errors)?
35. What are the limits of generalization to these research studies on base rate of malingering, SVTs, etc.? Can they lead to practical applications in individual assessments?

32.4.3 Chapter 3

1. * Although the MND system of diagnosing malingering and related response biases filled a void, and often is considered the gold standard, or the potential to be the gold standard, Rogers et al. (2011a, b) leveled relevant criticisms of the system. What are their main points?
2. * Does the MND use an adequate definition of malingering?
3. * Does it overclassify malingering?
4. Does it consider sufficiently passed domains/tests relative to failed ones?
5. Are the criteria overly inclusive or exclusive?
6. * Can any one system provide evidence of "proof" of malingering, or is it best to use terms such as "clearly supports," "provides evidence strongly consistent with," etc.?
7. * Does the Rogers et al. (2011a, b) literature review support the estimated malingering prevalence rate of 1–10 %, 40–50 %, or in between?
8. Did they find sufficient research on the particular MND criteria?
9. * What do they mean by criterion contamination? Should one define known-malingering criterion groups by SVT test failures, for example, and then determine group differences on other psychometric tests?
10. Does the MND account for symptom minimization?
11. Does it consider sufficiently alternate interpretations?
12. Does it consider the stress of the insurance process ("lexogenic factors")?
13. Should all inconsistencies in an evaluee's file be considered reliable?
14. Does Boone (2011) agree with the Rogers et al. criticisms of the MND?
15. * What are Boone's (2011) recommendations for its change?
16. According to her, how many SVT failures should be considered as threshold in malingering determinations?

17. * Does Young (2008a) agree that there is a high degree of malingering or, more generally, of "problematic" presentations pertaining to evaluees in tort and related evaluations? Would you agree?
18. Should evidence from inconsistencies be given equal weight in such determinations, as per Larrabee et al. (2007)?
19. According to you, given Rogers et al.'s (2011a, b) and Boone's (2011) analysis, does the work of Slick et al. (1999) on the MND meet court requirements for objectivity, as per Cutler and Kovera (2011)?
20. * According to McGrath et al. (2010, 2011), does the evidence support the use of validity or response bias indicators in applied assessment?
21. * Did Rohling et al. (2011) refute effectively this argument?
22. Does the research by Fox (2011) support McGrath et al. or Rohling et al.?
23. Does Young (2011a) suggest that there are dangers in prematurely accepting the approach by McGrath et al.?
24. Do Butcher et al. (2008) and Ben-Porath et al. (2009a, b) have the same opinion on the validity of the FBS?
25. The meta-analysis by Nelson et al. (2010) supports more which camp on the FBS debate?
26. Are the RBS and HHI as effective as the FBS in the research undertaken (e.g., Dionysus et al. 2011; Sullivan and Elliott 2012; Young et al. 2011)?
27. Which criteria of the MND would you change and why?
28. Which criticisms of the MND would you ignore and why?
29. Does research support use of the PAI or the MCMI-III more in these contexts? Does the extent research on these instruments match that for the MMPI-2-RF? (for the MMPI-2)?
30. * Which of the following tests/measures of malingering and related response biases fare better in the research: (a) validity indicators on personality inventories (e.g., the FBS); (b) stand-alone SVTs (e.g., the WMT); (c) stand-alone structured interviews (e.g., the SIRS-2); (d) validity indicators on dedicated psychological-injury specific measures (e.g., the DAPS for PTSD); and (e) embedded neurocognitive/neuropsychological measures?
31. What are Boone's (2013) recommendations to explain SVT use to evaluees?
32. * For free-standing two-alternative force-choice SVTs, what score constitutes a below-chance performance?
33. * What is meant by sensitivity and specificity being in balance?
34. * What level is considered adequate sensitivity in this area?
35. * Specificity?
36. * Why should SVTs be spread out in evaluations?
37. * And varied?
38. * Can they be correlated in the research, and if not, used in practice?
39. * Does SVT failure always indicate feigning? Explain.
40. * Does SVT lack of failure always indicate lack of feigning? Explain.
41. * Is a cry for help one valid explanation of SVT failure? Should it always be used? Never?
42. Do Boone (2013) and the chapter author share the opinion – that the MMPI-2-RF is an important test in the area?

43. That the original MND model is not a model that should be used as is, despite its importance?
44. That the approach by Larrabee (2008a) on predictive power/likelihood ratios should be used as is?
45. That malingering is defined appropriately and its prevalence clear?

32.4.4 Chapter 4

1. * Is research from independent workers accumulating to show the value of the MMPI-2-RF in forensic disability and related contexts? Why is it important to show the validity of the instrument outside of the work of Ben-Porath and Tellegen (2008/2011) and colleagues?
2. Is the MMPI-2-RF an extension of the MMPI-2 or a new test?
3. How many validity indicators does it have?
4. Higher-order scales?
5. Clinical scales?
6. Specific problem scales?
7. Personality psychopathology scales?
8. * How many of the MMPI-2-RF's scales concern symptom over-reporting? Describe them in detail.
9. * Does the research by Sellbom and Bagby (2010) support the FBS-r?
10. Can the RBS and HHI be used with the MMPI-2-RF as well as the MMPI-2?
11. * How does the research by Gervais et al. (2011) support use of the MMPI-2-RF?
12. Jones and Ingram (2011)?
13. Schroeder et al. (2012a)?
14. Does factor analysis support use of the FBS-r without modification (Gass and Odland 2012)?
15. How would you interpret a positive finding in an assessment? The FBS/FBS-r.
16. Peck et al. (2013) found which two validity indicators useful in detecting "probable" malingering?
17. Sullivan et al. (2013)?
18. Whitney (2013)?
19. Goodwin et al. (2013)?
20. Were the indicators the same over these studies? Were there qualifications to note?

32.4.5 Chapter 5

1. In the area of psychological injury and law, do financial and psychological pressures influence equally evaluees and evaluators?
2. Defense and plaintiff sides?
3. Treatment providers and evaluators?

4. Individual actors and institutions (e.g., insurers, worker compensation boards)?
5. * According to the chapter author, what are seven types of feigning/malingering/negative response bias possible in evaluees?
6. * In your opinion, what are their associated percentages among evaluees?
7. What is the role of external incentives, such as for financial gain, compared to more unconscious motivations, such as catastrophizing and a cry for help, in determining prevalence of these types of response bias?
8. Can there be mixed malingering-nonmalingering presentations and performances over time, e.g., with malingering driving symptoms at first and then symptom expression being experienced as subjectively real and consciously attributed to the effects of the event at claim?
9. Could the intermediate, gray zone category of response bias constitute the norm?
10. How would you deal with such cases in an assessment?
11. Has it been researched enough?
12. Does a science-first approach to this type of case make sense?
13. * Which is more important in this type of work – being comprehensive, scientifically informed, or impartial? (Hint: all three equally.) Why?
14. * Do you think a survey using the model based on the seven types of feigning/malingering/response bias as suggested by the author of the book will support the Mittenberg et al. (2002) approach that towards 40 % of evaluees in this type of work are malingering?
15. Will professionals working in different areas (e.g., psychiatry, psychology) respond in the same way to the survey?
16. What type of evidence would psychiatrists and psychologists rely upon in making these types of determinations?
17. Will workers more on the plaintiff or defense side respond in the same way?
18. What does this say about the adversarial divide?
19. Could the conceptualization and research that might be undertaken based on it, as presented in the present chapter, alter the differing opinions that typify the divide?
20. If not, what does this indicate about the divide? If it does?
21. * What are the origins of the MND system, as described by Slick et al. (1999)?
22. * Did the MPRD system of Bianchini et al. (2005) greatly change the MND system? What were its major changes relative to the MND?
23. What are the major types of inconsistencies/discrepancies in the MND model?
24. In the MPRD model?
25. * The author of the present book noted over 10 difficulties in the inconsistency/discrepancy sections of the MND/MPRD sections. Do they make sense to you?
26. * Do the proposed solutions make sense?
27. * Rubenzer (2009) took a different tack in developing test weightings of different types of tests for the detection of malingered PTSD, i.e., he did not develop a system that included inconsistencies/discrepancies. What are the advantages and disadvantages of his particular approach?
28. * Why did the author of the present book consider that it is valid to combine data from different types of instruments that aim to detect malingering

(e.g., forced-choice SVTs, validity indicators on personality inventories, embedded neurocognitive measures)?

29. * Is the approach used by the author consistent with that of Larrabee (2012a), e.g., who emphasized three or more test failures as a pertinent threshold in this regard? With Boone (2011)? With Rogers et al. (2011a, b)? With Slick et al. (1999)? With Bianchini et al. (2005)?
30. * Is the choice to refer to the sequence of definite, probable, and possible negative response bias in the malingering-detection systems developed by the author preferable and supported more by the literature compared to use of the terms definite, probable, and possible malingering? If so, why? If not, why?

32.4.6 Chapter 6

1. Does the proposed Young system for detecting malingering and related response biases include room for definite malingering?
2. * What would you consider as incontrovertible evidence of definite malingering in an assessment in this area?
3. How would you state your conclusions in reports/testimony if you found such evidence?
4. How would you describe evidence that is not quite incontrovertible?
5. Could the evidence of such incontrovertible evidence from testing derive from other than forced-choice SVT testing? How?
6. Could it derive from compelling/marked/substantial inconsistencies/discrepancies? How?
7. Does the author's system in these regards increase its ecological validity relative to other systems? How?
8. Are there rules that govern the order in which different aspects of polytrauma are considered in the combined, integrated system?
9. * Do the different examples provided for inconsistencies/discrepancies in the different psychological injuries make sense?
10. Are others needed? Does a casebook on use of the integrated system, including multiple examples, make sense? What should it contain to ensure reliability and validity?
11. * Does the combined, integrated system for malingering detection developed by the book author have the potential to reach acceptable thresholds of reliability (e.g., inter-rater agreement) with sufficient research?
12. * Of validity (e.g., content, construct, criterion)?
13. Will the reliability for each of the three components of the system (related to PTSD, pain, TBI) be equal for inter-rater reliability across plaintiff and defense experts? If not, what would this mean?
14. The validity? If not, what would this mean?
15. Do you agree with the need to limit beforehand critical tests for use in malingering detection so that it is not a fishing expedition?

16. * Do you agree that 5–8 failed test results are needed for malingering attribution or consideration when there is nothing else in the assessment at hand, such as no forced-choice test failures, no extremely high scores on validity indicators, no inconsistencies/discrepancies in the file, no overall impression indicative of feigning in the file, etc.?
17. * Do you agree that personality inventories, such as the MMPI-2-RF, can contribute up to four of the five validity indicator failures in these regards? And that even clinical patterns on them can be used in system ratings?
18. * System ratings depend on the information that the systems ask for and allow to be included. In this regard, the book author added many types of inconsistencies/discrepancies for the indeterminate, ambiguous, intermediate, gray zone category. Does this serve to overinflate the prevalence that might be found for this level, or is it consistent with the type of evaluees that professionals typically encounter in practice in this area?
19. * There are many qualifiers to the exclusionary criteria the book author added relative to the MND and MPRD systems. Do they make sense? Do you agree that these criteria should be excluded, as per Slick and Sherman's (2012, 2013) revision of the MND?
20. Science builds on the wave of advances and research of others. What work does the author of the book emphasize as primary contributions to the field that helped lead to the development of his diagnostic systems for malingering and related response biases?

32.4.7 Chapter 7

1. Generally, what valid points about malingering in court are presented by Drob et al. (2009)?
2. What points made are invalid?
3. What is the most critical valid part?
4. What do the multitude of invalid points reveal about the full scope of arguments?
5. Generally, what valid points about malingering in court are presented by Larrabee (2012a, b, c)?
6. What points made are invalid?
7. What is the most critical valid part?
8. What do the multitude of invalid points reveal about the full scope of arguments?
9. The critical issue in the field, as presented and analyzed by Drob et al. and Larrabee, is the degree of accuracy in detecting malingering through psychometric testing. Discuss their contrasting points of view.
10. What issues does the book author note about Larrabee's proposed test-result aggregating procedures?
11. Berthelson et al. (2013) conducted a meta-analysis on use of multiple tests of effort. Did they find that generally the tests are uncorrelated and, if not, what was the average correlation? Is this significant statistically?

12. Algorithms used to calculate the probability of malingering presentation need to take into account such correlations. Do they, or do they assume it must be zero?
13. What type of error in classifying values derives from the "pervasive" misunderstanding of statistics in these algorithms?
14. What false positive rate appears to derive even in using optimal specificity values? Does this vary by amount of validity indicators used?
15. For 10 such measures, what appears to be the threshold failure rate for attributing malingering/validity indicator when there is inter-test correlation (0.2–0.5)?

32.4.8 Chapter 8

1. What difficulties are presented by using extreme groups in so-called known-group designs in malingering research?
2. Has there been enough research on ambiguous cases?
3. Are premature conclusions (an evaluator factor) possible in malingering determinations?
4. Could biases, such as confirmatory bias, serve as contributing factors?
5. Could testing choices and strategies be involved as contributing factors?
6. Are actuarial methods sufficiently supported by the research in forensic disability and related determinations?
7. Is it appropriate to develop new malingering detection measures?
8. When can base-rate information provide even more information to a case at hand compared to testing?
9. Does the VIP test have good potential for use in this area of assessment? Does it have drawbacks?
10. Have special populations been considered sufficiently in the research and in test construction?
11. Does the Bayesian approach to malingering detection, as described by Mossman et al. (2012) and Ortega et al. (2012), hold promise? Is the approach applicable yet to individual assessments?
12. Why can clinical judgment help in malingering determinations?
13. Can clinical judgment be incorporated into algorithmic methods?
14. Should assessments be fully transparent, to the degree possible, e.g., which cut scores are used for tests, and what others might be available?
15. Is malingering a dichotomous or continuous construct?

32.4.9 Chapter 9

1. Why is the A criterion of PTSD controversial? Do you think it is valid?
2. * What are the three main clusters of PTSD symptoms? Do you think this structure is valid?

3. * To what does conceptual bracket creep refer with respect to PTSD?
4. What factors best predict valid cases of PTSD?
5. But is PTSD a uniformly expressed disorder? Has there been research on what predicts particular symptom combinations that might arise in its diagnosis?
6. * Are comorbid diagnoses a confounding complication?
7. * Is subsyndromal diagnosis a confounding complication?
8. Is prehistory a confounding, complicating factor, including of possible personality disorder?
9. Are litigants responsive to treatment?
10. Is "recall bias" a confounding complication?
11. Is there a high prevalence rate after exposure to trauma-related stressors?
12. * Is there a high prevalence rate of malingered PTSD?
13. Can malingered PTSD be partial?
14. * Is there evidence for and against the use of psychophysiological markers of PTSD?
15. * Does research support the use of PTSD-dedicated tests, such as the CAPS, the PCL, the DAPS, the TSI, and the MENT, in detecting malingered PTSD?
16. Has the MMPI-2's Fptsd been found to be effective?
17. * Can the MMPI-2-RF help (e.g., according to Sellbom et al. 2012)?
18. The SIRS? The M-FAST?
19. SVTs, such as the TOMM and the WMT?
20. * Is the clinical judgment method better to use in detecting malingered PTSD?

32.4.10 Chapter 10

1. What court decisions constitute the *Daubert* trilogy?
2. What factors facilitate admissibility of evidence to court in these decisions and according to authors on the matter?
3. Are these factors uniformly relevant in other court-related venues (e.g., the VA system)?
4. Does the champion of actuarial approaches, Meehl (1954), recognize, where warranted, non-actuarial data?
5. As for testing, are SVTs generally accepted in court?
6. About controversies, in court are experts required to reveal them, e.g., about SVTs?
7. Are conclusions about the ultimate issue of malingering allowed in court?
8. Larrabee's (2012a) algorithmic or test combination methods are based on the statistical independence of the tests in the research undertaken. However, the book author queries whether the research described by Larrabee has indeed demonstrated such independence. In this regard, in which study was the needed intercorrelation matrix not even calculated? In which one was it calculated but the matrix did not reveal the required independence? What can you conclude?

9. Davis et al. (2012) conducted a study that the book author analyzed for the issue of test independence. Did it support the Larrabee point of view on this issue at hand?
10. According to Heilbronner and Henry (2013), what test has "demonstrated superiority" in effort evaluation?
11. Are validity indicators unduly influenced by depression? Chronic pain?
12. According to Iverson and Lange (2012), is effort/exaggeration/malingering a construct that is dichotomous or continuous?
13. In their opinion, does failing one indicator render questionable or invalid the entire testing results?
14. According to Davis et al. (2012), do those who pass all effort tests perform differently in neuropsychological testing compared to those who fail two or more such tests?
15. Do their findings on validity measure indicator intercorrelations support Larrabee's approach to algorithmic or indicator combination in arriving at malingering determinations?
16. What is the basis of evidence law? (Hint: *Daubert* and others decisions.)
17. What is the basis of tort law?
18. Do these bases apply to the VA?
19. What is the book author's view on causality?
20. How does it compare to other models?

32.4.11 Chapter 11

1. Does Rogers' approach to terms in the field of malingering detection make complete sense to the book author?
2. What are some misconceptions and fallacies that he describes?
3. What are the detection strategies of malingering and related response biases that Rogers describes?
4. In this regard, what does he mean by performance curve and floor effect?
5. What does he mean by rare, blatant improbable/absurd symptoms or their combinations?
6. And quasi-rare and common ones?
7. How does Rogers use these detection strategies in the scales of the SIRS and SIRS-2? What are the critical scales in Rogers' instruments, the SIRS and the SIRS-2?
8. What are the four major research designs that Rogers describes needed to investigate malingering and related response biases? What are the advantages and disadvantages of each?
9. How does he advise reporting feigning/dissimulation when there is no incontrovertible evidence of malingering?
10. Is there sufficient research on the SIRS/SIRS-2 supporting use of the instrument(s) in forensic disability and related determinations?

32.4.12 Chapter 12

1. Review: Personal injury assessment components: History
2. Review: Personal injury assessment components: Current
3. Review: Personal injury assessment components: Records/documents
4. Review: Factors contributing to case difficulty
5. Review: Possible underlying motivations for exaggeration
6. Review: Differential/rule out diagnoses
7. Review: Potential sources of bias and error
8. Review: Fallacies in psychological assessment
9. Review: Common evaluator errors
10. Review: Methods for decreasing biases in clinical reasoning
11. Review: Elements for feigning evaluations
12. Review: Cautions in disability evaluations: psychological
13. Review: Cautions in disability evaluations: psychiatric
14. Review: Rules of thumb for response bias
15. Review: Assessment competencies in forensic psychology

32.4.13 Chapter 13

1. Review: Considerations in malingered PTSD evaluations: Lareau (2011)
2. Review: Considerations in malingered PTSD evaluations: Howe (2012)
3. Review: Problematic issues in assessing malingered PTSD
4. Review: Aids in detecting malingering
5. Review: Signs of malingering
6. Review: Behaviors suggestive of malingered PTSD
7. Review: Characteristics suggestive of malingering
8. Review: Factors relating to the perception and reporting of symptoms
9. Review: Exclusionary risk factors for treatment
10. Review: Qualitative variables in assessing response bias

32.4.14 Chapter 14

1. What are the differences in impairment, disability, and handicap?
2. Describe the ICF model of disability. In particular, what has Dixon et al. (2008) added to the model?
3. What factors need to be considered in disability according to Gold and Shuman (2009) and Piechowski (2011)?
4. What are the four major spheres typically considered in disability evaluations (the SSA list)? What do they mean by "marked" restrictions?

5. Describe the approaches given for disability determination for PTSD (figure by Wald and Taylor 2009).
6. Review: Factors contributing to difficulties in evaluations, assessment
7. Review: Factors contributing to difficulties in evaluations, pre-existing
8. Review: Factors contributing to difficulties in evaluations, event-related
9. Review: Factors contributing to difficulties in evaluations, litigation/iatrogenic
10. Review: Psychological injury report model
11. Review: Psychological injury evaluation
12. Review: Steps in the legal process
13. Review: Multifactorial assessment framework
14. Review: Psychological injury report model outline (Greenberg 2001)
15. Describe Goodman-Delahunty and Foote's (2011) model of report writing described in the literature.
16. How would you structure a fitness for duty evaluation (Corey and Borum 2013)?
17. Describe Piechowski's (2011) six-step model.
18. How do these various models compare?
19. What are some legal tests or constructs that inform assessments/reports/testimony?
20. What are DeMier's (2013) three central points to effective forensic report writing?

32.4.15 Chapter 15

1. What are the major criticisms of the MND model (Slick et al. 1999) made by Larrabee et al. (2007)?
2. * What are the three major foci in the changes Slick and Sherman (2013) instituted in the MND model?
3. Can videographic surveillance provide evidence of compelling inconsistencies?
4. * What limits did Slick and Sherman (2013) point out for the LR and PPP statistics used in malingering detection (Larrabee 2008b)?
5. Did Slick and Sherman (2013) account for these limits in their use of posterior probabilities in their system?
6. What are the criticisms of the MND exclusionary criterion?
7. Was the decision to drop this criterion from the revised system appropriate and, indeed, was the decision actually followed through?
8. * Is the concept of secondary malingering valid?
9. How does the revised MND model of Slick and Sherman (2013) compare to the approach taken by the book's author for the equivalent system he developed for definite malingering?
10. How does the revised MND model of Slick and Sherman (2013) compare to the approach taken by the book's author for the equivalent system he developed for probable malingering?
11. How does the revised MND model of Slick and Sherman (2013) compare to the approach taken by the book's author for the equivalent system he developed for possible malingering?

12. * Should MND by Proxy be included as a criterion in any revised MND system?
13. * Slick and Sherman (2013) distinguished between psychological and material-legal secondary gain. Explain.
14. They refer to psychosocial and material-legal secondary losses. Explain.
15. They refer to SVTs as noncompliance detection methods. Explain.
16. * They described adjustment disorder/problem with specious symptoms. Is this new nomenclature helpful?
17. They described other work proposing utility of the concept of cogniform condition/disorder. Do they agree?
18. Does the research support the value of the concept of stereotypic threat in these types of determinations?
19. Does the research support the value of the concept of neurocognitive hypochondriasis threat in these types of determinations?
20. Does the research support the value of the concept of oppositional defiant behavior threat in these types of determinations?

32.4.16 Chapter 16

1. * Does Guilmette (2013) support the use of clinical judgment in forensic-related assessment?
2. Does the recent research support its use?
3. What does the literature say about its limitations?
4. * Explain Bush's (2013) concept of positive ethics.
5. * Does research reported by Green and Merten (2013) support the utility of SVTs?
6. Do they consider Stone's (2009) argument that MUS (medically unexplained symptoms) have valid unconscious causes?
7. Do they believe that evidence of malingering in an assessment should be described directly for what it is?
8. Do they believe that isolating "pure" malingering is possible?
9. * Carone et al. (2013) indicate the MTBI symptoms might occur due to pathophysiological reasons. Explain.
10. Explain the paradoxical severity effect in TBI cases (in Nelson and Doane 2013).
11. * Describe the research presented by Nelson and Doane (2013) on the FBS and RBS of the MMPI-2/MMPI-2-RF.
12. * Guidotti Breting and Sweet (2013) described the logic underlying free-standing SVTs, such as the TOMM. Describe.
13. They advocate for a multidimensional-multimethod approach in malingering detection. Explain.
14. What are the three major categories of free-standing cognitive SVTs?
15. * Schutte and Axelrod (2013) reviewed embedded cognitive symptom validity measures. What are their advantages?
16. What are the four major categories of these embedded neurocognitive measures?
17. * Schutte and Axelrod (2013) also discussed procedures used to combine embedded effort indices. What are their disadvantages?

18. * Do details of the research on collating measures (e.g., Victor et al. 2009) indicate that the research has been referred to and used correctly by Larrabee (2008b) in his collating procedures?
19. * Does the technique of using multiple (logistic) regression hold promise?
20. When researched adequately, will it replace or add data to free-standing measures?
21. * Describe the research by Schutte et al. (2011) using the technique.
22. * Heilbronner and Henry (2013) present research on five new measures in detecting response bias – the FBS, HHI, RBS, MMDS, and PDS. Which are recommended? Can they be used together?
23. * Carone (2013) described using clinical judgment in this area according to the "7 Cs." Describe.
24. Victor et al. (2013a, b) described available embedded neuropsychological measures. Which category of measures stood out? Which specific measures?
25. Do they have as much sensitivity as free-standing SVTs?
26. According to Browndyke (2013), which areas of the brain are more engaged in deception/malingering?
27. Does he believe that fMRI lie detection methods are ready for individual cases and court?
28. What tests can be used in malingering pain detection according to Bianchini et al. (2013)?
29. * According to Bianchini et al. (2013) can the Bianchini et al. (2005) MPRD system for detecting malingered pain be applied to PTSD cases? Does the book author agree?
30. Has the TOMM been shown to be valid for use with depressed patients?

32.4.17 Chapter 17

1. What are Bigler's (2012a, b) main points with respect to SVTs? For example, what are Bigler's main points about the number of tests, their use, and their cut scores?
2. What are Larrabee's (2012d, e) main counterpoints?
3. What are some cautions about his arguments made by the book author?
4. Would they agree on the role of diagnosis threat in explaining poor SVT performance?
5. Do they agree on the validity of the research undertaken in the area?
6. Describe the research reported by Jones et al. (2012) supporting the value of the MMPI-2-RF in this type of work.
7. Describe the factor analytic study of the FBS-r by Gass and Odland (2012) on why the FBS-r might need subscales.
8. Describe the current research supporting use of the PAI in this type of work (e.g., Lange et al. 2012).
9. Describe the research by Mihura on the value of the R-PAS in this type of work (Mihura 2012).

10. Does the research by Miele et al. (2012) and Schroeder et al. (2012b) support use of the RDS in this work?
11. Does the research by Denning (2012) support the approach by Larrabee in combining SVT results in this work?
12. Does the book author agree with Hall and Hall (2012) that compensation neurosis is a valid attribution in this work?
13. Is there some merit to their approach to symptom hardening?
14. What are Silver's (2012) arguments why SVT failure might be due to non-malingering factors?
15. Given the poor opinion that the court might hold of mental health experts, Edens et al. (2012) suggest that preparation for court involves the "4 Cs." Describe. Does Brodsky (2013) add relevant guidelines?
16. Given what you have learned about malingering and related biases and their detection in forensic disability and related contexts pertaining to psychological injury and law, what would you suggest to your referral sources about the present book?
17. Wouldn't it be appropriate to have an attorney ask of the expert engaged by the other side, "Have you read the approach of Young (2014, i.e., the present book) on malingering"?
18. "How does the evaluation that you undertook for the case at hand reflect the approach described in the Young book?"
19. "Where it does not, please explain why?"
20. "If you are not familiar with the approach taken by Young in his book on malingering and related issues, please explain why."

32.4.18 Chapter 18

1. Define MTBI.
2. Define chronic pain.
3. What are its pathophysiological effects?
4. What is PPCS and is it contested?
5. According to Iverson (2012), what factors influence PPCS outcome?
6. Describe Young's (2007) biopsychosocial model of pain.
7. What tests does Boone (2013) list for evaluating malingered neurocognitive presentation?
8. Bianchini et al. (2013) for pain in this regard?
9. For pain, describe the fear-avoidance model.
10. The PDQ.
11. In polytrauma, what are the compounding effects of pain and MTBI to consider in evaluating PTSD? Does using a biopsychosocial model help in this regard?
12. For MTBI, when it persists in PPCS, how likely is at play malingering or related negative response biases?
13. For malingered chronic pain, how likely is at play malingering or related negative response biases?

14. * Do the factors listed in Iverson (2012) to explain poor outcome in MTBI apply to PTSD and to pain?
15. Which would be easier to evaluate, if any, among PTSD, pain, and MTBI, given their controversies?

32.4.19 Chapter 19

1. How is pain feigning checked in the MMPI-2 and MMPI-2-RF?
2. Can SVTs help?
3. Can the PCP:EA help? Can the CMAP help?
4. Can understanding the biopsychosocial-forensic model of pain help?
5. Can the DSM-IV-TR help?
6. Which tests on pain would you use in a comprehensive battery aimed at determining pain feigning?
7. Can the LAQ help? Can the BAPQ help?
8. Can the PSR-2 help?
9. Can the PFDT help?
10. What research is needed in this area?

32.4.20 Chapter 20

1. Why is conversion disorder considered problematic as a diagnosis?
2. What are its key diagnostic features?
3. What major changes for conversion disorder have been implemented for the DSM-5?
4. Does neurobiological evidence support it as a diagnostic entity?
5. What alternate terms have been proposed for it?
6. What are some of its noted historical links?
7. What are some of its present-day models?
8. Does Young's (2008b) somatization model help in understanding conversion disorder?
9. Does the book author's recommendation to refer to it as Conversion Complications Disorder make sense?
10. Can psychometric tests used in malingering detection help rule out this factor in differential diagnosis?

32.4.21 Chapter 21

1. Describe the biopsychosocial approach to psychotherapy.
2. Describe the stress response.
3. How does the medical model differ from the biopsychosocial one?

4. Where does coping fit into the biopsychosocial model?
5. Does psychotherapy have to meet accepted legal standards in court?
6. Should psychotherapy be DSM-driven?
7. * How do forensic factors play a role in psychotherapy for psychological injury?
8. Is evidence-based therapy/practice universally accepted?
9. Are RCTs and treatment manuals efficacious for conducting psychological therapy research?
10. * Does evidence-based practice research generalize to the real world?
11. * What are the major schools of practice in psychotherapy?
12. Describe behavioral therapy.
13. Describe cognitive therapy.
14. Extensions of behavioral and cognitive therapy.
15. Extensions of experiential therapy.
16. Extensions of existential therapy.
17. Extensions of mindfulness/acceptance therapy.
18. Extensions of postmodern/poststructuralist therapy.
19. Extensions of psychoanalytic/psychodynamic therapy.
20. Extensions of eclectic, common factor approaches to therapy.
21. Extensions of positive psychology in rehabilitation.
22. What are the ten components of the person in Young's componential approach to psychotherapy?
23. How is that approach transdiagnostic?
24. What major school of psychotherapy can be quite helpful for understanding many of the components?
25. How do breathing techniques work?
26. Progressive muscle relaxation?
27. Biofeedback?
28. Systematic desensitization?
29. * Exposure therapy?
30. Interoceptive awareness?
31. What is the A, B, C, D model?
32. Give examples of the maladaptive cognitions in the psychological injury context.
33. * Give examples of the constructive self-statements in the psychological injury context.
34. *Why is lifestyle important to consider in psychotherapy?
35. Why are models of disability important to consider, too?
36. To see the whole rehabilitative/therapy picture, how can systems therapy help?
37. Can it help understand the development of chronic pain?
38. What are the stages in the HAPA model?
39. What is the major lack in the ICF disability model accommodated by Dixon et al.'s (2008) model?
40. * What is meant by active vs. passive coping? Which would you encourage in rehabilitation?
41. * Do integrative psychotherapy models, evidence-based practice, and related developments account sufficiently for individual differences?

42. Should the DSM be part of integrated models constructed for therapy?
43. * Describe the transdiagnostic approach to psychotherapy of Barlow and colleagues.
44. * Describe the stages of change model in psychotherapy.
45. Have these models been applied to psychological injuries?
46. * Why is a combined biopsychosocial and forensic model of psychotherapy and practice good for psychological injury assessment and treatment?
47. Does it conflict with a systems view?
48. * What does the book author mean by broad therapy?
49. * What are some patient factors in the model?
50. * What are some practitioner factors in the model?

32.4.22 Chapter 22

1. What are some important items in the APA's (2013) forensic specialty guidelines that the book author emphasizes?
2. What are some important forensic mental health assessment guidelines for this area?
3. What are some important neuropsychology guidelines?
4. What are Bush's (2013) 4 A's in positive ethics?
5. What do the APA ethics code items that concern use of assessments and interpreting test results tell us?
6. What should evaluators tell evaluees about SVTs before an assessment begins?
7. What are some critical guidelines for the APA in working with people with disabilities?
8. What are the five major principles in the APA ethics code?
9. Can careful decision-making help with ethical dilemmas?
10. Is the APA code of ethics in its final form?
11. Is being scientific, impartial, and comprehensive a sufficient starting point in ethical practice?
12. What is normative ethics?
13. What are the major steps in ethical decision-making, according to Kitchener and Kitchener (2012)?
14. What is their model of reflective judgment?
15. Describe Cottone's (2012) model of ethical decision-making.
16. What does the book author mean by broad ethics?
17. How does the model include education and practice?
18. Science and practice?
19. Ethical dilemmas and practice?
20. How does the model include reflection and decision-making in ethics and practice?

32.4.23 Chapter 23

1. Are there positive consequences in believing in free will work?
2. Is free will belief important for psychotherapy?
3. Can a psychotherapeutic module on free will work?
4. Is it transdiagnostic?
5. Does it promote psychotherapeutic change?
6. What are some barriers to free will belief?
7. Does it develop in daily life?
8. What are some cognitive underpinnings to it?
9. Can ego depletion affect it?
10. Consciousness, or its lack?
11. Reasoning?
12. Motivation and attention?
13. Intuitive thought?
14. Does free will belief develop?
15. Do patients inevitably move to higher-order levels?
16. Do they use free will working schemas?
17. Are free will beliefs and taking responsibilities antithetical?
18. Explain the book author's concept of Re-Responsibilities.
19. Why is his model of the growth of free will paradoxical?
20. Asymptotic?
21. How does Erikson's concept of generativity fit the model?
22. Individualism-collectivism?
23. Activation-inhibition?
24. Can it be useful in psychotherapy?
25. Can it help promote posttraumatic growth?

32.4.24 Chapter 24

1. Are there missing steps in Kitchener and Kitchener's (2012) model of the development of reflective judgment, according to the book author?
2. Can the author's own similar model (Young 2011b) help accommodate these missing steps?
3. Does his model apply to the steps described by Kitchener and Kitchener (2012) for concepts of morality?
4. How did the book author apply this model to create a new one on broad ethics?
5. What steps were added to Kitchener and Kitchener's model of ethical decision making in doing so?
6. What steps were dropped?
7. How was this new model applied to create a broad model of professional therapy perspectives?

8. How was it applied to create a model for the Golden Rule?
9. Can these models be useful to individual practitioners as they build their ethical and psychotherapeutic perspectives?
10. Can they be useful to organizations, too, such as the two APA's?

32.4.25 Chapter 30

1. * Can attorney coaching take place on both sides of the adversarial divide? What does this say about plaintiff and defense theories of the case (e.g., no malingering, malingering, respectively)?
2. Is evidence considered inadmissionable equally when presented to court from both sides of the adversarial divide?
3. Is bias equal on both sides of the adversarial divide?
4. Science seeks "support" for its results and conclusions, acknowledging that "proof" is an impossible standard. Does the court have the same approach?
5. * What is the minimum legal threshold at which an event at issue is causally contributory? In a specific case at hand?
6. * How do the legal and psychiatric/psychological definitions of "compensation" differ? Damage/damages?
7. Is "compensation neurosis" or the like a valid concept?
8. * In cases of pre-existing injury, do the terms thin and crumbling skull cases make sense? For which one can still receive legally defined compensation/damages if there is demonstration of valid causation (i.e., plaintiffs)?
9. Is mental health evidence considered only scientific, or also technical or otherwise specialized?
10. Must mental health evidence gathered in an assessment be considered falsifiable? Or, subject to evaluation according to other *Daubert* (1993) scientific criteria of admissibility (e.g., peer review)?
11. Or, is general acceptance the test of admissibility of mental health evidence that applies most clearly?
12. What is the difference between fit, helpfulness, relevance, and reliability (as legally defined)?
13. * What is the difference between the legal and psychiatric/psychological definition of reliability?
14. What is the difference between the tests of forseeability, but-for, and material causation/causality/proximate cause?
15. Do judges or other triers of fact make good gatekeepers of evidence, determining effectively what should be admitted or denied admission to court?
16. Should more weight be given to idiographic or nomothetic data in psychiatric/psychological injury cases, or might it depend? If so, how?
17. * What is the difference between junk science and litigation science? Can the latter constitute good science with respect to admissibility standards?
18. Is it fair that in tortious negligence leading to a tort or related case mean the survivor has to be taken as they are found (in the sense of pre-existing

psychological/psychiatric injury not necessarily denying a case's validity)? psychological/ Is it fair that post-event survivor effort to adhere to treatment regimen, or mitigate loss affects the case's validity?
19. Is pain and suffering considered in the award of a case?
20. If evidence is more prejudicial than probative, or not helpful in arriving at a conclusion that the preponderance of the evidence supports the allegation of the injury sustained due to the event at claim, does it have to be presented to court no matter what the referral source?
21. * Should evidence/experts address ultimate issues? Does your conclusion apply to psychiatric/psychological injury cases? To attributions of malingering?
22. Are there sufficiently accurate actuarial algorithms to facilitate reliable and valid predictions/estimate in psychiatric/psychological injury cases?
23. Are they better than extant practices in terms of accuracy (e.g., combined tests – clinical judgment)?
24. Do they need to consider base rate, e.g., of malingering? Are these known to a sufficient degree, e.g., for malingering?
25. Is below-chance SVT performance a sign of definite malingering?
26. Below cut-score test performance?
27. * Is poor suboptimal, inconsistent, etc., effort a sign of definite malingering?
28. Exaggeration?
29. Fabrication?
30. Inconsistency/discrepancy?
31. Response bias?
32. How do the terms feigning/noncredible misrepresentation, impression management, and malingering differ?
33. * Is disability best defined in terms of disorders, impairments, limitations, dysfunctions, or any combination thereof?
34. Can secondary factors, such as iatrogenesis or litigation distress, exacerbate symptoms? Lead to limitations/dysfunctions/disability?
35. How do the terms symptom (in)validity, presentation (in)validity, and performance (in)validity differ?
36. How do the terms incentive, motivation, secondary gain, and conscious intent/volition differ?
37. How do the terms validity scale/indicator/measure and test validity differ? Does the former apply to the latter?
38. How do the terms Type I and II error, hit and miss rate, false and true negatives and positives, and sensitivity and specificity differ?
39. Is the psychological injury diagnosis of chronic pain controversial, and contested in court? Nevertheless, does science support it, at least in valid, nonmalingered presentations?
40. PTSD?
41. MTBI/PPCS?
42. Can a risk/vulnerability-resilience/coping model, or the biopsychosocial one, explain them in part?

43. Why is a multitrait-multimethod approach to assessment in contested court cases appropriate?
44. * The area is a forensic one and appearing in court or related venues is likely for those practicing in the area. What is the best approach to use in order to successfully defend evidence (e.g., in admissibility challenges, in cross examination)?
45. Why are all the major areas of the field of psychiatric/psychological injury and law necessary to know for competent, court-admissable practice and evidence in the area?

32.4.26 Chapter 33

1. Define cut score.
2. Is it constant or variable for any one test? Why?
3. Are the cut scores for the MMPI-2-RF constant? If not, describe some variations.
4. Describe some of the research on cut scores using the MMPI-2-RF. What can you conclude?
5. Are the MMPI-2's cut scores found consistent?
6. The PAI's?
7. Are the criticisms of the SIRS-2 valid?
8. Does the research support it?
9. Which of the test directly related to PTSD appear best to you? Why?
10. What can you conclude about cut scores for practice and for court?

32.4.27 Chapter 34

1. What are the major criteria for the proposed diagnostic category of Chronic Pain Complications Disorder?
2. What are its advantages?
3. In Bender and Matusewicz (2013), what factors do they consider to explain poor SVT performance other than malingering?
4. What other relevant points do they raise?
5. What is the counter-argument of Merten and Merckelbach (2013)?
6. Can any alternate explanation other than uncooperativeness and the like fully explain negative response bias?
7. When can the explanation of a cry for help be used?
8. How could one explain why even nonlitigating patients might exhibit negative response bias?
9. Is SVT failure rate the same in genuine patients and those with external incentives?
10. What are some "pseudo-explanations" of SVT failure?

11. What are the major points in the work by Piechowski (2012)?
12. Scott and McDermott (2013)?
13. Bomyea, Risbrough, and Lang (2012)?
14. Frueh, Grubaugh, Elhai, and Ford (2012)?
15. Lilienfeld, Thames, and Watts (2013)?

32.5 Final Conclusion

The major underlying goal of the book is to help improve the education of students and young professionals entering and practicing in the field. By beginning careers with the knowledge imparted in the book, it is more likely that assessments in the area of forensic disability and related determinations will be effective and the difficulties that ineffective assessments present both to evaluators and their evaluees will be minimized. Seasoned professionals can also profit from the book, e.g., in continued education. The questions listed in this chapter will help the reader in these regards.

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Chapter 33
PTSD and Malingering: Tests, Diagnostics, Cut Scores, and Cautions

33.1 Introduction

The present chapter tackles one of the most difficult issues in the area of malingering detection. Mental health assessors use instruments to help detect malingering, feigning, and negative response bias, in general. These instruments typically have cut scores that maximize malingering detection while minimizing errors in this regard, such as false positives and negatives. Often, the cut scores are chosen on empirical grounds. The chapter presents the major instruments used in malingering detection and their associated cut scores, especially as they apply to posttraumatic stress disorder (PTSD). These cut scores might apply to a test as a whole or to component scales or subscales of the tests. To help compare and contrast the various instruments and their efficacy, we constructed tables for each of the major tests having sufficient data on population studied, sample size, cut scores, and sensitivity and specificity values. The tests examined related to personality inventories, structured interviews, symptom validity tests (SVTs), and self-report inventories. Also, to begin the chapter, we review some basic information on testing and research. The chapter concludes with a call for more research and also it emphasizes the need to proceed cautiously in choosing relevant instruments, their cut scores, and their application in evaluations, for example, related to PTSD.

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Table of Term and Sources

Abbreviations	Name	Source(s)
ATR	Atypical Response Scale	Briere (1995)
CAPS	Clinicians Administered PTSD Scale	Blake et al. (1995)
DAPS	Detailed Assessment of Posttraumatic Stress	Briere (2001)
F	Infrequency Scale	Butcher et al. (1989)
Fb	Back Infrequency	Butcher et al. (1989)
FBS	Symptom Validity Scale	Ben-Porath and Tellegen (2008/2011), Lees-Haley et al. (1991)
F-K	Dissimulation Index	Gough (1950)
Fp	Infrequent Psychopathology	Ben-Porath and Tellegen (2008/2011)
Fp-r	Infrequent Psychopathology Responses	Toomey et al. (2009)
Fs	Infrequent Somatic Responses	Ben-Porath and Tellegen (2008/2011)
HHI	Henry-Heilbronner Index	Henry et al. (2006)
MCMI-III	Millon Clinical Multiaxial Personality Inventory, Third Edition	Millon (1994), Millon et al. (1997)
MMPI-2	Minnesota Multiphasic Personality Inventory, Second Edition	Butcher et al. (1989)
MMPI-2-RF	Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form	Ben-Porath and Tellegen (2008/2011)
MENT	Morel Emotional Numbing Test	Morel (1995, 1998)
MENT-R	Morel Emotional Numbing Test – Revised	Messer and Fremouw (2007)
M-FAST	Miller Forensic Assessment of Symptoms	Miller (2001)
MND	Malingered Neurocognitive Dysfunction	Slick et al. (1999)
MPRD-DF	Malingered Pain-Related Disability-Discriminant Function	Hopwood et al. (2010)
NB	Negative Bias	Briere (2001)
NDS	Negative Distortion Scale	Thomas et al. (2012)
NIM	Negative Impression Management	Morey (1991)
PAI	Personality Assessment Inventory	Morey (1991, 2007)
PB	Positive Bias	Briere (2001)
PCL	PTSD (Posttraumatic Stress Disorder) Checklist	Weathers et al. (1993)
PDRT	Portland Digit Recognition Test	Binder (1993), Binder and Willis (1991)
PIM	Positive Impression Management	Morey (1991)
PLC-R	Hare's Psychopathy Checklist, Revised	Hare (1991)
PDS	Paulhaus Deception Scales	Paulhus (1998)
-r	Revised (e.g., FBS-r)	Ben-Porath and Tellegen (2008/2011)
RC	Restructured clinical scales	Ben-Porath and Tellegen (2008/2011)
RDS	Reliable Digit Span	Babikian et al. (2006), Greiffenstein et al. (1994)
RNBI	Ruff Neurobehavioral Inventory	Ruff and Hibbard (2003)

(continued)

(continued)

Abbreviations	Name	Source(s)
SCID	Structured Clinical Interview for DSM-IV Axis I Disorders	First et al. (1997)
SIMS	Structured Inventory of Malingered Symptomology	Widows and Smith (2005)
SIRS	Structured Interview of Reported Symptoms	Rogers et al. (1992)
SIRS-2	Structured Interview of Reported Symptoms, Second Edition	Rogers et al. (2010)
TOMM	Test of Memory Malingering	Tombaugh (1996)
TSI	Trauma Symptom Inventory	Briere (1995)
TSI-2	Trauma Symptom Inventory-2	Briere (2011)
WMT	Working Memory Test	Green (2005)

33.2 Testing

As a preface to examining cut scores in relation to detection of PTSD malingering, first, I provide a brief review of the available tests. In this regard, I compared and contrasted four chapters on the topic of PTSD and its assessment in relation to malingering, written by: (a) Andrikopoulos and Greiffenstein (2012); (b) Rosen and Grunert (2012); (c) Lareau (2011); and (d) Howe (2012). There is much disagreement among them on what is effective in detecting malingering. Andrikopoulos and Greiffenstein (2012) valued the interview process and Lareau (2011) preferred psychophysiological testing. Both Howe (2012) and Rosen and Grunert (2012) emphasized the use of psychological tests, although they did not recommend the same tests for detecting malingered PTSD.

Overview of these various surveys of instruments recommended for PTSD evaluation gives no clear recommendations. Not one instrument was universally recommended, including the widely used and recommended MMPI-2 (Minnesota Multiphasic Personality Inventory, Second Edition; Butcher et al. 1989, 2001) and SIRS (Structured Interview of Reported Symptoms; Rogers et al. 1992). The MENT (Morel Emotional Numbing Test; Morel 1995, 1998) and DAPS (Detailed Assessment of Posttraumatic Stress; Briere 2001) received some support. The M-FAST (Miller Forensic Assessment of Symptoms; Miller 2001) and SIMS (Structured Inventory of Malingered Symptomology; Widows and Smith 2005) generally were not recommended. The CAPS (Clinicians Administered PTSD Scale; Blake et al. 1995) has some utility (according to only one of the sources, Andrikopoulos and Greiffenstein 2012), but the SCID (Structured Clinical Interview for DSM-IV Axis I Disorders; First et al. 1997) does not. The MMPI-2 validity indicator scales were recommended, consistently including the Fp (Infrequent Psychopathology Responses; Ben-Porath and Tellegen 2008/2011).

Torres et al. (2012) surveyed tests used to assess PTSD. The instruments used most frequently were the: MMPI-2; TSI (Trauma Symptom Inventory; Briere 1995); PCL-R (Hare's Psychopathy Checklist, Revised; Hare 1991); PAI

Table 33.1 Selected psychometric indicators of PTSD feigning (along with suggested cutoff scores, associated false-positive rates, and a preliminary weighting system) in Rubenzer (2009; reworked)

Test	Indicator	Source	Cut score	Weight
MMPI-2	F(p)	Greene (2008)	4–6	1
MMPI-2	F(p)	Greene (2008), Rogers et al. (2003)	≥7	2
MMPI-2	FBS	Greiffenstein et al. (2004)	27–28	1
MMPI-2	FBS	Ben-Porath et al. (2009)	>28	2
MMPI-2	Ds	Greene (2008)	>30	1
MMPI-2	Ds	Greene (2008), Rogers et al. (2003)	>35	2
PAI	NIM	Scragg et al. (2000)	>84	1
PAI	MAL	Scragg et al. (2000), Liljequist et al. (1998)	≥3	1
PAI	MAL	Scragg et al. (2000), Morey (1991)	≥5	2
SIRS	One scale definite feigning	Rogers et al. (1992)	Definite feigning range	1
SIRS	Three scales probable feigning	Rogers et al. (1992)	Probable feigning range	2
SIRS	Tot	Rogers et al. (1992)	≥76	2
WMT	IR or DR	Green (2005)	83–89	1
WMT	Tot	Green (2005)	Failure	2
SVT	Any SVT significantly below chance (any trial or combination of trials)	Pankratz et al. (1975)	α	5
TOMM	Trial 2 or retention trial	Ashendorf et al. (2004)	Failure	2
MENT	Tot	Morel (1998, 2008)	Failure	2

Adapted from Rubenzer (2009)

Abbreviations. MMPI Minnesota Multiphasic Personality Inventory, *PAI* Personality Assessment Inventory, *SIRS* Structured Interview of Reported Symptoms, *WMT* Word Memory Test, *TOMM* Test of Memory Malingering, *MENT* Morel Emotional Numbing Test, *F(p)* Infrequent Psychopathology, *FBS* Symptom Validity Scale, *Ds* Dissimulation Scale, *NIM* Negative Impression Management, *MAL* Malingering Index, *Tot* Total, *IR* Immediate Recognition, *DR* Delayed Recognition, *SVT* Symptoms Validity Test

(Personality Assessment Inventory; Morey 1991, 2007); CAPS; MCMI-III (Millon Clinical Multiaxial Personality Inventory, Third Edition; Millon 1994; Millon et al. 1997); SCID; SIRS; and DAPS. As for evaluating malingered PTSD, the following tests were used most frequently: MMPI-2; TSI; TOMM (Test of Memory Malingering; Tombaugh 1996); SIRS; CAPS; and M-FAST.

Rubenzer (2009) conducted a review of tests useful in malingered PTSD detection and developed a weighting system to help aggregate their results (see Table 33.1). He emphasized the utility of the MMPI-2, PAI, SIRS, WMT (Work Memory Test; Green 2005), TOMM, and MENT. Also, he reported that only one study has researched the CAPS usefulness (Hickling et al. 2002), and the results indicated that it was "completely ineffective" in identifying exaggeration. Rubenzer reviewed the TSI. It includes the ATR (Atypical Response Scale). Research has shown that it

is only "modestly effective" and it suffers from not having clear guidance in establishing an appropriate cut-off score in forensic evaluations.

As for Rubenzer's (2009) positive suggestions, he recommended especially the MMPI-2 family of F indicators – F (Infrequency Scale; Butcher et al. 1989), Fb (Back Infrequency; Butcher et al. 1989), Fp, FBS (Symptom Validity Scale; Ben-Porath and Tellegen 2008/2011; Lees-Haley et al. 1991), and RBS (Response Bias Scale; Gervais et al. 2007). For Rubenzer, even though it had just appeared at the time of his publication, the MMPI-2-RF (Minnesota Multiphasic Personality Inventory, Second Edition, Restructured Form; Ben-Porath and Tellegen 2008/2011) has much potential, e.g., the Fp-r (Infrequent Psychopathology Responses; Toomey et al. 2009). Other personality inventories generally are not supported in the works he reviewed (e.g., MCMI-III).

To conclude, the TSI, PCL (PTSD Checklist; Weathers et al. 1993), and PDS (Paulhus Deception Scales; Paulhus 1998) were not recommended in the various reviews. When indicators of cognitive effort testing appears warranted, the WMT appeared the best SVT (symptom validity testing), and the TOMM, as well.

33.3 Cut Scores

33.3.1 Introduction

A cut score (also cutting/cut-off point/level) is defined as a (numerical) reference value dividing a data set into two (or more) categories (Cohen and Swerdlik 2010). For purposes of personality and other tests, a cut score divides a range of standardized scores (of the total test or partial components, e.g., subscale, individual scale) into separate classifications, such as pass/fail. There might be several such criteria thresholds for any one distribution (e.g., pass, indeterminate, fail). The cut scores are determined according to the normative research (e.g., for different populations), follow-up research, and clinical/practical experience/factors.

Ben-Porath et al. (2009) noted that cut scores for the MMPI-2 have evolved and so there is no one yardstick. Recommendations in these regards change with the accumulation of both relevant research and clinical experience. Moreover, cut-score usage depends on the context and "facts" of an evaluation.

Ben-Porath et al. (2009) remarked that the 1989 version of the MMPI-2 manual (Butcher et al. 1989) and the later version (Butcher et al. 2001) provided different cut scores, and varied with respect to setting, as well (e.g., inpatient, outpatient clinical). Moreover, Butcher and Williams (2000) provided different F cut scores relative to either of the two manuals.

Ben-Porath et al. (2009) continued that no one best, recommended, or optimal cut score is appropriate for all cases and any search for such a cut score is misguided, given the variability in specific cut scores that are presented in the research (Gallop et al. 2003; Greve et al. 2006a, b). For example, for the FBS, the classificatory accuracy data ranges have risen with time, consistent with the research.

The study by Merten et al. (2009) illustrates several of the major points made by Ben-Porath et al. (2009). They undertook a prospective study of 61 patients (mostly MVA and work accident cases) claiming PTSD in neuropsychiatric evaluation. Aside from neuropsychological tests, the authors administered the MENT, an instrument specific to PTSD, the WMT, a cognitive SVT, and a more general malingering detection inventory, the SIMS.

In their introduction, Merten et al. (2009) noted that most research supports the efficacy in use of the MMPI-2 family of validity indicators in evaluation of claimed PTSD (e.g., Arbisi et al. 2006; Bury and Bagby 2002; Efendov et al. 2008; Elhai et al. 2000, 2001; Rogers et al. 2003); per contra, Greiffenstein et al. 2004). Also, they noted that cognitive SVTs has been shown to be effective in these regards (Demakis et al. 2008). They chose the MENT (Morel 2007, a German version) because the pooled estimate of its sensitivity and specificity was 70 % and 96 %, respectively (Morel and Sheppard 2008).

It is interesting to note that the German version of the SIMS (Cima et al. 2003) uses the cut-off of 16, unlike the original of 14. Similarly, Merten et al. (2009) chose, from among the different cut-offs that had been recommended for the WMT, the one that is "more conservative." Note that the authors also used the RDS (Reliable Digit Span; Babikian et al. 2006; Greiffenstein et al. 1994), an embedded test, but the results for this measure are usually more "modest" relative to the more specific SVTs (Merten et al. 2007). This confirms that the value of embedded neuropsychological tests as validity indicators normally are not as good as stand-alone SVTs and the ones in personality inventories.

As for the particular results of the Merten et al. (2009) study, it is worth noting that 25 % of the participants failed all three critical tests of effort although, according to the authors, towards 50 % could have been expected. I note that the 50 % estimate of malingering in forensic and disability type cases might be best conceived as the level of "problematic" presentations rather than malingering or clear feigning, per se. Second, the results for the validity indicators were generally intercorrelated. This speaks to the research on validity indicator correlations addressed elsewhere (e.g., Berthelson et al. 2013). Third, those who passed or failed the three critical indicators performed differently on the neuropsychological measures, with the fail group generally performing worse. This speaks to the criticism of the use of such indicators by McGrath et al. (2010), to which Rohling et al. (2011) had responded. Generally, the research supports the value of using validity indicators in forensic and disability evaluations. Moreover, returning to using clinical judgment (and file review) exclusively would be a step backwards.

33.3.2 MMPI-2-RF

The MMPI family of personality inventories includes the MMPI-2 and the MMPI-2-RF. Tables 33.2 and 33.3 present the cut score for the validity indicator on the MMPI-2 and the MMPI-2-RF, respectively. Table 33.2 presents the values for

Table 33.2 Cut scores for validity indicators on the Minnesota Multiphasic Personality Inventory-2 (MMPI-2) according to the manual (Butcher et al. 1989)

Sample	Sample size (N)	Indicator	Cut score	Interpretations	Sensitivity	Specificity
Nonpatient sample	724	Infrequency (F)	≥91T	Invalid	?	?
			71–90T	Questionable	?	?
			56–70T	Probably valid	?	?
			45–55T	Acceptable	?	?
			≤44T	Acceptable	?	?
		Back F (Fb)	≥91T	Invalid	?	?
			71–90T	Questionable	?	?
			56–70T	Probably valid	?	?
			45–55T	Acceptable	?	?
			≤44T	Acceptable	?	?
		Infrequency Psycho-pathology (Fp)	65T	–	?	?

Note. According to Greene (2000), for Infrequency psychopathology scale (F(p)), the profile dated January 17, 2010, raw score is 3, which equals to the cut score 65T. However, for the profile dated February 17, 2010, the raw score of 3 is just below the cut score. Both profiles were filled in on score sheets dated 2001, and were identical in structure. I also noted other changes in placement of raw scores (e.g., F and FB scale)

Table 33.3 Cut scores for validity indicators on the Minnesota Multiphasic Personality Inventory-2 Restructured Form (MMPI-2-RF) according to the manual (Ben-Porath and Tellegen 2008)

Indicators	Cut score	Interpretations	Sensitivity	Specificity
Infrequent Response (F-r)	<79T	No evidence of over-reporting	?	?
	79–89T	Possible over-reporting		
	90–99T	Possible over-reporting		
	100–119T	Possible over-reporting		
	120T	Invalid		
Infrequent Psychopathology Responses (Fp-r)	<70T	No evidence of over-reporting	?	?
	70–79T	Possible over-reporting		
	80–99T	Possible over-reporting		
	≥100	Invalid		
Infrequent Somatic Responses (Fs)	<80T	No evidence of over-reporting	?	?
	80–99T	Possible over-reporting		
	≥100T	Invalid		
Symptom Validity (FBS-r)	<80T	No evidence of over-reporting	?	?
	80–99T	Possible over-reporting		
	≥100T	Invalid		

nonpatient samples only, and only for F, Fb, and Fp. Table 33.3 presents values for F-r, Fp-r, Fs (Infrequent Somatic Responses; Ben-Porath and Tellegen 2008/2011), and FBS-r (Symptom Validity Scale; Ben-Porath and Tellegen 2008/2011). These data from the MMPI manuals provide a starting point for considering cut scores on these tests. In the following, I give a description of the MMPI-2-RF. The classic MMPI-2 is described very well in Greene (2011).

The MMPI-2-RF is a 338-item test. Its normative sample consisted of 2,276 representative American men and women. The test includes nine validity indicators (over- or under-reporting indicators, as well as inconsistency indicators), three higher-order scales, nine RC (restructured clinical) scales, 23 specific problems scales, two interest scales, and revised Personality Psychopathology Five (Psy-5) scales.

The three higher-order scales are: Emotional/Internalizing Dysfunction, Thought Dysfunction, and Behavioral/Externalizing Dysfunction. The nine restructured clinical scales include: Demoralization, Somatic Complaints, and Low Positive Emotions. The 23 specific problems scales include aspects such as: Malaise, Gastrointestinal Complaints, Head Pain Complaints, Neurological Complaints, Cognitive Complaints, Stress/Worry, Anxiety, Anger Proneness, Behavior-Restricting Fears, Substance Abuse, and Aggression. The revised Personality Psychopathology Five scales involve: Aggressiveness, Psychoticism, Disconstraint, Negative Emotionality/Neuroticism, and Introversion/Low Positive Emotionality.

The MMPI-2-RF provides four standard over-reporting scales (Greene 2011; Hoelzle et al. 2012). The F-r scale is a 32-item measure of general over-reporting that includes items that had been rarely endorsed in the MMPI-2-RF normative sample (10 % or less). The Fp-r scale includes 21 items of over-reported symptoms indicative of severe psychopathology. The Fs scale was constructed specifically for to the MMPI-2-RF in order to measure over-reported somatic complaints. It consists of 16 items having somatic content that were rarely endorsed in large archival medical and chronic pain samples (less than 25 %). Finally, the FBS-r contains 30 items and assesses non-credible somatic and neurocognitive complaints (Lees-Haley et al. 1991).

Aside from the validity scales exclusive to the MMPI-2-RF, two others can be used in conjunction with it, although they were developed for the MMPI-2. The RBS is an empirically-derived scale comprised of 28 MMPI-2 items. According to the authors, it is the only scale developed using SVT performance in a forensic disability sample, and the sample did not involve head injury. The HHI (Henry-Heilbronner Index; Henry et al. 2006) consists of 15 items. The items were chosen for their sensitivity to neurocognitive complaints.

The best research on validity indicators for use with forensic, disability, and related populations is emerging with the MMPI-2-RF. Goodwin et al. (2013) researched disability-seeking veterans. They found that Fp-r and F-r were quite useful in detecting symptom overreport. Marion et al. (2011) studied college students and individuals in PTSD remission, as well as PTSD patients. They found that the Fp-r was the most useful scale in differentiating the groups according to symptom overreport. The optimal Fp-r cut score in Marion et al. (2011) was consistent with the MMPI-2-RF manual, but it was lower in Goodwin et al. (2013).

Schroeder et al. (2012) studied optimal cut-scores on MMPI-2-RF validity indicators in neuropsychological samples, including those who failed the MND (Malingered Neurocognitive Dysfunction; Slick et al. 1999) criteria. The authors established cut scores in these real world populations that differed somewhat compared to those in the MMPI-2-RF manual. They established cumulative percentages of patients who met or exceeded each T-score on each over-reporting validity scale (F-r, Fp-r, Fs, FBS-r, and RBS). With the tables, they derived optimal cut scores for the sensitivity level of 0.90 or more. The results were consistent with similar values found in Wygant et al. (2009) in civil forensic settings. Specifically, they involved T-scores of 88, 68, 83, 89, and 92, respectively.

For the MMPI-2-RF, Greene (2011) provided interpretative guides for different elevation levels for the F-r, Fp-r, Fs, and FBS-r. It is noted that the recommendations differ from those in the MMPI-2-RF manual and follow-up book (Ben-Porath and Tellegen 2008, 2011) (see Tables 4.2 and 4.3). Greene (2011) did not provide explanation for this difference in suggested ways to interpret different MMPI-2-RF validity indicator elevation levels.

33.3.3 MMPI-2

For the MMPI-2, Worthen and Moering (2011) presented both more and less conservative cut-scores for each F family indicator (F, Fb, F-K (Dissimulation Index; Gough 1950), Fp) for use in the VA/CP context. The T-scores varied at the two levels (e.g., ≥130 vs. 129–118 for F and ≥106 vs. 105–99, for Fp). [Note that Worthen and Moering recommended cut scores for the MENT that differed from the manual, but Morel (2013) contested this change.]

Rubenzer (2009) suggested optimal cut scores over a variety of instruments for use in detecting malingered PTSD. For the MMPI-2, he examined especially the Fp and FBS, giving raw score thresholds at both a greater and lesser weighting level. The split was recommended at ≥7, and >28, respectively. Note that the currently recommended score is higher, at 29 (according to Butcher et al. 2008). For clinical samples, Greene (2008) indicated various FBS cut-scores of 28, 31, 34, and 35, at percentiles of 90, 95, 98, and 99, respectively. The 28 and 34 cut scores constitute less and more conservative ones. Also note that, in his summary table of cut scores, Rubenzer (2009) appears to have incorrectly specified these latter two levels as 27–28 and >28, respectively. Beyond that, Greene (2011) reported that the 93 (not 90) and 98 percentiles constitute typical benchmarks in most settings. Clearly, the area is variable in consistency, and evaluators should exercise caution in both choice and use of cut scores.

Greene (2011) provided a table of cut scores for symptom over-report on the MMPI-2 according to different settings. Table 33.4 indicates that for normal, pain, and clinical populations at the critical 93 and 98 percentile levels (1.5 and 2 SD, respectively), the cut scores vary for F, Fp, RBS, and FBS (data from Butcher et al. 1989; Caldwell 2007a, b; respectively).

Table 33.4 Cut score on the MMPI-2 validity scales for normal, pain, and clinical populations

Sample	Indicator	93 Percentile Cut score	98 Percentile Cut score
Normal[a]	Infrequency (F)	9	12
Pain[b]		12	19
Clinical[c]		17	23
Normal[a]	Infrequency-Psychopathology (Fp)	3	4
Pain[b]		3	5
Clinical[c]		4	7
Normal[a]	Response Bias Scale (RBS)	8	10
Pain[b]		12	16
Clinical[c]		15	18
Normal[a]	Fake Bad Scale (FBS)	19	22
Pain[b]		28	31
Clinical[c]		30	34

Adapted from Greene (2011)

Note. 93 percentile is at 1.5 standard deviation (SD), and 98 percentile is at 2.0 SD, respectively. The samples include normal[a] (Butcher et al. 1989); pain[b] (Caldwell 2007a); and clinical[c] (Caldwell 2007b) participants

33.3.4 PAI

The PAI is a self-report objective personality inventory containing 344 items that takes about 40–50 min to complete. It is designed to provide information relevant to clinical diagnosis, screening for psychopathology, and treatment needs. It is comprised of 22 scales that have the advantage of being nonoverlapping. There are four validity scales, 11 clinical scales, five treatment scales, and two interpersonal scales. The validity scales analyze for inconsistency of response, infrequency (extremely high or low endorsement rates), negative impression management (NIM, exaggerated unfavorable presentation, possible malingering), and positive impression management (PIM, very favorable presentation, reluctance to acknowledge even minor flaws). The clinical scales concern corporal complaints, mood complaints (e.g., anxiety, depression, with subscales involving physiological, cognitive, and affective components), more extreme complaints (e.g., mania, paranoia), borderline personality disorder features, and substance abuse. Treatment scales include stress, aggression, nonsupport, and treatment rejection. Interpersonal scales examine dominance, coldness, and their opposites. Psychometric properties relating to reliability and validity are considered adequate. The standardization sample consisted of 1,000 community dwelling adults. T scores, derived from raw scores, can be referenced against a representative clinical sample of 1,246 patients.

Tables 33.5, 33.6, and 33.7 present cut scores for PAI validity indicators. The tables show that there is no uniform standard.

Table 33.5 Cut scores for validity indicators on the Personality Assessment Inventory (PAI) according to the manual (Morey 2007)

Sample	Sample size (N)	Indicator	Cut score	Sensitivity	Specificity
Normal population	1,462	NIM (Negative Impression Management)	≥73T	?	?
Clinical population	1,265		≥84T	?	?
Clinical standardization sample	1,246	MAL (Malingering Index)	≥84T	86.4 %	94.0 %
Community sample	1,462	RDF (Rogers Discriminant Function)	≥59T	87.1 %	96.4 %
Clinical sample	1,265		≥59T	87.1 %	96.4 %

Note. The size of the clinical standardization sample in the criterion groups given on pages 80 and 258 differ (N = 1,246) and (N = 1,265), respectively

Table 33.6 Cut scores for validity indicators on the Personality Assessment Inventory (PAI) according to Rogers et al. (2012)

Sample	Sample size (N)	Indicator	Cut score	Sensitivity	Specificity
PTSD (Extensive traumatic histories)	21	NIM (Negative Impression Management)	≥92T	?	98 %
		MAL (Malingering Index)	≥84T	?	90 %
		RDF (Rogers Discriminant Function)	≥70T	?	?
PTSD + Dissociative Identity Disorder (DID)	19	NIM	≥92T	?	98 %
		MAL	≥84T	?	90 %
		RDF	≥70T	?	?

Note. These values are different compared to the PAI manual

Table 33.7 Cut scores for validity indicators on the Personality Assessment Inventory (PAI) according to Thomas et al. (2012)

Sample	Sample size (N)	Indicators	Cut scores	Sensitivity	Specificity (%)	Hit rate (%)
PTSD	46	NIM (Negative Impression Management)	>69T	?	75	74
			>84T	?	61	80
			>91T	?	58	87
Feigning group, PAI validity indicator coached	79	MAL (Malingering Index)	>69T	?	52	94
Feigning group, PAI validity indicator noncoached	77	RDF (Rogers Discriminant Function)	>59T	?	61	74
			>69T	?	26	91

Note. These values are slightly different from the PAI manual

Table 33.8 Cut scores for validity indicators on the Morel Emotional Numbing Test (MENT) for PTSD according to Morel (1998)

Sample	Sample size (N)	Cut score	Sensitivity (%)	Specificity (%)
Claimant diagnosed with PTSD (PTSD)	17	≥9	82.0	100.0
Claimants diagnosed nonPTSD (NonPTSD)	17	≥9	82.0	100.0
Geriatric (older claimants, 63 or older)	17	≥9	82.0	100.0
Suspect claimants (Suspect)	17	≥9	82.0	100.0

Note. Patients being treated for chemical dependency and inpatients with schizophrenia were not included in this table

Table 33.9 Cut scores for validity indicators on the Morel Emotional Numbing Test-Revised (MENT-R) according to Messer and Fremouw (2007)

		Cut score		Sensitivity		Specificity	
Sample	Sample size (N)	a	b	a (%)	b (%)	a (%)	b (%)
Clinical PTSD	24	>9	7	56	63	96	92
Subclinical PTSD	41	>9	7	56	63	96	92
Honest controls	39	>9	7	56	63	96	92
Malingerers	41	<9	7	56	63	96	92

Note. The clinical PTSD group met full diagnostic criteria for PTSD (N = 13), it included motor vehicle accident (MVA) survivors (N = 5). The subclinical PTSD group did not meet the diagnostic criteria for PTSD, it included MVA survivors (N = 17). These cut scores are same compared to the manual

33.3.5 Forced-Choice Tests

The MENT is a 60-item, two-alternative, forced-choice test using items to detect negative response bias. The items have "no face validity," making it difficult to discern the goal of the test. The items concern facial expressions, and the instructions state that the items may be difficult for those manifesting PTSD, although this is not the case. For the items, respondents have to match photographs of people with the correct corresponding affect labels (e.g., happy, sad, afraid). The test was normed on military veterans, as well as people applying for PTSD, hospitalized patients with schizophrenia, and inpatients for addiction.

Table 33.8 indicates the cut score for the various populations researched for the MENT falls at 9 or more in all cases, for the sensitivity and specificity indicated. However, it has been noted that using a test involving correspondences of faces and emotional labels does not concern directly the difficulties confronted by PTSD evaluees (there is "no clear rationale why PTSD patients should fail to recognize emotional expressions," Andrikopoulos and Greiffenstein 2012, p. 377).

Messer and Fremouw (2007) developed the civilian version of the MENT, termed the MENT-R (MENT revised). Table 33.9 provides the details of the samples involved in the standardization. Two levels of appropriate cut scores were found – 7 and greater than 9. The population consisted of students, and a malingering group

was created by coaching. The final set of pictures used involved 6 emotions, rather than the 10 in the MENT. To conclude, we note that there has not been additional research with the MENT-R.

Boone (2011) reviewed the literature on sensitivity rates for common measures of response bias/effort for the specificity level of 0.88 or more in populations of "real world" noncredible participants. For free-standing SVTs, she noted differences for cut-off rates between TBI (traumatic brain injury) and pain populations, for the TOMM, WMT, and PDRT (Portland Digit Recognition Test; Binder 1993; Binder and Willis 1991). For example, on the TOMM Trial 2, the values were ≤48 and ≤49, respectively (Greve et al. 2008). For the WMT, the IR (immediate recognition) cut scores in this regard were ≤75 and ≤87.5, respectively. For easy PDRT items, they were ≤24 and ≤26, respectively. There are many other SVTs, such as the MSVT and the VSVT, but it is beyond the scope of this work to discuss the cut scores for all of them with respect to the present evaluation contexts.

33.3.6 Structured Interviews

The SIRS-2 (Structured Interview of Reported Symptoms, Second Edition; Rogers et al. 2010; see Table 33.10) is a structured interview administered to evaluees in order to ascertain the presence of negative response bias, including of possible malingering. It consists of eight primary scales, with up to 32 items for reported symptoms on questioning. The scales that relate to "unlikely" detection strategies include rare and improbable symptoms. The ones related to "amplified" detection strategies include blatant and subtle symptoms. There are four supplementary scales and two summary scores (modified total, supplementary). The total score of the original SIRS (Rogers et al. 1992) has been dropped in the SIRS-2.

The SIRS-2 was developed because research had shown an unexpected false-positive rate (9–35 %) on the SIRS (Brand et al. 2006; Rogers et al. 2009b). This necessitated administering the instrument to 206 additional genuine clinical evaluees from a mental health system (Timberlawn), (Rubenzer 2010).

The original normative sample involved 403 subjects in four criterion groups –100 honest clinical; 97 honest-nonclinical; 36 suspected malingerers; and 170 simulators (DeClue 2011). The "honest" clinical group involved individuals who were "multiply traumatized," and about half had been diagnosed with Dissociative Identity Disorder (DID). Rubenzer (2010) noted that these latter patients appear not to have been screened for feigning or exaggeration. DeClue (2011) noted that these patients were not described for their age, gender, ethnicity, and so on. Moreover, he queried whether the original sample was the size of 306 participants from the health system involved, rather than the 314 reported. He also noted that the simulators who were tested were not described in enough detail.

As for the psychometric results applicable to the SIRS-2, Rubenzer (2010) queried whether the reported 2.5 % false positive rate that was associated with the reported 0.80 "sensitivity" was more like 3.6 %. DeClue (2011) queried whether

Table 33.10 Cut scores for validity indicators on the Structured Interview of Reported Symptoms, 2nd Edition (SIRS-2) according to the manual (Rogers et al. 2010)

Sample	Sample size (N)	Indicators	Cut score		Sensitivity	Specificity
			Definite range	Probable range		
Clinical-general	236	Rare Symptoms (RS)	≥9	>4	?	?
Clinical-forensic	1,232	Symptom Combinations (SC)	≥12	>6	?	?
Correctional	613	Improbable or Absurd Symptoms (IA)	≥7	>5	?	?
Community/ college	217	Blatant Symptoms (BL)	≥24	>10	?	?
Feigning – malingering	36	Subtle Symptoms (SU)	≥26	>15	?	?
Feigning – simulators	167	Selectivity of Symptoms (SEL)	≥32	>17	?	?
		Severity of Symptoms (SEV)	≥17	>9	?	?
		Reported vs. Observed Symptoms (RO)	≥12	>6	?	?

Note. The clinical-forensic group included 647 cases on p. 62, but the authors did not specify why this number is different than the one of 1, 232 on p. 60. In the former group, there were 18.4 % personal injury evaluees, and 66.4 % were worker compensation cases. Also, 34.8 % were referred by plaintiff and 64.3 % were referred by defense

that 0.80 "specificity" level was more like 49 %. Also, he noted that the prevalence of feigning indicated in the manual, which was set at 31.8 %, is based on incomplete or inaccurate information. Rubenzer (2010) queried whether the data showed a malingering base rate of 74 % rather than the indicated 31.8 % [note that DeClue's (2011) data might be confused themselves, because the SIRS-2's specificity is 0.975, not the 0.80 that he reported, which is its sensitivity level].

To conclude, the authors of the SIRS called for a switch to the SIRS-2 based on new information from research with the SIRS. However, the reviews of the test pointed out other difficulties, such as the ones mentioned. Nevertheless, these critiques might not be accurate, in part. Clearly, more validation research is needed on the instrument. Moreover, if it is used in forensic, disability, and psychological injury cases, including on PTSD, it should be interpreted with caution, and with its limits clearly indicated.

In the following, I examine further the SIRS-2 manual in order to ascertain any other difficulties with the recommended cut-scores. I compared the changes to the cut scores for each of the primary and supplementary scales in the SIRS-2 relative

to the SIRS. For both versions, the cut scores were established at two levels of classificatory certainty (alternately referred to as levels involving malingering or feigning) – "definite" (<10 % of false positives, with actual results lower (but at one point referred to as probable)) and "probable" (75 % accurate differentiation). The cut-score levels for probable feigning and definite feigning were provided in a table in the SIRS for each of the eight primary scales. The text portion, though, mentioned just the probable levels. The SIRS did not give the cut score levels for the supplementary scales, just mentioning the probable levels. This latter part of the comparison was determined by my examination of sample profiles on scoresheets, which fortunately gave the two sets of cut-offs (probable, definite).

For the SIRS-2, the authors removed the summary table found in the SIRS manual of the primary scale cut-scores. However, they added one for the supplementary scales that had not been present in the SIRS. Inspection of the text relative to the primary scales revealed no change in the probable level criteria. Inspection of the score sheet in the profiles revealed no change for the primary scales, both for the definite level and for the probable level.

However, the new SIRS-2 table provided on the supplementary scales indicated that, relative to the SIRS, the supplementary scales changed threshold for three of the four scales involved (DA, DS, and OS; Direct Appraisal of Honesty, Defensive Symptoms, Overly Specified Symptoms, respectively). Explanation was provided only for the change for DS. Furthermore, no explanation was provided for the cut-off labels for the supplementary scales (e.g., "high").

As for the decision model combining the various scales in the SIRS-2, the clearest indication of feigning/malingering involved three or more probable or one or more definite primary scale results. The algorithm continues with different options for less definitive results. The decision rules appear to have been rationally derived rather than by empirical guidelines, unlike the case for the individual scales.

To conclude my presentation of the SIRS-2, there appear to be positive elements. However, more research is needed to determine its relative efficacy in the forensic and disability context.

The M-FAST (Miller 2001) is a structured interview instrument serving to help detect the probability of malingered "psychiatric illness." It consists of 25 items and takes 5–10 min to complete. Miller referred to it as a screening instrument that should be part of a comprehensive assessment. However, I note that this does not necessarily mean that a longer psychiatric illness malingering detection instrument is needed. Miller (2001) developed seven scales for the instrument, each having from one to seven items. The scales are based on the work on response style by Rogers (1990, 1997). The seven scales are the following: Reported vs. Observed (RO), Extreme Symptomatology (ES), Rare Combination (RC), Unusual Hallucinations (UH), Unusual Symptom Course (USC), Negative Image (NI), and Suggestibility (S). The total score is computed by summing the seven scale scores. Its cut score of 6 is interpreted as highly suggestive of attempts to malinger psychopathology, whether the evaluee is clinical or nonclinical (see Tables 33.11 and 33.12).

The CAPS was developed by Blake et al. (1995) and has been updated since (Blake et al. 2000). It is a semi-structured interview tool designed to help diagnose

Table 33.11 Cut scores for validity indicators on the Miller Forensic Assessment of Symptoms Test (M-FAST) according to the manual (Miller 2001)

Sample	Sample size (N)	Indicator	Cut score	Sensitivity (%)	Specificity (%)
Nonclinical	210	Total	6	93	100
			7	82	100
Clinical	86	Total	6	93	83
			7	93	86
Nonclinical		Reported vs. Observed (RO)	≥1	92	75
Clinical				77	69
Nonclinical		Extreme Symptomatology (ES)	≥2	85	99
Clinical				77	78
Nonclinical		Rare Combinations (RC)	≥2	91	98
Clinical				97	91
Nonclinical		Unusual Hallucinations (UH)	≥2	85	96
Clinical				63	91

Note. Nonclinical sample (N = 210) includes undergraduates. Clinical sample (N = 86) includes forensic inpatients (N = 50), clinical participants (N = 16), and forensic inpatients (N = 20)

Table 33.12 Cut scores for validity indicators on the Miller Forensic Assessment of Symptoms Test (M-FAST), according to Messer and Fremouw (2007)

Sample	Sample size (N)	Cut score	Sensitivity (%)	Specificity (%)
Clinical PTSD	24	6	78	79
Subclinical PTSD	41	6	78	79
Honest controls	39	6	78	79
Malingerers	41	6	78	79

Note. The clinical PTSD group met full diagnostic criteria for PTSD (N = 13). It included motor vehicle accident (MVA) survivors (N = 5). The subclinical PTSD group did not meet the diagnostic criteria for PTSD. It included MVA survivors (N = 17). These sensitivity and specificity values are different compared to the M-FAST manual

PTSD according to the DSM-IV. Aside from querying PTSD symptoms and trauma factors, it allows the clinician to indicate whether responses are judged inaccurate or valid. It was designed for use with military evaluees and has been used with civilian evaluees (e.g., MVA survivors) (Weathers et al. 2001).

Each item can be judged for "questionable" validity (significant concern about accuracy/veracity). Global validity is determined after the interview by examining the number of such items and other factors (compliance with interview procedure, mental status problems, symptom minimization/exaggeration). The global respondent validity is rated up to four (invalid).

Review of the literature related to the psychometric properties of the CAPS shows that there has not been any research on the global validity scale. Nor is any cut score described. The scale items include: 1 – might be adverse validity; 2 – definite reduced validity; 3 – substantially reduced validity; and 4 – invalid responses, e.g., possible deliberate "faking bad." There are no rules to help decide whether item 3 or 4 should be used as a cut-off.

Table 33.13 Cut scores for validity indicators on the Trauma Symptom Inventory-2 (TSI-2), according to the manual (Briere 2011)

Sample	Sample size (N)	Indicator	Cut score	% invalidated by cutoff score of 15	Sensitivity	Specificity
University students	1,051	Atypical Response (ATR)	110T	–	?	?
University students	477		110T	–	?	?
Incarcerated women	125		110T	4.0 %	?	?
Full combined clinical validity (CCV) sample	125		110T	4.8 %	?	?
Borderline personality disorder	30		110T	3.3 %	?	?
PTSD	55		110T	10.9 %	?	?
Combat veterans	32		110T	–	?	?
Sexual abuse victims	32		110T	–	?	?
Domestic violence victims	31		110T	–	?	?
PTSD simulation group	75		110T	–	?	?
PTSD genuinely distressed group	49		110T	–	?	?

33.3.7 Self-Report Measures

The Trauma Symptom Inventory-2 (TSI-2; Briere 2011; see Table 33.13) is used to test for trauma-related symptoms and behaviors. It consists of 136 items that were normed and standardized on a representative sample of the American general population. It contains 12 clinical scales, 12 subscales, four other factors, and two validity scales. The symptom validity overreporting scale is referred to as the Atypical Response Scale (ATR). It was designed to assess both general overreporting and that related to PTSD. As for the data derived from the TSI-2 for evaluation purposes, first, critical items are listed. Second, information about the validity scales is provided. The RL scale (Response Level) concerns defensiveness. As mentioned, the ATR scale concerns over-reporting. There are four factor scores, referred to as self-disturbance (SELF), posttraumatic stress (TRAUMA), externalization (EXT), and somatization (SOMA). As for the clinical subscales and scales, they consist of Anxious Arousal (AA), Anxiety (AA-A), Hyperarousal (AA-H), Depression (D), and Anger (ANG). There is also Intrusive Experiences (IE) and Defensive Avoidance (DA). It continues with Dissociation (DIS), Somatic Preoccupations (SOM), Pain (SOM-P), General (SOM-G), Sexual Disturbance (SXD), Sexual Concerns (SXD-SC), and Dysfunctional Sexual Behavior (SXD-SC). The scales of Suicidality (SUI), Ideation (SUI-I), and Behavior (SUI-B) are critical. The scales finish with Insecure Attachment (IA), Relational Avoidance (IA-RA), Rejection Sensitivity (IA-RS), Impaired Self-Reference (ISR), Reduced Self-Awareness (ISR-RSA), Other-Directedness (ISR-OD), and Tension Reduction Behavior (TRB).

Table 33.14 Cut scores for validity indicators on the Detailed Assessment of Posttraumatic Stress (DAPS) according to the manual (Briere 2001)

Sample	Sample size (N)	Indicator	Cut score	Sensitivity	Specificity
General population reported at least one *DSM-IV*-level trauma	400	Negative Bias (NB)	≥75T	?	?

For the TSI-2, Gray et al. (2010) found that the ATR was useful in study of undergraduate students with genuine PTSD symptoms and those simulating PTSD.

The DAPS is a standardized self-report inventory of trauma exposure and posttraumatic response. There are 104 items scored on a 5-point scale that take 20–30 min to complete. The instrument includes two validity scales, positive bias or underreporting, and negative bias, or overreporting (PB and NB, respectively). It examines the three major aspects of Posttraumatic Stress Disorder (PTSD; re-experiencing, avoidance, hyperarousal) or, if it is early after a traumatic incident, it aims to detect Acute Stress Disorder (ASD). It indicates the likelihood of diagnosis. There are four trauma specification scales, e.g., peritrauma distress. Finally, there are three associated features scales, e.g., substance abuse. The DAPS was normed on 400 respondents from the general population having had exposure to trauma, and other respondents. The data in the manual indicate that the DAPS is psychometrically reliable and valid.

Table 33.14 presents the cut score for the one validity indicator related to overreporting in the DAPS, the NB. It shows that the manual did not present any values related to sensitivity and specificity. Moreover, inspection of the table reveals that the standardization sample did not include populations directly relevant to disability and forensic work.

33.4 Literature Review

The following I reviews recent relevant research on the various tests that have been enumerated in the present chapter in terms of cut scores for forensic and disability assessments, in general, and for PTSD, in particular (although research with the MMPI-2-RF was reviewed above). Unfortunately, the literature search revealed little that was directly applicable, providing little information beyond what had been given in the manuals for the various tests with respect to cut scores. Therefore, the literature review is brief and, generally, just presents some recent interesting findings not necessarily dealing with cut scores.

For the MMPI-2-RF, Arbisi et al. (2011) determined that the MMPI-2-RF overreporting validity scales were not significantly elevated in military veterans with mild traumatic brain injury (mTBI). Rogers et al. (2011) investigated feigned mental disorders (FMD) and feigned cognitive impairment (FCI) in a large civil forensic sample. As for the major results, for the former, F-r and Fp-r provided relevant results and, for the latter, FBS-r and RBS proved useful.

For the MMPI-2, in a sample of veterans seeking compensations related to PTSD, Arbisi et al. (2006) found that the Fp was the most effective validity indicator. Marshall and Bagby (2006) examined disability claimants relative to PTSD and found that the Fptsd scale (Elhai et al. 2002) was not very effective in predicting exaggerated PTSD, comparable to the findings of Arbisi et al. (2006). However, an earlier study by Elhai et al. (2004) had demonstrated some utility of the Fptsd for malingering detection in combat trauma victims. Efendov et al. (2008) studied coached participants feigning PTSD who were remitted trauma victims. Relative to controls, F, Fb, and Fp were the most effective F family scales that distinguished the groups involved. Elhai et al. (2004) had found that Fp could be useful for civilian trauma victims; however, Arbisi et al. (2004) queried the utility of the Fp for military veterans. Relative to some other F indicators in a military veteran sample, Garcia et al. (2010) also found the Fp less effective. For further research on military veterans and other F indicators, see Tolin et al. (2004).

Tables 33.6 and 33.7 presents data from Rogers et al. (2012) and Thomas et al. (2012) on the PAI. The cut scores in this research are different compared to the manual for the PAI's validity indicators. In Rogers et al. (2012), the sample involved traumatized inpatients in a between-subject simulation design. The MAL and the RDF were found to be more reliable in feigning detection compared to NIM, which was still useful. Thomas et al. (2012) developed a new PAI validity indicator that was useful in the detection of feigned PTSD. It is called the Negative Distortion Scale (NDS). The sample involved individuals diagnosed with PTSD or those instructed to feign PTSD. The cut scores found for specificities of 78, 70, and 64 were, respectively, 65, 75, and 85. Overall, the NIM and NDS were most effective in detecting feigned PTSD, but MAL and RDF also were effective. Hopwood et al. (2010) developed a new scale for detecting malingered pain-related disability, referred to as Malingered Pain-Related Disability-Discriminant Function (MPRD-DF). Cheng et al. (2010) noted the value of PAI in assessing MVA survivors, and McDevitt-Murphy et al. (2007) noted its value for use with college students with mixed civilian trauma exposure.

As for the MENT, the value of its use with military veterans was demonstrated by Morel (2008). Merten et al. (2009) found the German version useful in their study.

Previously, we had reviewed the SIRS-2 for its value in detecting malingering. Green et al. (2012a) presented mixed results for the SIRS-2 relative to the SIRS, as did Green et al. (2012b). Weiss et al. (2011) were somewhat more positive about the SIRS-2. For all three studies, the samples varied, and the findings were not uniform. In general, further research is needed on the SIRS-2 for use in forensic, disability, and related contexts, e.g., for PTSD. For the SIRS itself, despite its limitations, research that had not compared it to the SIRS-2 had found it somewhat effective (Freeman et al. 2008; Rogers et al. 2009a, b).

For research on other instruments mentioned in this chapter, for the CAPS, consult Macdonald et al. (2013). For the DAPS, consult Sulhai et al. (2009). About the RNBI (Ruff Neurobehavioral Inventory; Ruff and Hibbard 2003), not mentioned to date, Young et al. (2009) examined MVA evaluees and found that the premorbid positive impression management scale (PB) correlated with the postmorbid

negative impression management scale (NB). This result suggests that the former scale could be as useful as the latter when examined carefully in forensic and disability evaluations involving possible malingered PTSD determinations.

33.5 Chapter Conclusion

Tests provide cut scores that should be optimal for sensitivities and specificities, in order that false positives and negatives are controlled adequately. However, the chapter has shown that there is no uniform way of describing and choosing cut scores for any one relevant instrument in the area. Moreover, there are inconsistencies both within the various manuals and in their comparison with the research after their publication. Granted, cut scores are known to vary with the populations to which they are applied. Nevertheless, for the area of forensic and disability evaluations, in general, and especially for PTSD cases involving possible malingering, in particular, there is as yet little standard criteria related to both cut score calculation and choice in the various relevant instruments. In examining the various instruments and their recommended cut scores in the manuals and subsequent research, we note that there is much variability, which complicates their use, for example, for PTSD, the disorder at hand. Moreover, nor is there enough data available for the relevant populations for these types of determinations. The present work calls for significantly more and better research in this regard and also for cautious use of malingering detection instruments and their cut scores, for example, in PTSD work. That being said, we share the optimism (Rubenzer 2009) that the MMPI-2-RF has much potential and we note that the research on it is burgeoning.

To conclude, PTSD (malingering) assessment needs to be comprehensive, multimodal, scientifically-informed, and impartial, including in test and cut-score choice and application. Malingering would be easier to detect with such a careful approach. Moreover, if the research were careful this way, too, it is doubtful that the prevalence of malingering would be as high as some of the estimates in the literature. That being said, there are other ways of suggesting poor evaluee credibility, or "problematic" presentations, without using the "M" word itself, which should only be used when there is incontrovertible evidence.

Outstanding issues related to PTSD include the validity of the clinical methods and psychological instruments used to assess it, including the various measures used to detect malingered PTSD and their cut scores. More research is needed on all relevant questions. Haynes et al. (2011) added that cut score determinations are not "wholly objective," require judgment, and they are "conditional."

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Chapter 34
Book Conclusions

34.1 Introduction

This last chapter of the present work deals with the most recent germane literature in the field, as published in the journal *Psychological Injury and Law* (PIL), and also with complications that could arise because of the controversies surrounding the DSM-5 (Diagnostic and Statistical Manual of Mental Disorders, 5th edition; American Psychiatric Association 2013). It concludes with an overview and recommendations. For the latter topic, I suggest that careful study of the present book can help allay development in practitioners of a new practitioner-user disorder that is needed for the DSM-5 – "Psychological Injury and Law" Confusion Disorder.

Table of Terms and Sources

Abbreviation	Name	Source(s)
DSM-IV-TR	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision	American Psychiatric Association (2000)
DSM-5	Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition	American Psychiatric Association (2013)
MND	Malingered Neurocognitive Dysfunction	Slick et al. (1999)
PCS	Postconcussive Syndrome	Bender and Matusewicz (2013)
PIL	Psychological Injury and Law	Springer.com

34.2 DSM-5

The DSM-5 (American Psychiatric Association 2013) has created a firestorm of controversy. A pertinent change for the area of psychological injury and law concerns striking Pain Disorder from the DSM-IV-TR (Diagnostic and Statistical Manual of Mental Disorders, 4th edition, Text Revision; American Psychiatric Association 2000) manual and making pain complaints merely a specifier of Somatic Symptoms Disorder in the DSM-5. I had previously recommended that

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Pain Disorder should be changed to Chronic Pain Complications Disorder (Young 2010). This would emphasize that there are psychological consequences to pain experience to consider, and the debate about its origins medically and psychologically becomes less important in diagnosis. The concept of complications in chronic pain as the focus of pain evaluations also allows for consideration of complications related to malingering and response bias to be included. This approach would necessitate evaluation of factors such as malingering and other confounds before attributing the diagnosis. The advantage in this type of procedure in diagnosing chronic pain psychologically would be some reduction of its controversial standing in court and related venues.

Table 34.1 presents the criteria recommended for the next iteration of the DSM-5 for Chronic Pain Complications Disorder. It takes the best elements of the DSM-5's Somatic Symptom Disorder and aligns them with pertinent suggestions (Young and Haynes 2014).

The DSM-5 has so many with tongue in cheek, changes that, aside from recommending realistically how one of its disorders could be improved, I also constructed a disorder applicable to practitioners, called DSM-5 Confusion Disorder (see Table 34.2)! The reader will note its similarity with another equivalent disorder, especially one that might be more in evidence after reviewing those portions of the DSM-5 applicable to the area of PIL – that is, "Psychological Injury and Law" Confusion Disorder. As with the DSM-5 Confusion Disorder, sound scientific knowledge and application might help alleviate the confusions.

34.3 Final Research Review

34.3.1 Research

The journal *Psychological Injury and Law* (PIL) published in 2013 just before press time for the present book two articles in Issue 6(2) that illustrate the difficulty in arriving at clear and workable conclusions in the area for practice and court purposes. Both articles deal with malingering, specifically, and negative response bias, generally, as well as means for its detection, including in SVT (symptom validity test) testing. Also, both refer to an extant diagnostic system (Malingered Neurocognitive Dysfunction, the MND; Slick et al. 1999).

As for the first article of the pair, Bender and Matusewicz (2013) examined the area of postconcussive syndrome (PCS), malingering, and alternate factors that could explain the persistence of PCS. They noted that PCS lacks specificity, its diagnostic utility is questionable, and the dividing line between it and genuine symptomatology due to mild traumatic brain injury (mTBI) is not specifiable. Once the PCS diagnosis is given, it is subject to extraneous factors that complicate its explanation in terms of malingering. For example, there are iatrogenic and "jurisogenic" factors involved. There is possible "compensation neurosis" leading to exaggeration

Table 34.1 Proposal: Chronic Pain Complications Disorder (Diagnostic Criteria)

Criterion	Explanation
I. Apparent Authentic Biopsychosocial Presentation/Causation	
A.	Pain in one or more anatomical sites is distressing and is the predominant focus of the clinical presentation
B.	The pain causes clinically significant impairment in social, occupational, or other important areas of functioning
C.	Psychological factors are judged to have an important role in the onset, severity, exacerbation, or maintenance of the pain (excessive thoughts, feelings, or behaviors), as manifested by at least one of the following: (a) Thoughts about the seriousness; (b) Anxiety about the experienced pain and its perceived consequences; (c) Time and energy expended about them
D.	The symptom or deficit is not intentionally produced or feigned (as in Factitious disorder or Malingering)
E.	The pain is not better accounted for by another disorder
Specifier	
Duration:	Acute: <6 months Chronic: ≥6 months
Specifier	
Severity:	Mild ☐ Moderate ☐ Severe ☐
Pain reported	☐ ☐ ☐
Distress reported	☐ ☐ ☐
Impairment reported	☐ ☐ ☐
II. If Confusing or Complicated Presentation/Causation	
Specify Degree of Feigning, if any	
☐ Minor Exaggeration ☐ Gross exaggeration ☐ Outright malingering	
Specify Source of Confusion, if any	
☐ Can be fully explained by pre-existing factors (e.g., psychopathology)	
☐ Pre-existing factors exacerbate the pain	
☐ Post-onset factors exacerbate the pain (e.g., family, work, litigation, distress)	
Specify Certainty of These Ratings	
☐ Unsure ☐ Some data ☐ Clear data	

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Table 34.2 Proposal: DSM-5 Confusion Disorder

Criterion	Explanation
A	**Diagnostic confusion**
A1	Among practitioners using the DSM-5, there is cognitive, affective, or behavioral disorientation
A2	Etiologically-induced by studying, using clinically, and/or applying forensically the portions of the DSM-5 that are not reliable/valid/or clinically useful
A3	Condition is demonstrated by the following: diagnostic confusion symptoms for the diagnostic categories in DSM-5, and these are of the type 1, 2, and/or 3
	Type 1: Confusion for a category unchanged from DSM-IV-TR
	Type 2: Confusion for a category modified from DSM-IV-TR, or
	Type 3: Confusion for a category new in DSM-5
B	**Diagnostic binging** (Inflation)
B1	Too many disorders consistently diagnosed (co-co-co morbidities)
B2	Too many people consistently diagnosed (prevalent prevalence)
C	**Diagnosis belief**
C1	Strict uncritical compliance with DSM-5
C2	Lack of scientific verification in using it in diagnosis
C3	Note "Disbelief" problems could arise (e.g., in court), due to C1 or C2
D	The confusion significantly impairs important aspects of vocational, social, or personal functioning, at least until cures attempted (or perhaps even with trying them (e.g., (in) appropriate beverage or substance (ab)use)
E	Duration lasts longer than attending relevant presentations/workshops, reading the literature, etc.
F	Disorder not accounted for by other conditions (e.g., continuation of DSM-IV-TR Confusion Disorder; being a member of a DSM-5 Workgroup)
Specify if	Psychiatrist, psychologist, other mental health professional, other stakeholder or, most harmfully, patient

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from "mostly internally-generated motivation." There are post-injury psychological factors that interfere with recovery (e.g., depression, poor coping). There are illness perceptions (leading to adoption of the sick role). Also, expectations of what the symptoms might mean influence their presentation (called "expectation as etiology," "diagnostic threat"). There is minimization of pre-injury factors that might influence (or even create) the presentation.

As for SVT performance and failure, or poor effort, there might be exacerbations from comorbidities (e.g., Campbell et al. 2009) that interfere with good performance. Even healthy individuals, or those without external incentive pressures, could fail them (Gorissen et al. 2005; Kemp et al. 2008; Locke et al. 2008). Experimental manipulations are capable of increasing symptom endorsement (Merckelbach et al. 2011), so that the presence of incentive and poor effort might not be the only reason. Finally, for poor SVT performance, the malingering detection systems and their revisions (i.e., the MND, Slick et al. 1999; Slick and Sherman 2013) might express a "bias toward overclassifying malingering" and, moreover, they need validation work before they can be employed "with confidence."

In contrast to the Bender and Matusewicz (2013) approach of being cautious in attributing malingering, Merten and Merckelbach (2013) arrived at quite opposite conclusions about the value of SVTs and their capacity to help in its attribution. Rather than PCS, they focused on somatoform and dissociative disorders. The essential argument of Merten and Merckelbach (2013) is that SVT failure and negative response bias in evaluees especially indicate uncooperativeness, lack of genuine presentation, and lack of face value in their presented symptoms and life history. Further, neither psychological problems, such as unconscious conflicts and depression, nor context (e.g., a cry for help), could explain away any evaluee negative response bias.

Nevertheless, Merten and Merckelbach (2013) noted that negative response bias is present to a noticeable degree in nonlitigating populations so that they could be produced by psychological factors other than incentive to malinger (e.g., Brooks et al. 2012; Kemp et al. 2008; Williamson et al. 2012). However, patients in nonlitigating contexts might have "hidden agendas" about litigation-related factors, e.g., seeking benefits (Van Egmond et al. 2005).

Also, in genuine patients, SVT failure rates are usually low (e.g., for depression/anxiety, and including chronic pain; respectively, Ashendorf et al. 2004; Iverson et al. 2007). In contrast, the rates are higher in contexts with external incentives (e.g., Dandachi-FitzGerald et al. 2011). Also, experimentally-induced malingering often leads to focus on cognitive problems (Dandachi-FitzGerald and Merckelbach 2013).

The research shows a relationship between SVT performance and other indicators of response bias (González et al. 2010; Jones et al. 2012). Also, failure on SVTs negates the correlation found between hippocampal volume and memory test performance in evaluees of early stage dementia (Rienstra et al. 2013).

Alternate explanations to negative response bias other than feigning-related ones might consider a "cry for help." However, this explanation should be invoked only when there is clear and converging evidence. Other explanations, such as involving loss aversion, stereotypic threat, and anger/revenge (Silver 2012), cannot fully explain poor performance on SVTs, and so are "pseudo-explanations." The construct of cogniform disorder/condition (Delis and Wetter 2007) also fits this latter category.

Merten and Merckelbach (2013) concluded that one solution in cases of uncertainty in attributing malingering in evaluations about somatoform and related disorders is to qualify the degree of certainty in one's attribution of malingering (definite, probable, possible). Note that I have proposed a similar solution to my criteria for the mentioned Chronic Pain Complications Disorder.

34.3.2 Comment

The adversarial divide in the area of psychological injury and law contains chasms that lead to opposing opinions and interpretations of science in the area, and also for multiple topics, including malingering and negative response bias. Sometimes the

same studies and concepts are raised by both sides but they are interpreted in different ways or used in a chain of logic leading to very different conclusions. Part of the difficulty in these regards relates to the lack of clarity in each of the concepts, research, and findings in the field. Also, evaluees present in manners difficult to disambiguate, and reside in the "gray zone" in credibility and in diagnostic clarity. Finally, both researchers and clinicians might be influenced to varying degrees by the adversarial, or plaintiff-defense divide.

As maintained throughout the present work, the science needs to improve and, as well, the practitioner needs to be careful in using and interpreting it. This applies especially to instruments and systems that can be used to detect malingering and related negative response bias. The adversarial divide will always exist, but how close we get to its precipice depends uniquely on each of us.

34.4 Conclusions

34.4.1 Overview

Malingering is one of the most difficult issues in the area of forensic disability and related assessments, and generally in the field of psychological injury and law. The present work has examined it in terms of its controversies, conceptual underpinnings, definition, relationship to other response styles and biases, empirical research, practice considerations, diagnostic systems, and attribution. The work also deals extensively with other major areas in the field of psychological injury, including chapters on ethics, ethical thought, and decision-making, in which I present my own model. In addition, it covers ethics at several other points, including. The work presents a middle-of-the-road perspective in which science, good logic, and impartiality govern its presentation and analysis.

The book is noteworthy for more than its extensive review of literature, it makes recommendations for new diagnostic systems related to the three major psychological injuries – posttraumatic stress disorder (PTSD), pain, and TBI. It asks for careful surveys, using appropriate definitions, of its prevalence or base rate. It suggests a new pain feigning detection instrument. It includes a course proposal for students and for continuing education. The book has even recommended changes to the basic definition of malingering.

The literature review in the monograph is comprehensive and up to date. It permits a compare/contrast format of simultaneously published recent sources. The published work indicates that there is no uniform approach to the understanding and detection of malingering and that no one test or diagnostic system should be considered gold standard. The book reviews the arguments that might be presented to court, showing the difficulties with both plaintiff- and defense-oriented points of view. The monograph also examines relevant case law, evidence law, professional and ethical guidelines, and related issues, such as causality and the nature of disability.

The book emphasizes that assessments need to be impartial, comprehensive, and scientifically-informed; it provides reviews of literature that help in malingering detection in these regards, and it makes recommendations. Also, there are two chapters on therapy, which take a transdiagnostic approach.

As for limitations, the present work especially focuses on the most recent literature. It does not examine the history of the study of malingering and related response biases. A second limitation is that it does not provide comprehensive details about the various tests/measures/scales in the area, their psychometric properties, the normative populations on which these properties are based, and details on how to interpret the tests in assessments. It does not conduct meta-analyses to find trends over the literature that could be beneficial. Finally, the book has not dealt with special populations, such as children, minorities, and the elderly. Further review and research is needed for all these topics.

34.4.2 Recommendations

The most important recommendations for the field relate to the research that needs to be conducted and the care that needs to be applied in practice. With respect to research, the conceptual and definitional issues pertaining to malingering and related response biases need to be clarified. This will help lead to appropriate surveys that could establish prevalence or base rates in different populations relevant to the area of forensic disability and related evaluations and psychological/psychiatric injury and law. It will also help in research with known-group designs and on extant malingering diagnostic systems. There needs to be more research on the characteristics of malingerers compared to controls in known-group design studies. The new diagnostic systems that I have proposed need reliability and validity research. Further work is needed on biomarkers of psychological injury and their application in neurolaw. For example, will specific physiological markers be found for PTSD that can reliably differentiate valid and invalid presentations and performances in assessments in the forensic disability and related contexts? Similarly, will specific brain scans be found for mTBI (mild traumatic brain injury) in the same regards?

As for practice recommendations, evaluators need to conduct their assessments with extreme caution and to use the most appropriate and scientifically- and legally-accepted methods, procedures, and instruments, while being able to defend their choices for court and related purposes. For example, both tests administered and cut scores should be chosen and used with extreme care. In cases where there are problematic presentations and performances by evaluees, evaluators should use carefully-crafted arguments about any feigning involved so that the lack of credibility that is evident in evaluees is stated in a way that does not go beyond the data gathered in the case at hand. Evaluators should attribute malingering only when there is incontrovertible evidence. The latter could be obtained from two major sources of appropriate data (aside from direct evidence, such as videographic evidence) – that is, (a) from testing, including from SVTs (below-chance performance

and other failures), and (b) from marked, substantial, or compelling inconsistencies and discrepancies in the file. Practices will thrive better by adapting a middle-of-the-road approach that is state-of-the-art, which is the approach taken in the present book. In this regard, the book should be an excellent one for graduate students and for continuing education in the mental health field.

34.5 Addendum

34.5.1 Disability Evaluations: Psychologist

Piechowski (2012) noted that disability evaluations differ from evaluations conducted by treatment providers especially in the emphasis on functional capacity evaluation compared to diagnosis, aside from the attribution of causality. She stated that disability is defined functionally, as an inability to undertake behaviors of a specified task or role in context. As for causality, the assessor must show that the disability is causally related to the condition of the patient. She added that secondary factors such as "financial problems, personal lifestyle choice, legal issues, and family demands" might affect work functioning, in and of themselves, they are not considered enough to cause legally-defined disabilities.

In assessing disability, the psychologist determines the psychological condition involved, and associated symptoms and manifestations in the evaluee. The latter's individual job duties at work are established in terms of functional capacities. The evaluator ascertains the relationship across psychological condition and symptoms, and capacity to undertake the functional duties at issue. The links between psychological condition/ symptoms and functional capacity/ occupational duties must be "clearly established" in a defensible way.

Piechowski (2012) continued that for the age range of 14–44 in Americans, depression is the leading cause of disability (NIMH; National Institute of Mental Health 2001). She added that it could have a "significant impact on work functioning". Of the workers with Major Depression, surveys indicate that 37–48 % are placed on short-term disability (Goldberg and Steury 2001), although therapy can be effective with them (U.S. Department of Health & Human Services 1999).

Anxiety disorders, including PTSD, affect each year about 13.3 % of Americans in the age range of 18 and 54 (NIMH 2001). These disorders have impacts that affect work capacity. For example, panic disorder with agoraphobia has been associated with cognitive and memory deficits (Cohen et al. 2003; Greisberg and McKay 2003; Roh et al. 2005). PTSD expresses these effects and also reduced motivation, reduced time-management ability, and over-concern or anxiety with physical injuries (Brewin et al. 2007; Matthews 2005; Taylor et al. 2006).

In establishing causality, after a valid condition has been identified, competing explanations for the observed impairments must be considered, with the primary one established. These hypotheses concerning the cause of the functional impairments

Table 34.3 Topics for the Interview

Topic	Description
Social history	Childhood, family children, etc.
Educational history	Academic and behavioral performance
Occupational history	Satisfaction and dissatisfaction with work, etc.
Legal history	Involvement with the criminal justice system, etc.
Medical history	Current or past health problems, etc.
Mental health history	Impatient and outpatient treatment, current and past psychotropic medications, etc.
Substance abuse history	Use of alcohol, illegal drugs, abuse of prescription medications, etc.
Job duties	Detailed description of duties, working conditions, schedule, and pace of work done just prior to the onset of the claimed disability
Current daily activities	How the claimant currently spends the day
Disability onset	Detailed description of the onset of the difficulties
Functional impairments	Detailed description of how functioning has been affected

Adapted from Piechowski (2012)

must be compared. I would add that this takes place by considering all the valid evidence gathered that is consistent with the competing hypotheses.

The interview should be comprehensive in the information gathered (see Table 34.3). Also, the interview allows for the "mental status examination." About psychological tests, Piechowski (2012) noted that those instruments appropriate for forensic assessment will contain "sophisticated" evaluee validity scales. As for particular recommendations in this regard, Piechowski mentions multiscale personality inventories, such as the Minnesota Multiphasic Personality Inventory-2 (MMPI-2; Butcher et al. 2001) and the Personality Assessment Inventory (PAI; Morey 1991). They cover a broad range of psychopathology, as well as the validity scales for the detection of possible distorted response sets (e.g., feigning). A "considerable research base" has developed in support of the forensic use of these inventories (Piechowski 2011).

Other relevant instruments to assess for response bias include the Structured Inventory of Reported Symptoms, 2nd edition (Rogers et al. 2010), and the Miller Forensic Assessment of Symptoms Test (Miller 2001). Both of them aim to assess feigned psychiatric symptoms.

If cognitive exaggerations are a concern, the Test of Memory Malingering (Tombaugh 1996), the Word Memory Test (Green 2003), and the Computerized Assessment of Response Bias (Allen et al. 1997) could be used. These are memory tests with a forced-choice format (such that choosing the correct item is easier than it seems).

Tellingly, Piechowski (2012) noted that in a review of the literature, Samuel and Mittenberg (2005) found that estimates of the base rate for malingering in disability claimants varied between 7.5 and 33 %. Also, Sumanti et al. (2006) investigated "non-credible" symptoms in workers claiming "stress" and consequent compensation and they found that 9 to 29 % of the workers endorsed non-credible psychiatric symptoms, along with 8–15 % for non-credible cognitive symptomatology.

Piechowski continued that the consensus in the literature appears to be that the best way to assess response bias is by comparing information gathered from a variety of sources, including interviews; documentation; psychological reports; investigations; and work reports (She cited Gold et al. 2008; Heilbrun et al. 2002; Rogers and Payne 2006; Samuel and Mittenberg 2005; Sreenivasan et al. 2003; Rogers and Bender 2012).

In order to establish malingering, Samuel and Mittenberg (2005) advised verification of symptoms and features in four areas: (1) motivation/ circumstances (e.g., financial incentives, work-related problems, legal problems), (2) symptoms (e.g., atypical, exaggerated, incongruent), (3) evaluee presentation (e.g., discrepancies, lack of cooperation, admission of malingering), and (4) extra- interview behavior/ activity (e.g., treatment noncompliance, no impairments outside of work, capacity for recreation).

34.5.2 Disability Evaluations: Psychiatrist

Gold (2013) summarized mental health disability evaluations. Evaluators in this context must have sufficient information about the evaluee. This includes the presence of any psychiatric disorder and its relationship to work capability, work load, and work demand. Mental health disability evaluators need to understand an evaluee's past and any conditions that might affect their occupational functioning.

Stejskal (2013) reviewed the assessment of exaggerated symptoms in work disability. One manner is to compare the symptoms endorsed by the evaluee and the pattern of symptoms endorsed by the relevant clinical population. Psychologists administer multiscale personality tests toward this end, and also tests of symptom validity, with the tests being reliable and valid. Findings might reveal that symptoms are more extreme, indiscriminate, or inconsistent. Tests that could be used include the MMPI-2- RF (Ben-Porath and Tellegen 2008/2011), the PAI (Morey 2007), the M-FAST (Miller 2001) the Structured Inventory of Malingered Symptomatology (SIMS; Widows and Smith 2005), and the SIRS-2 (Rogers et al. 2010), as well as the TOMM (Tombaugh 1996). He advised that feigning of symptoms on psychological tests should not be viewed as representing malingering, unless examination of the full data set gathered support such a conclusion. Stejskal (2013) advised that mental health practitioners without the needed skills for psychological testing should work together with psychologists.

For malingered PTSD, Scott and McDermott (2013) stated that PTSD is quite easy to malinger. They noted that Breslau (2009) had noted that the lifetime cumulative exposure to any traumatic event in Americans in 2000 was 82.8 %. Nevertheless, only a minority of trauma exposes (<10 %) developed PTSD. Scott and McDermott (2013) continued that Hall and Hall (2006) provided an extensive list to consult that indicates possible malingering of PTSD. As for malingering depression, it also is subject to a long list of indices to consider. Scott and McDermott (2013) concluded that there is "considerable risk" of malingering in

disability assessments. The evaluator should use psychometric tests toward detecting malingering, along with other pertinent information.

Causation often is quite contested in workers' compensation claims (as per Gold et al. 2008). Drukteinis (2013) described there must be "strong" basis for the cause attributed about an evaluee's mental disorder as related to work. He opined that facts are needed to facilitate accurate clinical work in this regard. He suggested querying: (a) Is the mental disorder verifiable? (b) Has the evaluation considered how well adjusted was the complainant to family, work, and life prior to and at the time of the claimed injury? (c) Has it considered the longitudinal life history and personality of the individual? (d) Has the course of illness and/ or response to treatment been typical? Is there motivation to recover? (e) Also, assessors should seek corroborating information, including from the workplace. In all these regards, alternative explanations can be explored for claims of work impairment.

34.5.3 Problematic PTSD and Assessment

Bomyea et al. (2012) elaborated the multiple pre-existing vulnerabilities involved in PTSD. They proposed an interplay between pre-existing characteristics, traumatic experiences, and subsequent PTSD symptoms (McKeever and Huff 2003). Vulnerabilities might be biological characteristics or ecological ones. Biological components involve genetic makeup or physiological reactivity, while ecological ones involve social and developmental history and psychological factors (e.g., cognitive variables, personality, pre-existing psychopathology).

With respect to biological vulnerability factors, genetic and epigenetic factors that are implicated in PTSD involve 5-HTT, COMT, and FKBP5 gene variants, in particular. Animal models have been particularly helpful in establishing causal relationships between 5-HTT and COMT functional variants and stress behavior and neurocircuit alterations (Harrison and Tunbridge 2008; Homberg and Lesch 2011). Also there is an association between glucocorticoid receptor and FKBP5 genotypes (Mehta et al. 2011; van Zuiden et al. 2012). Brain wise, the hippocampus and prefrontal cortex could be involved, as well as the amygdala. For neuroendocrine response and vulnerability to PTSD, many findings demonstrate hypocortisolism in PTSD, with lower resting levels of peripheral cortisol and enhanced negative feedback mechanisms (Handwerger 2009; Meewisse et al. 2007; Mehta et al. 2011; Yehuda 2006; Yehuda et al. 2004).

As for cognitive vulnerability factors in PTSD, see research on intelligence and other cognitive factors in relation to PTSD (e.g., McNally and Shin 1995; Vasterling et al. 1997; Brewin et al. 2000; Macklin et al. 1998; Gilbertson et al. 2006; Kremen et al. 2007; Koenen 2006; Verwoerd et al. 2009; Elwood et al. 2009; Bryant and Guthrie 2007; Boeschen et al. 2001; Shenck et al. 2012; Wald et al. 2011).

Bomyea et al. (2012) concluded that many of the vulnerability factors reviewed in their article suggest increased anxiety reactivity in PTSD. Also, other vulnerability factors suggest a decreased cognitive control over trauma-related cognitions.

Frueh et al. (2012) reviewed the data on PTSD, for example, prevalence and risk factors, but also its possible malingering. PTSD prevalence estimates have been established (Breslau et al. 1991; Davidson et al. 1991; Dohrenwend et al. 2006; Norris 1992; Smith et al. 2008). Exposure to potentially traumatic events is estimated at up to 80 % of the population in those exposed to traumatic events (Breslau et al. 1991; Kessler et al. 1995). PTSD rates improve with time, with about 50 % remitting within 3 months of exposure even without treatment (Galea et al. 2002; Rothbaum et al. 1992).

Vulnerabilities and risk factors include low social support (Andrews et al. 2003). Females experience it more than men by a ratio of approximately two to one (Breslau et al. 1991; Breslau et al. 1998; Tolin and Foa 2006). Other significant PTSD risk factors include "lower intelligence, lower education, lower socioeconomic status, prior history of poor social adjustment or psychiatric disorders, and substance abuse." There are even certain genetic vulnerabilities (Koenen 2007).

Unfortunately, the diagnosis of PTSD is commonly invoked in claims for worker's compensation or disability (Taylor et al. 2007), including among American military veterans (Frueh et al. 2007; Worthen and Moering 2011). The DSM-IV does indicate for PTSD that "malingering should be ruled out" where applicable (American Psychiatric Association 1994, p. 467). There is also the possibility of partial malingering (Rogers 2008). Malingered PTSD is probabilistic, and could be qualified as possible, probable, or definite malingering (Slick et al. 1999). Taylor et al. (2007) concluded that "given the potential financial benefits" in workplace claims, "an employee may have the incentive to over report" PTSD symptomology.

34.5.4 Malingering and SVTs

Lilienfeld et al. (2013) reviewed the field of SVTs, and noted that failing to meet the threshold on these tests does not automatically imply that malingering has taken place. Moreover, malingering appears not to be a construct that is dichotomous (present, absent) but is dimensional, with the distinction between conscious and unconscious negative response bias "blurrier" than widely assumed. Malingering testing does not yield an overarching, interrelated superordinate variable or factor structure, but only moderate correlations, at best, and several separate factors, depending on the study (e.g., Haggerty et al. 2007; Nelson et al. 2007; respectively). Psychopathological and cultural influences have not been sufficiently investigated, among others.

Lilienfeld et al. (2013) concluded that such tests "surely" assess variance related not only to response sets but also to "genuine psychopathology." Therefore, the "precise meaning" of scores obtained on many SVTs need "clarification." In addition, the manner in which they can be combined has not been conclusively established, and any new information that they provide might "worsen" clinical judgment and prediction, e.g., if the information is of nonexistent or negligible validity. If SVTs are going to demonstrate their clinical utility, the "V" portion (or validity portion) of their intent must be better demonstrated. I would add this refers to: (a) their capacity to

differentiate in research "known" malingerers from "genuine" responders, (b) the research base on their clinical utility in applied practice (do they add "incremental validity" in malingering attribution), and (c) their ability to meet the challenge posed by McGrath et al. (2010) that they have yet to demonstrate sufficient "convergent" validity (but see the response by Rohling et al. 2011). In addition, the implication of the article by Lilenfeld et al. (2013) is that, for court purposes, evaluators conducting assessments for forensic disability and related examinations need to be extremely cautious in how they use SVTs and interpret them.

Perhaps it is wise to conclude a book on possible malingering by the evaluee with a note of caution on possible bias in the evaluator. Kassin et al. (2013) referred to a forensic confirmation bias, Murrie et al. (2013) to an allegiance effect, and Stanovich et al. (2013) to a myside bias. These studies were not related to the forensic civil disability, and related context, but their concerns resonate for this area of practice. In essence, evaluators, evaluees, and third party stakeholders form an integrated system in which science must be the best source of evidence for court to dispel bias from any side of the process in court.

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