

Elena L. Grigorenko *Editor*

Handbook of

Juvenile Forensic Psychology and Psychiatry

 Springer

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Abbreviations

16PF-Q3	Sixteen-Personality-Factor-Questionnaire
5-HTT	Serotonin transporter gene
5HTT	Serotonin protein
AAPL	American Academy of Psychiatry and the Law
ACA	American Correctional Association
ACE	The Centers for Disease Control and Prevention Adverse Childhood Experiences
ACE	Autonomy, collaboration and evocation
A-con	Conduct disorders
ADA	Americans with Disability Act
ADHD	Attention deficit hyperactivity disorder
AIDS	Acquired immune deficiency syndrome
ALI	American Law Institute
AMA	American Medical Association
ANOVA	Analysis of variance
ANS	Autonomic nervous system
APA	American Psychological Association
APA	American Psychiatric Association
APS	Adolescent Psychopathology Scale
AQ	Aggression Questionnaire
AR	Androgen receptor gene—a gene that codes for the protein that functions as a steroid hormone-activated transcription factor
ART	Aggression replacement training
ASBI	The Adolescent Sexual Behavior Inventory
ASEBA	Achenbach system of empirically based assessment
A-sch	School problems
A-trt	Negative treatment indicators
ATSA	Association for the Treatment of Sexual Abusers ()
AUC	Area under the curve
BART	Becoming a Responsible Teen
BASC-2	Behavior assessment system for children—second edition
BBBSA	Big Brothers/Big Sisters of America
BHP	Behavioral Health Partnership
BMX	Bicycle motocross
BPS	Biopsychosocial model

BRIEF	Behavior Rating Inventory of Executive Function
BV	Bacterial vaginosis
CAFAS	Child and Adolescent Functional Assessment Scale
CAI	Computer-assisted instruction
CAT	Children's Apperception Test
CBCL	Child Behavior Checklist
CBITS	Cognitive behavioral intervention for trauma in schools
CBITS	Cognitive behavioral intervention for traumatized students
CBM	Curriculum-based measurement
CBT	Cognitive behavior therapy
CBT-RP	Cognitive behavioral therapy-relapse prevention
CC	Court Clinic Model
CD	Conduct disorder
CDC	Centers for Disease Control and Prevention
CD-CP	Child Development-Community Policing
CDI	Children's Depression Inventory
CFTSI	The Child and Family Traumatic Stress Intervention
CGS	Connecticut General Statute
<i>CHRM2</i>	Muscarinic acetylcholine receptor M ₂ gene
CJCA	Council of Juvenile Correctional Administrators
CMH	Community mental health
COGA	Collaborative study on the genetics of alcoholism
COMT	Catechol- <i>O</i> -methyl transferase
Connors CBRS	Connors Comprehensive Behavior Rating Scales
CPI-Sc	California Psychological Inventory
CSBCL-2nd	Child Sexual Behavior Checklist
CSBI-III	Child Sexual Behavior Inventory-III
CSSD	Court Support Services Division of the Superior Court of Connecticut
CST	Competency to stand trial
CT	State of Connecticut
DA	Dopamine protein
<i>DAT1 (SLC6A3)</i>	Dopamine transporter gene
DβH	Dopamine beta-hydroxylase
DCF	Department of Children and Families
DHHS	Department of Health and Human Services
DIBELS	Dynamic Indicators of Basic Early Literacy Skills
DICA-IV	Diagnostic Interview for Children and Adolescents-IV DISC Version 2.3
DISC	Diagnostic Interview Schedule for Children
DISC-IV	Diagnostic Interview Schedule for Children, Version IV
DJJ	Department of Juvenile Justice
DMC	Disproportionate minority contact
DNA	Deoxyribonucleic acid
DOR	Diagnostic odds ratio
DRD ₁₋₅	Dopamine different receptors (5)

DSM	Diagnostic and Statistical Manual of Mental Disorders, different versions
DUI	Driving under the influence
DV-HVI	Domestic Violence Home Visit Intervention EARL-20B and EARL-21G
EARS	Express empathy, amplify ambivalence, roll with resistance, and support self-efficacy
E/BD	Emotional/behavioral disorder
EBFT	Ecologically based family therapy
EBPs	Evidence-based practices
EBT	Evidence-based treatment
EC	Emotions course
ED	Emergency Department
ED or EBD	Emotional disturbance
EDJJ	National Center on Education, Disability, and Juvenile Justice
EEG	Electroencephalogram
EIA	Enzyme immunoassay, also known as ELISA
EKG	Electrocardiograph
ELISA	Enzyme-linked immunosorbent assay, also known as EIA
ERASOR	Estimate of risk of adolescent sexual offense recidivism
ES	Effects size
ESTs	Empirically supported interventions
FAPE	Free Appropriate Public Education
FBA	Functional behavioral assessment
FBI	Federal Bureau of Investigation
FBT	Family behavior therapy
FCU	Family check-up
FDA	Food and Drug Administration
FERPA	Family Educational Rights and Privacy Act
FFT	Functional family therapy
FMHA	Forensic mental health assessment
fMRI	Functional magnetic resonance imaging
FN	False negatives
FP	False positives
GABA	Gamma (γ)-aminobutyric acid
GABRA2	Gamma-aminobutyric acid receptor subunit alpha-2
GED	General Education Diploma
GBMI	Guilty but mentally ill
GGI	Guided group interaction
GNRH	Gonadotropin-releasing hormone agonists
GPA	Grade point average
HIPAA	Health Insurance Portability and Accountability Act
HIT	How I Think Questionnaire
HIV	Human immunodeficiency virus
HPV	Human papilloma virus

HRCT	Heart Rate Coherence Training
HSV	Herpes simplex virus
IAP	Intensive Aftercare Program
ICPS	Individual cognitive problem solving
IDEA	Individuals with Disabilities Act
IDEIA	The Individuals with Disabilities Education Improvement Act of 2004
IEP	Individualized Education Program
IEPs	Individualized Education Programs
IICAPS	Intensive In-Home Child and Adolescent Psychiatric Service
IGT	Interactional group therapy
IQ	Intelligence quotient
IRB	Institutional Review Boards
IY	Incredible years
JD	Juvenile diversion
JD + ST	JD plus skills training
JD + MEN	JD plus mentoring
JDAI	Juvenile Detention Alternatives Initiative
JFRC	Juvenile Residential Facility Census
JJDP	Juvenile Justice and Delinquency Prevention Act
JJDPA	Juvenile Justice and Delinquency Prevention Act
JLWOP	Juveniles to life without the opportunity for parole
JSO	Juvenile sex offender
JSOs	Juveniles charged with sex offenses
JSOAP-II	Juvenile Sex Offender Assessment Protocol II
JUMP	Juvenile Mentoring Program
KABC-II	Kaufman Assessment Battery for Children, second edition
K-BIT-2	Kaufman Brief Intelligence Test, second edition
K-SADS-PL	PTSD traumatic events component of the semi- structured clinical interview for PTSD
KTEA-II	Kaufman Test of Educational Achievement, second edition
LD	Learning disabilities
LSI	Level of Service Inventory
LSI-R	Level of Service Inventory—Revised
LWOP	Life sentences without the opportunity for parole
Ma	Hypomania
MacCAT-CA	MacArthur Competence Assessment Tool—Criminal Adjudication
MACI	Millon Adolescent Clinical Inventory
MAC-R	MacAndrews Alcoholism Scale Revised
MAJCC	Massachusetts Alliance of Juvenile Court Clinics
MANCOVA	Multivariate analysis of covariance
MAOA and MAOB	Monoamine oxidase A and B

MAPI	Millon Adolescent Personality Inventory
MASC	Multidimensional Anxiety Scale for Children
MAYSI-2	Massachusetts Youth Screening Instrument—version 2
MAYSI-2 TE	Massachusetts Youth Screening Instrument-2 “traumatic experiences”
MDFT	Multidimensional family therapy
MDI-C	Multiscore Depression Inventory for Children
MHA-TP	Microhemagglutination-treponema pallidum test
MI	Motivational interviewing
MMD	Mild and/or moderate mental disabilities
MMPI	Minnesota Multiphasic Personality Inventory
MMPI-A	Minnesota Multiphasic Personality Inventory—Adolescent
MPH	Methylphenidate
MSE	Mental status examination
MSM	Men who have sex with men
MST	Multisystem therapy
MST	Multisystemic therapy
MTA	Multimodal Treatment Study of Children with ADHD
MTFC	Multidimensional Treatment Foster Care
MTFC-A	Multidimensional Treatment Foster Care—Adolescents
MTO	Moving to opportunity
NAATs	Nucleic Acid Amplification Tests
NASP	National Association of School Psychologists
NCCEV	National Center for Children Exposed to Violence
NCCHC	National Commission on Correctional Health Care
NCJFCJ	National Council of Juvenile and Family Court Judges
NCJTP	National Criminal Justice Treatment Practices Survey
NCLB, 2001	No Child Left Behind Act
NCMHJJ	National Center for Mental Health and Juvenile Justice
NCTSN	National Child Traumatic Stress Network
NEO-FFI	NEO-Five Factor Inventory
NFP	Nurse-Family Partnership
NICHD	National Institute of Child and Human Development
NIDA	National Institute on Drug Abuse
NIH	National Institutes of Health
NIMH	National Institute of Mental Health
NREPP	Registry of Evidence-based Program and Practices
NSA	National Survey of Adolescents
OARS	Client-centered counseling skills
ODD	Oppositional defiant disorder
OJJDP	Office of Juvenile Justice and Delinquency Prevention
OMHRC	Oregon Youth Mental Health Referral Checklist
OROS	Osmotic-controlled release oral delivery system
OVC	Office for Victims of Crime
Pa	Paranoia
PAI-A	Personality Assessment Inventory-Adolescent

Pap	Papanicolaou
PCIT	Parent–child interaction therapy
PCL:YV	Psychopathy Checklist: Youth Version
Pd	Psychopathic deviate
PDD	Pervasive developmental disorders
PDR	Parent Daily Report checklist
PENS	Psychological Ethics and National Security
PHDCN	Project on Human Development in Chicago Neighborhoods
PID	Pelvic inflammatory disease
PINS/CHINS	Person or child in need of supervision
PIRLS	Progress in International Reading Literacy Study
PISA	Program for International Student Assessment
PKC	Protein kinases, C
PP	Private Practitioner Model
PPC	Positive peer culture
PPV and NPV	Positive and negative predictive values
PRKCG	Protein kinase C gamma type
PTE	Potentially traumatic events
PTSD	Posttraumatic stress disorder
PTSD-RI	UCLA PTSD Reaction Index
PYC	Project Youth Connect
RADS-2	Reynolds Adolescent Depression Scale—Second Edition
RC-MAS	Revised Manifest Anxiety Scale
RCT	Randomized controlled trial
RCT	Randomized placebo-controlled trials
RCTs	Randomized controlled trials
ROC	Receiver operating characteristic
RPR	Rapid plasma reagin
RRFT	Risk reduction through family therapy
RSTI	Risk-Sophistication-Treatment Inventory
RT	Relaxation training
SAMHSA	Substance Abuse and Mental Health Services Administration
SASSI-3	Substance Abuse Subtle Screening Inventory, third edition
SAVRY	Structural Assessment of Violence Risk for Youth
SB-5	Stanford–Binet Intelligence Scales—Fifth Edition
SCDJJ	South Carolina Department of Juvenile Justice
SCIP	Social-cognitive information-processing
SED	Serious emotional disturbance
SGFP	Specialty Guidelines for Forensic Psychologists
SiHLE	Sistas Informing, Healing, Living and Empowering
SIR	Statistical Information on Recidivism Scale
SLC6	Solute Carrier Family 6
SLD	Specific Learning Disabilities
SNP	Single Nucleotide Polymorphisms
SORNA	Sexual Offender Registration and Notification Act of 2006

SPEP	Standardized Program Evaluation Protocol
SES	Socioeconomic status
SPARCS	is a group intervention that was designed to address the needs of adolescents who have experienced chronic trauma, may still be living with ongoing stress, and are experiencing problems in several areas of functioning
SPI	Student Press Initiative
SPJ	Structured professional judgment
SS	Seeking safety therapy
SSIS	Social Skills Improvement System
SSRI	Selective serotonin reuptake inhibitor
STD	Sexually transmitted diseases
STIs	Sexually transmitted infections
STRP	Short <i>Tandem Repeat Polymorphisms</i>
SUD	Substance use disorder
SUQ	Service Utilization Questionnaire
SVJ	Serious and violent juvenile offenders
SVORI	Serious and Violent Offender Reentry Initiative
SYRF	Survey of Youth in Residential Facilities
TARGET ©	Trauma Affect Regulation: Guide for Education and Therapy
TAT	Thematic Apperception Test
TB	Pulmonary tuberculosis
TCA _s	Tricyclic antidepressants
TD	Tardive dyskinesia
TE _s	Traumatic events
TESI	Traumatic Events Screening Instrument
TESI	Traumatic Experiences Screening Instrument
TFAP β 2	Transcription factor AP-2 beta
TF-CBT	Trauma focused cognitive behavior therapy
TF-CBT	Trauma-focused cognitive-behavioral therapy
TF-CBTWeb	is a free Web-based training program for clinicians holding a master's degree or higher
TN	True negatives
TP	True positives
TRAAY	Treatment recommendations for the use of antipsychotics for aggressive youth
TSCC	Trauma Symptom Checklist for Children
TSC-CPTS	Trauma Symptom Checklist for Children—Posttraumatic Stress Symptoms
TST	Trauma Systems Therapy
TST-SA	Traumatic stress and abusing substances
WASI	Wechsler Abbreviated Scale of Intelligence
WBR	Weekly Behavior Report
WIAT	Wechsler Individual Achievement Test
WIC	Women, infants, and children
WISC-IV	Wechsler Intelligence Scale for Children-Fourth Edition

WJ-ACH	Woodcock Johnson Tests of Achievement Revised
WJ-III/3, WJ-R	Woodcock–Johnson Test of Educational Achievement, Third Edition or Revised
WSIPP	Washington State Institute for Public Policy
YLS/CMI	Youth Level of Service/Case Management Inventory

Dana Shoenberg

This handbook offers insights and guidance illuminating the many points at which the practice of mental health and the juvenile justice system intersect today. It comes at a promising time. Juvenile justice officials increasingly understand the critical role that mental health services play in rehabilitating the youth in their care. At the same time, juvenile justice reformers seek ways to connect youth to the behavioral health services they need without having courts become the primary means for youth to access care. Budget pressures are forcing states to be more careful about how they spend their juvenile justice funds, and communities are searching for ways to keep youth in programs closer to home rather than relying on expensive, sometimes less effective out-of-home placements for youth far from their families and other supports. Mental health care providers play critical roles in these public policy dialogues, while also fulfilling essential evaluation and treatment functions in the community, through the courts, and in locked settings. The authors brought together in this publication have produced rich resources that can inform both policy and practice.

This introduction offers a bird's-eye view of some of the mental health-related challenges facing juvenile justice policy makers and advocates.

These issues form the landscape that treatment providers must navigate when working with youth and their families, and they also demonstrate the importance of mental health professionals' involvement in the discourse about how to serve court-involved youth most effectively.

Youth involved in the juvenile justice system bring with them experiences and characteristics shaped by a common theme: most have been failed by one or more adults or systems meant to protect and serve them. As many authors in Part V of this handbook acknowledge, youths' histories of exposure to trauma and related PTSD are significant and often overlooked problems in juvenile justice. Antonis Katsiyannis and David Barrett in their chapter on offenders with disabilities discuss how the unmet needs of youth with educational disabilities contribute to their disproportionate representation among the juvenile justice population. In addition, youth with child welfare histories represent between 9 and 29% of youth in the juvenile justice system (Smith and Thornberry 1995), and as much as 42% of youth in probation placement (Halemba et al. 2004). Youth who have experienced foster care are more likely to recidivate and end up deeper in the system as well (Alltucker et al. 2006 cited in Chap. 33). John Chapman observes that a "driving factor" contributing to the appearance of youth with mental health needs in the juvenile justice system is families' inability to access mental health care in their communities. Thus, juvenile justice officials must find ways to help youth with a host of needs that other systems before them have failed to meet.

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Mitigating the Harmful Qualities of Correctional Environments

As policy makers have come to acknowledge the prevalence of youth with mental health disorders and trauma histories in the juvenile justice system, they have begun to grapple with how and where to serve them effectively. Anyone who has spent much time in a locked juvenile justice facility recognizes that youth detention centers and correctional facilities (or “training schools”) are among the least equipped places to meet the mental health needs of youth. In fact, punitive correctional environments, complete with their hardware, isolation, and displacement of youth from their families and schools, often exacerbate symptoms and are poor environments in which to try to establish a therapeutic relationship. One-third of detained youth identified with depression developed their symptoms during their incarceration (Kashani et al. 1980), and preventing youth suicide is an ongoing concern in juvenile justice facilities (Hayes 2004). Detention of youth is not only the most significant factor increasing the odds of recidivism (Benda and Tollet 1999), but it also increases the probability that youth will end up deeper in the system, even when controlling for severity of the youth’s offense (Florida Office of State Courts Administrator 2003). Lenore Engel and her colleagues point out the important role that psychiatrists play in protecting youth at imminent risk of self-harm or with disabling and dangerous symptoms of major psychiatric disorder. Such youth should be treated in psychiatric settings rather than in detention or secure placement, and psychiatrists must be advocates for moving youth to appropriate treatment settings when juvenile facilities cannot provide for their safety and well-being.

In both detention and post-adjudication secure placement, mental health providers frequently encounter punitive and decidedly antitherapeutic practices among custody personnel. In many places, custody staff curse at youth and otherwise demean them. Often direct care staff lack training to help them understand the needs of youth in their care and see their roles more as security

guards than youth development specialists. Facilities that lack structured programming, effective behavior management systems, and solid staff training often rely on harmful punitive practices, such as isolation and physical and mechanical restraint, in order to control behaviors they do not understand or cannot manage. Mental health professionals are often asked to visit youth in isolation, and even sometimes when they are restrained, to check on their well-being and to ensure timely response to mental health crises. These are challenging environments in which to provide effective mental health care, but mental health professionals can play key roles in mitigating punitive environments in detention and placement facilities. Faye Taxman and her colleagues provide a stark assessment of the limited rehabilitative and therapeutic services provided in most placement facilities in their chapter examining services for youth in closed settings, finding that most fail to deliver evidence-based practices or treatments likely to improve the life prospects of youth. Meanwhile, Angela Wood and her colleagues describe the developments in correctional practice in more hopeful terms, outlining training approaches that can bring the respectful, therapeutic engagement strategies of motivational interviewing techniques to correctional settings. It is clear that programming in out-of-home placement facilities needs to catch up to the strides in research and program development that have occurred in community settings.

Mental health professionals working in correctional settings have opportunities to help custody staff understand more about the youth in their care. Custody staff training programs often fail to include key topics, including adolescent development, differing responses of kids with mental illness to strict rules and directions, effective strategies for working with youth with mental illness, the harms that excessive isolation and restraint can cause, understanding youth with developmental disabilities, trauma-informed care, and other behavioral health concepts. Mental health professionals can play key roles in educating custody personnel, both formally and informally, about these topics, but they must spend time where the youth live and seek out

conversations with custody staff in order to maximize these opportunities.

In many facilities, service contracts leave mental health, education, and other professionals working in separate silos. Facilities are more likely to serve youth effectively when staff from various disciplines collaborate to create behavior management and intervention plans for youth with special needs. Professionals governed by the *Health Insurance Portability and Accountability Act* (HIPAA 1996), the *Family Educational Rights and Privacy Act* (FERPA 1974), and other confidentiality protections must remain mindful of their legal responsibilities, but can still find ways to share limited, helpful information to coordinate and improve services to youth and their families. Interdisciplinary case planning and follow-up are surprisingly absent from many youth detention and correctional facilities, but can help establish common goals for behavior management and treatment of residents with special needs, and are recommended practice (National Commission on Correctional Health Care 2004). Where professionals believe that it would be valuable to share information protected by confidentiality laws, agencies can develop information-sharing agreements and consents (Wiig et al. 2008). Agencies must, of course, be ever mindful that what looks to one agency like helpful flow of information to better serve youth may look more like excessive sharing of protected information to others (Soler and Breglio 2010). In their chapter about education for youth in correctional settings, Candace Mulcahy and Peter Leone reinforce the need for collaboration and effective communication among educators, custodial personnel, and mental health professionals—collaboration that is critical when tailoring individual interventions and supports and planning for youth reentry into the community.

In addition, informal discussions with individual staff in order to help them understand the challenges presented by youth in their care are opportunities for mental health professionals to educate their colleagues, and can take place without revealing confidential information. Furthermore, mental health professionals can play important roles in after-incident reviews to help custodial staff and others understand, analyze,

and work to resolve the circumstances that may have led to a youth's violent, self-harming, or otherwise disruptive behavior. Those in positions to negotiate mental health contracts and staffing plans should not overlook these extra responsibilities of formal and informal staff education and collaborative planning along with screening, assessment, direct treatment, and crisis intervention functions when estimating staff capacity and cost. They should also provide for adequate staffing to work with youth on their substance abuse problems. As Sarah Feldstein and her colleagues point out in their chapter on serving dually diagnosed youth, there is a significant gap between the needs of dually diagnosed youth and the resources and treatment available through juvenile justice programs today. In many facilities, we see little if any attempt to address substance abuse needs of youth unless the facility specializes in drug treatment. The functions described above should be considered integral to the work of mental health providers in detention and correctional settings, and are invaluable to help mitigate the harsh realities of many facilities.

Preventing Juvenile Justice from Becoming the De Facto Mental Health System for At-Risk Youth

A critical question policy makers face is just how comprehensive mental health treatment should be in pre-adjudication detention centers, where the main function is to hold youth safely pending adjudication (Migdole and Robbins 2007). As a general matter, federal law requires that juvenile justice facilities meet youths' mental health needs and keep them safe from harm in accordance with accepted professional judgment, practice, or standards (*Youngberg v. Romeo* 1982; *Estelle v. Gamble* 1976; *Bowring v. Godwin* 1977). Individual state laws provide additional mandates as well. In recent U. S. Department of Justice investigations and litigation about conditions in state and local juvenile detention facilities, agencies have been required to provide mental health services in the following areas: suicide risk assessment and response

(Marion County Agreement 2008), screening, assessment, treatment plans and services (Maryland Agreement 2007), response to crisis, coordination with other staff to meet youths' needs, medication management, tracking lab results, counseling to ameliorate target symptoms of identified mental illness, and collaboration with other staff to develop behavior modification plans and care for suicidal youth (Los Angeles County Agreement 2004). Recent private litigation has included similar requirements as well as reentry planning (*Jerry M. v. District of Columbia* 2007).

Many authors in this handbook cite data from detention centers reporting rates of youth who meet the criteria for a mental health disorder as high as 70% (see, e.g., Teplin et al. 2002). While not all youth who could be diagnosed with a disorder need treatment, given these reported rates of youth who could be diagnosed with a mental health disorder, one might conclude that juvenile detention centers should be the locations for the most sophisticated and comprehensive treatment available. After all, there is a clear need among the population and the opportunity to provide significant care while youth are "captive audiences" required to be there. However, if detention-based services exceed what is available in the community, judges and court staff seeking to help youth may be more likely to incarcerate them in order to get them the help they need, sometimes regardless of the youth's actual risk to the community. Striking the balance between ensuring that the juvenile justice system does not become a "portal to care" and meeting the mental health needs of incarcerated youth is challenging. For detailed guidance about appropriate mental health care in a detention setting, readers may find useful the standards developed by the Annie E. Casey Foundation to guide jurisdictions wishing to assess their detention facility conditions, *Detention Facility Self-Assessment: A Practice Guide to Juvenile Detention Reform* (Annie E. Casey Foundation 2006). As Tom Grisso has noted in his insightful piece on the progress and perils of the juvenile justice and mental health movement, the obvious long-range solution is to improve community mental health services for youth and in the short term to be wary of

innovations that may draw youth into the juvenile justice system for care (Grisso 2007). And as John Chapman explains in his chapter on court clinics, courts can support community-based service development by referring youth for assessment and treatment in the community rather than in detention where possible.

Protecting Youth from Self-Incrimination

Despite strict legal requirements of confidentiality in most circumstances, many jurisdictions have not taken adequate steps to protect the information shared in therapeutic relationships. Some states have found ways to protect youths' treatment records from becoming evidence in their delinquency or criminal proceedings. However, in most states, the risk that information shared with psychologists, psychiatrists, and others may be used against them in delinquency and criminal proceedings compromises the pretrial relationship between mental health service providers and their clients in court and detention settings (Rosado and Shah 2007). Mental health professionals in states without protections from self-incrimination in mental health treatment must navigate their responsibility to provide care, the desire to protect the trusting relationships they work to establish with clients, and the prospect that they could be called as witnesses. In walking this tightrope, some choose to limit their record-keeping in hope that their subpoenaed files may not be appealing to prosecutors, or they avoid topics that could lead to self-incrimination in their conversations with clients.

Mental health professionals and others should place a high priority on promoting legislative change to allow effective pre-adjudication screening, assessment, and supportive care without the risk that the information will wind up in court. Given that some youth wait months or years for court proceedings to conclude, especially those charged in adult criminal court, youth should be able to develop effective therapeutic relationships free from the worry of undesirable exposure of

their thoughts and shared experiences. Mental health practitioners have the opportunity to share their concerns about the way the lack of self-incrimination protections compromises their work, and can bring together representatives across disciplines to work toward change in their individual states.

Movement Toward Community-Based Care

Ideally, youth with psychiatric disorders would have their needs met outside of locked correctional environments. Some communities are beginning to build solid continuums of alternatives to detention and secure placement, and to divert youth with mental health needs from the juvenile justice system altogether. Promising work is occurring to help law enforcement officials identify youth with mental health needs and refer them for care (National Center for Mental Health and Juvenile Justice 2009). Other communities have focused on helping schools provide on-site mental health services or behavior interventions to keep school-based misconduct from resulting in arrest (National Center for Mental Health and Juvenile Justice 2009; Leech 2009). Some communities are finding ways to divert youth to mental health care after arrest but before they are formally processed in the courts (National Center for Mental Health and Juvenile Justice 2009). Jean Adnopolz and her colleagues in their chapter describe the Intensive In-Home Child and Adolescent Psychiatric Service (IICAPS) treatment model, which Connecticut courts are using as a preferred in-home mental health intervention for delinquent youth with mental health needs and those at risk of out-of-home placement or hospitalization.

National statistics indicate that jurisdictions are recognizing the value of community-based services. Out-of-home placements have declined over the past few years from a high of 109,000 in 2000 to below 81,000 in the latest data set from 2008 (Sickmund 2010). A touchstone of this change is the increased investment many com-

munities are making in community-based, evidence-based practices, such as Multisystemic Therapy, Functional Family Therapy, and Multidimensional Treatment Foster Care, which Paul Boxer and Sara Goldstein describe in their chapter on best practices in treating juvenile offenders.

“Evidence-based” has become the watchword for funding priorities, but not everyone understands the term in the same way, as Nancy Guerra and Kirk Williams discuss in their chapter on evidence-based practices. Some are just looking for “proven effective” programs or programs with some measurable amount of success, while others find anything less than the rigorous requirements of random assignment of youth to experimental and control groups, sustained effect and replicability—the hallmarks of the Blueprints for Violence Prevention programs—to be insufficient (Center for the Study and Prevention of Violence 2010). As several authors in this handbook point out, while the name-brand Blueprints programs provide a package of services, individual strategies identified as effective by Lipsey and colleagues may be incorporated in programs that have not themselves been rigorously tested (Lipsey et al. 2000). There is still much to be learned to determine programs’ effectiveness for particular populations, such as girls or members of individual racial and ethnic groups who may respond differently to in-home vs. out-of-home interventions.

Advocates have begun to lay out the arguments for legislators, agency directors, and others to understand how beneficial and cost-effective these services can be so that they can invest in productive forms of care and restructure state funding systems to incentivize keeping kids close to home (Justice Policy Institute 2009). Mental health professionals can be important contributors to decisions juvenile justice agencies and courts make about where, how, and for whom to establish new programs to serve youth effectively, and they must be at the forefront of developing new programs that can be studied and become “evidence-based.”

The shift that has begun to emerge toward more community-based and evidence-based care

has been supported and fuelled by some significant juvenile justice reform initiatives over the past several years. The Annie E. Casey Foundation's Juvenile Detention Alternatives Initiative (JDAI) has grown from a handful of pilot sites in 1992 to over 125 sites in 30 states and the District of Columbia. The initiative brings together collaboratives of juvenile justice stakeholders, mostly at the county or parish level, to gather and analyze data about their incarcerated youth populations and implement policy, practice, and other changes to reduce reliance on secure confinement while improving public safety and reducing racial and ethnic disparities. JDAI has recently begun to move toward statewide applications (Annie E. Casey Foundation 2011). Since 2005, the John D. and Catherine T. MacArthur Foundation's Models for Change Initiative has worked with leaders in states that have initiated juvenile justice reforms and that are likely to influence national reform. The Models for Change Action Networks in Juvenile Indigent Defense, Disproportionate Minority Contact, and Mental Health/Juvenile Justice have created peer learning networks and served as laboratories for innovation. States involved in the Mental Health/Juvenile Justice Action Network have developed new diversion strategies, develop training for juvenile justice personnel on mental health related issues, and improved involvement of youths' families in mental health and juvenile justice programs (John and Catherine T. MacArthur Foundation 2011).

Through both of these initiatives, and with the help of federal funding, some communities have begun to make strides in reducing racial and ethnic disparities at various points where youth have contact with the juvenile justice system. As Kimberly Kempf-Leonard notes in her chapter discussing race and sex disparity in juvenile justice processing, the juvenile justice system creates a "cumulative minority disadvantage." Youth of color receive harsher dispositions than white youth, even for similar offenses, and the overrepresentation of youth of color in the system grows greater at each progression deeper into the system (National Council on Crime and Delinquency 2007). In 1988, the Juvenile Justice and Delinquency Prevention Act (JJDP) first

required states to "address" disproportionate minority confinement (JJDP 1988), and then made it a condition of federal funding in 1992 (JJDP 1992). In 2002, Congress required that states address disproportionality at all contact points with the juvenile justice system (JJDP 2002). Despite the imprecise wording of this requirement, some communities have advanced beyond studying and writing reports about the problem to finding real solutions. These jurisdictions develop strategies that target their individual points of overrepresentation of youth of color and the myriad factors that can cause disparities, often reducing the numbers of youth of color securely detained or placed (Szanyi 2008–2011). The diverse stakeholder groups that have been the driving forces behind racial and ethnic disparities reduction work and the JDAI and Models for Change initiatives more broadly have, in the best cases, involved representation from the mental health community. Mental health professionals who wish to contribute to broadscale systems reform in their communities would do well to seek out existing collaboratives in their communities or spearhead new initiatives to promote data-driven reforms.

Valuing and Involving Families

Juvenile justice professionals have come to appreciate the central role that families must play in their children's rehabilitation. Families often feel shut out of decision making about their children and their needs, and demonization of parents by some juvenile justice officials can lead to a lack of trust and communication. Juvenile justice agencies committed to the core value of meaningful family involvement have begun to foster growth of youth-family team decision making for case planning, expansion of opportunities for families to visit their children in secure facilities, increased promotion of cultural competence, and improved information and records sharing with parents and guardians about their children's care. Pennsylvania has engaged in statewide efforts to involve families more fully in

planning and implementation of treatment and aftercare, communicate respect, and improve communication, visitation and transportation (Pennsylvania Family Involvement Committees 2009). The Texas Youth Commission has an expansive, clearly written Parents' Bill of Rights that outlines a broad range of parents' rights to communicate with their children and facility staff, to access information, and to be involved in treatment decisions (Texas Youth Commission 2008). The document does flag a bit on informed consent for medical care, stating only that parents have "The right to discuss your child's health condition with a licensed healthcare professional and to be informed if there are significant medication changes." However, it compiles and promises to parents a broad array of rights not seen in other jurisdictions.

The challenge of obtaining parent and guardian as well as youth informed consent for treatment in juvenile justice settings poses hard questions. What does consent mean in a coercive world in which you or your child is in custody? Although strides have been made in individual jurisdictions, parents whose children are incarcerated do not have full information about their behavior, responses to particular circumstances, trouble they may be having with individual youth or staff, or a host of other details they might normally factor into weighing treatment recommendations. In addition, parents may be fearful that refusing to consent might get their children in trouble, or they may not know what their options are in a system where they cannot just make an appointment and bring the child elsewhere for a second opinion. Mental health professionals in contact with families to discuss their children's care and obtain informed consent should remain aware of these factors and take extra care to ensure that parents and guardians have enough information to provide meaningful consent.

Sandra McPherson in her chapter on forensic practices points out additional challenges with obtaining youths' informed consent. These include youths' limited comprehension, lack of trust of adults in confinement settings, ethical questions of off-label prescribing where risks and benefits are unknown, and the limited ability

of adolescents to understand sophisticated explanations of probability. Practitioners working with youth must take the time and care necessary to explain their recommendations, answer questions, anticipate questions youth do not know how to ask, and check to see if youth understand during discussions seeking informed consent.

Contributions of Brain Development Research

Many important developments for youth charged with crimes have come about in recent years as understanding of adolescent brain development has made its way from the research realm into court decisions, legislative debate, and policy deliberations about the nature of youth offender culpability (Soler et al. 2009). As Jeffrey Shook notes in his discussion of juvenile life without parole sentences, the Supreme Court's recent decisions, first finding the juvenile death penalty unconstitutional (*Roper v. Simmons* 2005), and then invalidating life without parole for youth whose crimes did not include murder (*Graham v. Florida* 2010), have provided new opportunities for advocates to push back the most draconian sentences for youth tried in the adult system.

Baptiste Barbot and Scott Hunter explain in their chapter on developmental changes in adolescence how further understanding of the neurobiological and psychosocial underpinnings of the "storm and stress" of adolescent development may help shape justice system response to juvenile offending. Elizabeth Scott and Laurence Steinberg offer a "developmental model," informed by our understandings of brain development, as a new option to respond to youth crime and reduce adult court transfer. Under this model which recognizes adolescents' lesser culpability, most youthful offenders would remain in the juvenile justice system, where the chances of receiving some rehabilitative care are greater than in the adult system (Scott and Steinberg 2008). This option holds promise of more effective approaches to youth crime, since we know from research that trying and sentencing youth in

adult court makes us all less safe (Redding 2010). The translation of brain development and other influential research into practice is a key contribution that the mental health field continues to make to juvenile justice.

Conclusion

The more that juvenile justice decision makers incorporate an understanding of youths' developmental and mental health needs into policy, training, and practice, the greater the likelihood of successful outcomes for youth. Forensic mental health practitioners can play a key role in shaping policy and practice while providing individual mental health services in both community-based and locked settings. Opportunities abound for psychologists, psychiatrists, and clinical social workers to educate juvenile justice personnel in formal and informal settings in order to help reduce the punitive atmosphere of many locked facilities. At the same time, the goal should be to serve youth in the least restrictive environment necessary for public safety.

Balancing adequate information sharing with the need to protect youth from self-incrimination is a particular challenge for mental health professionals that could be solved through legislative change. Valuing families and finding ways to incorporate them more fully into decisions about their children is a core goal to be pursued as well. As juvenile justice reformers seek to improve the effectiveness of juvenile justice interventions while reducing unnecessary use of confinement, the mantras of the field today include closer to home, more humane, trauma-informed, and evidence-based. Many resources and new solutions to promote those goals are found in this handbook. And, as many authors note, many more resources and solutions are still waiting for mental health practitioners and researchers to collaborate, innovate, develop, and evaluate them.

Mental health professionals committed to working with court-involved youth are essential to juvenile justice today, despite the many barriers and challenges this environment imposes on

mental health practice. Meeting youth in the juvenile justice system at the intersection of crisis, consequences, and opportunity brings with it the possibility of making a great difference in their lives.

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Developmental Changes in Adolescence and Risks for Delinquency

2

Baptiste Barbot and Scott R. Hunter

Adolescence is a critical developmental period considering the quantity and intensity of related changes (e.g., biological and psychosocial), which may represent, in themselves, risks for present and future delinquency. It is indeed well established that the age–crime curve peaks during adolescence (e.g., Landsheer and van Dijkum 2005) and that the rate and severity of offences occurring during this period are strong predictors of later offences (e.g., Overbeek et al. 2001). Furthermore, the number of juvenile offences is extremely high in the USA, with 2.11 million juveniles arrested in 2008, a rate of about 2.4% of 10- to 17-year olds. Among these, 96,000 juveniles were arrested for violent crimes, including 1,280 murders (Sickmund 2010; Puzzanchera et al. 2010). Despite the frequency of juvenile delinquency, young offenders are rarely taken into consideration in the literature on normative adolescent development, and it would be consequently incorrect to assume that delinquency precludes youth from experiencing processes that are typical during this developmental period (e.g., Knight et al. 2009). Accordingly, the ways in which the justice system responds to juvenile

offending should be informed by the lessons of developmental science (Steinberg 2009).

The concept of “storm and stress” has been suggested (Rousseau 1762/1962), operationalized (Hall 1904), and revised (e.g., Arnett 1999) to describe the tumultuous change inherent in normative adolescence, and also to suggest pathways to delinquency. In this chapter, we build upon this concept by analyzing the developmental changes of adolescence as a fundamental context for the emergence of a range of behavior and outcomes that may include delinquency. Such contextualization could help to understand how “normative” experiences of rule breaking may persist into a delinquent identity. Complementing Steinberg’s (2009) review on adolescent development and its implications for the treatment of juveniles in the justice system, we examine neurobiological and psychosocial changes of adolescence as vulnerable contexts for the emergence of delinquency. First, we introduce the key characteristics of adolescent development in terms of neurobiological and psychosocial changes. Second, we describe how this natural developmental process can lead to maladaptive adjustment and behavior, ranging from “typical” manifestations of adolescent behavior to more troubling outcomes such as delinquency and psychopathology. Third, we examine more deeply the neurobiological factors that may be involved in the emergence of such outcomes. Finally, we review the major aspects of emerging identity that may result in internal conflicts, maladaptive

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behaviors, and delinquency. We conclude by underlining the advantages of contextualizing delinquency in neurobiological and identity changes, and by hypothesizing that developmental asynchronies may explain individual differences in experiencing storm and stress. Understanding these developmental changes individually thus provides insight into the emergence of juvenile delinquency in adolescence. Taken together, they offer new perspectives for delinquency theory and research with implications for tailored interventions, grounded in adolescent development.

Developmental Storm in Adolescence

Several volumes on adolescent development would be necessary to describe the quantity, the intensity, and the complex interaction of the changes occurring during this period of life, and how these changes may represent specific vulnerabilities for developing adolescents. In modern societies, adolescence is indeed often characterized as a period of “storm and stress” (e.g., Hall 1904) or “developmental storm” (e.g., Cloutier 2005), as the intensity and rapidity of the changes experienced by youth are significant and widely observed. Across all these changes, the task of adolescence is above all the formation of an identity, which is triggered by environmental, social, pubertal, and neurobiological changes. These neurobiological changes, specifically, lead to increased cognitive capacity, which allows the new meta-reflexive questions of identity formation. The multitude of adolescent changes also results in behavioral manifestations such as risk taking,¹ impulsivity, and emotional disturbance. In this section, we introduce the key psychosocial and neurobiological transformations of adolescence in order to better understand the emergence and peak of delinquency during this period of life, as further explored in the next section.

¹The tendency to engage in behaviors that have the potential to be harmful or dangerous, yet at the same time provide the opportunity for some kind of outcome that one perceives as positive (e.g., the thrill of driving at unsafe speeds, or the feelings of euphoria from taking a new drug).

Adolescent Neurobiological Development

Puberty represents the onset of adolescence, and the mechanistic and outward physical changes involved have been widely studied and reported in the literature. However, the human brain undergoes substantial development during adolescence, and until recently the specific developmental changes occurring in the brain were opaque. While there is still much to learn, researchers have identified two neurobiological systems that are particularly important in regulating behavior during adolescent development: the socioemotional system and the cognitive control system (Casey et al. 2010; Steinberg 2008).

The socioemotional system processes social and emotional information and compels individuals to act in ways that maximizes pleasure and minimize displeasure. Due to the system’s role in reinforcing pleasurable behaviors, one of its major components is commonly referred to as the reward pathway or reward center, and it is particularly important when considering the risk versus reward considerations that are a key feature of risky decision making (Steinberg 2008). The other system, the cognitive control system, is generally responsible for executive functioning, including response inhibition, affective control, planning, weighing risks and rewards and simultaneous consideration of multiple sources of information—and these are critical features for identity formation, as reviewed below. These two systems, the socioemotional system and the cognitive control system have been observed to mature substantially during adolescence, but they do not develop at exactly the same time. As a whole, the socioemotional system develops rapidly during early adolescence likely triggered by puberty, and is undistinguishable from adults by middle adolescence (age 15–16). While the cognitive control system also shows gains in early adolescence, its development is more gradual than the socioemotional system, and only reaches the final stages of maturation as late as early adulthood (age 18–24) (Casey et al. 2010; Steinberg 2009).

This developmental lag of the cognitive control system, described as a temporal gap (e.g., Steinberg

2009), is the typical neurobiological context of adolescent behavior. The lack of inhibition from the developing cognitive control system results in a brain that is highly susceptible to social and pleasurable influences, has decreased capacity to plan ahead, and weigh the consequences of risky behavior. This temporal gap is analogous to how a growing adolescent's body can develop disproportionately, resulting in an awkward teenage look; similarly, the asynchronous development of neurobiological systems predisposes adolescents to characteristic behaviors, such as risk taking and impulsivity. Adolescents' greater susceptibility to peer influence and decreased capacity to plan for the future are additional factors that influence risk taking and impulsivity and can be explained by this temporal gap of developing brain systems.

The specific cellular changes that occur in the developing brain and ultimately lead to the formation of an adult brain are complex and there is still much to be discovered; however, underlying cellular changes can be inferred from observations made at the anatomical level. Brain development in late childhood and adolescence involves a gradual decrease in total gray matter and an increase in total white matter (Giedd 2004). The gray matter is distributed along the outer portion of brain structures and it primarily contains neuron cell bodies that project onto other cells both within the gray matter and also to other regions of the brain. The decrease in gray matter corresponds to maturation because neurons of the gray matter are thought to undergo synaptic pruning, which results in improved coordination and specialization of neurons for specific cognitive tasks (Gogtay et al. 2004). The white matter differs from gray matter in that it does not contain cell bodies, and is primarily made up of the myelinated (i.e., long and fast) connections between brain regions. The volume of white matter continues to increase linearly before stabilizing in adulthood, suggesting that connections between cortical and deep brain regions continue to increase until early adulthood when the brain has established the network of communicating neurons between its regions (Paus 2005). Such studies demonstrate that it is not until early adulthood (age 18–22) that the human brain is anatomically

stable over time (i.e., fully developed). The increasing specialization of neurons and improving interconnectivity of brain regions, occur in both neurobiological systems, the socioemotional system, and the cognitive control system. The emerging interconnectivity between these developing brain systems is a possible mechanism to explain individual behavioral tendencies, including risk-taking and impulsivity (Casey et al. 2010). The brain maturation that occurs during adolescence is also responsible for cognitive changes that allow new meta-reflexive questions involved in the process of identity formation.

Adolescent' Psychosocial Development and the Quest for Identity

Adolescence is a fragile period of "crisis," which is a crucial time for identity development. Erikson (1968) used the term "crisis" to refer to a time of fragmentation and conflict, and to describe how adolescent development happens through contradictions and uncertainties about the self. Indeed, the adolescent's quest for identity refers to the new question "Who am I?" allowed by the new development of the brain (see previous section), major environmental changes, and the new dynamic of the need for affiliation/socialization and individuation. The formation of identity in adolescence is the pursuit of a feeling of self-sameness and existential continuity across contexts and situations (Erikson 1968). This is reached through a complex dynamic between two aspects of identity: the personal and the social. The personal aspect of identity refers to the need for individuation, or need to be unique, independent, while the social aspect involves the search for the feeling of belonging to a social group (cf. Tajfel 1982) and being accepted by a group of peers. This dynamic makes the balance between "self" and "others" a developmental challenge (e.g., Kroger 2003). This quest for identity is also compelled by an essential adaptation to a "new" body (i.e., puberty and other biological changes), and changes in cognitive functioning (i.e., access to abstract reasoning) allowing new abilities in self-representation

(e.g., Harter 2003), as well as for interpreting and interacting with the social world. At the same time, identity development occurs during a period of the first significant decisions of life, which are often required due to environmental and societal demands imposed on youth (e.g., such as the choice of a school curriculum that will determine one's future career opportunities). These commitments and commitments in general strongly contribute to the adolescent's self-image, since they define social categories that serve as a source of self-esteem (cf. Bosma 1994, Tajfel and Turner 1986).

Among different theoretical approaches, the identity status paradigm (Marcia 1966) has been used for decades to empirically describe identity formation in adolescence (e.g., Berzonsky and Adams 1999; Kroger et al. 2010; Zimmermann et al. 2010). In his early work based on the Eriksonian perspective of identity, Marcia (1966) focused on the outcome of the identity crisis in adolescence. He realized that adolescents' ability to formulate their commitments—an essential aspect for defining the self—depended on whether or not they experienced a period of “crisis,” or exploration of many possible commitments, which may lead to doubts and uncertainties about the self. For Bosma (1994), the amount of exploration involved in achieving the commitments reflects on the stability and flexibility of the sense of identity. Indeed, commitments have a social significance and provide a definition of the adolescent to him/herself (e.g., Bourne 1978; Kroger 2003). Therefore, the intensity of the commitments reveals the strength of the adolescent's sense of identity (Bosma 1994). Accordingly, Marcia (1966) constructed a model of four “identity statuses” based on an adolescent's level of exploration and commitment in significant ideological and interpersonal domains of life (e.g., future profession, leisure activities, politics, religion) (see Table 2.1). As described later, each identity status is related to various levels of psychosocial maturity,² and can explain adolescent decision making and delinquency.

²Psychosocial maturity has been defined as the capacity of the individual to function adequately on one's own, to make decisions without excessive reliance on others, to contribute to social cohesion, and to interact adequately with others (e.g. Greenberger and Sorensen 1974).

Table 2.1 The identity statuses paradigm (adapted from Marcia 1980)

		Exploration ^a	
		Low	High
Commitment ^a	Low	Diffusion	Moratorium
	High	Foreclosure	Achievement

^aLevel (low or high) of exploration of commitment and corresponding identity statuses

Identity achievement status has been described as the goal (or ideal) of a developmental trajectory because it characterized adolescents who have explored different areas of life and then committed themselves through personal choices in these domains. Therefore, this status is often described as the most mature developmental configuration in Western societies (e.g., Waterman 1999). Since commitments are grounded in their experience, identity achievers (i.e., adolescents in identity achievement status) are able to articulate the reasons for their choices. They are also described as intrinsically motivated (Waterman 2004) and open to new experience (Clancy and Dolliger 1993). Conversely, *Identity-diffusion status* is an identity structure resulting from a lack of exploration associated with a lack of commitment in significant domains. In other words, diffuse adolescents do not attempt to commit, which reflects a low level of psychosocial development and often a less mature identity (e.g., Waterman 1999). Identity-diffusion is associated with negative outcomes such as low intrinsic motivation (Waterman 2004), lack of self confidence (Dunkel 2000), higher conformism (Adams et al. 1985), and more risk for alcohol and drug abuse (Jones and Hartmann 1984). The *Moratorium status* describes adolescents in a period of wide exploration, a quest for identity with intense questioning about possible commitments. The Moratorium identity is per se, the period of identity “crisis” discussed above. In their narrative, adolescents in Moratorium describe a lot of dilemmas, internal conflicts, and often anxiety about themselves and their future (e.g., Yoder 2000). Cognitively, Moratorium's intense exploration is consistently associated with greater divergent thinking (Barbot 2008). While adolescents in this status show more

emotional disturbance and higher anxiety than other statuses, they also show higher openness to experience (Clancy and Dolliger 1993). Conversely, the *Foreclosure-status* is characterized by very strong commitments that do not result from a period of exploration, but rather a deep internalization of parental and social values. These strong commitments leave little opportunity for exploration and reconsideration. Foreclosed adolescents are generally extrinsically motivated and dependant on relevant external forces for guidance and decision making (e.g., Archer and Waterman 1990; Marcia 1980). They attach great importance to preserve their identity through rigidly held beliefs and inflexible values (e.g., Berzonsky and Sullivan 1992; Dollinger 1995). On the other hand, they may be less inclined to take risks (Jones and Hartmann 1988) and to be open to experience (Clancy and Dolliger 1993). By protecting their commitment and their identity, these adolescents may have higher self-esteem than Moratorium and Diffuse adolescents (e.g., Cramer 1995), possibly for defensive reasons (Marcia 1980).

Confirming that the Diffusion status is a less mature configuration, whereas Achievement is more mature, evidence from numerous longitudinal studies indicates a prevalence of identity Diffusion in the beginning of adolescence, and the highest rate of Achievement in late adolescence (e.g., Kroger et al. 2010; Meeus et al. 1999). As an illustration, a recent meta-analysis of 124 longitudinal studies using Marcia's paradigm (Kroger et al. 2010) indicated that about two-thirds of the identity development trajectories started at age 14 with either a Diffusion (36%) or Foreclosure (28%) status, whereas Achievement (15%) and Moratorium (22%) statuses were less frequent. The reverse pattern was found in late adolescence, but the highest rate of Achievement is in fact more prevalent beyond adolescence (47% among 30- to 36-year olds), also suggesting that identity development does not necessarily end in adolescence (Kroger et al. 2010).

While these differences in identity status distribution suggest a direction of change from Diffusion to Achievement (e.g., Marcia 1980, 1993; Waterman 1999), the developmental

sequence in forming identity during adolescence is, however, multi-phasic (e.g., Matteson 1975) and not hierarchical, with a variable number of periods of stability, "regressions," and "progressions." Thus, throughout adolescence, identity does not develop linearly between the Diffusion status and the Achievement status. Conversely, it may be constantly explored and reconsidered (e.g., Crocetti et al. 2008), in particular when adolescents face new events of life or have to make new commitments.

The concept of *Identity confusion* proposed by Erikson (e.g., Erikson 1970) is useful to understand how this developmental task of identity formation is a difficult process which may lead to internalizing or externalizing problems. Identity confusion reflects the state in which the individual fails to resolve identity crisis and does not have a strong feeling of identity. According to Erikson (1970), a state of identity confusion, often seems to be accompanied by all the neurotic or near-psychotic symptoms to which a young person is prone on the basis of constitution, early fate, and malignant circumstance. Correspondingly, Marcia (1980; see also Archer 1989) advanced that each identity status is associated with both protective and risks factors for psychopathology (e.g., phobia, depression, anxiety) and other psychosocial problems (e.g., drug abuse, delinquency), except perhaps in the case of identity achievement, which would more likely be associated with only protective factors. According to Marcia's (1980) review, the protective factors associated with Identity Achievement include autonomy, reflection, self-esteem, post-conventional moral reasoning, mature intimacy, cultural sophistication, and an internal locus of control. Conversely, risk-factors mostly associated with Diffusion and Foreclosure include authoritarianism, pre-conventional and conventional moral reasoning, an external locus of control, less self-directedness, stereotyped interpersonal relationships, a preference for cognitive simplicity or disorganized cognitive complexity, and impulsivity. In a later section, we review what makes the process of identity formation a particularly vulnerable process for the development of delinquency.

From Developmental Storm to the Perfect Storm: Risks Inherent to Adolescent Development

At the inception of adolescent development as an area of scientific study, the term “storm and stress” was used to characterize the chaos, passion, energy, and tumult that was more often observed in adolescence than in other age groups (e.g., Hall 1904). The “storm and stress” issue has been explicitly considered in relation to adolescent normative development to describe adolescents’ typical tendency (a) to question and contradict their parents (adolescence is a time when conflict with parents is especially high, which is associated with a tendency to be rebellious and to resist adult authority), (b) in their mood disruptions (adolescents tend to be more volatile emotionally and to experience more extremes and swings of mood, including more frequent episodes of depressed mood), and (c) in their propensity for reckless and antisocial behavior (they have higher rates of reckless, norm-breaking, and antisocial behavior) (Arnett 1999). Indeed, adolescence has long been associated with heightened rates of antisocial, norm-breaking, and criminal behavior, particularly for boys. Hall (1904) included this as part of his view of adolescent storm and stress, suggesting that “a period of semi-criminality is normal for all healthy [adolescent] boys” (Vol. 1, p. 404). While this idea is still accepted, as suggested by international guidelines on adolescent delinquency (United Nations 1990), adolescents do vary a great deal in the extent to which they participate in reckless and antisocial behavior (Arnett 1999).

If adolescence is expected to be a time of storm and stress for all, there may be adolescents whose serious problems go unrecognized and untreated, while adolescents who are experiencing normal difficulties may be seen as pathological and in need of treatment (Arnett 1999). Similarly, startling statistics on psychiatric symptoms, mortality, crime, and drug abuse, should not be misconstrued to suggest that all adolescents are criminals, or even that all adolescents are greatly affected by storm and stress. However,

epidemiological data identify adolescence as the most common time of life for psychiatric illness to emerge (Kessler et al. 2005), and adolescents have been observed to have higher rates of depressed mood than either children or adults (Petersen et al. 1993), which is consistent with common observations of adolescent storm and stress. US mortality statistics also reinforce the notion that adolescence is a time of storm and stress as accidents, homicide, and suicide are the three leading causes of death for 15- to 19-year-olds (Heron 2007), which is also the case worldwide. Indeed, the leading causes of death for all countries combined in ages 15–19 are road traffic accidents (11.6%), self-inflicted injuries (7.3%) and violence (6.2%). Furthermore, in the 20–24 age group, deaths from HIV/AIDS become the second leading cause of mortality (8.3%) (Patton et al. 2009), in large part a consequence of the increased risky sexual behavior that occurs in adolescence.

Just as disquieting are studies suggesting that “extreme forms” of storm and stress (such as delinquency) are associated with mental disorders (e.g., Fazel et al. 2008). A number of US studies report that nearly 70% of incarcerated youths and 50% of youths on probation screen positive for at least one mental disorder, and in those that screened positive, rates of comorbidity were as high as 80% (Teplin et al. 2002; Wasserman et al. 2002, 2005). Setting out to further estimate the disease burden of mental health in incarcerated youths, a recent meta-analysis on the international prevalence of mental disorders among juveniles in correctional facilities included data from 25 studies from eight countries for a total of 13,778 boys and 2,972 girls (mean age 15.6 years, range 10–19 years) (Fazel et al. 2008). Results are summarized in Table 2.2. The investigators state that they limited their analysis to psychotic disorders, major depression, and ADHD due to their treatability, and to conduct disorder because of its prognostic value. Substance abuse prevalence was also excluded due to the substantial influence of reporting and ascertainment bias. While these data offer a limited view of disease burden, they have external validity that far exceeds individual studies in a field with limited

Table 2.2 Aggregated prevalence of juvenile psychopathology in correctional facilities compared with community estimates

	Correctional facilities		Community estimates ^a (%)
	Boys (%)	Girls (%)	
Psychotic disorder	3.3 ^b	2.7 ^b	0.3
Major depression	10.6 ^b	29.2 ^b	5
ADHD	11.7 ^b	18.5 ^b	3
Conduct disorder	52.8 ^b	52.8 ^b	4
PTSD	10.9 ^c	14.7 ^c	1

^aUS data (Costello et al. 2005)

^bFazel et al. (2008)

^cUS data (Abram et al. 2004)

epidemiological data. Nonetheless, to offer a more complete picture, the table also includes findings in Post-Traumatic-Stress-Disorders (PTSD) prevalence from a recent large US study of 532 males and 366 females from a single urban area (Abram et al. 2004). For comparison, the median US-wide community prevalence of the same disorders are also listed (as reported by Costello et al. 2005), but similar to reports on disease prevalence in incarcerated youth, the reviewers caution that remarkably few rigorous epidemiological surveys reporting the general prevalence of mental disorders in adolescents have been carried out, hence the lack of precision in the numbers reported.

Table 2.1 clearly shows that the burden of mental illness in delinquent adolescents is high (with rates of psychotic disorder, ADHD, conduct disorders and PTSD above ten times greater than for the community estimates; and two to six times higher rates for major depression). In other words, incarcerated adolescents tend to present much higher risks for psychopathology (Teplin et al. 2002). However, it should be noted that incarcerated youths represented only approximately 35% of all delinquency cases in 2007 (Puzzanchera et al. 2010). Therefore, these epidemiological data may disregard possible other prevalent diseases of adolescents who are not detained as well as those who evade the juvenile justice system and/or the mental health care system. Thus, it appears that storm and stress in adolescence is sometimes much more severe than the three keys aspects usually mentioned in the literature and reviewed above: conflict with parents, emotional disturbance, and antisocial behaviors.

Although contemporary views of adolescence's storm and stress have attempted to revise, or reconsider it (e.g., Arnett 1999), the concept still presents a limited view of the risk involved in adolescence. Nor does it take into account the important consideration of complex interaction of risk and resilience factors that go far in accounting for which adolescents are most likely to have difficulty (for review see Loeber 2008). Of course, many adolescents proceed through and emerge from this developmental stage without any great conflict or negative outcomes.

Thus, typical adolescent changes are expressed as a broad range of outcomes. Most adolescents experience the typical storm and stress as described above. Others experience storm and stress to a more "extreme" degree: at one extreme, albeit rare, is total absence of storm and stress; at the other extreme is severe storm and stress, including delinquency and psychopathology that may be comorbid. Given that storm and stress is exclusively an adolescent phenomenon, it is reasonable to situate it in the unique developmental specificities of this period of life. Accordingly, the degree of storm and stress expressed may be rooted in how one experiences the most salient changes of adolescence: neurobiological changes and identity formation.

As identity formation is the key developmental task of adolescence, this difficult process may indeed be particularly associated with various degrees of storm and stress expressions, including delinquency in the extreme. In a later section, we will describe different approaches in psychology suggesting that delinquency in adolescence can be understood as a consequence of identity formation issues that adolescents face—especially dealing with emerging personal, social, gender, and ethnic identity—and delinquency is in most cases, a way of coping maladaptively with such identity issues. Typical manifestations of storm and stress can also be understood in this light. For instance, conflicts emerging from the contradictions between the need for affiliation (being part of a social group) and the need for individuation (need for autonomy) represent a developmental process that is easy to relate to the typical manifestations of storm and stress

described above: conflicts with parents and “emotional disturbance.” While conflict with—or detachment from—parents reflects the developmental need for individuation and autonomy (e.g., Steinberg 1990), it is only one aspect of larger changes in the adolescent’s social environment. Interpersonal development also includes a necessary investment in the sphere of peers, which is a key influence in identity development and psychosocial development in general. In other words, the fundamental elements of storm and stress—conflicts with parents, emotional disturbance, and antisocial behavior—can be understood in terms of the psychosocial changes related to identity formation in adolescence. By extension, delinquency, as an extreme expression of storm and stress, can also be understood in these terms.

Just as significant is the neurobiological development that underlies the typical behavioral changes observed in adolescence. Recent research efforts in this domain offer a new perspective to understand typical manifestations of storm and stress as well as more serious forms of antisocial behavior and delinquency. For instance, risk taking and impulsivity are features of adolescence that are easy to relate to the underlying developmental trajectory of the adolescent brain: the rapid development of the socioemotional system means that adolescents have a highly active reward pathway (strongly connected to risk-taking) for which the cognitive control system has not yet developed the adult levels of inhibitory strength to prevent impulsivity. This neurobiological context predisposes an adolescent to risky and impulsive behaviors as well as affective dysregulation, all of which contribute to typical expressions of storm and stress, and may lead to rule breaking and delinquency. In the same vein, the temporal gap between these two neurobiological systems leaves adolescents more susceptible to external influence including anti-social peer influence. Furthermore, this gap may account for a relative disregard for future consequences, which along with peer influence, is implicated in adolescents’ serious risk-taking. More broadly, these neurobiological changes underlie the development of new cognitive capacities that enable the adolescent’s new interpretations and interactions with the world, engaged in the considerations of identity formation.

To sum up, delinquency can be situated as an extreme expression of storm and stress, grounded in inevitable neurobiological development and identity formation inherent to adolescence. Neurobiological and identity changes are indeed among the most salient in adolescent development, and are two complementary components in the process of becoming an adult. While neurobiology and identity perspectives are quite separate in the literature, they are not mutually exclusive and both provide insights to understand the range of adolescents’ behaviors. Neurobiological changes help, for example, to understand the propensity for risky behaviors, impulsivity, and emotional lability that emerge in adolescence. At the same time, the identity formation process provides further insights in that it guides the expression of these behaviors (e.g., break the law in the need for exploration, or to integrate into a peer group), and such maladaptive behaviors may crystallize into a persistent delinquent identity. Taken together, identity formation and neurobiological development provide a complementary view to elucidate “normative” storm and stress as well as more serious delinquent behaviors. Indeed, recent and successful interdisciplinary approaches such as social neuroscience (Cacioppo et al. 2007) devoted to understanding how biological systems implement social processes and behavior, have proved to be promising to elucidate, inform, and refine theories of social behavior (Cacioppo et al. 2007). Extending this approach to the study of delinquency, by situating how neurobiological changes and identity formation processes results in delinquency, could offer a new light to understand the phenomena. In the following sections, we explore this developmental contextualization in depth by considering separately these two key aspects of development.

Neurobiological Development and Risks for Delinquency

Until recent decades our understanding of adolescent brain development was largely informed by the limited information gathered from post-mortem and behavioral studies, but advances in

research and especially neuroimaging have accelerated our understanding. Such advances have in turn shed new light on behavioral studies, offering analyses that go beyond observations of behavioral tendencies by proposing etiological neurobiological foundations of adolescent behavior. As introduced earlier, the model of adolescent brain development we describe here involves the coordinated development of two neurobiological systems, the socioemotional system, and the cognitive control system. We begin by describing each system in some detail and then consider how the differential timing of development of the two systems predisposes adolescents to risk taking (or reward seeking) and impulsivity, both of which are important features of adolescent behavior that may lead to delinquency. We also relate peer influence and adolescents' future planning to the neurobiological model of adolescent development, as these two psychosocial factors are particularly relevant to delinquent youth (Steinberg 2008).

The Socioemotional System: Reward Susceptibility and Risk-Taking

The increased emotionality of adolescents is rooted in the rapid neurobiological development of the socioemotional system (Steinberg 2008). Anatomically, this system is contained within deep brain structures and as such it is often characterized as subcortical, but certain cortical areas have also been implicated. Specific locations include the amygdala, ventral striatum, orbitofrontal cortex, medial prefrontal cortex, insula, and superior temporal sulcus. In addition to accounting for the neural basis of social attachment and emotional impulses, the system also contains the developmentally important reward pathway, which has a central role in adolescent risk taking. Understanding adolescent patterns of risk taking provides some explanation for the entire range of risky behaviors exhibited in adolescence, including potentially delinquent behaviors.

The generally increased risk-taking behavior among adolescents is popularly attributed to a teen's sense of invincibility or a decreased perception of potential risks. This idea, however, is inconsistent with a body of research that

describes the opposite: contrary to the popular belief that increased risk taking in adolescence results from adolescents' sense of invincibility or a decreased awareness of potential risk, studies show that perception of risk is actually observed to be at its highest in early adolescence and is still typically higher in middle/late adolescence than in adulthood (Millstein and Halpern-Felsher 2002). In fact, the notion of auto-invincibility is actually more frequent in adulthood than any younger age. It is therefore somewhat surprising that while adolescents are generally more aware of potential risks than adults, they nonetheless engage in more risky behavior. The explanation for this is based on a risk-reward paradigm of decision making, supported by research into reward sensitivity and reward seeking. As we discuss below, increased risk taking appears to have more to do with adolescents' heightened sensitivity to intense rewards than to their perception of risk (Galvan et al. 2007; Steinberg 2008).

The neurobiological basis of the relationship between reward seeking and risk taking rests within an important component of the socioemotional system, the reward pathway. Activation of this pathway is associated with pleasurable feelings about one's self, and dopamine is the chief neurotransmitter involved. Animal models have suggested that a rapid decline in dopamine receptors occurs at the onset of puberty (Sisk and Foster 2004; Sisk and Zehr 2005; Teicher et al. 1995). With fewer receptors to transmit signal, greater stimulation is required to activate the neurons, thus compelling adolescents to seek more intense behavioral and emotional rewards, which are theorized to cause release of high levels of dopamine that, in turn, activate the brain reward system, even with its reduced number of receptors. This phenomenon has implications for adolescent risk taking, as such high-intensity rewards are often also associated with great risk (e.g., driving 90 mph on the highway at night, engaging in sexual activity with an unknown partner, stealing something that is really wanted). Thus, much of the risk taking observed in adolescents, including rule breaking involved in delinquent behaviors, may actually be explained by a neurobiological compulsion to seek rewards intense enough to activate the brain's attenuated reward system.

Numerous fMRI studies examining the activity of socioemotional brain structures further the hypothesis of how altered function of the reward pathway in adolescence results in greater risk taking. In agreement with the theorized process of stimulation from intense rewards, these studies describe increased brain activity during reward processing, the time immediately after rewards are received, but they also note a heightened activity during reward anticipation, the time immediately before reward, when reward is uncertain. Both of these observations were noted to be stronger in early and middle adolescence and became indistinguishable from adults by late adolescence (Casey et al. 2008; Ernst et al. 2005, 2006; Galvan et al. 2006), suggesting that for at least the reward pathway, adult levels of development are achieved after age 16. More recent studies have as well concluded that early and middle adolescents have greater anticipation for and response to high-intensity rewards (Forbes et al. 2010; Van Leijenhorst et al. 2010). While this neurobiological tendency to highly anticipate and respond to rewards is typical of most adolescents, the individual manifestations of these general neurobiological changes differ across individuals. These individual differences account for the varied behaviors of some adolescents who engage in very little reward seeking and risk taking, whereas others engage in more risk taking and are likely to become delinquent.

Further evidence of heightened reward sensitivity in adolescence relative to other age groups has been widely observed in laboratory comparisons of adolescents and adults. Overall, children and early adolescents are more sensitive to rewards than to losses, but by late adolescence individuals behave similarly to adults and are more sensitive to losses (Cauffman et al. 2010; Crone et al. 2005; Hooper et al. 2004). More precisely, adults appear more conservative in a gambling task³ because the

³The Iowa Gambling task in which individuals are given four decks of cards from which they are told to choose at will with the goal of winning the most money. Unknown to participants, two of the decks have high value rewards, but also many losses, and thus result in a net loss; whereas the other two decks contain lower value rewards but result in a net gain.

influence of their recent experience with loss outweighs the influence of their experience with reward; whereas in adolescents, the influence of experience with reward outweighs the influence of experience with loss. This increased sensitivity to reward has also been associated with specific pubertal changes (for review see Dahl 2004). For example, a recent study comparing reward-related brain activity in adolescents in early versus late pubertal stages, found a relationship between reward-response and testosterone levels in both boys and girls (Forbes et al. 2010). Such evidence of a relationship between adolescents' reward sensitivity and the hormonal changes that occur in puberty supports the idea of a physiological, neurobiological basis for the increased risk taking observed in adolescence. While adolescents are, for example, more likely than adults to drive recklessly, to drive while intoxicated, to use varied illicit substances, to have unprotected sex, and to engage in both minor and more serious antisocial behavior (Arnett 1999), the degree to which adolescents engage in this behavior varies widely by individual. The reasons for these individual differences could be explained not only by differences in the function of the socioemotional system (and in particular, the reward pathway), but also by the interaction of this socioemotional system with the cognitive control system.

Cognitive Control System: Improved Cognitive and Affective Control

As adolescents mature beyond puberty, their reward-seeking behavior decreases as another neurobiological system, the cognitive control system itself matures and exercises greater control on behavior. This system is generally localized to cortical regions and is recognized as a top-down control system of the brain's more internal socioemotional system. Anatomically, the cognitive control system is composed of the lateral prefrontal and parietal cortices and includes connections to the anterior cingulate cortex. The development of these regions is delayed relative to the socioemotional system, and this delay is a central process of the changing adolescent brain—see the

next section. This normal delayed development of the cognitive control system has been confirmed by both primate studies and human postmortem studies indicating that the prefrontal cortex, a key region associated with cognitive control, is actually one of the last brain regions to mature (Bourgeois et al. 1994; Huttenlocher 1979). These late changes that continue to occur in humans after age 16 and progress well into early adulthood are the primary neurobiological basis for which others, such as Steinberg (2009), have argued that even late adolescents are developmentally immature, and their particular immaturities often play an important role in the motivation of delinquent acts and criminal decision making.

The specific changes to occur in the prefrontal cortex and cognitive control system include synaptic pruning and continued myelination (Paus 2005), which respectively increase the efficiency of neuronal communication and facilitate transmission of nerve impulses. As these developments occur and neural connections are improved, there is more coordinated activation of cortical areas (Brown et al. 2005; Durston et al. 2006). These developmental changes may manifest as improved executive functioning, including response inhibition, planning, weighing risks and rewards and simultaneous consideration of multiple sources of information. Additional developments of this system include improved connections between cortical regions and more internal structures (Steinberg 2009). In other words, these late stages of brain development improve cognitive control of the structures implicated in the socioemotional system. This interconnectivity between systems is the neural basis for improved coordination of affect and cognition, a hallmark of brain maturity. Conversely, any delay in development of the cognitive control system would result in affective dysregulation and greater impulsivity. Most adolescents indeed demonstrate such a delay as part of typical development, whereas in others, there may be a more profound delay that could contribute to a prolonged period of risk for delinquency.

The capacity of the cognitive control system to regulate behavioral impulses can be analyzed in studies examining impulsivity in adolescence.

The trajectory of impulsivity, or the propensity to act without considering the consequences of one's actions, differs from reward-seeking in that impulsivity steadily decreases with age, and does not peak in adolescence as do risk-taking and heightened reward-seeking (Galvan et al. 2007; Steinberg et al. 2008). The age-related decline in impulsivity has been demonstrated in the laboratory with the Tower of London task⁴ (Berg and Byrd 2002). Younger children take no more time before making their first move in complex scenarios than in simpler ones. More simply put, children were observed to not pause and think before making their first move during more complex tasks. Impulsivity measured in this way decreases steadily with age. So while adolescents are less impulsive than children, they are nonetheless still more impulsive than adults and this increased impulsivity in combination with their heightened reward sensitivity reasonably contributes to impulsive and risky behavior. Thus it is reasonable to consider that these behaviors occur within a spectrum of normal, in the context of an immature brain with a still-developing cognitive control mechanism. However, extreme impulsive and risky behaviors that are associated with delinquency can be better described in terms of the interaction between the two brain systems, particularly in the vulnerable period in adolescence where the brain's socioemotional development outpaces its cognitive control.

Temporal Gap of Developing Brain Systems and Immature Decision-Making

The behavioral effects of the developmental lag of the cognitive control system relative to the socioemotional system are demonstrated in a variety of studies describing adolescent decision making and planning. Short of making direct connections to the underlying developmental

⁴In this task participants have to arrange objects with the goal of using a minimum number of moves and as quickly as possible. Typical measures include time to first move, total competition time and number of moves.

neuroscience, these studies nonetheless provide vivid examples of adolescents' social, emotional, and cognitive vulnerabilities that peak in middle adolescence and then decrease in late adolescence and into early adulthood, a pattern that is consistent with the underlying neurobiological developmental changes. These vulnerabilities include increased reward sensitivity and impulsivity, and the relevance of these particular adolescent features to delinquency has already been emphasized. As Steinberg (2009) noted, two additional psychosocial features of adolescence, a heightened response to peer influence and immature future-orientation are of particular concern in delinquent adolescents. Studies focusing on each of these features arrive at conclusions consistent with principals of neurobiological development, suggesting that as adolescents mature, improved cognitive control not only effects to attenuate reward seeking and impulsivity, but more importantly, to dampen social influences and promote goal-directed future planning.

For the large portion of adolescents who commit crimes but do not persist in adulthood (i.e., adolescence-limited antisocial behavior), it has long been hypothesized that the imitation of higher-status peers is a major motivation for delinquent acts (Moffitt 1993). In support of this assertion is the observation that adolescents are far more likely than adults to commit crimes in groups (e.g., Zimring 1998). This observation can be widely related to identity formation (see next section). While peer influence can be pro- or antisocial as well as neutral, antisocial peer influence is of particular interest in considering the underlying causes of juvenile delinquency. All forms considered, the impact of peer influence on behavior decreases over time for boys and girls after reaching peak levels around age 15 (Steinberg and Monahan 2007). In a remarkable laboratory demonstration (Gardner and Steinberg 2005), participants were randomly assigned to perform a simulated driving exercise designed to measure risk taking, either alone or in a group with two other similar-age peers. Individually, risk taking declined slightly with age, but within all three age groups risk taking was greater when the exercise was performed in groups.

Furthermore, this group effect on risk taking was by far the greatest for adolescents, while young adults (i.e., college age) demonstrated intermediate levels of risk taking in groups compared with the adult group (Gardner and Steinberg 2005). While research into the neural foundations for the decreasing peer influence that is thus observed in late adolescence and early adulthood is limited, such studies can nonetheless be described by the neurobiological model: it is the limited development of interconnections between the socioemotional system and the cognitive control system that leave adolescents more susceptible to peer influence (Grosbras et al. 2007; Paus et al. 2008).

In addition to peer influence, adolescents also differ from adults in their future orientation, defined as their ability to plan for the future as well as their perception of how their current position (in society, employment, etc.) relates to their plans for the future. Future orientation figures prominently in adolescents' engagement in anti-social behavior, because it impacts the value one assigns to the risk that may occur when making a decision. Earlier it was noted that adolescents may in fact be more perceptive than adults of the risk inherent in certain situations. However, adults generally exceed adolescents in their ability to coordinate their cognitive and emotional awareness of potential future negative consequences. Studies have shown that the development of future orientation continues through adolescence and into early adulthood. Specifically, consideration of future consequences, concern for the future and ability to plan ahead, all increase with age (Greene 1986; Nurmi 1991). These observations have furthermore been correlated to neurobiological studies that have reported associations between future orientation and age-related differences in the cognitive control system (Cauffman et al. 2005).

Additional insight into differences in adult and adolescent future orientation is also provided by a consideration of adolescents' relatively limited life experience. Not only do adolescents have fewer memories to rely upon when considering future consequences, but they also perceive future time differently in that they are less able to

perceive the proximity of the future, and are therefore less likely to heavily weigh future consequences. Five years of time, for example, represents a full third of a 15-year-old's life but only represents a fifth of a 25-year-old's, and given the relative paucity of episodic or autobiographical memory before school age (Nurmi 1991), such relative differences in perception of time are even more significant. Thus, 5 years into the future reasonably seems much farther away to a 15-year-old than a 25-year-old, and so long-term consequences of present-day decisions are likely to seem more immediate with increasing age. Additionally, while it may be true that adolescents are highly aware of potential risks, is it likely that their relative inexperience with negative outcomes means that they lack the emotional aversion to negative consequences that is elicited by negative memories. It is important to consider adolescents' life experience as well as their developmental status in order to understand how they perceive the future, more importantly, the extent to which they understand the future consequences of their present actions.

The ability to plan for the future and realistically consider future consequences is a highly complex cognitive task that requires a high level of integration of the cognitive control system and the socioemotional system. For most adolescents, future orientation proves challenging as their brains are still developing the connections between regions responsible for executive functioning and episodic memory. Furthermore, by middle adolescence, the socioemotional system is largely developed, and so while adolescents may experience social and emotional impulses similarly to adults, their still-developing cognitive control system means they are less able to coordinate these impulses when planning and making decisions (Steinberg 2009). Future orientation only becomes more difficult to achieve when adolescents are influenced by any number of social influences that aggravate normative deficits most adolescents already face. Exposure to violence, for example, can contribute to notions of uncertainty about the future, and unstable relationships can increase emotionality, making coordination of socioemotional impulses and

executive functioning all more difficult (Nurmi 1991). Such disturbances of the complex cognitive processes in future orientation provide some insight into how social and environmental risk factors for delinquency interact with the normative neurobiological "deficits" of the adolescent brain (cf. Robbins and Bryan 2004). Indeed, delinquency and other extreme expressions of storm and stress can be better understood when the trajectories of brain development are viewed in complement with the psychosocial developmental process of adolescence.

Identity Development as a Risk Factor for the Emergence of Delinquency and a Delinquent Identity

Little is known about identity development among juvenile delinquents; however, an increased understanding of this important developmental milestone has implications, notably for rehabilitation efforts (Grier 2000). For decades, identity theorists have described failure in identity crisis resolution as a possible cause for maladaptive adjustment and identity-confusion (e.g., Erikson 1968). Such maladaptive development can lead to the emergence of a "delinquent identity," which is in fact a superposition of several aspects of identity (United Nations 2003). For instance, and as we will review closer more extensively throughout this section, research on ego-identity has shown that diffusion status (Berzonsky 1989; Marcia 1966) is associated with delinquency (Grier 1997, 2000), as well as alcohol abuse (Jones and Hartmann 1988) and substance abuse (Jones et al. 1989). Issues with emerging ethnic-identity may lead minority youth to be more aware of racial discrimination (Lee et al. 2010). Incidentally, perceived racial discrimination has also been associated with delinquency (e.g., Anderson 1999), and this perception may mediate the link between ethnic-identity and delinquency. Gender identity, fully developing and expressed during adolescence, may also be associated with "gendered" roles predisposing more or less to

delinquency (Walklate 2003). Indeed, due to gendered stereotypes, males are more inclined to break the rules and be involved in delinquent behaviors. Largely, authors focusing on social identity have also emphasized that several young people may need to pursue their “delinquent reputations” as a means to assert their identity (cf. Emler and Reicher 1995). Complementary, psychodynamic models of adolescent development have explained violent behaviors and delinquency in adolescence as an attempt to restore a menaced identity (e.g., Jeammet 2009). Finally, protective and risk factors for delinquency identified in the literature (e.g., Shader 2003) have also been recognized as strong mediators of identity development (e.g., Yoder 2000), substantiating the relationship between delinquency and identity development. These factors include gender, parental involvement and monitoring, peer support, economic status, or attitude toward school. In this section, we review four aspects of identity (personal, social, ethnic, and gender) which may be related to the emergence of delinquency and its possible crystallization into a delinquent identity.

Personal Identity and Delinquency

Few researches using Marcia’s Identity-status paradigm have linked the diffusion status with delinquency and other behavioral problems (e.g., Grier 1997, 2000; White and Jones 1996; Jones et al. 2003). Grier examined identity status among a group of African American male juvenile delinquents. She found a high prevalence (i.e., 74%) of the sample to be of diffused identity status; a far greater rate than any previous developmental study among adolescents across age groups (cf. Kroger et al. 2010). Likewise, White and Jones (1996) indicated that detainees with a diffuse identity are younger at the time of their first arrest, and show greater number of total arrests than individuals having other identity status. These findings suggest that diffused adolescents are at higher risk for recidivism. Consistently, Grier (2000) concluded that a diffused identity pattern may put individuals at risk for further criminal activity. Conversely, Jones et al. (2003)

indicated that Foreclosed adolescents were unlikely to recidivate, use drugs, and they reported fewer previous offenses. More recently, Crocetti et al. (2008) examined the process of “reconsideration of commitment,” an identity process referring to the comparison between current commitments and other possible alternatives, which can lead to diffusion or in most cases in changes in identity structure. They found this process to be related to psychosocial problems, both internalizing (e.g., depressive and anxiety symptoms) and externalizing (e.g., involvement in delinquent behaviors).

As identity status reflects the level of psychosocial maturity, it can also be stated that identity status is related to criminal decision making, because psychosocial immaturity is often connected to criminal decision making (e.g., Fried and Reppucci 2001; Steinberg and Cauffman 1996). According to Greenberger and Sorensen (1974), psychosocial maturity is indeed strongly related to the “success” of identity. Individuals who know who they are, what they believe, what they want, and who have a sense of their worth as persons, will be better able to function adequately on their own than individuals without a clear and stable identity. Viewed in light of Marcia’s paradigm, Greenberger’s idea suggests that identity Achievement would be a protective configuration for immature decision making, whereas an unclear identity (i.e., diffusion and moratorium) represents risk for immature decision making and possibly even criminal decision making.

Thus, certain issues related to the process of building one’s identity as a person (personal identity) could represent risk for delinquency and psychosocial problems. Conversely, certain identity states could be associated with protective factors for such difficulties. This has implication for intervention and rehabilitation efforts (cf. Archer 1994). Reaching such protective identity, however, is not only a personal process but also has much to do with the social and environmental context in which the adolescent develops. Yoder (2000) identified cultural variables that constitute “barriers” in the developmental process of exploration and commitment. These barriers, including geographic isolation, physical limitations, political restrictions,

ethnicity, gender, age, and religion, can affect optimal identity formation. The “social barriers” take the form of encouragement or prohibition of certain practices, beliefs, or values within the social group, which have a strong impact on personal identity development. Ethnicity and gender will also affect personal identity depending on whether the individual belongs to the “dominant” class or not. Therefore, the social side of identity has to be taken into account when considering an adolescent’s personal identity, psychosocial maturity, and criminal decision making.

Social-Identity and the Emergence of a “Delinquent Reputation”

In the context of adolescent development, the need for social affiliation can lead to maladaptive decision making, which is mostly due to peer influence. The neurobiological foundations of this susceptibility to peer influence have been described above. Psychosocially, the increased significance of peers in adolescence likely makes approval seeking especially important at this stage of life in group situations (Steinberg 2009). That is why, in certain subcultures (Miller 2008), delinquency is sometimes viewed as “valorizing,” “desirable,” and “integrative” within a social group, helping adolescents to assert themselves, their identity, and their membership of the group (Emler and Reicher 1995; Oyserman 1993). Ultimately, adolescents can decide to pursue their “delinquent reputation” through an affiliation to juvenile gangs, which constitute a serious form of delinquency, facilitating transition into adult criminality (Chap. 36). Fortunately, this extreme form of maladaptive affiliation is not the common way of socializing in adolescence: as said earlier, antisocial behavior may indeed be a typical part of development which tends to disappear spontaneously in most individuals during the transition to adulthood (United Nations 1990). However, one would wonder why it does not disappear in some cases, and why a normative “semicriminality” (in reference to Hall 1904) could turn into deep-seated predispositions to criminality (e.g., Steinberg 2009).

Emler and Reicher (1995) interpreted delinquency by asking about the social dynamics of behavior and misbehavior. Their central thesis is that conduct is motivated by reputation: the pursuit or avoidance of delinquent behavior is a choice of social identity and moral reputation. They developed the idea of “reputation management” and examined the kind of reputation and identity that is conveyed by delinquent action and the advantages this may have for the actor. Although delinquency can developmentally be viewed as an “affiliative act” (within the social group), the problem is to explain why many young people choose to pursue their delinquent reputations (Emler and Reicher 1995). An important element of the answer is that as the significance of peers increases in early adolescence, resistance to peer influence (particularly to deviant peers) may or may not develop while transiting from middle adolescence to adulthood. This could be explained by both the “barriers” of identity formation described above (e.g., strong community pressure), as well as a certain neurobiological context in which cognitive control functions lose out to socioemotional affiliative impulses.

Recently, Monahan et al. (2009) examined how individual variation in exposure to deviant peers and resistance to peer influence affect antisocial behavior from middle adolescence into young adulthood (ages 14–22 years). Using data from a longitudinal study of 1,354 serious juvenile offenders,⁵ they found evidence that antisocial individuals choose to affiliate with deviant peers, and that affiliating with deviant peers is associated with an individual’s own delinquency—as already noted in the research literature. However, they indicated that these complementary processes of peer selection and peer socialization operate in different developmental periods. In middle adolescence, both peer selection and socialization serve to make peers similar in antisocial behavior, but in the transition to adulthood only peer socialization appears to be important. Later (after age 20), the impact of

⁵ Participants were adolescents who have been convicted of a felony or similarly serious non-felony offense as a misdemeanor weapons offense, or misdemeanor sexual assault.

peers on antisocial behavior disappears as individuals become increasingly resistant to peer influence, suggesting that the process of desistance from antisocial behavior may be tied to normative changes in peer relations that occur as individuals mature socially and emotionally (Monahan et al. 2009). Conversely, pursuing one's delinquent identity may suggest that the individual does not demonstrate the level of psychosocial maturity necessary to individuate and separate from peers. Furthermore, in the event of a strong affiliation with a deviant peer group, this normative and necessary task of disengagement from the peers, may be all the more difficult. The success of this task, requiring resistance to peer influence, could also vary as a function of other mediators such as gender and ethnicity (cf. Gardner and Steinberg 2005).

Gender Identity and the Gendered Nature of Delinquency

It is well established that youth crime is disproportionately committed by young men (e.g., Snyder 2008), and several approaches have attempted to determine the reasons for this overrepresentation (e.g., Eadie and Morley 2003). For instance, neurophysiological research has linked testosterone levels to risk taking (e.g., Forbes et al. 2010), suggesting a higher propensity for risk taking not only in boys, but for individuals of both sexes with relatively higher testosterone levels. Alternatively, Heimer and De Coster (1999) suggested that traditional gender definitions are essential for understanding gender differences in delinquency. They perceive adolescent delinquency and violent offending as a product of gendered experiences, gender socialization, and the patriarchal system in which they emerge. This “product,” which can be called “gender-identity,” results in typical gender differences in delinquency. In general, girls who accept the traditional gender definition of femininity—often equated with a high capacity for nurturance, a tendency toward passivity rather than aggressiveness, and physical and emotional weakness (e.g., Burke 1989)—are less likely than other girls to

offend, as reported by multiple indices of delinquency (Heimer 1996). For the latter girls, violent delinquency would be viewed as “doubly deviant,” violating the law as well as their beliefs about femininity. Boys who accept traditional gender definitions of masculinity—associated with competitiveness, independence, rationality, and strength (e.g., Burke 1989)—may be more likely to use physical force and aggression (Heimer 1996). Consistently, Horwitz and Raskin White (1987) showed that females tend to display higher rates of internalizing problems (i.e., psychological distress), whereas males tend to externalize more with problems such as delinquency and addiction problems. However for both genders, masculine identity is associated with higher rates of delinquency. Thus, the development of a masculine identity and acting out these stereotypes about masculinity may make young men more likely to engage in antisocial and criminal behavior (Walklate 2003). In light of this “gendered view” of delinquency seen through social roles and identity, the serious problem of antisocial and criminal behavior committed by adolescent females (see Chap. 35) has to be studied more extensively. Indeed, a recent, and worrying, increase in the prevalence of arrest rates among this population (Snyder 2008) introduces new social questions regarding identity formation in girls. For instance, possible profound social changes may be contributing to this increase in female delinquency: are social changes in gendered experiences, gender socialization, and the patriarchal system, resulting in new gendered differences in delinquency?

Interesting results indicate that these gendered differences in delinquency could be exacerbated when adolescents are influenced by the peer group—social environment would thus be an aggravating factor. Gardner and Steinberg (2005) measured risk preference by asking adolescents to rate the cost–benefit ratio of certain risky decisions (e.g., having sex without a condom, riding in a car with someone who has been drinking, trying a new drug that no one knows anything about, breaking into a store at night and stealing something that one really wants, and driving over 90 mph on the highway at night). They observed that males,

compared to females, assigned a greater weight to the benefits of such risky decisions than to the risks. They also observed that males assigned a greater weight to the benefits of risky decisions when in groups; younger males weighted the benefits more than older males, and there were no differences between older males and older females—which could reflect the “protective effect” of psychosocial maturity in reaching identity achievement. Taken together, these observations suggest that the perception of benefits to risk taking is greatest when young adolescent males (age 13–16) are in a group. With respect to identity formation, these results are an example of how gender and the presence of peers influence an individual’s perceptions, with the likely consequence of altering how one behaves. As we will review now, ethnicity and ethnic identity are also factors that may have similar influence on behavior.

Ethnic Identity and the Overrepresentation of Ethnic Minorities in Juvenile Detention Centers

Although ethnic minorities are often overrepresented in the juvenile justice system, the particular identity issues that these minority adolescents face receives little attention in the literature, and have begun to generate empirical studies only recently (e.g., Arbona et al. 1999; Caldwell et al. 2004; French et al. 2006; Lee et al. 2010). However, a large body of research literature exists about the more general race–crime relationship, suggesting that even though there is empirical evidence indicating a higher rate of offence among minorities,⁶ much of the minority overrepresentation in prisons can be attributed to race group differences in arrests for crimes⁷ that are most likely to lead to imprisonment (e.g., Chambliss 1994). Whether “differential involvement,” “differential selection” or a “combined” approach (e.g., Feld 1999) is defended by researchers, ethnic-identity is often thought to be related to perceptions of

discrimination (Lee et al. 2011) and racial segregation specific to minority communities, which is often viewed as a contributor of delinquency (Anderson 1999).

In fact, racial identity and the engagement in delinquent behavior, particularly violent acts, maintain complex, gender-specific relationships, in which violence and delinquency can be viewed as a response to racial discrimination (Caldwell et al. 2004). Indeed, Caldwell et al. (2004) study suggested that experiences with racial discrimination explained violent behavior in young adults over and above earlier adolescent risk factors for violence. They indicated that among young adult males for whom race was less central to their identity, experience with racial discrimination was associated with engaging in more types of violent behaviors. Conversely, experiences with racial discrimination may be less likely to be associated with violence when it is balanced with strong feelings of ethnic identity. This interaction was not found for females.

Thus, in some conditions, ethnic identity could operate as a protective factor against delinquency. More precisely, this mechanism has been described as a “buffering effect” of ethnic identity in the relation between minority discrimination and negative outcomes such as delinquency and violence (e.g., Sellers et al. 2006). Nevertheless, Cadwell and colleagues’ (2004) study was conducted among young adults—for whom identity is supposed to be stabilized—and the developmental period of adolescence with emerging ethnic identity could appear to be conversely a vulnerable context, at risk for delinquency. Indeed, during adolescence, the increasing meta-cognitive abilities that result from cognitive maturation make ethnic identity more salient and increase perception of racial discrimination: adolescents become highly aware of the evaluations of their group made by the majority culture (Lee et al. 2011; Dupree et al. 1997; Spencer and Dornbusch 1990). Thus, the personal salience of ethnicity affects the extent to which discrimination is perceived (Sellers and Shelton 2003) as indicated by research showing that adolescents who more extensively explore their ethnic

⁶“Differential involvement” explanation of youth crime.

⁷“Differential selection” explanation of youth crime.

identity—which is an additional developmental task for them—or for whom ethnicity is an important part of their identity, are more likely to perceive discrimination (Lee et al. 2011; Romero and Roberts 1998; Sellers et al. 2003). As said earlier, such discrimination is in most cases associated with higher rates of delinquency.

Beyond the social discrimination explanations, Gardner and Steinberg's (2005) study indicated that minority adolescents take more risks in the presence of their peers than white adolescents do. However, in individual situations, minority and non-minority adolescents performed similarly. The observed increased susceptibility to peer influence for minorities disappeared in adulthood, and minority adults actually observed a slightly greater resistance to peer influence than non-minority adults. This adolescence-limited susceptibility likely suggests that group affiliation and acceptance holds a greater influence on ethnic minorities, and thus the social aspects of identity formation may be more significant for minority youth. Furthermore, the fact that minority adults are less susceptible to peer influence may be a sign of a more mature identity formation that has resulted from a more extensive identity-exploration in adolescence.

Furthermore, models of ethnic-identity process such as Phinney's (1990), suggests that minority ethnic groups must resolve basic conflicts that occur as a result of their membership in a non-dominant group. They must resolve the stereotyping treatment of the dominant group, as well as negotiate a bicultural value system. For individuals from the dominant group, these issues may not be salient since ethnicity is usually unconscious, because societal norms have been constructed around their racial, ethnic, and cultural frameworks (Chávez and Guido-DeBrito 1999). This additional identity issue for youth of ethnic minorities consists of the integration of a sense of ethnic identity into their larger personal identity (Phinney 1989). This specific issue could be related to supplementary identity conflicts that may result in negative outcomes such as delinquency or substance abuse.

Conclusion

Juvenile delinquents are a worrying population not only for their maladaptive behaviors and the consequence of their offences for society, but also because they appear to accumulate difficulties in terms of identity issues and psychiatric problems, which may lead them to persist in such antisocial behaviors beyond adolescence. Indeed, 70% of juvenile delinquents meet one or more criteria for the diagnosis of psychopathology (Teplin et al. 2002) and a high proportion of this population is of Diffusion identity status (Grier 1997), an identity configuration associated with low psychosocial maturity (e.g., Waterman 1999) and other negative outcomes such as alcohol and drug abuse (Jones and Hartmann 1988). Given the frequency of such outcomes in this population, it is likely that the identity configuration of most delinquent adolescents could be a more profound form of identity Diffusion (cf. Erikson's notion of identity confusion and extended definitions of identity Diffusion, such as Archer and Waterman 1990) than the form that most individuals experience at some point in their life. Beyond the possible aggravating effects of identity-related factors such as ethnicity, gender, and community, which can restrict the exploration and commitment that is essential to achieve an identity, the specific reasons for the emergence of delinquency in the developmental context of adolescence remain complex. The particular trajectory of the most serious cases, when maladaptive behaviors persist and crystallize into a delinquent identity, is a process that must be further investigated in order to be better prevented. Indeed, while nearly all adolescents engage in rule-breaking as part of the process of exploring limits, reflecting the adolescent's normative "semicriminality" suggested by Hall (1904), the problem is to understand why a number of adolescents exceed these adolescence-limited experiences, and ultimately commit to "deep-seated criminality" (Moffitt 1993).

In this chapter, we explored two salient aspects of adolescent development (i.e., neurobiological changes and identity formation) that are useful to contextualize normal expressions of storm and stress, as well as more serious forms of antisocial behavior that may emerge in adolescence. We proposed the idea of a continuum of storm and stress experience in adolescence, ranging from “no manifestation” of storm and stress, to “extreme expression” of storm and stress leading to both internalizing and externalizing problems such as delinquency. Individual differences in the degree of experiencing storm and stress may result from these typical changes of adolescence that are neurobiological development and identity formation. While risk taking and impulsivity are hardly new characteristics of adolescence, understanding these behaviors in the context of neurobiological development can be extremely helpful to researchers and clinicians alike, who aim to better understand the most severe cases, when risk taking and impulsivity result in antisocial or delinquent behavior. In the same way that misbehavior in toddlers must be dealt with in an age-appropriate manner, the evaluation of and response to such behavior in adolescents will be most effective if we consider the recent scientific advances that have improved our understanding of adolescent brain development. Additionally, identity formation has been described as the most important task of adolescence, and better situating the emergence of delinquency and related maladaptive behavior into this necessary and complex task, provides essential context to better understand the persistence of delinquency beyond adolescence, which has implications for delinquency theory, prevention, and intervention.

To sum up, knowledge of neurobiological changes is useful to understand adolescent susceptibility to the key aspects of storm and stress: impulsivity, risk taking, and emotional disturbance. Knowledge of identity formation provides useful insight to understand how these behavioral and psychological specificities may be expressed as outcomes of identity issues. Ultimately, identity development may sustain the experience of storm and stress into the formation of a delinquent identity. In our examination of identity formation

and neurobiological development, we have emphasized the quantity, intensity, and variety of the changes occurring during adolescence, and have underlined how these changes may represent risks for delinquency in themselves. On an individual basis, however, it is obviously impossible to predict an adolescent’s trajectory, whether he or she is on the path to delinquency, and whether the antisocial behavior will be persistent or not. An individual’s trajectory is indeed determined by a multitude of factors, including genetic endowment, life events, psychosocial and environmental conditions, and other numerous factors. Nevertheless, situating maladaptive behaviors in the context of neurobiological development and identity formation, processes unique to adolescence, is essential to understanding the emergence and persistence of delinquency. Such contextualization may also prove helpful in grounding new, tailored, developmentally informed interventional approaches that may improve the effectiveness of rehabilitation efforts. Further research is needed to integrate these key aspects of development and to better understand them as foundations for delinquency. While identity formation and neurobiological development have each been extensively studied (and more rarely linked, independently, to delinquency), there is a lack of research exploring the interactions, overlaps, antecedents, and consequences between them. Such research is needed to identify possible incongruence, or developmental asynchronies (i.e., relative to “gaps”) between neurobiological and identity development that may be associated with patterns of vulnerability for delinquency. It is likely that the particular interactions of brain and identity development, when accompanied by certain social or environmental demands, result in cumulative risks for the emergence of antisocial and delinquent behaviors.

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The “Why(s)” of Criminal Behavior in Juveniles: The Long and the Short of It

3

Elena L. Grigorenko

The USA and the Russian Federation have been competing with each other for what appears to be the rather dubious leadership in having the highest number of prisoners per 100,000 people (Walmsley 2008), with the USA being a clear first (756 in 2008), and Russia—the leader of a cluster (629 in 2008) formed primarily by developing nations (e.g., Rwanda—604, St. Kitts and Nevis—588, Cuba—531, U.S. Virgin Islands—512, with the rest of the countries falling below and far below 500; 59% of the countries had less than 150 prisoners per 100,000 people). This trend is replicated in the juvenile justice systems as well, with USA and Russia detaining and/or incarcerating the largest number of juveniles per capita in the world.

There are, of course, a number of complex dynamic characteristics of the justice systems in the USA and Russia captured by these numbers. For example, per capita costs for detention, corrections, and rehabilitation (collectively and individually) vary dramatically in these countries and around the world. They also vary dramatically for adults and juveniles (much higher for the latter). Yet, regardless of these complex dynamics, both “leaders” of this number race,

the USA and Russia, have been searching for ways to decrease these numbers, both to save costs and to approach the world average of incarceration and detention.

To achieve this goal, it seems absolutely necessary to have a plan on how such a decrease might happen. There are multiple parallel and overlapping processes that should shape the formation of this plan, involving legal, financial, political, social, cultural, and many other factors. One such group of factors has to do with understanding what triggers the criminal (hereafter used synonymously with antisocial) behavior for which people end up being detained and incarcerated. Understanding the “why” of criminal behavior might help both prevent it and influence the judicial system in finding effective alternatives to incarceration.

In any society, criminal behavior assumes the presence of an interaction effect between an individual and society: for behavior to be labeled as “criminal,” an individual is assumed to have committed an act that is illegal, as defined by a given society. Clearly, there is a lot of variation between societies in what is recognized as criminal and what is not, but one common denominator is violent offences. It is notable that a substantial portion of people committing violent offences commit them repeatedly; thus, in the USA the re-arrest rate for violent offenders over a period of 3 years has been estimated at 59.6% (<http://www.ojp.usdoj.gov/bjs/reentry/recidivism.htm>). These data, arguably, indicate

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that a significant amount of violent crime is committed by a fairly limited group of individuals; indeed, although there are no specific statistics, isolated studies indicate that a large portion of all crimes (up to 50%) appear to be committed by a relatively small number of individuals, perhaps as small as 10% of all offenders (Wolfgang et al. 1972). It has also been stated that many “career criminals” start early, interacting for the first time with the judicial system as juveniles. Yet, there is a substantial number of individuals, especially among juveniles, who engage in the desistance process, diverting from crime in the course of life trajectories; in fact, desisting and aging out of crime appear to be a common rule rather than an exception (Sampson and Laub 2005). The complex dynamics of predisposition for criminal behavior, engagement in criminal acts, and possible commitment to or diversion from criminal behavior throughout the lifespan are directly related to the question of the etiology of crime.

The task of understanding the etiology of criminal behavior has been central to many scientific disciplines, including psychology and psychiatry. In recent comprehensive overviews of these literatures, it has been concluded that the manifestation and duration of antisocial behavior are driven by substantial and dynamic interactive co-contributions of genetic and environmental factors that are often difficult to disentangle (Craig and Halton 2009; Ferguson 2010; Moffitt 2005; Steinberg 2009; Tremblay 2010; Viding et al. 2008). To extrapolate a number of main conclusions from these reviews, the “why” (or, rather “why(s)”) of criminal behavior are multiple, heterogeneous, and not very well understood. And yet the field keeps paying a tremendous amount of attention to these “why(s),” because it is believed that as soon as we find answers to them, we will know how to prevent and remediate criminal behavior. Whether this belief is grounded or not is an important question on its own that is not going to be discussed here. The purpose of this review is to delineate, in broad strokes, what is known about the “why(s)” of criminal behavior in juveniles.

General Considerations

Before engaging in this discussion, I would like to clarify three important aspects of this review. First, it is limited in scope; its intention is to be illustrative, not comprehensive. In other words, it comments on major themes in the literature, but does not claim to cover them exhaustively or even list all of them. The selection of these themes is driven by the main assumption of this review, namely, that juvenile criminal behavior is, generally speaking, a manifestation of broken processes of social learning (or faulty learning). This position is close to and partially derived from the well-known developmental perspectives on disruptive behavior in childhood that are rooted in models of social learning and disease onset (Tremblay 2010). Here, juvenile criminal behaviors are viewed as deviations from the normative developmental process, by which the acquisition of social norms occurs through learning how to control what is considered to be socially undesirable behaviors that impeach the rights of others—that is, impulsivity, aggression (overt and covert), and rule breaking. Correspondingly, the point of this review is to outline sources of difficulties that have been identified by research and marked as junctions of social learning, where it can be derailed or slowed down. In the literature, these sources are typically subdivided (although the division is artificial) into internal and external factors. The internal here are represented by “risky genes,” i.e., sources of neurophysiological variation that, for example, may predispose an individual to impulsive and aggressive behavior. External factors here are “risky environments,” i.e., sources of contextual variation that, for example, may trigger impulsive and aggressive behavior.

Second, although not exclusively, a vast majority of juvenile offenders meet the criteria for one or more developmental disorders characterized by disruptive behavior, such as conduct disorder (CD), oppositional defiant disorder (ODD), and attention deficit hyperactivity disorder (ADHD). Here I will not attempt to differentiate between them in fine-grain detail, and,

following the literature (Gunter et al. 2010), refer to them as antisocial spectrum disorders.

Third, in this review, I omit a discussion of the psychological indicators that capture traits predisposing for criminal behavior. Although references will be made throughout to temperament, personality, and cognitive indicators traditionally associated with antisocial behavior and violence, these references are cursory. The review is focused on “risk factors” that have been marked by research as either causal or associated with the derailed social learning that is thought here to underlie criminal behavior in juveniles. Thus, although this overview, as many others, presents data from both schools of thought on the causes of crime—one focused on the role of individual differences and the other focused on structural and contextual variables that predispose a young individual to crime—it primarily focuses on those factors that are charged (at least potentially) with explanatory power with regard to the “why” questions of juvenile crime.

The Long of It

Since the work of Sir Francis Galton (Galton 1869, 1883), the field has developed an approach to approximate, at least roughly, whether and to what degree causal factors underlying behavior (or a particular behavior) can be attributable to heritable factors. This approach, in brief, assumes that all variance in behavior can be viewed as 100%, a portion of which is heritable (i.e., “received” from parents through genetic material) and can be captured through so-called heritability estimates, while everything else (i.e., everything that is not transmitted through genetic material) can be captured by environmentality estimates. A century and a half of the application of this approach, regardless of its many complexities, has resulted in the realization that it is difficult (virtually impossible) to find a behavior which is either completely heritable or completely not. A large field, referred to as quantitative genetics, is focusing—with much more analytical and computing sophistication than the nineteenth century permitted—on appraising the heritability of human behavior. Criminal

behavior itself and its precursors and associates enjoy much of the attention of this field.

Specifically, a great deal of work has been done on antisocial behavior, defined as a quantitative trait (measured in a number of different ways), which is distributed in the general population. According to summaries of this work, aggressive behavior is moderately heritable, with environment—shared, i.e., specific to two or more relatives, and nonshared, i.e., specific to an individual—also playing an important role (Burt 2009; Rhee and Waldman 2002, 2011). Specifics of these estimates vary between studies depending on design and sample size, age and gender of the sample, definition and measurement of antisocial behavior, and its subtypes.

Similar results, in general terms, have been obtained in studies of other related traits (Viding et al. 2008). To illustrate, heritable factors have also been stated to be important for the trait of psychopathy (Taylor et al. 2003), especially its callous-unemotional dimension (Viding et al. 2005). Yet, environmentality is never negligible in all of these studies (Burt 2009; Burt et al. 2010).

Also of note is that different manifestations of the antisocial-spectrum disorders and related traits share common genetic etiology, at least to a certain degree (Bornovalova et al. 2010). Shared genetic factors are thought to underlie comorbidity between CD and ODD (Dick et al. 2005), CD and ADHD (Christiansen et al. 2008; Monuteaux et al. 2009; Rhee et al. 2008; Tuvblad et al. 2009), ADHD and violent behavior (Retz and Rösler 2009), and antisocial behavior and psychopathy (Forsman et al. 2010).

Thus, the “long of it” is that both heritable and nonheritable factors have been found to be important in the etiology of antisocial behavior. But what, specifically, are these factors?

The Short of It

The short of it lies in the fact that there appear to be many risk factors for antisocial behavior and yet not a single one emerges to be deterministic. All these risk factors are probabilistic and may

contribute to an eventual confrontation between a young person and society that results in an act of antisocial behavior—crime. As stated above, these risk factors are considered obstacles to social learning. These factors—risky genes, risky environments, and their interactions—will be discussed in this section.

Risky Genes

There are many ways to seek evidence of the role of variation in DNA in the manifestation of human behaviors. Among those are investigations of different types of DNA variation by genotyping and sequencing. With regard to studies of the connections between DNA variation and antisocial behavior, the two most widely used methods are: (1) a whole-genome search of the regions harboring potential gene-candidates for a disorder or a behavior¹; and (2) an investigation of specific gene-candidates, in which a particular gene is selected on the basis of an a-priori hypothesis and the involvement of this gene with a particular phenotype is tested by means of inferential statistics. Both methods are aimed at investigating the relevance of the structural variation in DNA and genes to individual differences in behavior. With the first method, researchers scan the whole genome in an attempt to identify a limited number of regions that appear to be co-segregating among relatives with a disorder or trait, and then investigate these regions to identify specific genes that contribute to the disorder/trait. With the second method, researchers capitalize on ideas developed in animal research or pharmacological research and attempt to investigate genetic variability in a gene hypothesized to be relevant to the disorder or trait of interest. The first method utilizes both linkage and association statistical analyses, whereas the second method uses only the association paradigm.

¹To carry out such searches, typically, the genome is covered with a large set of highly polymorphic, multi-allelic (so-called short tandem repeat polymorphisms, or STRPs) or di-allelic (so-called single nucleotide polymorphisms, or SNPs) genetic markers.

Regions in the Genome

A number of studies should be mentioned here. The first study (Dick et al. 2004) has a distinct feature: the probands in this study were identified postfactum. Specifically, in typical whole-genome scans, a sample of participants is ascertained through a proband possessing a disorder of interest. After such probands are identified, their relatives are included in the study. In this particular case, the probands were identified through a different study for a different phenotype, specifically, the phenotype of alcoholism used in the Collaborative study on the Genetics of Alcoholism (COGA). Thus, probands with alcoholism were recruited and their family members were invited to participate. All consenting participants older than 18 were administered a semi-structured clinical assessment that permitted a retrospective diagnosis of conduct disorder; this phenotype was then used in subsequent analyses. The results of this genome scan identified six regions of the genome, for both categorical and continuous phenotypes, which produced suggestive but not, strictly speaking, statistically significant results. These regions were 19p13.12 and 19q12, 2p11.2, 12q13.13, 3q12.3, and 1q32.1.² A different group of researchers recruited a sample of adolescents treated for substance abuse and delinquency and their siblings (Stallings et al. 2005). These investigators reported significant evidence for linkage at 9q34 and suggestive evidence at 3q24-25 and 17q12. In yet another sample, a group of adults with CD and Antisocial Personality Disorder and their family members, no significant evidence for linkage was established, but suggestive signals were reported on chromosomes 2 and 3 (Ehlers et al. 2008). Two studies investigated CD and related problems using data from the International

²To acknowledge specifics of chromosomal architecture, a special nomenclature was introduced. In this nomenclature, the first number indicates the number of a particular chromosome (e.g., 1), the letter signifies a particular chromosomal arm (*p* for short, and *q* for long arms; e.g., 1q points to the long arm of chromosome 1), and subsequent numbers designate a specific cytological band in which a marker or a signal of interest resides (e.g., 1q32.1, where 32.1 is a specific cytological location on the long arm of chromosome 1).

Multicenter ADHD Genetics project. Again, no statistically strong findings were generated, but there were interesting signals at 3p25–24 and 9p24 (Anney et al. 2008) and 20p12 (Sonuga-Barke et al. 2008). In summary, there are three relevant observations here. First, no whole-genome scan has yet been conducted where the sample was ascertained directly through indicators of antisocial behavior. Second, because these samples are characterized by such a diversity of ascertained schemes in different samples (i.e., probands with alcoholism, substance abuse, and ADHD were recruited and antisocial behavior was evaluated only subsequently), it is, perhaps, of no surprise that there is little overlap in the findings between these studies.

Candidate Genes

Research with humans and with animal models has identified a number of likely types of proteins that are associated with antisocial behavior. Correspondingly, there is research on the sources of genetic variation that are associated with variations in these proteins. Thus, the following groups of genes have been investigated as the structural genetic bases for antisocial behavior: (1) neurotransmitters and (2) "other" genes.

Neurotransmitter Signaling Pathways

When neurotransmitter signaling pathways are studied, a number of proteins establishing such pathways should be considered. First, there are the specific neurotransmitter ligands themselves (e.g., dopamine (DA), serotonin (5HTT), γ -aminobutyric acid (GABA)). Second, for a postsynaptic signal to originate, it should be received by a particular protein known as a receptor. There are ligand-specific, committed receptors (e.g., dopamine has five types of different receptors, DRD_{1-5}) and receptors able to bind one or more types of ligands. Third, there are proteins that are needed to transport the remaining ligand from the neuronal cleft; these proteins are called transporters, and, once again, there could be neurotransmitter-exclusive or multifunctional transporters. Finally, there are molecules that participate in both the synthesis and degradation of neurotransmitters (e.g., monoamine oxidase, which is a

protein that metabolizes serotonin, dopamine, and norepinephrine). All these systems of genes and proteins are naturally interactive: together, they assemble pathways for the transmission of the neural signal and their constant interaction is essential to the functionality of these pathways.

To illustrate, consider an example of interactive events characteristic of dopamine transmission. In brief, DA activates the five types of dopamine receptors (DRD_{1-5}), each of which is controlled by its own genes. The D_4 receptor is controlled by the gene DRD_4 . Variation (i.e., polymorphic allelic differences in the population) in DRD_4 has been associated with externalizing and antisocial behaviors (Bakermans-Kranenburg and van Ijzendoorn 2006; Faraone et al. 2001; Holmes et al. 2002; Munafò et al. 2008; Young et al. 2002). In addition, polymorphisms in the genes coding for two other receptors, D_2 and D_5 , were associated with antisocial behavior in alcoholism (Lu et al. 2001) and substance abuse (Vanyukov et al. 2000), respectively. In synaptic clefts, DA is deactivated by reuptake via its transporter, the protein coded by the $DAT1$ (also known as $SLC6A3^3$) gene. There is evidence that genetic variation in this gene might be related to the manifestation of behavior problems (Kuikka et al. 1998; Yang et al. 2007) and antisocial personality disorder in alcoholics (Reese et al. 2010). DA is broken down by catechol-O-methyl transferase (encoded by the $COMT$ gene), monoamine oxidase (controlled by the $MAOA$ and $MAOB$ genes), and metabolized to norepinephrine by dopamine beta-hydroxylase precursor (encoded by the $D\beta H$ gene). There are substantial bodies of literature connecting $COMT$ (Craddock et al. 2006; Thapar et al. 2005), $MAOA$ (Kim-Cohen et al. 2006; Prom-Wormley et al. 2009; Tikkanen et al. 2009), $MAOB$ (Oreland et al. 2007), and $D\beta H$ (Cubells and Zabetian 2004) to psychopathology in general and conduct problems in particular. Finally, the activity of DA-converting

³There is a consistent nomenclature for genes coding for proteins functioning as neurotransmitters. All such genes have the SLC6 (solute carrier family 6) abbreviation in them and then a letter indicating type and number of the associated protein (e.g., A3).

enzymes is itself controlled by genes. For example, monoaminergic activity is regulated, among other things, by a transcription factor AP-2 beta (Berggard et al. 2005; Damberg et al. 2001), encoded by the *TFAPβ2* gene. Genetic variation in *TFAPβ2* has been associated with behaviors engaging monoaminergic mechanisms (Damberg 2005).

Evident from the above, the literature has numerous examples that connect criminality itself and its behavioral correlation features (e.g., aggression) to different allelic variants at particular polymorphisms in particular genes. In addition to the genetic variation that is associated with the turnover of dopamine, polymorphisms in a number of other neurotransmitter-related genes were associated with antisocial behaviors and related traits. For example, specific variants in the serotonin (5-HT) transporter gene, *5-HTT* (or *SLC6A4*) have been associated with violent behavior (Retz et al. 2004), conduct disorder (Cadoret et al. 2003; Sakai et al. 2006), behavior disinhibition (Twitchell et al. 2001), antisocial behavior in alcoholism (Ishiguro et al. 1999), antisocial personality disorder in alcoholics (Reese et al. 2010), and violent suicide (Courtet et al. 2001). In addition, polymorphisms in other serotonin or serotonin-related genes, the gene coding for tryptophan hydroxylase (*TPHI*), a protein participating in the biosynthesis of serotonin (Hill et al. 2002), and serotonin receptors [*HTR1B* (Soyka et al. 2004) and *HTR2A* (Hill et al. 2002)] were shown to be statistically-significantly or suggestively associated with antisocial behavior in alcoholism. In addition, variation in *HTR1B* has been associated with aggressive behavior (Jensen et al. 2009).

Conduct disorder has also been associated with one of many GABA receptor proteins, receptor A_2 (*GABRA2*); this finding was obtained on the same sample described above, the COGA sample (Dick et al. 2006). In addition, using principal component analyses of a number of variables indicative of externalizing behaviors, the same group, using almost the same sample of individuals, re-analyzed markers obtained through their previous genome scan (see above) and identified an additional region of interest, 7q21.11-7q33. Having explored this region, they established an association between

this combined externalizing factor and polymorphisms in the muscarinic acetylcholine receptor M_2 gene (*CHRM2*).

Moreover, externalizing symptoms have been associated with genetic variability in adrenergic neurotransmission. Specifically, a single polymorphism in the gene *ADRA2A*, coding for one of the adrenergic receptor proteins,⁴ was found to be associated with oppositional defiant conduct and other disorders (Comings et al. 2003).

Other Genes

Only a limited number of studies have investigated structural variability in genes other than those directly related to neuronal signaling. One such study, based on specific hypotheses generated in the animal literature, investigated polymorphisms in one of the protein kinases, C (PKC), an enzyme that has the capacity to regulate other proteins by chemically adding phosphate groups to them (i.e., phosphorylating them). There are three large subtypes of PKCs, α , β , and γ —all expressed in different tissues and having different functions. PKC- γ is present solely in the brain (abundant in the cerebellum, hippocampus, and cerebral cortex) and spinal cord and has been reported (as summarized in Schlaepfer et al. 2007) to be engaged in such functions as synaptic formation, long-term potentiation and depression, and modulation of neurotransmitter receptors (e.g., GABA_A). A group of researchers has associated genetic variability in the gene coding for PKC- γ (*PRKCG*) with behavior disinhibition (Schlaepfer et al. 2007).

Because of the predominance of males among individuals demonstrating antisocial behavior, researchers have investigated the genes located on the X chromosome. In particular, variation in the androgen receptor gene (*AR*)—a gene that codes for the protein that functions as a steroid-hormone activated transcription factor—has been associated with externalizing (conduct and oppositional defiant) disorders (Comings et al. 1999).

⁴These proteins are functional in the regulation of neurotransmitter release from sympathetic nerves and from adrenergic neurons in the central nervous system.

In summary, the picture is rather diverse: There are many candidate genes whose variation has been associated with antisocial behavior and related traits (Gunter et al. 2010). Each of these variants might have been or is considered as a risk indicator. Yet, given the “balance” of replications and nonreplications of findings, not a single variant is recognized as a causal factor of antisocial behavior.

Risky Environments

As mentioned above, antisocial behavior is defined in contrast to pro-social or social-values-oriented behavior; thus, its definitions always include reference to social principles, values, and norms and a society’s capacity to install, support, and promote them—that is, an outcome of social learning. There are multiple models in the literature that investigate the emergence of antisocial behaviors in the context of the relationships between an individual and society (e.g., Glueck and Glueck 1968; Hirschi 1969). One such model differentiates these relationships into age-specific bands, arguing that through these intrapersonal bands, maturing individuals accept and internalize their ties to each other and society (Sampson and Laub 1990, 1993). Specifically, this model, referred to as a revised age-graded theory of informal social control (Sampson and Laub 2005), stresses the importance of parents (i.e., parenting styles and attachment characteristics), peers, religion, and the school system in *childhood and adolescence*, and the importance of participation in vocational training, military service, higher education, and the labor force in *young adulthood*. It also emphasizes the importance of forming family and other close relationships, and participating in social and religious institutions in *young adulthood*.

Neighborhoods and Schools

A variety of socio-demographic characteristics appear to be predictive of antisocial behavior (Shaw et al. 2000). More juvenile crime is associated with inner-city areas characterized by dilapidation, hostility and disorganization, and high

residential mobility (Kroneman et al. 2004; Sampson et al. 1997). Moreover, risky neighborhoods have been reported to amplify the impact of individual predispositions on delinquent conduct (Lynam et al. 2000). In addition, levels of neighborhood poverty are positively associated with other behavior indicators that themselves are risk factors for conduct problems [e.g., teenage pregnancy and high-school drop-out (Brooks-Gunn et al. 1993; Sommers and Baskin 1994)]. However, it appears that direct influences of risky neighborhoods are modified by characteristics of the community itself (Browning et al. 2004) and by family variables (Gorman-Smith et al. 1996). In addition, children and youth with antisocial behavior tend to come, disproportionately, from low-SES neighborhoods (Offord et al. 1986) and minority backgrounds (Chapman et al. 2006; Kilgore et al. 2000). Moreover, children with antisocial behavior tend to attend schools characterized by high rates of crime, and problematic relationships between faculty and students (DeWit et al. 2000; Hadley-Ives et al. 2000; Kilgore et al. 2000; Loukas and Robinson 2004; Shafii and Shafii 2003). There is also evidence that, in contrast, schools with well-formulated, consistent, and sustained rules are characterized by low rates of students’ delinquent behaviors (Gottfredson 2001; Gottfredson et al. 2005).

Family

Low SES, parental unemployment, low parental education, and dependency on welfare benefits have been reported to be associated with antisocial behavior and conduct problems in juveniles (Velez et al. 1989). Low SES (e.g., welfare status) is not only characteristic of children with conduct disorder as a group (Loeber et al. 1995), it is also associated with an earlier onset of the disorder (Loeber et al. 1998). These relationships, however, appear to be of a complex nature, with the general link between SES and delinquency, in particular, being conditioned on family social practices (Dodge et al. 1994).

In addition, family size (Farrington 1992, 1993; Newson et al. 1993), birth order (Warren 1966), and sibling influences (Reiss and Farrington 1994) have been observed to be related

to antisocial behaviors, delinquency, and conduct problems. However, these associations also appear to be multifaceted and multidirectional (Cote et al. 2002).

Although the factors mentioned above are important, the bulk of the literature, however, linking family variables and juvenile delinquency is clustered into three main groups: (1) child rearing, especially maltreatment and abuse; (2) marital conflicts and family structure; and (3) individual characteristics of parents as a source of both genetic and environmentally negative influences. These three bodies of literature are quite substantial and cannot be comprehensively reviewed here. Correspondingly, only selected findings are highlighted. With regard to child rearing practices, parental rejection (McCord 1979; Robins 1978), harsh or punitive discipline (Haapasalo and Pokela 1999), and reduced or absent parental supervision (Stern and Smith 1999) are considered to be reliable predictors of juvenile delinquency. Early child maltreatment (Smith and Thornberry 1995), physical abuse (Malinosky-Rummell and Hansen 1993), sexual abuse (Feiring et al. 2007), and psychological abuse (Haapasalo and Moilanen 2004) all predict later delinquency. Parenting practices resulting in child maltreatment are of great cost to society: their total costs are estimated at \$20 billion direct (Bess 2002) and over \$69 billion indirect per year (Fromm 2001).

Domestic violence and parental conflict are also reliable predictors of delinquent behaviors (Buehler et al. 1997). Incomplete family structure (Fergusson et al. 1994; Velez et al. 1989), divorce (Kolvin et al. 1988), and bad marital relationships (Cui et al. 2007) are all considered to be risk factors for delinquency with their independent direct predictive powers, but none of these effects are deterministic and there is evidence for the modifying impact of various protective factors (Hart et al. 2007). Of note are also multifarious reciprocal relationships between the childrearing environment and child problem behavior, such that growth in conduct problems in children appears to impact subsequent parental behaviors (Patrick et al. 2005; Stattin and Kerr 2000).

Last, but not least, specific characteristics of parents themselves are reliably predictive of delinquent outcomes (Lipsey and Derzon 1998). First and foremost, specific forms of psychopathology in parents are predictive of these same types of psychopathology in children. Thus, parents with antisocial personality disorder (Frick et al. 1992) and various conduct problems (Faraone et al. 1991; Lahey et al. 1988; Lipsey and Derzon 1998) tend to have children who demonstrate similar delinquent behaviors. Second, there is a substantial amount of cross-over in the familial transmission of psychopathology. Specifically, psychiatric conditions such as substance abuse (Loeber et al. 1995) and maternal depression (Dumas and Wahler 1985; Loeber et al. 1998; Zahn-Waxler et al. 1990) are associated with conduct problems in children.

Peers

The tradition of considering peer influences in the early onset of antisocial behavior extends itself to the classic sociological paradigm of symbolic interactionism, which, in the framework of social learning theory (Akers 1998), asserts that criminal behavior arises as a product of a learning process based on interactions in close peer networks (Sutherland 1947). There is a substantial amount of data supporting this assertion and indicating, specifically, that having delinquent peers is, indeed, one of the strongest correlates of juvenile delinquency (Dishion and Patterson 2006; Elliott and Menard 1996; Haynie 2001; Keena et al. 1995; Patterson et al. 1991; Warr 2002), although the strength of association varies depending on the level of internal and external constraints (Cass 2007; Piquero et al. 2005) and the quality of the friendships (Piehler and Dishion 2007).

Along with the literature on delinquent peer pressures as one of the main correlates of criminal juvenile activity, there is a growing body of literature on other risk and protective factors associated with the tendency to submit to or resist peer pressure. Among the risk factors are chaotic and disorganized school environments (Payne et al. 2003), poor teacher–student relationships (Welsh et al. 1999), low school adjustment and

attachment, lack of interest in and engagement with extra-curricular activities, and the absence of positive mentor-like authorities (Osgood et al. 1996). Among the protective factors are strong moral values (Akers 1998), strong social ties to family members and nondelinquent peers (Heimer and De Coster 1999), disapproval of criminality (Mears et al. 1998), and the quantity and quality of parent monitoring (Svensson 2003).

It is notable that many researchers comment on the complex nature of these relationships, which exhibit multiple reciprocal connections as well as cumulative (both additive and interactive) effects associated with the enhanced impact of multiple factors if they occur simultaneously, whether in risk or protective contexts (Lansford et al. 2003; Liu 2004; Simons et al. 2001).

Risky Interactions

As evident from the discussion above, the literature contains long "laundry" lists of risk factors, many of which work in concert. For example, although parents create environments for their children, they also pass along genes to their children, thus, forming multi-directional associations between the genes that predispose them for particular behaviors (e.g., antisocial behaviors) and particular parenting styles (e.g., neglect and abuse), as well as between their genes and the genes they have passed along to their children (e.g., risk genes for conduct disorder), so that children's genes, in turn, can trigger particular reactions from their parents (e.g., harsh discipline in response to disobedience), and so forth. In other words, these associations soon become quite difficult to disentangle; collectively, they form the context of and potential for antisocial behavior. Thus, as is always the case in the social sciences, the studies of risk factors have generated some "good leads" (Rutter et al. 2003, p. 1092), but are far from being decisive or deterministic in terms of their findings' etiological or interventional power. The discussion below, stressing the role of combinations of these factors, illuminates even better their probabilistic nature. It examines three types of such combinations:

(1) of various genetic risk factors; (2) of various environmental risk factors; and (3) of various environmental and genetic factors.

Gene-by-Gene Interactions

It is possible to hypothesize that there might be non-linear interactions between various specific genes or variants within these genes (so-called epistatic interactions) predisposing for the manifestation of conduct problems. There is a large literature on the role of epistatic interactions in medicine, especially in studies of cancer (Fijneman 2005). Research on the concept of gene-gene interaction is still limited (Comings et al. 2000a, b; Grigorenko et al. 2008), but testifies to the substantial importance of such interactions for the understanding of the genetic texture of the predisposition for antisocial behaviors. Thus, it is possible that an accumulation of risk factors (e.g., co-presence of structural DNA polymorphisms, each of which has been associated with conduct disorder) might result in the formation of non-linear higher-order effects of importance to the development and manifestation of conduct problems. Again, pointing to the medical literature, it appears that the co-existence of such "risky" genetic variants is not characterized by simple additive effects, but rather by various non-linear outcomes.

Environment-by-Environment Interactions

Numerous studies have been designed to bring together different environmental effects that had previously been considered in isolation. For example, both family and school factors are important, and the literature indicates differential developmental outcomes when family and schooling indicators are considered interactively. Specifically, there is evidence in the literature that learning gains as conditioned by school sizes are greater for students from disadvantaged families than families with higher incomes (Lee and Smith 1997). There is also evidence of non-linear

relationships between social capital at home and students' ability to benefit from social capital at school (Crosnoe 2004).

Similarly, the interaction between indicators of family and peer environments has been shown to be important (Simons et al. 2001). Specifically, although no direct association was found between oppositional/defiant behavior during childhood and a trajectory of increasing involvement with deviant peers and delinquency during adolescence, early oppositional/defiant behavior undermined effective parenting practices. Lack of positive parenting, consequently, predicted an increased engagement with deviant peers and delinquency during adolescence. Interaction effects also appear to be important for the activation of protective factors. Specifically, it has been shown that problems in the parent-child relationship can be countered by positive affiliation and support from friends, relatives, and other significant adults (Call and Mortimer 2001). There is evidence in the literature that such family factors as low cohesion are differentially associated with low social competence and self-worth only in adolescents without a best friend (Gauze et al. 1996). Likewise, high-quality friendship was reported to be a protective factor negating the association between child abuse and subsequent low self-esteem (Bolger et al. 1998). Thus, it is possible that the co-occurrence of specific peer relationships, whether dyadic (Buhrmester and Furman 1987; Laub et al. 1998) or group (Ladd 2006; Lansford et al. 2003), and early negative family experience can differentiate behavioral outcomes in an interactive manner (Criss et al. 2002).

Although the literature on conduct disorder does not yet contain plentiful examples of interactions between environmental factors, there is strengthening support for the use of statistical models that are capable of capturing non-linear interactions (Ousey and Wilcox 2007). This argument is particularly strong in sociology and criminology (Agnew et al. 2002; Agnew and Raskin White 1992; Sampson and Laub 1993), where the research shows that what were previously perceived as deterministic "main effect" variables appear to demonstrate time- and context-sensitivity, rising

and falling in their importance during particular developmental stages of the life span.

Genes by Environments Interactions

Recently, the field has seen a surge of studies investigating interactions between genes (or specific genetic variants, alleles) and environments. The essence of a gene-by-environment interaction study is to capture differences in susceptibility to specific environments that are related to differences in genotypes. Although the importance of these interactions was hypothesized long ago (Cadoret et al. 1983; Cloninger et al. 1982), the field has only recently begun to systematically test this hypothesis with both measured genetic variants and measured environments. The intensification of this line of inquiry was triggered by a study that investigated the interaction between the presence of the risk genetic variant in the promoter⁵ region of the *MAOA* gene and the presence of child maltreatment in a large sample of males (Caspi et al. 2002). The results showed the differentiation between developmental outcomes: a combination of the low-*MAOA* allele and severe maltreatment characterized the child-abuser group, with 85% of the participants demonstrating some antisocial outcomes; the other study groups (low- vs. high-*MAOA* allele vs. no, probable, or severe maltreatment) did not show the frequency to be nearly as high. This initial study was well received and a chain of studies followed, both attempting to replicate the original finding and to apply the methodology to other risk genes and other risk environments. Thus, in addition to numerous studies of the *MAOA*-promoter variant and maltreatment (for a review see Kim-Cohen et al. 2006), there are also other studies investigating different interactions with regard to the outcome of antisocial behavior. Specifically, there is evidence that differentiates the outcome of depression in maltreated children with regard to the promoter variant in the serotonin

⁵ A regulatory region of DNA generally located upstream of a gene (i.e., outside of the gene, prior to its first coding unit); this region generally promotes transcription of the gene.

transporter gene (*5-HTT*) and the availability and quality of social support (Kaufman et al. 2004). There is also evidence for the role of the interaction between the *COMT* variants (val158met) and birth weight (Langley and Thapar 2006). In addition, it has been shown that the presence/absence of specific alleles in the dopamine transporter gene (*DAT1* or *SLC6A3*) and the presence/absence of maternal rejection differentiate depression outcomes in incarcerated juvenile offenders (Haefffel et al. 2008).

The number of studies of gene-by-environment investigations is mushrooming but the texture of results varies, resulting in new findings and both replications and nonreplications of old findings. There are interpretations of the result variability (replications and nonreplications) as largely statistical or design artifacts (Eaves 2006; Risch et al. 2009), indicators of small effect sizes (Salanti et al. 2006) and the imprecision of the methodology used in these studies (Wallace 2006). Yet, the premise of these types of research makes infinite sense, since it differentiates the behavioral expression of specific genetic risk factors in the context of specific risk environments.

Inquiries into co-acting risk factors becoming more and more powerful in the context of discussions on the role of epigenetic effects in the development and manifestation of antisocial behavior (Cohen 2010; Gunter et al. 2010; Tremblay 2010). Epigenetic effects refer to changes in gene expression resulting from methylation and acetylation and other types of chromatin remodeling and histone modification. These processes are heritable, but are impacted by environmental factors that can both trigger and reverse them. They are thought of as the possible biological basis of the environmental impact on the genome and might be the substrate of gene-environment interactions that are captured statistically. There is now a growing literature that suggests the role of epigenetic regulation in antisocial behavior. For example, it has been demonstrated that patterns in the methylation of the dopamine transporter gene *DAT1* (*SLC6A3*) are altered in alcohol dependence and associated with craving (Hillemacher et al. 2009), and that the methylation of the *MAOA* gene is associated

with nicotine and alcohol dependence in women (Philibert et al. 2008).

Concluding Thoughts

This discussion has unfolded around a number of observations. First, it appears that an effective reduction of the number of prisoners requires an understanding of the causality of detention and incarceration, which is directly, although not completely, related to an understanding of the etiology of antisocial behavior. Second, as per other positions in the field, juvenile delinquency here is viewed as an outcome of faulty learning, specifically, social learning that went astray. Third, it is clear that the understanding of the etiology of antisocial behavior is directly related to the understanding of the risk factors that can derail social learning. The long and the short of it is that there are many factors of various natures that can derail learning; none are deterministic, but all are probabilistic, with non-negligible probabilities. Thus, it is important to continue to catalog them and understand the magnitude of these probabilities so that, eventually, they can be negated. Negating the impact of these risk factors is one certain way to decrease the numbers of individuals being detained or incarcerated in the prison system.

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Race and Sex Disparity in Juvenile Justice Processing

4

Kimberly Kempf-Leonard

This chapter describes the distribution of youths in juvenile justice systems in the USA based on sex and race. If children all shared the same experiences equally, the proportion of youths in the juvenile justice system in one demographic group would mirror that of the general population. That is not the situation now, nor has it ever been. Instead, there are very clear differences based on race, ethnicity, and gender in the prevalence and reasons that children become involved in juvenile justice, and in the type of experiences they have during the process. These disparities should be considered within the context of the distinct system of justice for children that exists in the USA. This chapter describes what is known about race and gender differences in juvenile justice and why they exist, and recommends how official decision makers might intervene with youth more equitably in the future.

Juvenile Justice Processing

Juvenile justice is a unique feature of the American system of justice that originated more than a century ago. The Progressive reformers who worked to establish a separate juvenile court and residential facilities intended for the system

to treat children very differently from the way in which adults are processed in criminal justice (Platt 1977; Rothman 1978; Tanenhaus 2004). The mission was to create a largely informal system in which all decisions by juvenile justice officials address ways in which best to help the individual youths overcome their current problems. The legal doctrine of *parens patriae* was adapted from England's chancery courts to direct officials to act as a surrogate parent. Of course, then as now, there was no single agreed upon best parenting technique, so interventions and services provided to youths varied widely.

In working to provide for "the best interests" of the youth, there was no official role for legal advocates; attorneys are not necessary when everyone is doing what is best for the child. Similarly, to safeguard against public shaming, proceedings are not transcribed and remain private. Official records also are not openly accessible, and are often purged when children involved with juvenile justice reach adulthood. Treatment and opportunities for learning and reform are the primary interventions; just deserts punishment and retribution are inconsistent with the juvenile justice objective.

The original juvenile justice systems developed distinctively on a state-by-state basis, but shared many of the same features. The "best interests of the child" objective was implemented nationwide. However, it is inevitable that any system in which legal decisions are based on individualized criteria and can result in severely

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restricting personal liberties, problems are likely to develop. This was true of juvenile justice, and finally recognized by the U.S. Supreme Court in the 1960s. In a series of decisions, but most importantly *In re Gault* (1967), the Court subsequently required all juvenile justice systems to address equity concerns and to add some, but not all, elements of due process that are requisite of criminal justice systems (Bernard 1992; Feld 1999).

The federal government became more involved in juvenile justice with passage of the Juvenile Justice and Delinquency Prevention (JJDP) Act in 1974 (42 U.S.C. sec. 5601–5640 [1983]). As a condition of federal funding, the main provisions of the JJDP Act required states: (1) to remove from secure confinement all youths without alleged crimes, meaning those with status offenses, abuse, and dependency referrals; and (2) to provide all youths with sight and sound separation from adults in jails. Compliance with these mandates was particularly difficult because there were many status offenders but few alternatives to secure facilities, especially in rural jurisdictions. The obstacles for officials diminished somewhat when the JJDP Act was amended in 1980 to enable states to continue to receive funding even if they could not meet the deinstitutionalization requirements, but were taking steps in that direction or had non-offending youths in custody for violating a court order. In 1988, another amendment made it mandatory for states to identify the level of minority overrepresentation in detention and residential facilities and to take steps to understand and reduce racial disparities (42 U.S.C. sec. 5633 (a) (16) [Supp. 1993]). Congress reauthorized the JJDP Act in 1992, and provided a challenge grant incentive for states to develop gender-specific programming to help girls more effectively.

Today's juvenile justice systems continue to operate largely at local and county levels according to state rules, but with more federal regulation, some funding, and minimal oversight. The process also remains largely informal and unstructured, allowing local officials to dictate judgments based on social history and the best interests of the child in some cases, while pursuing punitive sanctions and public safety interests

in other cases based on severity of the offense. The services and interventions available to juvenile justice decision-makers, and information about their relative effectiveness in achieving the goals intended, are still very limited, particularly in rural and less affluent jurisdictions. As such, officials develop their own routine practices, or establish their "going rate" for processing juveniles. Often these discretionary practices result in disparate treatment by race and sex.

Race and Ethnicity

Distribution in Juvenile Justice

Approximately one-quarter of the U.S. population is younger than age 18, which is generally how juvenile status is defined. The race distribution is estimated at 80.7% White, 13.3% Black, 4.9% Asian, and 1.1% Native American (Puzzanchera et al. 2009). Ideally, race and ethnicity groups would be defined with greater distinction, but that is not yet possible in national statistics or those of most states. Among all juveniles arrested during 2008, the race distribution is 66.4% White, 30.9% Black, 1.2% Asian, and 1.5% Native American (Crime in the U.S., Table 43 2008). These national FBI data show that Black youths are arrested at much higher levels than expected based on their presence in the population.

Figure 4.1 shows the arrest patterns by race for violent index crimes, including murder, forcible rape, robbery, and aggravated assault, for the past decade. Two charts with different scales are shown because the arrest patterns for Native Americans and Asians would disappear due to their small overall numbers in comparison to the far larger number of arrests for Whites and Blacks. The trend lines indicate that violent crime has declined among White, Native American, and Asian youths, but increased among Blacks. Violent crime increased dramatically among African American youths by 15% in 2005, having gradually increased in the preceding years. The specific arrest rates by race are shown in Table 4.1.

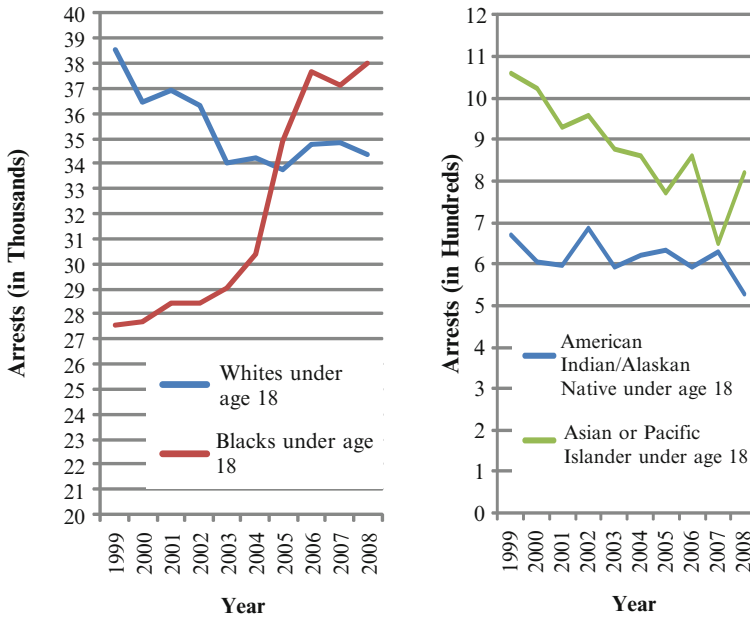


Fig. 4.1 Race trends in juvenile arrests for violent index crimes, 1999–2008

Table 4.1 Number and percent change in juvenile arrests for violent index crimes by race

Year	Whites under age 18		Blacks under age 18		American Indian/ Alaskan Native under age 18		Asian or Pacific Islander under age 18	
	Arrests	% Change	Arrests	% Change	Arrests	% Change	Arrests	% Change
1999	38,529		27,551		670		1,061	
2000	36,450	-5.4	27,690	0.5	605	-9.7	1,022	-3.7
2001	36,927	1.3	28,427	2.7	595	-1.7	928	-9.2
2002	36,297	-1.7	28,448	0.1	686	15.3	959	3.3
2003	34,012	-6.3	29,012	2.0	592	-13.7	877	-8.6
2004	34,232	0.6	30,416	4.8	620	4.7	860	-1.9
2005	33,780	-1.3	34,897	14.7	632	1.9	771	-10.3
2006	34,737	2.8	37,650	7.9	591	-6.5	859	11.4
2007	34,810	0.2	37,151	-1.3	631	6.8	649	-24.4
2008	34,360	-1.3	38,005	2.3	527	-16.5	820	26.3

Figure 4.2 shows the arrest patterns, and Table 4.2 shows the rates, for serious property crimes used in the FBI index to measure crimes, including burglary, larceny, theft, motor vehicle theft, and arson. White youths show large declines, especially from 2003 to 2006, with an increase in the last 2 years. Property crime is fairly stable among Black youths until recent

increases in 2007 and 2008. Native American youths show a gradual decline with a big drop during 2006, followed by an increase in 2007. Asian youths also had a dramatic decline followed by an increase during the same years.

Table 4.3 shows major crime categories recorded routinely as part of the Uniform Crime Reports for arrests of juveniles under age 18 in

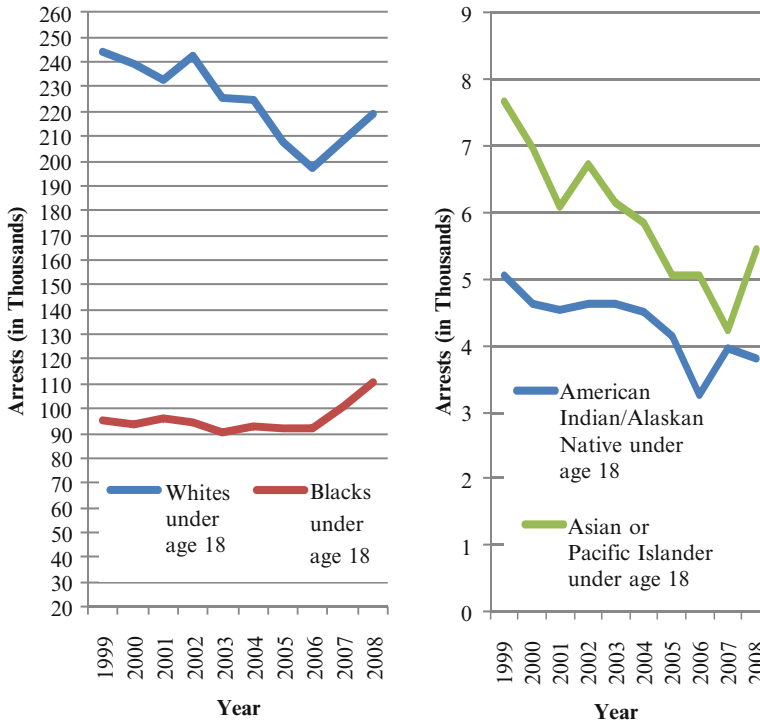


Fig. 4.2 Race trends in juvenile arrests for property index crimes, 1999–2008

Table 4.2 Number and percent change in juvenile arrests for property index crimes by race

Year	Whites under age 18		Blacks under age 18		American Indian/ Alaskan Native under age 18		Asian or Pacific Islander under age 18	
	Arrests	% Change	Arrests	% Change	Arrests	% Change	Arrests	% Change
1999	243,759		95,344		5,057		7,684	
2000	238,988	-2.0	94,018	-1.4	4,615	-8.7	6,985	-9.1
2001	232,448	-2.7	96,337	2.5	4,545	-1.5	6,100	-12.7
2002	242,250	4.2	94,679	-1.7	4,625	1.8	6,726	10.3
2003	225,612	-6.9	90,682	-4.2	4,618	-0.2	6,140	-8.7
2004	224,354	-0.6	93,033	2.6	4,498	-2.6	5,858	-4.6
2005	207,414	-7.6	92,089	-1.0	4,153	-7.7	5,067	-13.5
2006	197,225	-4.9	91,806	-0.3	3,246	-21.8	5,064	-0.1
2007	208,693	5.8	100,962	10.0	3,959	22.0	4,232	-16.4
2008	218,889	4.9	110,322	9.3	3,801	-4.0	5,458	29.0

the U.S during 2008, the most recent year in which these data are available. White youths are arrested for the majority of offenses. However, given that white youths are 80.1% of adolescent population, they are underrepresented in every type of offending. In contrast, Black youths are represented far above their 13.3% of the population.

The majority of arrests for robbery, murder, non-negligent manslaughter, and violent index crimes involve Black youths. Native Americans are underrepresented in all crime categories. Asian youths are arrested equal to their distribution in the population, with the exception of their higher levels for running away.

Table 4.3 Juvenile arrest types by race, 2008

	Arrests under age 18			
	Percent White	Percent Black	Percent American Indian/Alaskan Native	Percent Asian/Pacific Islander
Total offenses	66.4	30.9	1.2	1.5
Murder and non-negligent manslaughter	39.9	58.5	0.5	1.1
Forcible rape	61.9	36.7	0.8	0.6
Robbery	31.3	67.2	0.3	1.2
Aggravated assault	55.7	42.2	0.9	1.1
Burglary	63.0	35.1	0.8	1.1
Larceny-theft	65.8	31.2	1.2	1.8
Motor vehicle theft	52.3	45.1	1.3	1.4
Arson	77.3	20.1	1.0	1.6
Violent index crime	46.6	51.6	0.7	1.1
Property index crime	64.7	32.6	1.1	1.6
Curfew and loitering law violations	63.1	34.8	0.8	1.2
Runaways	66.1	27.1	1.9	4.8

Violent crimes are offenses of murder, forcible rape, robbery, and aggravated assault

Property crimes are offenses of burglary, larceny-theft, motor vehicle theft, and arson

Adapted from Crime in the U.S., Table 43

As these arrest data show, Black youths are disproportionately represented in juvenile justice. This overrepresentation of minority youths has become a national policy issue. Congress has taken steps to provide a financial incentive “carrot” to encourage states to take steps to reduce inequity in the distribution of race in juvenile justice. The next section describes the current status of the disproportionate minority contact (DMC) initiative, including issues to identify disparity and the current understanding of why this overrepresentation persists.

Understanding Disproportionate Minority Contact with Juvenile Justice

Although inequity by race in the national overview of juvenile justice is disappointing and highlights the importance of continued attention to minority overrepresentation, it does not identify whether the problem is widespread in the country or concentrated in specific states. To understand this context, there have been concerted efforts to assess DMC in nearly every state. Most state-level findings show minority groups, mainly

Blacks, but often followed by Latinos and Native Americans, with higher involvement in juvenile justice (Bishop 2005; Feyerherm 1993; Hamparian and Leiber 1997; Hsia et al. 2004; Hsia and Hamparian 1998; Lauritsen 2005; Leonard et al. 1995; Pope and Leiber 2005; Sickmund 2004). No regional patterns of disparity have been identified (Sickmund 2004). There are likely to be changes in these race patterns because of rapid growth in Latino populations which in parts of the USA. do, or soon will, outnumber White populations. The smaller Asian populations also are increasing quickly with immigration. Although official categorization of race and ethnicity is imprecise, the evidence is compelling that minorities, particularly some youths of color, are disproportionately involved in juvenile justice.

Next, it is important to explain why disparities occur. This requires not only that Black or other minority youths be compared to White youths, but also that such assessments be based on youths who are similarly situated in all ways except their race. This extends to family and personal values, beliefs, and lifestyles (Lauritsen 2005; Patterson 2006). Definitions of similarly situated youths also include qualities related to opportunities,

contextual traits, and other indicators of social capital. Poverty, for example, is one social status that is unevenly distributed by race in the U.S. to the extent that Blacks and some Latino groups are much more likely to appear among “the underclass” (Currie 1985) or “the truly disadvantaged” (Wilson 1987). In comparison to White youths who more often enjoy a privileged status, opportunities for success are more often blocked for disadvantaged poor minority youths (Edelman et al. 2006; Patterson 2006).

Poor Americans also are concentrated within geographic areas, reflecting patterns of immigration, segregation, and jobs in the region. One result of this “spatial mismatch” between residents and social capital is a structural disadvantage for Black youths to access the resources, or “collective efficacy” necessary for their success (Jargowsky et al. 2005; Morenoff et al. 2001; Sampson et al. 1997).

Another feature of poor neighborhoods is disproportionate police patrolling and more calls for service by neighborhood residents. The unequal distribution of police services should lead us to expect more youths from poor neighborhoods to become targets of police intervention. Indeed, historical accounts suggest that this always has been one reason for minority overrepresentation in juvenile justice—even when most urban youths were from recent immigrants and White (Bernard 1992; Feld 1999; Schlossman 1974; Tanenhaus 2004). Policing patterns and referrals to juvenile court are not the only stage at which racial disparity exists. Differences exist across all stages, including victims reporting crimes, police patrol, arrest and referral decisions, intake screening, detention, prosecution or filing of a petition, adjudication, and final case disposition.

For each stage, Feld (1999: 284) explains *why* differential treatment works: “...offenders, defined as ‘similar’ on the basis of their present offense or prior record, can receive markedly dissimilar dispositions because of their differing ‘needs.’ Because individualized justice of the juvenile court classifies youths on the basis of their personal circumstances, then in a society marked by great social, economic, and racial inequality, minority youths consistently find

themselves at a disadvantage.” The lack of clearly defined legal objectives and informal procedures is *how* disparate decision making can prevail in juvenile justice.

If the system is intended to provide just deserts punishment to juvenile offenders, then minority overrepresentation would indicate that minority youths are judged as having the most heinous offenses and thus, to be more deserving of punitive responses. Serious violent crimes, particularly murder and robbery, carry the most severe punishments in criminal justice. They are also those in which media portrayals more often depict as culpable young African American and Latino youths living in inner cities (Feld 1999, 2005; Lauritsen 2005). As shown in Table 4.5, these are precisely the offense categories in which police arrest Black youths at the highest levels. Alternatively, if interventions to treat “the best interests of the child” guide decision making, then juvenile justice officials justify the longest, most intensive services going to the youths most in need, which again are disproportionately poor youths of color (Frazier and Bishop 1995: 32).

At each decision, some youths move forward within the juvenile justice system while others’ cases are dismissed and they leave. If progression and attrition are evenly distributed, then there is no change in the race distribution anywhere in the system. However, generally disparity worsens as youths proceed through a series of decisions during juvenile court hearings to disposition of their cases. There are two considerations to understand this process of cumulative minority disadvantage. First, picture juvenile justice systems working something like building a giant disparity snowball. Adolescents self-report offending that is fairly similar by race (Lauritsen 2005). However, police officers, either acting on their own while on patrol or in response to citizen complaints, arrest minority youths at an elevated rate. High proportions of minority youths at the intake screening may serve to confirm preconceptions of court officials—they are influenced erroneously by media depictions of criminals as much as the general public (Decker and Kempf 1993)—who respond in similar patterns. It is in this sequence of decisions that the DMC snowball

becomes larger. As a result, it is not uncommon to find a very large Black majority of youths housed in residential placement facilities following a series of police and court decisions. However, the explanation is not as straightforward as it appears, because many well done empirical studies of racial disparity do *not* identify race as a factor in juvenile court decision making (Bishop 2005).

Second, to understand how it is possible that race is *not* a significant factor in juvenile justice decisions that *do* result in large race disparities, again we must consider the sequential process that tends to be influenced by similar factors. If an early stage, such as arrest, is marked by differential treatment that makes it less likely for minority youths than Whites to be released, then the total group of youths which proceeds to the next stage is substantively different than the original group. At the next stage, for example, White youths might be more serious offenders or more in need of services than Black youths who are more diverse in terms of offenses and personal traits. This differential selection process results in comparisons of youths who differ by race, but who also are not similarly situated in other ways. (Leonard and Sontheimer 1995). In these circumstances, it is the offense or personal traits, not race, that affects the second-stage decisions.

Official classification of race and ethnicity by juvenile justice systems is imprecise, and unable to distinguish cultural variations. Minority groups are defined by their smaller enumeration within the general population. Demographic changes will soon make Hispanic subgroups the majority in many parts of the USA. However, understanding why race and ethnicity affect decisions in juvenile justice processing cannot be explained merely by skin color, language, and cultural heritage. Patterns of immigration, segregation, and job creation affect opportunities for communities, families, and youths to achieve success. Such opportunities always have been and remain unequal in our country (Hawkins 2003; Omi and Winant 1994). We know patterns of offending and arrest are linked to opportunities, and complicate our ability to explain DMC with juvenile

justice systems. Hopefully soon, definitions of minority status will relate less about small numbers and more about limited opportunities and restricted social status.

Gender

Distribution in Juvenile Justice

Boys and girls are about evenly distributed within the general population, but 70% of the juvenile arrests in 2008 involved boys and only 30% involved girls. The overrepresentation of boys has been a stable feature of arrests for violent crimes, as shown in Fig. 4.3 and Table 4.4. Among boys, there was a dramatic decline in violence between 1996 and 2001, with more gradual leveling off in recent years. The pattern is similar among girls, although less pronounced in the figure because of their overall smaller number of arrests and because many of the percent changes for girls are not as large as those experienced by boys.

Figure 4.4 shows the arrest trends for property index offenses. Again the overall relationships indicate a decline in offending. Again the declines are more dramatic for boys, particularly between 1996 and 2001, but continuing throughout. In contrast to boys, property arrests involving girls show smaller declines and some increases, including 10% increases during each of the last 2 years. The arrest rates are shown in Table 4.5.

Table 4.6 shows arrests by offense and sex for 2008. The overwhelming majority of arrests of those under age 18 involve boys. Girls achieve more parity in arrests for larceny-theft, and constitute the simple majority of status offenses.

For overall rates of arrest, and most individual categories of crime, boys are overrepresented to such a high level that arrested girls are nearly eclipsed. It is only for theft and some status offenses, such as running away and truancy, that the arrests of girls come closer to reaching the level of equity comparable to their proportion of adolescents. These gender patterns have followed the same trends for many years, increasing during the 1990s then decreasing during much of the

Fig. 4.3 Gender trends in juvenile arrests for violent index crimes, 1991–2008

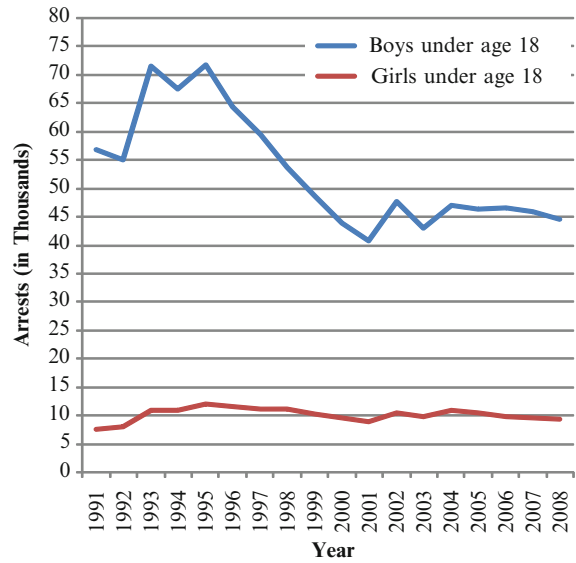


Table 4.4 Number and percent change in juvenile arrests for violent index crimes by gender

Year	Boys under age 18		Girls under age 18	
	Arrests	% Change	Arrests	% Change
1991	56,772		7,596	
1992	55,009	-3.1	8,035	5.8
1993	71,500	30.0	10,845	35.0
1994	67,473	-5.6	10,867	0.2
1995	71,727	6.3	12,124	11.6
1996	64,377	-10.2	11,655	-3.9
1997	59,452	-7.7	11,181	-4.1
1998	53,654	-9.8	11,101	-0.7
1999	48,550	-9.5	10,336	-6.9
2000	43,910	-9.6	9,712	-6.0
2001	40,817	-7.0	9,017	-7.2
2002	47,612	16.6	10,581	17.3
2003	43,111	-9.5	9,789	-7.5
2004	47,089	9.2	10,846	10.8
2005	46,426	-1.4	10,463	-3.5
2006	46,598	0.4	9,869	-5.7
2007	45,963	-1.4	9,688	-1.8
2008	44,519	-3.1	9,300	-4.0

last decade. The rate of change has differed. From the peak of 71,727 arrests of boys in 1995, the number fell 38% to 44,519 in 2008. For girls, the decline was 23%, from 12,124 to 9,300. There is much speculation about reasons for these different rates of change: Are girls becoming “worse,” boys “better” (Lauritsen et al. 2009), or have

evolving views about gender affected processing decisions by victims and police (Feld 2009a, b; Steffensmeier and Schwartz 2009)?

Understanding Potential Gender Biases in Juvenile Justice

Many scholars have attempted to explain juvenile justice disparities based on sex. Most of the attention on girls has focused on what happens after juvenile court decisions are completed, at the level and type of treatment and services girls receive in comparison to boys after final disposition decisions. There are fewer efforts to understand how gender differences occur at the front end of juvenile justice in arrest, referral, and juvenile court intake processing. Such system disparities may reflect actual behavioral differences, although self-reported adolescent behavior shows more gender similarities (Canter 1982; Figueira-McDonough 1985; Brener et al. 1999; Lauritsen et al. 2009).

To initiate juvenile justice involvement, parents, school administrators, and police are likely to respond differently to boys and girls based on gender stereotypes (Chesney-Lind and Shelden 1998; Krause and McShane 1994). Police officers

Fig. 4.4 Gender trends in juvenile arrests for property index crimes, 1991–2008

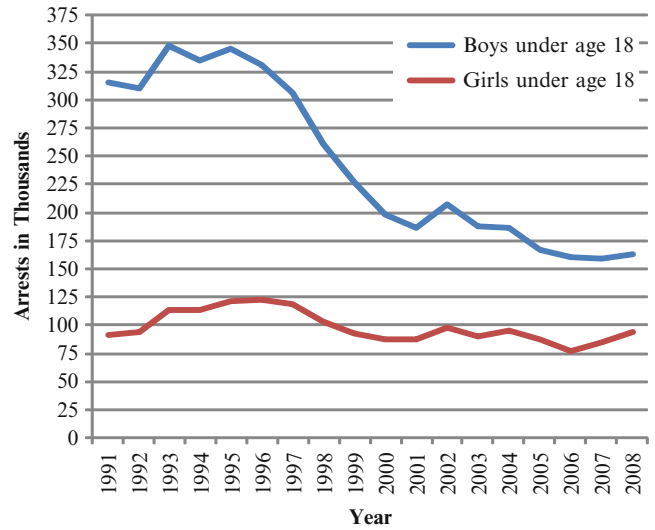


Table 4.5 Number and percent change in juvenile arrests for property index crimes by gender

Year	Boys under age 18		Girls under age 18	
	Number	% Change	Number	% Change
1991	315,954		91,614	
1992	310,303	-1.8	94,541	3.2
1993	348,045	12.2	113,583	20.1
1994	334,872	-3.8	113,718	0.1
1995	345,710	3.2	121,198	6.6
1996	330,753	-4.3	123,119	1.6
1997	305,862	-7.5	118,180	-4.0
1998	261,190	-14.6	102,810	-13.0
1999	226,267	-13.4	92,770	-9.8
2000	198,858	-12.1	87,043	-6.2
2001	186,688	-6.1	87,931	1.0
2002	207,104	10.9	97,344	10.7
2003	188,423	-9.0	89,707	-7.8
2004	186,768	-0.9	95,603	6.6
2005	167,587	-10.3	87,312	-8.7
2006	160,167	-4.4	77,291	-11.5
2007	159,495	-0.4	84,649	9.5
2008	163,158	2.3	93,491	10.4

Table 4.6 Juvenile arrest types by sex, 2008

	Arrests under age 18	
	Percent boys	Percent girls
Total offenses		
Murder and non-negligent manslaughter	93.3	6.7
Forcible rape	98.7	1.3
Robbery	90.3	9.7
Aggravated assault	76.9	23.1
Burglary	86.7	13.3
Larceny-theft	55.5	44.5
Motor vehicle theft	83.5	16.5
Arson	88.1	11.9
Violent index crime	82.7	17.3
Property index crime	63.6	36.4
Other assaults	65.9	34.1
Curfew and loitering law violations	40.1	59.9
Runaways	43.9	56.1

Violent crimes are offenses of murder, forcible rape, robbery, and aggravated assault

Property crimes are offenses of burglary, larceny-theft, motor vehicle theft, and arson

Adapted from Crime in the U.S., Table 33

appear to decide on arrest based on fewer criteria for females than males, and evoke different objectives based on the girl’s race (Visher 1983). Girls generally are viewed as vulnerable and more in need of protection than boys (McCluskey et al. 2003 :49), particularly related to sexuality (Chesney-Lind 1973; Schaffner 2008).

The decline in the gender gap in arrest rates may mean that the decisions of police officers changed in recent years, particularly for defining assault charges which cover a broad spectrum of behaviors (Blumstein 2000) and now include zero

tolerance of school disruptions (Feld 2009a, b). New mandatory arrest policies for domestic violence also have affected adolescent girls (Gaarder et al. 2004). Beyond different types of police responses to domestic violence, another reason is that girls' aggression often involves family members, whereas those who boys fight with tend not to be related (Hoyt and Scherer 1998; Bloom et al. 2002). Moreover, speculation exists that social norms about gender expectations have changed, making police, parents, and teachers less protective of girls and more willing to have them formally charged (Steffensmeier et al. 2005; Steffensmeier and Schwartz 2009).

In determining whether to process formally or divert youths from juvenile justice systems, gender again appears to play a role for intake officers. For girls but not boys, while compiling social history information officers inquired about mental health problems (Johansson and Kempf-Leonard 2009), child abuse (Acoca 1998), and noted in case files comments about girls' physical appearance, maturity, and sexuality (Rosenbaum and Chesney-Lind 1994).

Deciding which youth go to pre-hearing detention, or custody in either a secure or non-secure setting prior to formal disposition of the case, is another important stage of juvenile justice in which differential treatment by gender exists. One reason for this is the problem in allocation of space for the small number of girls in contrast to, and separately from, the many more boys. Another reason involves the JJDP Act mandate to deinstitutionalize status offenders and others without criminal charges. Immediately following the passage in 1974 there was a decline in custodial detention, including a disproportionate reduction for girls (Krisberg et al. 1987; Feld 1999, 2009a, b).

However, lobbying by the National Council of Juvenile and Family Court Judges led to the amendment in 1980 that continues to exist and enables judges to place status offending youth in secure custody if they violate a court order (Schwartz 1989). As a result, there is growing speculation that judges intentionally give status offenders orders they will fail or reclassify as law violations behavior that previously was defined

as a status offense. Given the higher level of representation of girls in status offense categories, it is likely that more girls are held in custody because of these adaptations by judges to the JJDP Act requirements (Weithorn 1988; Bishop and Frazier 1992; Chesney-Lind and Shelden 1998; Kempf-Leonard and Sample 2000; Feld 2009a, b). Two prominent cases on detention procedure, *NG v. Connecticut*, 382 F.3d225 (2nd Cir. 2004) and *Smook v. Minnehaha County Detention Center*, 457 F.3d 806 (8th Cir. 2006) involve strip searches prior to their detention for females accused of status offenses for whom there was no suspicion of contraband. In addition, conditions experienced while in detention and inequitable access to treatment and services is sometimes more problematic for girls (Chesney-Lind and Shelden 1998; Belknap and Cady 2008; Schaffner 2008).

The evidence on final adjudication and court disposition decisions in juvenile justice show mixed results based on gender. The national picture shows both that girls receive less restrictive interventions (Poe-Yamagata and Butts 1996) and that gender does not affect how cases are processed (Snyder and Sickmund 1995). In the past 20 years, juvenile court processing has become more formalized, with a higher proportion of cases adjudicated, and this has disproportionately affected girls (Tracy et al. 2009). When controls are added statistically to equate "similarly-situated" girls and boys, some studies show preferential treatment for girls (Johnson and Scheuble 1991; Kempf-Leonard and Johansson 2007), some findings show girls are disadvantaged (Bishop and Frazier 1992), but others report mostly gender neutral processing outcomes (Leiber 1994; Kempf-Leonard and Sample 2000).

Of course, small statistical differences may suggest important substantive concerns. For example, in my 2000 co-authored Missouri study, the same factors led to formal processing and out-of-home placement for girls and boys, with two exceptions. First, formal processing was more likely for girls but not for boys who had been abused or neglected. Second, the out-of-home placement was likely for girls with a single charge but number of charges made no

difference for boys. That child abuse and a single charge can make a difference in how girls but not boys are processed suggests some ways in which gender bias results in differential treatment in juvenile justice.

Within group differences also appear for juvenile court outcomes of girls. Girls from minority groups are described as culpable and threatening while similarly situated White girls are characterized as needing protection (Rosenbaum and Chesney-Lind 1994; Miller 1994; Bridges and Steen 1998; Steen et al. 2005). These types of “racialized gender expectations” (Miller 1994) have been documented for more than 100 years (Odem and Schlossman 1991; Knupfer 2001; Tanenhaus 2005).

Finally, at the concluding stages of juvenile justice where the number of girls is the fewest and the resources needed per youth are the most expensive, there are many concerns about access and quality of services. Corrections officials also frequently report a dislike working with girls (Baines and Alder 1996; Rasche 1999; Bond-Maupin et al. 2002; Gaarder et al. 2004). According to Schaffner (2008: 163), services for girls too often conveyed “outdated, static framings of gender, ignored the existence of transgender youth altogether, and encouraged girls to conform to archaic feminine identities that are not a part of their reality, let alone, ... in their best interests.”

To address the treatment and services, particularly in residential facilities but also in community settings, the JJDP Act was amended in 1992 to require states to assess the adequacy of their services for girls (Section 223 [a]8 of the JJDP Act, as modified in 1992). Another federal initiative provided challenge grant funding to states that developed female-specific treatment programs and services (Bownes and Albert 1996). Most projects funded under this initiative identified shortcomings but failed to offer much in the way of advancements (Community Research Associates 1997; Kempf-Leonard and Sample 2000; Bloom et al. 2002; MacDonald and Chesney-Lind 2001; Kempf-Leonard et al. 2005). Sadly, in a recent assessment of quality intervention, none of 62 promising programs for girls was identified as effective—even with some

reservations; only four programs were judged somewhat worthy, but none of those programs even remain in operation (Zahn et al. 2008).

Girls and boys are involved in juvenile justice at significantly different levels, and there is evidence to suggest that many of their experiences and treatment they receive throughout the process also vary. The gender focus in juvenile justice now targets girls, trying to understand their underrepresentation in most offense categories, their higher appearance among status offenders, and their increasing presence in arrest and other stages in recent years. Whether girls are worse or better off than boys depends on the emphasis placed on the juvenile justice mission. In a punitive system, any group with less restrictive intervention is viewed as getting preferential, lenient treatment. However, generally fewer and less formal interventions with girls can be seen as problematic in terms of traditional objectives that the juvenile justice system should meet the best interests of the child because it suggests that officials are not giving girls the same consideration to receive services as they are giving boys. The key to assessing disparity is making sure that comparisons are based on similarly situated youths who differ only by sex.

Implications and Recommendations

This chapter has examined how race and sex are distributed across important juvenile justice processing decisions and explanations for why subgroups do not appear at the same levels as they exist in the adolescent population. In understanding how disparities occur, options include both differences in behavior by youths and in treatment by officials. The answers are not straightforward, and probably include some differences from both sources. Many surveys of self-reported behaviors show more similarities than differences, however, so at least some of the responsibilities for subgroup variation must fall to differential processing by juvenile justice officials. Our understanding of differential treatment is hampered by a few obstacles that might be

overcome with two feasible changes to juvenile justice systems.

First, we should reconsider the categories used to distinguish race and sex. The way in which subgroups are defined plays a critical role in understanding differential treatment. In juvenile justice, official records of race are based on broad categories that distinguish only White, Black, American Indian/Alaskan Native, and Asian/Pacific Islander. Certainly the large White majority includes considerable heterogeneity of youths. Additionally, the fastest growing Latino ethnic groups often are not separately identified. No considerations about cultural heritage or values that may affect behavior can be discerned from such crude subgroups. Minority status is based on statistical representation in the general population of adolescents. Proportionality is determined by comparing the presence of a group in juvenile justice systems to that in the general population.

In a similar way, comparisons of girls and boys are based solely on two biological categories of sex. Sex is not the same as gender, which is socially constructed and varies within the population as well as by time and location, not sexuality. It is gender and perceptions about sexuality that drive a lot of the decision making in juvenile justice, and both merit more understanding. The importance of gender cannot be made more clear, “every aspect of adolescence is imbued with the implications of gender: youth development, physical and mental health care; understanding sexualities; mentoring; relating to family and neighbors; education; and work” (Schaffner 2008: 156). Gender expectations drive perceptions of boys and girls, and every adult with whom they interact. The evidence is compelling that to understand delinquency and official responses to it, we must move beyond seeing gender simply as dichotomous (Heimer and DeCoster 1999; Miller and Mullins 2009).

Independent assessment of race and sex also are not as meaningful as examining the subgroups defined by considering them together. Gender norms and values can vary by race and ethnicity. As such, behaviors and experiences need to be evaluated within the demographic categories that make a difference in youths’ lives. These sub-

groups need to be able to be distinguished in routine reporting of juvenile justice agencies. Officials who work with youths also need to receive routine training on the ways in which opportunities are unevenly distributed across these youths in their communities, and how interventions available within juvenile justice can or cannot improve their lives.

Second, juvenile justice policies must be revised to make the mission of the legal process explicit. In showing how juvenile justice officials tailor different legal objectives to justify decisions that result in race or gender disparity, I do not mean to imply that these professionals act with malice or even intent to treat differently. Most officials perceive themselves as the well-intentioned Childsavers (Bernard 1992; Platt 1977) of today. It is the subjectivity of juvenile justice processing that enables bias to occur in subtle ways, such as different word choices, emphasis or tone used to describe minority youths or girls as more in need of help or more worthy of blame (Bridges and Steen 1998; Inderbitzin 2005; Steen et al. 2005). Instead of a subjective, informal process, standardized procedures should outline the best practices for deciding on interventions that are tailored to assessment criteria which are relevant and routinely recorded for youths.

These procedures should be based on statistically validated assessment and classification instruments, including determinations of how well they work for distinct demographic subgroups of youths. Because there may be unique juvenile cases that do not fit general patterns, it is important that some element of exception to routine processing exist to handle them. When many exceptions to routine exist, a new pattern suggests that the tools and the criteria on which they are based should be re-assessed.

There are many advantages to be gained in juvenile justice systems that adapt standardized assessment and classification tools for important decision stages (e.g., Gottfredson and Gottfredson 1980). The discretionary “going rates” that result in arbitrary and capricious outcomes for youths no longer exist. This is advantageous not only for juveniles who otherwise feel treated unfairly, but also for officials whose judgment is not subjective

and open to criticism. New employees also can become skilled more quickly. The policy rather than the administrator is held accountable.

With these two changes to juvenile justice systems, American youths of every gender, color, creed and heritage could experience a law that is just.

Author Note

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Major Principles in a Minor Context: Forensic Practices Involving Adolescents

5

Sandra B. McPherson

Introduction

On March 12, 2008, Johanna Orozco appeared before the House and Senate of the Ohio Legislature. The teenage girl was lobbying to get a bill passed that would allow juveniles in abusive relationships to obtain court ordered protection, an option that has long existed for adults. Johanna's face was seriously disfigured when she was shot at point blank range by the former boyfriend who had raped her and against whom she was the listed witness in his upcoming criminal trial. She spoke also for a deceased 17-year-old Toledo teen who did not survive her attacker's assault. Orozco had hoped that the damage done to her face, even after extensive reconstruction, would convince legislators of the importance of the bill (Dissell 2008). On December 12, 2008, the bill died in the Senate after passing the House. Hopes of resurrecting it remain.

On February 17, 2009, the Cleveland Plain Dealer reported that, "Two former judges in Pennsylvania have admitted to receiving more than \$2.6 million in payoffs from companies that run private prisons for sending them minors for detention or disciplinary camps" (Pa. Judges 2009).

The above news stories illustrate in differing ways the reluctance of society to accord adoles-

cents with either the dignity afforded adults or the protection given to children. Such reports illustrate the ambivalent status occupied by adolescents in the society. Furthermore, outcomes of judicial decision making can be biased against the young offender. As early as 1981, Costello and Worthington detailed ongoing strategies by various states and groups that had the effect of punishing status offenders with less leniency than adult offenders might access, specifically referencing the tendency to place such juveniles in secure facilities rather than utilizing lesser levels, such as remand to their parents and assignment to intervention programs.

Ethical principles in psychiatry and psychology emphasize the dignity and worth of the individual and the duty of the professionals to respect and support persons who come to their attention. However, given that many in contemporary society view adolescence with ambivalence, sometimes even with fear and envy (see for example, King et al. 2006, for a psychoanalytic perspective), the general importance of the caretaking role can come to be diminished (Beck et al. 1985; Drysdale and Rye 2007). When the impact of that ambivalence is added into the ambiguities that exist in the forensic role in general, significant potentials exist for ongoing anomalies (Zerby and Thomas 2006). Furthermore, the legal context, with reference to adolescents, involves inconsistencies that also come into play. Thus, at 18, there is eligibility for admission to the Armed Services and there is vulnerability to capital punishment, but it is illegal to buy and consume

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alcohol until the individual reaches the age of 21. Adolescents are old enough to drive, though with varying constraints depending on the jurisdiction. They are able to marry with, and in some cases without, permission (but somewhat after they are biologically able to reproduce and are likely to be involved in some degree of sexual activity). They are variably legally constrained, depending on the issue, as to the exercise of decision making related to reproductive function, but it is generally agreed that there is no effective external control over their personal sexual decision making. In the criminal context, they have vulnerability to what are known as status offenses, in which they are held accountable for acts that would not be charged at the adult level.

Other distinctions pertain. Juveniles may or may not be considered competent, depending on whether it is to make personal decisions or to be compelled to stand trial. While exempted from capital punishment, as young as 14 they can be bound over to stand trial as adults and serve a long-term sentence, first in a youth facility and subsequently for many years in an adult prison.¹ They can give assent to certain medical or psychological procedures, but not consent. In a similar fashion, adolescents are entitled to confidentiality where privileged communication pertains, but that right can be waived by parents or guardians.

Forensic practice has as its defined goal to respond to some question raised within the context of the legal system and to provide some type of objective input, rather than functioning in the usual clinical role to care, protect, or respond to clients and their individual needs per se. The particularities of forensic practice have led Ratner (2002) to characterize the forensic psychiatrist as a “double agent.” That appellation reflects the fact that the forensic practitioner often has a primary relationship to third parties rather than to a patient.

¹In a bizarre exception to the usual course of events, a juvenile sexual offender now age 37 has been in juvenile custody for 20 years. The California code allows individuals to be held under a category of a mental disorder that impairs control over dangerous behavior—but does not allow shift to adult facilities (McKinley 2009).

An additional confound is created out of the history of juvenile justice. Its development from a more paternalistic approach, which emphasized the welfare of the child and the difference of children from adults to the current more formal system, courtesy *In re Gault* (1967), has led to an emphasis on the rights of children and their access to due process. That reform, however, has been accompanied by an emphasis on holding children accountable and applying a more punishment oriented set of consequences (Grisso 1996). In the meantime, particularly as US society moved in conservative directions, current research has not supported either a purely welfare-oriented approach to juvenile justice, nor a more adult model with an emphasis on retribution as having a beneficial impact in terms of reduced recidivism (Denning and Homel 2008; Macleod 2006; Schwartz 2009; Soler et al. 2009).

In other words, the legal position of juveniles at the present time is one that itself shows an ongoing evolution and contains its own ambiguities. Within that context, such concepts as the standard of proof may be higher for adults than for children and the application of legal principles is not always consistent, even when based on articulated case law. For example, it has been found that judges weigh heavily any evidence brought to their attention as to risk levels or dangerousness, and any evidence of the presence of sophistication or maturity, and weigh much less, if at all, the notions of treatment amenability in making decisions to move juveniles to the adult system (Brannen et al. 2006). The *Kent* (1966) standards for juvenile transfer are thus not being followed in judicial functioning and often to the detriment of the juvenile. The ethical implication for forensic practitioners involves the importance of understanding this judicial potential and making some effort not only to document carefully matters of cognitive competence and risk assessment, but also to include a knowledge base of interventions, along with empirically founded recommendations relative to the use of available resources in an instant case. In addition, when risk assessment is required, it could be viewed as an ethical obligation to provide judges with an understanding of the insecurities associated with any conclusions (Borum 2006; Koocher 2006).

These legal and ethical problems that stem from the special status of adolescents and the evolution of standards and procedures in juvenile justice are even more complex when issues of mental illness also pertain (Grisso 2004). Diagnosis is more difficult due to developmental factors and interferences in cognition markedly impact the juvenile's situation when charged with offenses against the law. Matters of risk as well as capacity are complex (Farrar 2007; Redlich 2007). In the meantime, availability and use of treatment facilities is also an issue in an arena where more punitive than restorative approaches to justice pertain (Macleod 2006).

Ambivalence is a breeding ground for inconsistency and sometimes for hidden agendas to play out in ways in which society fashions its institutions. Such has certainly been the case with racism in the society, which is less and less overt, but which remains in some very unexpected and covert places.² Thus, ethical practice involves dealing with system inequities and juvenile limitations in ways that do not offend against principled practice. A further issue that raises some potential for controversy involves the degree to which the forensic practitioner may have some ethical obligation to address those inequities (O'Shaughnessy and Andrade 2008).

In the same way, some of the laws which are passed and which require forensic psychological work as part of implementation are highly questionable as to their real impacts, at times leading to victimization of an already harmed population. The New York Family Court Act authorized pre-trial detention of juveniles if they posed a serious risk. Parents of a number of juveniles as a class raised a *habeas corpus* and 14th Amendment due process issue, which led to first the Federal District Court striking down the statute, and then the Court

of Appeals sustaining the federal district. The state appealed to the US Supreme Court, which reversed the lower courts, the reasoning being it was fundamental fairness that protected both juveniles and society and that the existing appeals and *habeas corpus* options are sufficient to address any particular case concerns; in effect, this decision treated juveniles as a special class making them particularly vulnerable to pretrial detention over what would be the case with adult criminals (*Schall v. Martin* 1984).

It is a fundamental concept that justice needs to be fairly and impartially applied, but it is equally fundamental that justice may be dispensed in unfair fashion and that specifically in the USA in both adult and juvenile settings, the minorities and the poor are at a disadvantage (Bishop 2005; Bray et al. 2006; Pewewardy 2003). The inequities of the application of justice in the adult system led among other things to the ending of the death penalty for at least a short period in the USA, referencing *Furman v. Georgia* (1972).³ That same kind of patterning, however, is also found in studies of juvenile delinquency. Bishop (2005) pointed out that the juvenile justice system has allowed substantial documentation of disparities of procedure when it comes to white versus minority youth. Minorities get sent to the standard and nontreatment-oriented state facilities, whereas whites have a much higher potential for referral to specialized treatment facilities. Furthermore, simply at the point of entry, minorities are overrepresented in comparison to whites in the population. Some would maintain that such overrepresentation is due to some intrinsic potential for law breaking that defines the groups, but there is no sound basis for accepting that prejudice and there is good evidence that individuals in positions of more power and substance in the society can obtain outcomes for their children that are more desirable.

The ethical issue that can be raised in forensic work goes to the obligation of the practitioner to

²The recent handling by police of a Harvard University professor who was apprehended in his home on the mistaken basis that he was breaking and entering when he forgot his keys became a national issue with dispute around whether the situation reflected profiling or the professor inappropriately refusing the officer's demand to leave his house after providing his identification (Goodenough 2009).

³The remedy of required mitigation hearings did not, however, reduce the racial and socioeconomic bias in capital justice (Amnesty International 2003; Lybnch and Haney 2000).

make available the same level of service to the high status and low status children who come to attention. As already indicated above, another issue, and one which raises a lot of complexities, is the degree to which the forensic practitioner may have some ethical obligation to address inequities in the system. Is it sufficient to serve equally well all persons, or is there some further requirement to intervene whenever possible when outcomes blatantly affront the fairness doctrine? Consider the following:

A white male teen from an upper income family attempted and almost succeeded in familial murder. His family immediately obtained experienced counsel and ultimately was able to protect him from any direct contact with the juvenile justice system. A negotiated outcome sent the youngster into a private out-of-state treatment facility as recommended by mental health professionals. Not long after, a second case involved a poor African American teen who killed the father who had abused his mother, restricted him from contact with her, and abused him throughout his growing up years. Pictures had been taken of that abuse which were found and presented to the Court. Nonetheless, despite recommendations for treatment, this youngster was sent into a state youth facility following an in-court lecture that emphasized his bad character and need for punishment.

Implications of Ethics Code Content

While there is a substantial and developing literature, including empirical study of matters relevant to ethical forensic practice with juveniles, the codes themselves have little focus on this group. In Fisher's (2003) review of the American Psychological Association (APA-PhD) ethics, she chooses to include adolescents with children and families and to then reference all code sections which might be significant for that grouping. However, the psychological code consists of two sections: the aspirational and general principles in the ethics code (beneficence and non-maleficence, fidelity and responsibility, integrity, justice, and respect for people's rights and dignity) and the

enforceable standards (American Psychological Association 2002). The first grouping, along with the Preamble, set forth the goals of ethical practice, all of which have relevance for work with adolescents. The Preamble includes direct reference to respect for and protection of civil and human rights. The mandate to do good and to do no harm requires that psychologists act to deal with and to reduce any conflicts of interest that are intrinsic in any situation, where they are called upon to play a role. Thus, if the goals of the institution or legal system involve harm to the individuals served by forensic psychologists, some concern and appropriate resolution is expected by the practitioner that will in fact minimize any necessary harm that carrying out the assignment requires. Furthermore, the psychologist has the duty to determine whether carrying out the assignment is itself ethically supportable.

Fidelity and responsibility go to the establishment of trust, which is often difficult and sometimes impossible in some forensic situations, generally and specifically with respect to adolescents. Adolescents in the juvenile justice system may have within themselves and by function of their experience, barriers to involving in a trust relationship with adults who represent to them the establishment. The expectation of integrity is that psychologists will function on the basis of accuracy and truthfulness and will meet the necessary scientific requirements of their work. However, with respect to the principle of justice, such areas are referenced as access by all to benefits of the system and to benefits of psychological applications, and the freedom from being victimized by unjust practices or limitations of expertise. Finally, the respect for people's rights and dignity specifically references the importance of securing privacy, confidentiality, and self-determination to all groups and mentions specifically age as one of the definers. It is noted that psychologists will neither knowingly participate in nor condone activity of others whose biases negatively impact the rights and dignity of a specified few.

In analyzing these principles for the required "ethical awareness," Fisher (2003) took the position that psychologists need to be able to identify the interests of any with whom they work, and

know when a situation “threatens the welfare of individuals...” (p. 240). Additionally, she noted that the psychologist has obligations to identify and correct in areas when it comes to lack of trust, and is responsible to understand “group vulnerabilities that can lead to exploitation” and implement appropriate safeguards. However, these principles are considered unenforceable and cannot be cited as a basis for ethical lapse that leads to sanctions.

A review of the content of the enforceable standards, which follow the aspirational sections, indicated that while there is no specific section on practice with adolescents, there are multiple places where standards apply. Psychologists must be competent to work with adolescents if they are providing services to same. They must be able to cooperate with other professionals, including lawyers, social workers, and other representatives of institutions that may be involved in juvenile cases. It is also expected that psychologists recognize and take appropriate steps to deal with conflicts between the institutions they serve and the ethical standards to which they are pledged (but there is no requirement for a resolution in which ethical standards prevail over institutional policy). They have a mandate to implement informed consent, which includes the responsibility of providing information about assessment or intervention procedures, in language the adolescent can understand. Since adolescents for the most part do not have the legal status to consent, psychologists also may be expected to obtain assent, which is based on an adolescent’s understanding and rational agreement to some proposed procedure.⁴ Obviously, assessment procedures used should be normed and appropriately applied to adolescents and any representations made to the legal system must rest on scientific and professional foundations that can pass peer scrutiny.

⁴What is not addressed is the potential dilemma when the adolescent understands but does not agree with a course of action and yet a decision is made by an adult or institution with the power to do so that requires compliance by the youth.

A review of the ethics followed by psychiatrists allows for some contrasts and considerations. The American Psychiatric Association (APA-MD) beginning in 1973 has periodically provided a document entitled *Principles of Medical Ethics with Annotations Specifically Applicable to Psychiatry*. The 2009 edition is based on the AMA *Medical Ethics Principles* published as of 2001.⁵ The psychiatric and medical documents referenced differ from the psychological association productions in terms of brevity and generality. However, in terms of content, there is essential compatibility. As with the psychological association documents, the principles of medicine and the annotations specific to psychiatry make little or no mention of adolescents and only reference minors in a couple of places.

Referencing the basic principles of medical ethics, there is a preamble that states the physician has, “...responsibility to patients first and foremost, as well as to society, to other health professionals, and to self.” The rest of the document is unequivocally based upon the assumption that the physician functions primarily to diagnose and treat patients. The actual principles are brief and reflect the need for competency, “...compassion, and respect for human dignity and rights.” It is required that professional standards be upheld, that there be respect for the law, but also, “... a responsibility to seek changes in those requirements which are contrary to the best interest of the patient.” Respect for rights includes the importance of maintaining confidentiality, but there is acknowledgment that the law may set some limits in that regard. The importance and necessity of study and continued education are noted. The physician is viewed as free to provide care at his or her own choice, “... except in emergencies ...” Section 7 requires that the physician, “... recognize a responsibility to participate in activities contributing to the improvement of the community and the betterment of public health,” and it is stated that the physician support, “... access to medical care for all people.” In the Annotations

⁵The AMA’s first ethics document was published in 1957, revised in 1980, and again in 2001.

section, a number of points are made that further define the way in which these standards are applied in the mental health specialty. Respect for human dignity and rights is expected to include avoidance of any exploitation, including that which may occur as a function of the emotional relationship that can occur when providing psychotherapy. In one of the two specific mentions of age, the psychiatrist is enjoined to "... not be a party to any type of policy that excludes, segregates, or demeans the dignity of any patient ...". Group identifications mentioned in this section include young age. Under Section 2, the point is made that the psychiatrist must practice within areas of professional competence, which would be applicable to providing services to adolescents. Section 3 raises an interesting issue in which it is stated that while a psychiatrist who behaves illegally may be found to have violated the ethics of his or her profession, in fact, if the illegal activity is itself not unethical, then the finding of a violation of law would not necessarily lead to a finding of ethical violation. Specifically, it is stated, "Physicians lose no right of citizenship on entry into the profession of medicine." That statement references the "right to protest social injustices." This provision specifically recognized the importance of acting to change laws which have non-beneficial impacts upon the population being served and has direct relevance for some of the dilemmas which can present in forensic psychiatry generally and specifically in the provision of services to adolescents.

In a second reference to minors, the seventh point under Section 4 cautions that the psychiatrist must use "careful judgment" in deciding to involve "parents or guardian in the treatment of a minor" and references insuring that the minor has proper access to confidentiality. Most of the rest of the document is devoted to the procedures that exist for addressing ethical questions and issues and the necessary hearings and investigations that might be undertaken in the case of an ethical charge. However, there is an Addendum I entitled *Guidelines for Ethical Practice in Organized Settings*. Guidelines, of course, are not standards and are not enforceable as such. Consistently, "This Addendum ... is intended to clarify existing

ethical standards ...". This document recognizes that the psychiatrist may find him or herself in a role which conflicts with the interest to an organization to which duty is owed. The basic principle that is presented is that in the obligation to reduce such conflicts when they occur, the focus has to be upon the needs of the patient.

Finally, it can be noted that at the end of this document there is an index. However, that index references nothing in the way of forensic psychiatry per se and outside of the two items already mentioned, references nothing in the way of adolescents or children. Of significant importance, however, is that in many respects the document supports more firmly and directly the importance of dealing with social issues than does the psychological ethics. It specifically disallows any involvement in torture procedures without any equivocation, and of course, it does not allow participation in execution, which is no longer relevant in the case of practice with minors.

It is thus clear that in both psychiatry and psychology, ethical standards and guidelines have developed in the context of general practice and primarily reflect the issues that surface in work with adults. The application of these principles to practice involving children and adolescents essentially reflects extensions of work with adults. In some ways, an apt metaphor might reference medieval artistic style which pictured children as little adults compared to later drawings of children that reflect more accurately the different ratios characteristic for child and youth developmental phases. In a similar fashion, while the position of children in the legal system has undergone a number of transformations, there has been no consistent foundation based on a realistic and empirically defensible and developmental perspective.⁶ Not surprisingly, the ethical issues that pertain in the work with children are rendered complex, and when added to the special circumstances of forensic practice, those issues become

⁶One exception that can be cited is *Roper v. Simmons* (2005) in which the American Psychological Association brief that was referenced in the decision emphasized developmental differences specifically noting neurological substrates to behavior.

particularly challenging. Some particularly troublesome areas illustrate the complexities.

As is well known, psychiatric practice involves the use of medication as an intervention. The practitioner has ethical obligations to obtain informed consent from individuals when proposing a specific course of medical treatment. However, juveniles may have substantial barriers to comprehension at necessary levels due to developmental factors as well as ability or capacity factors. They also often present with special attitudinal and personality issues, not the least of which may be the already referenced trust issue with adults. Furthermore, the impact of chemical interventions is less predictable with developing organisms and has a limited empirical base compared to studies available on adults. Therefore, a fairly sophisticated appreciation of probability statements would be needed for an individual to give informed consent. The capacity of adults to make well-founded personal decisions, where probabilities are part of the equation has been demonstrated to be insecure and often significantly flawed (Mlodinow 2008). In addition, practice with adolescents can move to the level of consideration of off-label prescribing which brings in ethical questions due to unknowns as to risks and benefits (the research is primarily reflective of the adult population). For example, the problems that emerged involving selective serotonin reuptake inhibitor (SSRI) antidepressants and juvenile suicide are instructive regarding the particular hazards that can pertain (Dell et al. 2008).

Another area of difficult practice applications involves dealing with violence. Violence in the more general sense has also been addressed from a forensic/treatment perspective (O'Shaughnessy and Andrade 2008). Although forensic and treatment roles need to be kept separate in serving the juvenile population as well as with respect to adults (Greenberg and Shuman 1997), forensic reportage frequently includes the expectation that specific recommendations will be made for treatment purposes, particularly in cases of sexual offending or other violence (see below). It is also not uncommon that treating doctors may be called upon to provide the courts with opinions as to response to treatment with implications for future

status of the young person. When such testimony is provided, the treating professional may be impermissibly moving into a forensic role. It is an ethical obligation to be aware as to why opinions may be sought and what the likely uses may be once they are rendered. (To make things even more complex, it is perhaps important to realize that the forensic/treatment dichotomy is not without its critics. Heltzel (2007) provided a rationale for not making hard and fast distinctions in this area; Greenberg and Shuman (2007) provided rebuttal. None of these authors considered the additional problems that may pertain in the case of forensic work with adolescents).

Assessment Issues

Developmental issues importantly impact responding to psychological assessment instruments. Adolescents in particular are known to give responses that in an adult context could indicate significant psychopathology, but are known to be part of the immature phase and not predictive of adult status, either as to diagnostic category or from a broader perspective of behavior and adjustment. Even the application of appropriately normed tools runs into some difficulty since the population is made up of members in the process of change and therefore that which is normative may or may not be predictive for ultimate status (Butcher and Pope 2006; Friedrich 2006; Koocher 2006; Medoff and Kinscherff 2006).

When the assessment focus involves neuropsychological evaluation, issues of both normative insecurities and forensic impacts present. Of particular importance is the ethical obligation to communicate accurately to the court system so that the use made of the information is consistent with its known value and meaning. There is particular importance in this area that derives from the role played in brain-behavior relationships that reflect neurological immaturities (Wills and Sweet 2006; Wynkoop 2008).

Up until the passage of the Sexual Offender Registration and Notification Act of 2006 (SORNA: Title I of the Adam Walsh Child Protection and Safety Act), evaluations of persons

accused of sexual crimes included estimates of risk. Significant question has been and continues to be raised about the capacity of psychologists to make statements that have life-affecting outcomes on the basis of the current level of offender risk research and instrumentation (Caldwell et al. 2008). Post SORNA, which has also been shown not to predict future recidivism, general or sexual (Caldwell et al. 2008), it is clear that adolescents are specifically being victimized by this particular legislation. Their capacity to respond to treatment is not given appropriate consideration and actually may be negatively impacted due to the extended consequences involved which cannot be ameliorated by anything the adolescent accomplishes (Douglas et al. 2008; McPherson et al. 2008; Politzer 2009).

Ethical Issues in the Conduct of Research

In recent years, there has been a significant amount of inquiry into and even some empirical work in the area of ethics and research with adolescents. Although forensic work with adolescents does not typically involve research, in some situations such can be the case. Clearly, some of the ethical concerns that pertain in this area mirror the ethical issues found in direct forensic practice. To some degree, adolescents can be treated as a special case of vulnerable populations. However, there are both similarities and differences in that regard. There are also some interesting national or cultural differences that can pertain. Thus, the view of adolescents as a group significantly varies between the USA and the UK and is also reflected in the legal constraints that exist. Bogolub and Thomas (2005), in considering issues of the need for parental consent for research with foster children, developed the thesis that in the UK children were viewed as more independent and competent than minors are considered to be in the USA, where a fiduciary relationship between parents and children is primary and the necessity for both parents' consent is the model. That latter perspective has been incorporated into statutory and regulatory requirements. In their work, the difficulty of having to obtain birth

parents' consent can lead to an inability to do the research since in the case of foster children, unless agency or guardian consent is permitted, there may be no reasonable access to birth parents and/or these persons may not themselves be able to provide an informed and best interest-based response to a request for participation of the children.

Some empirical findings in regard to capacity to consent exist with one study identifying that children from the age of nine onward, presuming no developmental disabilities, are capable of evaluating potential harm and benefit and can understand the right to withdraw (Bruzese and Fisher 2003). Nonetheless, questions remain as to whether adolescents are capable of projecting into the future from their limited personal experiences and therefore would be capable of giving consent as to the uses that will be made of responses they may provide, particularly in qualitative research (Denzin and Lincoln 2003; Fisher 2004; Nelson and Quintana 2005). Thus, from both a legal and normative viewpoint, the complexity of how to ethically proceed presents.

A special concern in regard to providing consent goes to the issue of payment as a way to motivate participation. Significant discourse and general disapproval of payment pegged to degree of risk in a procedure has been raised (Fernhoff 2002; Iltis et al. 2008). In general, the suggestion is made that payment to children or parents should reflect such matters as the scientific or social value of the study, the validity issues, and a fairness aspect that would include payment for whatever degree of participation occurs prior to a decision to withdraw. Some guidelines exist from the American Academy of Pediatrics and from the Institute of Medicine panel recommendations. While there is general concern about payments for risk levels, only 43 or 53.1% of institutions surveyed by the Institute of Medicine had policies in this area and not all disapproved the connection (Iltis et al. 2008). Drotar (2008) noted a continuing clear need for studies in the area of parental consent and child assent, and into the decision-making process that would facilitate a truly informed participation in that regard.

Another area of particular concern in research generally, but in the specific case of adolescence,

goes to whether participants should be informed as to the results of assessments conducted in the course of research where these results contain negative information that would affect personal decision making. Perhaps one of the more difficult areas involves genetics research where outcomes influence probabilities of future potentials rather than identification of current condition (Geller 2005).

Finally, it is clearly in the interest of society to conduct research into the status of children in very special groups such as runaway adolescents and adolescents who come to the attention of the court. Many of the children may only be willing to participate in research with the understanding that their parents will not be contacted if indeed it would be possible to find them (Meade and Slesnick 2002). These authors developed a rationale for self-consent in selected circumstances since the runaway population does not even have a surrogate parent such as is envisioned in the federal legislation in the USA that requires written consent (see Moolchan and Mermelstein (2002) for a discussion of Institutional Review Board waiver capacity when the welfare of the child is threatened by accessing the birth parent).

Ethical theories that emphasize the basis and goals of ethical decision making are relevant to the conduct of research. Such theories include some varying perspectives. Dutiful ethics implies an absolute value; discursive ethics approaches by asserting that a dialog between relevant parties leads to ethical procedure; varieties of utilitarian ethics involve using the consequences of what is done as the basis for ethical decision making (Helgeland 2005). Applications of such theoretical foundations can lead to varying conclusions. For example, as has already been indicated, in the UK there is a view of children as having more independence than is traditionally the case in the USA. Not dissimilarly, Helgeland (2005), reflecting a Norwegian viewpoint, looked at the area of marginal groups, including children, and suggested that the patriarchal view when considered from other than absolutist terms leads to a kind of protectionism that is not helpful to the so-called weak groups. In effect, the empowerment of adolescents, by involving them in meaningful ways in the decision-making

process, may be an important ethical posture in further developing guidelines for research (Beh and Pietsch 2004).

Emergent Models of Ethical Practice

In order to address the myriad issues that present in this area, models have been developed to assist practitioners in ethical analysis of emergent situations. An elaborate set of recommendations that looked sequentially at confidentiality, informed consent, and self-determination as applied to various juvenile settings was developed by Strom-Gottfried (2008). A somewhat more concise approach has been provided by Koocher (2006) whose model addresses the ethical issues involved in forensic work with adolescents. His three-part process includes a preparation phase, a phase of actual conduct of the evaluation, and an interpretation phase at which point the data developed is applied to the legal context. Koocher then assigned different ethical considerations to the phases of the process if the forensic practitioner is to adequately deal with the full range of such concerns. Thus, the preparatory phase would importantly involve informed consent/assent in which definition of roles and an explanation of the specifics of the practitioner's role, the limits to confidentiality, and the rights of the youth in terms of participation are provided. The adolescent should be made aware of the use to which the data will be put and who will control the outcome. Ethical issues that take place during the actual conduct of the evaluation pertain to the selection of instruments that are appropriate to the population, as well as involving the competence of the practitioner to work with this population. Finally, interpretation of the data requires an understanding of the developmental aspects that pertain to psychological test responding, including unevenness, the meaning of findings, the findings of research with respect to longer-range prediction, and the like. In this model, information provided in written reports as well as in testimony needs to clearly indicate limits of confidence that pertain based on the level of empirical findings.

As already indicated, additional ethical issues emerge when cross-cultural factors come into play

and such factors need to be part of any application models. The particular problems of bias, both individual and systemic, are well documented, particularly with reference to the African-American population (see, for example, Barratt et al. 2007; Oral 2009).

Looking at a different culture, Velasquez et al. (2006) addressed in some detail the specific problems that can present in the assessment of Latino youngsters, the ways in which the teen and/or parents need to be approached in an evaluative context, and the factors that will strengthen validity in applying evaluative techniques to this population.

A Remaining Ethical Issue

Although an anathema to some forensic practitioners (but specifically referenced in the APA-MD annotated ethics), current events have importantly illustrated that there can be obligations for advocacy of change and for an individual practitioner's responsibility to set limits on the degree to which he or she will serve the existing systems. Over an extended period of time, the APA-PhD was itself severely stressed by competing views as to whether psychologists should be involved in any roles *vis-a-vis* interrogations of detainees in the US controlled settings, especially referencing those considered coercive and/or torturous. If it was declared unethical to participate, there would be the potential that individual psychologists who decided to follow orders or who on their own continued participation would then be subject to ethical sanctions by APA-PhD. To further complicate matters, the Psychological Association diverged from the Medical Association in not taking a firm and unequivocal stance prohibiting such involvement when the issue first presented.⁷

⁷Supportive of the concerns raised by this issue is that a review conducted by this writer of the APA Presidential Task Force on Psychological Ethics and National Security (PENS) memoranda revealed rationalizations that are not inconsistent with the position that the means justifies the ends, as well as reflecting a protective stance toward APA that itself illustrates the ethical dilemma of serving more than one master.

The above raises the question: At what point does the "double agent" status of forensics become insupportable from a moral and ethical standpoint? And it underlines the question of what obligations may exist in serving systems that harm human beings, referencing the need for awareness and activity when legal process and custodial practices cause damage to juveniles. One way to approach answers to such a question is to look at what the hazard points may be for crossing ethical boundaries. In considering juvenile justice, it is necessary to have an ongoing awareness that adolescents are a vulnerable population, limited as to constitutional rights as well as personal cognitive potentials, and often manifesting preexisting social emotional alienation from adult society. It is argued that the usual cautions that have been created to protect the adult population must be augmented by the kinds of specific care that are also necessary when dealing with other special needs subgroups of the population. It is also asserted that particularly in this arena, there may be times when the forensic practitioner may find him or herself in the unenviable position of having to move in directions of advocacy for system change or withdrawal of service as the only ethical options.

Conclusion

A serious confound has developed over the years. The law has changed to enhance basic legal rights for the juvenile and in effect the young defendant may exercise many of the rights of adults. Whether this status is advantageous, however, is not at all clear (Grisso and Schwartz 2000). For example, research has looked at whether having a right to a jury, which has been proposed, is likely to enhance the fairness of the juvenile system; however, results have not clearly supported same (Feld 1993; Mahoney 1985). Research into decision making has documented that the juvenile's capacities for managing at what may be essentially adult levels vary dependent on situational and individual factors. Further, while there is support for involvement and decision-making responsibility as an enhancer of status and potential positive outcomes in many situations, in the

case of the juvenile justice system, that increased status is not infrequently accompanied by increasing application of retributive justice approaches and long-term punitive outcomes that last well into the youth's maturity if not forever.

Forensic practice involving adolescents takes place in an arena where the knowledge base is shifting, the legal constraints vary and change, and the nature of the population being served includes ongoing alterations of functional capacity along with vulnerability to prejudice and systematic bias from multiple social sources. If ethical practice is to be other than an oxymoron, the requisite degree of vigilance is high indeed.

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Juveniles and Criminal Responsibility Evaluations

6

Charles L. Scott and Matthew Soulier

Forensic Case Vignette

Joe is a 17-year old-male who has been charged with the attempted murder of three police officers. Because of the seriousness of his offense, Joe has been transferred to adult court. Joe has no prior arrest history or any legal involvement in the juvenile or adult legal system. Although Joe was described as “outgoing and friendly” during his elementary school years, during his high school years he was noted to become extremely withdrawn and aloof. He stopped socializing with others and by the time he was age 16, he was failing all of his classes.

Six months prior to the crime, Joe started exhibiting bizarre behavior in his home. For example, his parents described that he was spending hours on the computer investigating stories about alien invaders from space and would frequently yell out the word “Pogil Pilog Pogil Pilog” for no apparent reason. When his mother asked him why he was chanting this phrase, he told her that he had to communicate in these “secret words” so that the “space invaders” wouldn’t know “his plans to fight them.” His parents became increasingly concerned and forced

him to go to an outpatient psychiatric evaluation. During the evaluation, Joe communicated marked delusional beliefs about a group of “fake policeman” who had been taken over by “non humans.” He stated that he had seen the “fake policeman” but would not elaborate further. He reported that these “fake policeman” were put into place so that they could facilitate the “takeover of the world” when their fellow space invaders came to earth. He elaborated that this world “take over” by the aliens would involve the murder of “all government leaders” and “millions of innocents.” When asked, Joe said that he did not have any thoughts of hurting himself or others nor did he exhibit an inability to take care of himself. He was released to his parent’s care with a prescription of an atypical antipsychotic with a follow up appointment scheduled in 5 days. Two days later, Joe walked into his local police station and began firing a gun while screaming nonsensical words. The flying bullets struck three policemen, seriously injuring all three. Joe’s defense attorney requests a mental health practitioner to evaluate his client’s “mental state at the time of the offense.”

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Introduction

The forensic vignette above illustrates the type of case where a psychiatric evaluation will likely be requested to assist the defense team in understanding their client’s mental state at the time of

an offense. Forensic practitioners may be asked to evaluate a juvenile's mental state at the time of an alleged offense for the purpose of the determining the degree, if any, of criminal responsibility. A criminal act is composed of two components: *actus rea* (guilty act) and *mens rea* (guilty mind or criminal intent). Under English common law, a youth's age played a significant role in whether they were considered blameworthy for illegal acts. Children less than age 7 were deemed incapable of forming criminal intent. This defense, also known as the infancy defense, held that these very young children were not criminally responsible due to developmental immaturity. Juveniles between the ages of 7 and 14 were also presumed incapable of committing crimes though the government had the right to rebut this presumption. In contrast, juveniles 14 and older were treated as adults in regards to evaluating sanity at the time of an alleged offense (Fitch 1989).

With the emergence of juvenile courts in the USA during the late 1880s, the focus on troubled youth was rehabilitation, not punishment. Because the juvenile court movement emphasized treatment interventions necessary to curb delinquent behavior, the use of an insanity defense was rarely necessary and therefore rarely used. In fact, four states have actually denied the extension of the insanity defense used in their adult criminal justice system to their own juvenile court system (Taylor 2001).

In the USA, juvenile crime increased dramatically during the late 1980s until it peaked in 1994 (Snyder 2008). The American public was confronted with graphic images in the media of violent young children, many of whom appeared armed and ready to kill. The belief that our juvenile justice system was effective in managing these violent offenders was rapidly vanishing. In its place was a growing get tough attitude toward juveniles highlighted by the phrase, "If you do the crime, you do the time." Society was fed up. Something had to be done.

In response to this emerging skepticism regarding the juvenile court's ability to rehabilitate wayward youth, numerous states passed laws with more punitive approaches to address juvenile delinquent behaviors. A common thread running

through the fabric of these new statutes was a push to remove the protective veil of juvenile court and expose youth to the consequences of their acts in both the juvenile and adult criminal justice system. With the increasing numbers of youth transferred to adult court and the societal pressure to hold juveniles criminally culpable, forensic mental health expert should prepare for an increasing number of requests to evaluate if a juvenile's sanity at the time of the alleged offense.

This chapter provides the forensic examiner with an overview of various tests of insanity, how to prepare for the sanity evaluation, how to conduct the sanity evaluation, and how to formulate the sanity opinion. In many situations, a juvenile may have a significant mental illness that does not meet the legal definition of insanity as defined by his or her jurisdiction. Therefore, this chapter also reviews the legal doctrines of "diminished capacity" and "guilty but mentally ill." Both of these additional legal concepts are important to consider when evaluating the relationship, if any, of a mental disorder on a criminal act.

Insanity Tests

Insanity is a legal, but not psychiatric, term. The insanity evaluation determines whether the juvenile is so mentally disordered that he or she is not blameworthy or criminally responsible for the behavior. In contrast to competency to stand trial (CST) evaluations that focus on a defendant's *present* mental capacity as related to their understanding and participation in the legal process, an insanity evaluation involves a retrospective evaluation of a person's past mental state *at the time* of their alleged offense.

The most common test of insanity in the USA is known as the M'Naughten standard that was developed in 1843 following the trial of Daniel M'Naughten. Mr. M'Naughten was found not guilty by reason of insanity after he attempted to assassinate the prime minister of Britain and instead shot his secretary Edward Drummond. Queen Victoria, angered by the legal outcome in

this case, ordered her 15 Law Lords to draft a new standard of criminal responsibility. The new standard recommended by the Lords was as follows:

To establish a defence on the ground of insanity, it must be clearly proved that at the time of the committing of the act, the party accused was labouring under such a defect of reason, from the disease of the mind, as not to know the nature and quality of the act he was doing, or if he did know it, that he did not know he was doing what was wrong (M’Naughten’s Rule 1843).

This test is often referred to as the *right/wrong test* or *cognitive test* because of its emphasis on the defendant’s ability to know, understand, or appreciate the nature and quality of their criminal behavior or the wrongfulness of their actions at the time of the crime.

A second insanity test used in some jurisdictions is known as the *irresistible impulse* test. In essence, this test asks the evaluator to determine if the juvenile’s mental disorder rendered them unable to refrain from their behavior, regardless if they knew the nature and quality of their act or could distinguish right from wrong. A major criticism of this test has been the broadness of its scope. In other words, because a defendant did not refrain from a particular criminal behavior, mental health clinicians could use this decision to act criminally as evidence that the juvenile could not resist an impulse, thereby concluding that all criminal behavior not resisted by the youth equals insanity. Despite its current unpopularity as a measure of criminal responsibility, this test survives, in part, as both Virginia and New Mexico combine the irresistible impulse test with the M’Naughten test (Giorgi-Guarnieri et al. 2002).

A third test used in only two jurisdictions in the USA is known as the *Durham rule* or *product test* (Durham v. United States 1954). This insanity test derived from a D.C. Circuit case where Judge Bazelon allowed a finding of insanity if the defendant’s unlawful act was a “product of a mental disease or defect.” As with the irresistible impulse test, the product test expanded those eligible for a finding of insanity and rapidly fell out of favor. It is currently used in only two jurisdictions in the USA, New Hampshire and the Virgin Islands (Giorgi-Guarnieri et al. 2002).

A final test of insanity was developed in 1955 by the American Law Institute (ALI) when formulating the Model Penal Code. This test states:

A person is not responsible for criminal conduct if at the time of such conduct as a result of mental disease or defect he lacks substantial capacity either to appreciate the criminal of his conduct or to conform his conduct to the requirements of the law (ALI Model Penal Code 1985; Giorgi-Guarnieri et al. 2002).

This test involves both a cognitive arm (“appreciates the criminality of his conduct”) and a volitional arm (ability to conform behavior).

Preparing for the Sanity Evaluation

When preparing for an evaluation of a juvenile’s criminal responsibility, the expert should first clarify if he or she is court appointed or retained by the defense or prosecution. Although the examiner should always strive for honesty and objectivity regardless of the retaining party, opinions rendered by a psychiatrist hired by the defense are not always disclosed to other parties. Prior to conducting the evaluation, the defense attorney should be notified of the impending interview. In some situations, the defense attorney may request to be present during the assessment and may obtain a court order allowing them to do so. If this situation occurs, the evaluator should request that the defense counsel not interrupt the examination or instruct the defendant how to respond to questions.

Second, the evaluator should request the exact language of their jurisdiction’s insanity statute. In addition, relevant case law interpreting the state statute may provide further guidance to the examiner regarding exactly how that particular jurisdiction defines criminal responsibility. Third, it is important to understand how mental disorders or defects are statutorily defined. The exact definitions of mental disease and mental defect are usually found in either case law and/or statutes. The examiner should carefully review if any disorders are prohibited from consideration for the insanity defense. Diagnoses commonly excluded include voluntary intoxication with alcohol or other drugs,

Table 6.1 Collateral records to consider in a juvenile sanity evaluation

• Juvenile's account of crime to police or other witnesses
• Audio or videotaped statements from juvenile
• Witness and victim statements
• 911 calls (if available)
• Videotape of crime or crime scene (if available)
• Juvenile hall and/or jail booking and treatment records following the juvenile's arrest
• Prior psychiatric records
• Prior psychological testing
• Prior drug and alcohol treatment records
• Prior medical records
• Any writings from juvenile that may reflect his or her mental state or motive
• Computer hard drive and communications where appropriate
• Juvenile rap sheet and records of prior arrests/dispositions and/or convictions
• Prior juvenile confinement records and/or jail records
• Prior educational records
• Prior work records

personality disorders, and adjustment disorders. Psychotic disorders, such as schizophrenia, schizoaffective disorder, or mood disorders with psychotic features are the most common diagnoses that qualify for an insanity defense. Although some youth in early adolescence may demonstrate premorbid symptoms of a significant thought disorder, they may not meet formal diagnostic criteria for a DSM-IV thought disorder, thereby making it difficult for them to meet the mental disorder requirement of an insanity defense. The examiner should carefully evaluate if the juvenile has a developmental disability (such as mental retardation) as cognitive impairment may represent a qualifying disorder or defect for purposes of conducting the insanity analysis.

Fourth, the examiner should review collateral records that may assist in evaluating the mental state of the juvenile at the time of the offense. If the juvenile or juvenile's legal guardian refuses to sign a release for records, the expert can request the court to order the release of records important in conducting the insanity evaluation. Collateral records that may assist in the sanity evaluation are noted in Table 6.1.

The forensic expert should pay particular attention to those records that describe the juvenile's mental state close to the time of the crime. Specific areas to review in the collateral records include:

- Juvenile's exact statements before and after the offense.
- Juvenile's various offense accounts to police and others.
- Presence of any mental health symptoms near the time of the offense, particularly psychotic symptoms such as paranoia, delusions, and/or hallucinations.
- Presence or absence of substance use prior to the offense.
- Presence of conduct disorder and/or antisocial personality traits or disorder.
- Presence of a rational alternative motive rather than a psychotic motive.
- History of a similar offense indicating a possible pattern of delinquent and/or criminal behavior.
- History of malingering psychiatric symptoms before or after the offense.

In addition to collateral records, other evaluator's opinions may also assist in reviewing the consistency of the juvenile's presentation and account of the crime. However, the examiner should first determine if any prior psychological examinations are prohibited from their review. Finally, the examiner may find it helpful to take a detailed social background history from family members and individuals who know the juvenile with particular attention regarding the youth's mental state in the days and hours prior to the crime.

Conducting the Sanity Evaluation

The forensic expert should evaluate the juvenile as soon as possible in order to assess the defendant's mental state close to the time of the crime and to minimize the risk that they will learn how to malingering mental illness (Resnick and Noffsinger 2004). Prior to conducting the sanity assessment, the evaluator should carefully consider discussing with the referring party if an

assessment's of the youth's CST is also warranted, depending on the youth's age and/or circumstances of the case. As with CST evaluations, the forensic evaluator should explain to the defendant the nature and purpose of the interview. The *AAPL Practice Guideline for Forensic Psychiatric Evaluation of Defendants Raising the Insanity Defense* provides the following quoted language to explain the limits of nonconfidentiality to an adult defendant which is also appropriate when evaluating a juvenile:

I am a physician and psychiatrist who has been asked [by the court or the prosecuting attorney] to answer three questions:

1. What was your mental state at the time of the crimes you have been charged with committing?
2. Did you have a mental disorder?
3. At the time of the crime you are charged with committing, were you so mentally ill that the court should find you not criminally responsible? (Giorgi-Guarnieri et al. 2002, p. S20).

After providing the initial informed consent, the evaluator usually conducts a standard mental health evaluation that includes an assessment of any underlying medical and/or biologic conditions, a review of psychological issues, and social factors relevant to the juvenile. Key areas to review include past psychiatric history and prior hospitalizations, family psychiatric history, educational history, any history of learning disabilities, mental retardation, or special education, medical history, substance use history, and the juvenile's social and relationship history, particularly as related to any of the crime victims.

The examiner must give particular attention to obtaining the juvenile's account of the crime in an open-ended manner that does not suggest to the defendant what he or she should say. For example, the evaluator might say, "What happened on the day of the offense? Tell me everything that you remember happened starting with the day before this happened." The evaluator should ask the juvenile to describe his or her thoughts, feelings, and exact behaviors before, during, and after the alleged crime. After obtaining the juvenile's initial account, the evaluator may need to ask more detailed specific questions

Table 6.2 Sample questions to help evaluate mental state at time of offense

• What was your relationship to the victim [if the crime involved a victim]?
• When did you first have the thought to do your offense?
• Did you prepare for this? If so, how?
• Had you ever tried to do this before? If so, what stopped you or why did it not work out?
• What did you do immediately following this offense?
• Why did you take those particular actions following the offense?
• Prior to your committing this crime, did you know that this was against the law?
• At the time that you did this crime, did you know it was against the law?
• Would you have done this if a police officer was near or at the scene? If yes, why? If no, why not?
• Would you have done this if someone unexpected arrived at the scene? If yes, why? If no, why not?
• Is there anything that made you think what you did was a right thing to do? If so, what?
• When was the last drink of alcohol or use of any other drugs you took prior to this crime?
• Were you experiencing any type of mental health symptom at the time of the crime? If so, what? When did these symptoms start? When did these symptoms end? [The examiner may need to ask specific questions regarding the presence of hallucinations, delusions, paranoia, or other mental health symptoms.]

to evaluate the juvenile's sanity. In addition, the examiner should clarify with the defendant any inconsistent offense accounts that he or she has provided either during the interview or to other individuals (Resnick and Noffsinger 2004). Questions an evaluator should consider asking to help obtain the juvenile's account of the crime are listed in Table 6.2.

The evaluator will also need to consider the possibility that the juvenile may mangle psychiatric symptoms in an attempt to avoid criminal prosecution. The examiner should be particularly familiar with characteristics of faked hallucinations or delusions (Resnick 1999). The use of psychological tests designed to assess malingered psychiatric symptoms may also be useful. However, the evaluator should be careful in using psychological testing that is age appropriate and should also appreciate that psychological tests do

not specifically evaluate the juvenile's mental status at the time of the crime. Therefore, a finding on a psychological test that a juvenile is not currently malingering symptoms does not necessarily mean that he or she is not feigning symptoms about their mental state in the past.

The Sanity Opinion

There are three important areas to review when rendering an opinion on a juvenile's criminal responsibility. First, the evaluator must establish if the juvenile had a mental disease or defect at the time of the crime. The expert should determine what mental disorders qualify for consideration of insanity after reviewing the governing statute and relevant case law. Even if a defendant meets the jurisdictional criteria for a mental disorder or defect, having a mental disorder does not equate with the legal definition of insanity.

Second, the evaluator must determine the relationship, if any, between the mental illness or defect and the alleged crime. Understanding the motivation behind the youth's actions is a critical component of the insanity evaluation. The evaluator should obtain the juvenile's account of the crime in great detail by asking the youth to describe their thoughts, feelings, and exact behaviors before, during, and after the alleged crime. It is important that the evaluator consider all rational, rather than psychotic, motives for the criminal offense. For example, if an adolescent commits an armed robbery solely to obtain money for a drug purchase, the fact that they are depressed will unlikely establish a sufficient relationship between their mental state and their criminal behavior for purposes of the insanity defense.

Finally, the examiner must apply the relevant insanity test when evaluating the relationship between the person's mental disorder and their alleged acts. Under a M'Naughten test of insanity (i.e., cognitive standard), the evaluator reviews if the juvenile knew what they were doing or understood that their actions were wrong, even if they had a qualifying mental disorder. In those jurisdictions that utilize some form of the M'Naughten

test, the examiner should carefully review if the juvenile meets the criteria for each component of this test according to the precise governing language (Giorgi-Guarnieri et al. 2002).

In some states, the defendant must be so impaired from a mental illness that they are unable to know the nature and quality of their actions and/or are unable to distinguish right from wrong. In general, an individual would have to be extremely impaired to not be aware of or know his or her actions. For example, an attorney might argue that a psychotic girl who irrationally believed that she was squeezing a pillow when she was actually choking her 3-year-old sister was so mentally impaired that she did not know what she was doing (i.e., nature and quality of her act) and was therefore insane.

The more easily met component of the M'Naughten test involves whether the defendant was able to know or distinguish right from wrong at the time of the offense. In general, there are two broad categories related to a defendant's knowledge of the "wrongfulness" of their behavior: (1) legal wrongfulness and (2) moral wrongfulness. Jurisdictions vary as to whether both types of wrongfulness are allowed for consideration when determining a defendant's sanity.

An assessment of a person's understanding of the legal wrongfulness of their actions involves determining if they understood *at the time of the crime* that what they did was against the law. Resnick (2007) has provided examples of potential behaviors to help evaluate if a person understands the wrongfulness of their behavior that are outlined in Table 6.3.

In some jurisdictions, a juvenile may be found insane if his or her mental disorder resulted in their being unable to know or understand that their actions were *morally* wrong, even if they knew that society would legally sanction their actions. When evaluating whether a juvenile's mental disorder rendered them unable to know or understand the moral wrongfulness of their conduct, the examiner should specifically ask if there was any reason he or she thought their actions were morally justified at the time of the offense. Consider the circumstances of JG, a 16-year-old girl whose schizophrenic illness causes her to believe that she

Table 6.3 Evidence that may indicate a juvenile's knowledge of legal wrongfulness (Resnick 2007)*A. Efforts to avoid detection*

- Wearing gloves during a crime
- Waiting until the cover of darkness
- Taking a victim to an isolated place
- Wearing a mask or disguise
- Concealing a weapon on the way to a crime
- Falsifying documents (passport or gun permit)
- Giving a false name
- Threatening to kill witnesses
- Giving a false alibi

B. Disposing of evidence

- Wiping off fingerprints
- Washing off blood
- Discarding a murder weapon
- Burying a victim secretly
- Destroying incriminating documents

C. Efforts to avoid apprehension

- Fleeing from the scene
- Fleeing from the police
- Lying to the police

has been chosen by Buddha to rid the world of evil. She also has the delusional belief that the local postman is spreading anthrax through his delivery of mail throughout the town. As a consequence, she believes that hundreds of people will soon die if the postman is not stopped. Despite her numerous phone calls to the local police and local post office manager, she is told by law enforcement that the postmaster represents no threat and to stay away from him or she will be arrested. JG fears that many lives are at imminent risk with "increasing dosages of killer anthrax in the mail." JG may have some understanding that the police would view her killing of the postman unlawful, particularly as she has been told by local law enforcement to have no contact with the postman. However, due to her psychosis, JG may nevertheless believe that her killing of the postman is morally justified to save the lives of others.

The insanity standard in some jurisdictions requires an analysis of the individual's ability to refrain from his or her actions or to conform their conduct to the requirements of the law. This analysis focuses on how the person's mental disorder or defect affected, if at all, his or her ability or capacity to control their behavior. In this context, the

forensic examiner is evaluating if the juvenile had the ability to refrain from the behavior but chose not to. For example, evidence that the juvenile had the ability to refrain could include their stopping or delaying an illegal behavior when a witness is present or when a police car drives by the scene.

Diminished Capacity Evaluations

Unlike the insanity defence, which utilizes a specific test to evaluate one's criminal responsibility, a diminished capacity defense examines if the defendant had the capacity to form the requisite intent for the crime. To illustrate the difference, a 17 year-old boy with Schizophrenia believes that his next-door neighbour is about to start World War III with nuclear weapons because his neighbor's car license tag contains the number three. As a result, this boy decides that he must kill his next door neighbor in order to save the entire planet. He carefully loads his .357 magnum, waits for his neighbor to return home, calmly walks over to his neighbor's house, rings the doorbell, and shoots the neighbor directly in the heart when the neighbour opens the door.

At trial, this boy may be found legally insane under a M'Naughten insanity test if it is proved that his Schizophrenia resulted in his belief that his actions were morally right thereby rendering him unable to distinguish right from wrong. This same boy, however, may *not* meet the standard for diminished capacity, *despite* his mental illness, if proved that he purposefully walked over to his neighbor's house with a loaded shotgun with the specific intent to kill the neighbour. Therefore, diminished capacity defenses are focused on the degree, if any, that a person's mental disorder influenced their ability to form the specific intent to commit a crime.

Not all degrees of intent are viewed the same in the eyes of the law. Under a diminished capacity defense, the forensic expert evaluates if the defendant had a particular culpable state of mind. To illustrate, consider the case of MC, a 16-year-old boy who becomes intoxicated for the first time from alcohol while drinking with his best friend

BT. After consuming ten beers, he starts to argue with BT over a seemingly trivial matter and they become involved in a fistfight. MC repeatedly punches his friend in the face causing BT to have an unexpected fall that results in a severe head injury and subsequent death. MC is subsequently charged with first-degree murder, which in his jurisdiction is defined as the deliberate and purposeful taking of another human's life.

Did MC have the level of specific intent as defined by that state's penal code to deliberately and purposely cause his friend's death? A successful diminished capacity defense in this case would demonstrate that due to MC's marked intoxication, his level of consciousness was so impaired that he did not have the capacity to form the requisite intent. Even if his defense is successful, however, MC could still face charges that involve a lesser degree of intent, such as a charge of involuntary manslaughter.

The doctrine of diminished capacity is considered controversial and not all states allow mental health testimony in this regard. A state's decision to bar such testimony in regards to the effects of intoxication has been upheld by the U.S. Supreme Court in the 1996 case of *Montana v. Egelhoff*. In this case, James Egelhoff had been camping and partying with friends in the Yaak region of Northwestern Montana. During the course of the day he consumed psychedelic mushrooms and a substantial amount of alcohol. Later that evening, Mr. Egelhoff was found severely intoxicated in the back seat of a car with his two friends dead in the front seat as a result of a single gunshot wound to the back of the head. He was subsequently charged with two counts of deliberate homicide. At trial, Mr. Egelhoff was not allowed to present evidence regarding the impact of his intoxication on his specific intent to kill. After he was found guilty on both counts, he appealed his case to the US Supreme Court which upheld the trial court's decision to exclude mental health testimony related to the effects of intoxication on Mr. Egelhoff's specific intent (*Montana v. Egelhoff* 1996).

Likewise, testimony on the effects of severe mental disorders on *mens rea* may also be limited. In the 2006 case of *Clark v. Arizona*, the US Supreme Court was asked to review an Arizona trial court decision that prohibited mental health

testimony regarding the impact of a psychotic disorder on a defendant's ability to form the required specific intent to kill. Eric Clark was an undisputed paranoid schizophrenic who was charged with the first degree murder of a police officer in the line of duty. At trial, Clark was not allowed to present evidence regarding the impact of his psychosis on his alleged intent to kill. On appeal, the US Supreme Court upheld the trial court's decision to prohibit at the guilt phase, any mental health testimony regarding Mr. Clark's intent to kill the officer (*Clark v. Arizona* 2006).

Guilty but Mentally Ill

Twelve states have enacted statutes that allow a jury to find a defendant guilty but mentally ill (GBMI). Although precise definitions vary, this verdict recognizes those defendants with a severe mental disorder who are found guilty but do not meet a legal test for insanity. Proponents of GBMI statutes assert that such verdicts protect the public from dangerous offenders with mental illness by allowing longer periods of incarceration than might occur if such defendants were found insane. Several concerns have been raised regarding GBMI statutes. These concerns include the potential for jury confusion regarding the difference between sanity and GBMI, the lack of any meaningful difference in mental health treatment provided to those who receive a GBMI verdict and those who do not (Melton et al. 2007).

Forensic Case Epilogue

A forensic psychiatrist is court appointed to evaluate if Joe had a mental disorder, whether Joe had the specific intent to kill the police officers, and whether Joe met the state's definition of insanity. The forensic psychiatrist requested a copy of the statutory definition of insanity which read, "The accused is not guilty by reason of insanity if at the time of the alleged offense they were suffering from a severe mental disease or defect that rendered them unable to know or understand the nature and quality of their acts or to distinguish

right from wrong.” Collateral records indicated no use of any type of illegal substance or alcohol and all serum and urine drug screens were negative for alcohol or drugs. After reviewing the police reports and prior psychiatric records, the psychiatrist interviews Joe and learns the following:

Immediately after his return home, Joe began preparing for the “final battle.” He realized that his parents “were not yet enlightened” and so he kept all of his preparations “top secret.” With all of the money that he had saved, Joe purchased \$500 dollars worth of “grape juice and Skittles” so that he would have enough energy to “lead the fight and save the world.” Joe saw lights in the sky that night, which he interpreted meant the invasion had started. He found the key to his father’s gun cabinet and took out a .357 magnum and two boxes of ammunition. After loading the weapon, he dressed in black and loaded his backpack with grape juice and Skittles candy and went searching for the “fake policeman” so that he could “save the world.” Joe went to the local police station and when he saw three “fake policeman” inside the waiting area, he pulled out the gun, began screaming “Pillog,” and started shooting. Multiple officers immediately came to the scene and wrestled him to the ground.

The psychiatrist diagnosed Joe with Schizophrenia, paranoid type. The psychiatrist rendered an opinion that Joe did intend to kill the police officers despite his suffering from symptoms of acute Schizophrenia. However, the psychiatrist also opined the Joe was legally insane under that jurisdiction’s test of insanity. In particular, the psychiatrist testified that although Joe knew the nature and quality of his actions in regards to shooting his gun at the “fake policeman,” he also delusionally believed that his actions were morally justified because he was “saving the world from aliens.”

Summary

Insanity is a legal concept that requires an analysis of the relationship, if any, of the juvenile’s mental illness or developmental disability to the particular jurisdiction’s test for criminal responsibility.

Although many juveniles may be developmentally immature, the lack of mature judgment and impulse control alone is rarely sufficient for purposes of avoiding criminal responsibility under the insanity doctrine. The forensic expert must understand the importance of applying the relevant statute and case law when conducting this forensic assessment. Key documents to review include the police reports, juvenile’s statements before, during, and after the offense, any drug testing, subsequent jail records, and prior mental health history. When possible, the evaluator should review these records in advance of conducting the evaluation so any disparities between collateral sources of information and the forensic interview can be clarified. The evaluator should carefully outline his or her reasoning in formulating their opinion regarding the juvenile’s mental state at the time of the offense. If the juvenile does not meet the jurisdictional standard for insanity, the evaluator may also consider whether the doctrines of “diminished capacity” and/or “guilty but mentally ill” apply to the youth. This chapter outlines key principles important when assessing a juvenile’s mental state at the time of their alleged offense with practical guidelines on how to prepare and conduct this unique evaluation.

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Sentencing Juveniles to Life in Prison Without the Opportunity for Parole

7

Jeffrey J. Shook

In the 1980s and 1990s, almost every state enacted legislation easing the process of treating juveniles as adults (Bishop 2000; Shook 2005; Sickmund 2003; Torbet et al. 1996; Torbet and Szymanski 1998). Although states varied with regard to legislative approaches, these changes generally lowered the minimum age at which a juvenile could be treated as an adult, expanded the offenses for which a juvenile could be treated as an adult, revised transfer criteria to focus on more offense-based characteristics, shifted decision-making power from judges to prosecutors, and added new mechanisms to treat juveniles as adults (Torbet et al. 1996; Torbet and Szymanski 1998; Griffin 2008). Although the effects of these changes are complex, it is clear that they have subjected a broader group of juveniles to criminal court punishments (Bishop 2000; Shook and Sarri 2008). Whereas juvenile justice jurisdiction ends at age 21 in most states, this increased number of juveniles sentenced in the criminal court face the potential of receiving substantially longer sentences, including life without the opportunity for parole.

At the same time that more juveniles are now subject to adult sentences, scholars and advocates have increasingly called into question whether juveniles should receive the same punishments as

adults, particularly long or extreme sentences such as execution or life without the opportunity for parole. To argue that juveniles are less culpable than adults and less deserving of extreme sentences, these scholars and advocates have pointed to research on adolescent development that indicates that juveniles, as compared to adults, are more susceptible to external influences such as peers, are more impulsive and likely to seek thrills, and are more likely to exhibit short-sighted decision making (Steinberg and Scott 2003; Scott and Steinberg 2008). Further, this research suggests that an individual's character is not set in adolescence but that young people have tremendous room for change and growth (Steinberg and Scott 2003; Steinberg and Schwartz 2000; Grisso and Schwartz 2000). Research on adolescent brain development has largely confirmed findings from psychosocial research by showing that areas of the brain that govern planning, impulse control, and thinking ahead are still developing throughout adolescence and into early adulthood (Scott and Steinberg 2008). Thus, research findings from a variety of fields provide significant evidence that young people are different than adults and strongly suggests that developmental immaturity should mitigate against punishing young people the same as adults, particularly with regard to long or extreme sentences.

Over the last several years, the US Supreme Court has taken up two cases testing the limits of punishment for juvenile offenders in the criminal court. The first case, *Roper v. Simmons* (2005), found that the death penalty as applied to juveniles

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violated the eighth Amendment's ban on cruel and unusual punishments. Written by Justice Anthony Kennedy, the Court's decision was based, in large part, on the diminished culpability of juveniles construed from findings from psychosocial and neuroscience research identifying developmental differences between juveniles and adults. The second case, *Graham v. Florida* (2010), found that the sentence of life without the opportunity for parole as applied to a juvenile convicted of a non-homicide offense violated the eighth Amendment's ban on cruel and unusual punishment. Also written by Justice Kennedy, the *Graham* decision confirmed the findings regarding the reduced culpability of juveniles and noted that since *Roper* "developments in psychology and brain science continue to show fundamental differences between juvenile and adult minds" (slip opinion, p. 17).

Despite the growing body of scientific findings regarding differences between juveniles and adults, and the Supreme Court's acceptance of these findings as evidence of the diminished culpability of juvenile offenders, sentencing policy and practice in most states does not reflect the idea that juveniles should be treated differently than adults when they are transferred to the criminal court. This is particularly striking when considering life sentences without the opportunity for parole (LWOP). These sentences, absent a pardon or commutation, relegate an individual to a life behind bars for an act committed as a juvenile and deny any opportunity to show that he or she has reformed. It is even more striking when considering that in many states, the sentence of life without parole is mandatory for crimes of murder, thereby denying any opportunity to provide mitigating arguments such as the developmental immaturity of an offender. In addition, many states employ transfer schemes that are automatic, or effectively automatic, further limiting the degree that developmental immaturity and other characteristics are considered as mitigating factors.

This chapter reviews the legal and policy landscape regarding LWOP sentences for juvenile offenders. A primary goal is to demonstrate that despite a growing body of evidence showing differences between juvenile and adults, opportunities

to consider the developmental immaturity of a young offender in the transfer and sentencing process are limited. Thus, many juveniles who receive sentences of life without the opportunity for parole do so with little consideration of mitigating factors such as developmental immaturity. The first part of the chapter presents a brief overview of the context of LWOP for juvenile offenders. The second part moves to an examination of waiver and sentencing schemes in order to identify when and how arguments regarding developmental immaturity enter into the processes through which juveniles are waived and sentenced to life without the opportunity for parole, focusing on how the lack or limitation of discretion constrains considerations of youthfulness. The third part considers these transfer and sentencing schemes in light of the *Roper* and *Graham* decisions. The chapter concludes with options for policy reform that incorporate the central holdings of *Roper* and *Graham* by acknowledging differences between juveniles and adults and the reality that many young offenders are likely to change.

Life Without the Opportunity for Parole for Juvenile Offenders

Currently, the USA is the only country that sentences juveniles to life without the opportunity for parole (JLWOP) and the majority of states (43) allow this sentence for juveniles (de la Vega and Leighton 2008; Human Rights Watch 2008).¹ Unfortunately, the exact number of

¹ According to Human Rights Watch (2008), the 43 states that allow juveniles to be sentenced to life without the possibility for parole include the following: Alabama, Arizona, Arkansas, California, Connecticut, Delaware, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, and Wyoming. The degree that the sentence is applied varies substantially across these states.

individuals serving life without the opportunity for parole sentences for a crime committed under the age of 18 is not fully known.² At present, advocates contend that more than 2,500 individuals in the USA are serving LWOP for offenses committed as juveniles (Human Rights Watch 2008) including at least 73 who were under the age of 15 years old at the time of the offense (Equal Justice Initiative 2007).³ Although the vast majority of juveniles sentenced to LWOP were convicted of murder, at least 129 juveniles were sentenced to LWOP for non-homicide offenses.⁴ Further, estimates suggest that approximately one-third of all murder offenders are serving JLWOP for felony murder and that in many cases there was an adult codefendant involved (Human Rights

Watch 2008).⁵ While in-depth information on the characteristics of many of these youth is not available, it is estimated that a substantial percentage of these youth did not have prior contact with the juvenile justice system and that many of these youth faced substantial disadvantages growing up (Human Rights Watch 2005).

Despite the fact that JLWOP is allowed in the majority of states, there has been some movement away from this practice in recent years as both Colorado and Texas have enacted legislation abolishing JLWOP.⁶ There is also a lot of variation in the application of the sentence across states, as approximately two-thirds of all juveniles serving LWOP are estimated to come from five states—Pennsylvania, Michigan, Florida, California, and Louisiana (Human Rights Watch 2008). A fairly common attribute among the 43 states that do allow LWOP sentences for juveniles, however, is that the sentence is mandatory for at least one offense (most often first degree murder) in 25 of these states including four of the five states with the largest number of individuals serving JLWOP (Human

² Whether an individual is considered to be serving LWOP for a crime committed as a juvenile is typically defined based on the age of the individual at the time of the offense. State laws differ based on the age of juvenile court jurisdiction. Until recently, 37 states and the District of Columbia ended juvenile court jurisdiction at age 18, 10 ended juvenile court jurisdiction at age 17, and 3 ended juvenile court jurisdiction at age 16. Connecticut, however, recently raised its age of juvenile court jurisdiction to age 18 and efforts are underway in other states to also raise the age. Despite these differences across states, the definition of JLWOP typically includes everyone who was under the age of 18 years old at the time of the offense.

³ The findings of the Human Rights Watch report have been challenged in a number of ways. For example, The Sentencing Project released a report on LWOP in 2009 that identified considerably fewer juvenile LWOP cases than reported by HRW (1,755). The Sentencing Project has now identified approximately 2,400 cases (personal communication), a figure much closer to that reported by HRW. While it is beyond the scope of this chapter to determine the total number of juvenile LWOP cases, I have collected data on the number of such individuals in Pennsylvania and have found that there are at least 450 individuals serving LWOP for crimes committed as juveniles. These numbers are more consistent with those reported in the HRW report (444) than The Sentencing Project report (345).

⁴ This number was a subject of disagreement during the oral arguments in *Graham*, but in the decision Justice Kennedy affirmed that there are at least 129 juveniles serving LWOP for a non-homicide offense. All of these individuals will now be resentenced following the decision.

⁵ Although the specific number of juveniles serving LWOP for felony murder is not known, my findings from Pennsylvania are consistent with this estimate as more than one-third of all juvenile LWOP cases in Pennsylvania are serving their sentence for felony murder. Unlike First Degree Murder, a conviction for Felony Murder does not require that an individual committed or conspired to commit the act. A charge of Felony Murder requires that an individual be part of an underlying felony from or during which a murder occurred. In some cases, murders have occurred days after the juvenile ended his or her participation in the felony but the youth ended up being sentenced to life without the opportunity for parole for the murder under the felony murder statute.

⁶ Colo. Rev. Stat. Sec. 17–22.5–104(IV) (2009); Tex. Penal Code Ann. Sec. 12.31 (2010). Two other states also recently limited the sentence. Kansas eliminated the death penalty in 2004 and although the option of life without the possibility of parole was created for adults, it was explicitly precluded for juveniles (K.S.A. Sec. 21–4622 (2009)). Montana enacted legislation that prohibited mandatory sentences and limits on parole eligibility to individuals under the age of 18 (Mont. Code Ann. Sec. 46-18-222 (1) (2010)).

Rights Watch 2008, 2009).⁷ The mandatory nature of these sentences means that a judge cannot consider mitigating characteristics such as the developmental immaturity of an offender, the prior offending and juvenile justice system history of the offender, the mental health and substance abuse histories of the offender, or the experiences of the offender while growing up, including prior instances of trauma such as abuse and neglect. Further, they reject the idea that an adolescent's character is malleable and that young people change considerably across the life course. Instead, the sentence is automatic following conviction for the offense attached to the mandatory sentence. Among the 25 states that have mandatory life without parole sentences, in ten states the sentence is also mandatory for felony murder.⁸ As noted previously, this means that many juveniles sentenced to life without the opportunity for parole did not commit or intend to commit the murder but judges are unable to consider this fact in the sentencing process.

Transfer and Sentencing Schemes

Given the lack of discretion in LWOP sentences in many states, it is important to consider how juvenile offenders get to the criminal court. Despite the fact that many of the juveniles that receive LWOP sentences do so under mandatory sentencing schemes, there are points in the deci-

sion-making process, prior to sentencing, where characteristics of the offender can or will be considered. Primarily, this consideration comes during the decision to transfer or waive a juvenile to the criminal court. There are three main mechanisms through which transfer occurs. The first—judicial discretion—typically involves a hearing, upon the motion of a prosecutor, in which a judge decides whether to transfer a juvenile based on statutorily enumerated criteria. In most cases, the presumption is upon the prosecutor to show that the youth is not amenable to treatment in the juvenile justice system and should be transferred to the criminal justice court. There are several variations of judicial discretion—mandatory or presumptive judicial discretion—that place the presumption upon the youth to show that he or she should remain in the juvenile court or require transfer based on the documentation of specific aspects of the offense and offender.

The second mechanism through which juveniles are transferred to the criminal court is what is referred to as statutory exclusion. Juvenile codes grant jurisdiction to the juvenile court of all cases under a certain age, typically all individuals under the age of 18 years old. Statutory exclusion mechanisms, however, exclude certain youth from the jurisdiction of the juvenile court based on specific characteristics. What this means is that jurisdiction over the case vests in the criminal court once these characteristics are established. Typically, all this involves is the decision to charge for an excluded offense and confirmation of age. Some of these mechanisms exclude all youth charged with a specific offense from juvenile court jurisdiction. For example, all individuals in Pennsylvania charged with murder are excluded from juvenile court jurisdiction, regardless of age. Other statutory exclusion mechanisms exclude youth based on a combination of age and offense—individuals who are 16 and older and are charged with murder in Iowa are excluded from the juvenile court's jurisdiction. Other states include additional aspects of the offense—commission with a “deadly” weapon—in addition to age and offense characteristics for certain offenses listed in the statutory exclusion provision. Thus, there is a lot of variation in statutory exclusion mechanisms across

⁷According to Human Rights Watch (2008), the 25 states that have mandatory LWOP for juveniles include the following: Alabama, Arkansas, Connecticut, Delaware, Florida, Hawaii, Idaho, Illinois, Indiana, Iowa, Louisiana, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Hampshire, New Jersey, North Carolina, Ohio, Pennsylvania, South Carolina, South Dakota, and Virginia. The mandatory sentencing in these provisions differ regarding what specific offense is subject to mandatory LWOP. In eight of these states, LWOP is limited to more limited situations such as when special circumstances or aggravating circumstances exist, or when the victim is a police officer or under a certain age. Those states include Connecticut, Hawaii, Idaho, Indiana, Illinois, New Jersey, Ohio, and Virginia.

⁸The ten states where LWOP is mandatory for felony murder include the following: Alabama, Iowa, Louisiana, Massachusetts, Michigan, Nebraska, New Hampshire, North Carolina, Pennsylvania, and South Dakota.

states.⁹ At the same time, these provisions share a common attribute in that they limit consideration of developmental immaturity or other characteristics of the offender that might be mitigating factors in a transfer decision.

The third transfer mechanism is referred to as prosecutorial discretion. Under prosecutorial discretion provisions, both the juvenile and criminal courts have jurisdiction over an individual and it is up to the prosecutor to decide where to file a case. Similar to statutory exclusion mechanisms, prosecutorial discretion is often limited to a subset of cases based on age and offense characteristics. For example, in Michigan prosecutors have discretion to transfer youth to the criminal court when they are charged with a list of 18 offenses and are 14 years old or older at the time of the offense. States do vary substantially, however, as some provide prosecutors with discretion over a larger set of cases. Although these provisions provide more opportunity for discretion, the decision-making process does not involve a hearing and occurs primarily within the prosecutor's office (Bishop 2004; Shook 2004). Further, existing research indicates that many prosecutors focus on a narrow set of characteristics and do not incorporate other information, such as psychological evaluations, into the decision-making process (Bishop 2004; Bishop and Frazier 1991; Bishop et al. 1989; Shook 2004). Thus, many scholars argue that these mechanisms differ considerably from judicial discretion provisions given the process and the role and expertise of the decision maker (Bishop 2000, 2004; Zimring 2000).

Traditionally, states have used judicial discretion mechanisms to transfer juveniles to the criminal court (Tanenhaus 2000; Feld 2000). As states enacted legislation over the last several decades easing the process of treating juveniles as adults; however, a primary area of legislative change was the adoption or extension of statutory exclusion or prosecutorial discretion provisions (Bishop 2000; Feld 2000; Torbet et al. 1996; Torbet and Szymanski 1998). Currently, 29 states

employ statutory exclusion provisions and 15 states use prosecutorial discretion, although most states employ a mix of transfer mechanisms, even for the same offense (Griffin 2008; Sickmund 2003; Torbet et al. 1996; Torbet and Szymanski 1998).¹⁰ While many states maintain judicial discretion provisions in addition to statutory exclusion or prosecutorial discretion, in many states the latter two mechanisms often cover the most serious offenses (e.g., murder, robbery, rape, serious assaults). In other states, judges might have discretion over whether to transfer younger juveniles charged with certain serious offenses whereas statutory exclusion or prosecutorial discretion is employed for older offenders. Regardless of the specific ways in which states employ these waiver provisions, it is evident that for many serious and violent offenders there is relatively little consideration of mitigating factors such as developmental immaturity in the transfer process (Bishop 2000; Shook 2005).

This latter point is important because, as noted previously, in 25 of the 43 states that allow juveniles to receive LWOP sentences it is mandatory for at least one offense. In these 25 states, all but 7 employ statutory exclusion or prosecutorial discretion provisions that include the offense of murder.¹¹ Further, in 9 of these 18 states LWOP is mandatory for both First Degree Murder and

¹⁰The 29 states that have statutory exclusion provisions include the following: Alabama, Alaska, Arizona, California, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Louisiana, Maryland, Massachusetts, Minnesota, Mississippi, Montana, Nevada, New Mexico, New York, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, Utah, Vermont, Washington, Wisconsin. The 15 states that have prosecutorial discretion provisions include the following: Arizona, Arkansas, Colorado, District of Columbia, Florida, Georgia, Louisiana, Massachusetts, Michigan, Montana, Nebraska, Oklahoma, Vermont, Virginia, and Wyoming. It is also important to note that some states exclude entire age groups from the jurisdiction of the juvenile court by ending jurisdiction at age 15 or 16 (Griffin 2008; Sickmund 2003; Torbet et al. 1996; Torbet and Szymanski 1998).

¹¹The 18 states that have both statutory exclusion or prosecutorial discretion provisions and mandatory LWOP for at least one offense include the following: Alabama, Arkansas, Florida, Idaho, Indiana, Iowa, Louisiana, Massachusetts, Michigan, Minnesota, Mississippi, Nebraska, North Carolina, Pennsylvania, South Carolina, South Dakota, and Virginia.

⁹Statutory exclusion provisions often include a short or long list of offenses, particularly violent and serious offenses. Age or other characteristics included in the provision can also vary by offense. See Feld (2000) for a discussion of these provisions.

Felony Murder.¹² Thus, there is no consideration of an individual's role in the offense in these states. Of the 18 states that have mandatory LWOP sentences and statutory exclusion or prosecutorial discretion provisions, ten do employ what are referred to as reverse waiver or decertification provisions which provide an opportunity for a juvenile to petition the court hold a hearing to determine whether he or she should be treated as a juvenile. Although these provisions vary across states, they generally provide a criminal court judge with the discretion to decide whether the individual should be treated as a juvenile or an adult. In most states, the hearing is held before the case is decided whereas in others it is held after a juvenile is convicted and involves a determination of whether the youth should be sentenced as a juvenile or adult. What these mechanisms do, at least theoretically, is to serve as a safety valve within statutory exclusion or prosecutorial discretion provisions by providing a judge with the discretion to determine whether an individual should be treated as a juvenile or an adult.

Whether they do serve as a safety valve, however, is questionable. Unfortunately, there is relatively little research on reverse waiver or decertification, particularly regarding murder offenders. One study that examined reverse waiver and included murder offenders found that individuals convicted of First and Second Degree Murder were more likely than other offenders to receive an adult as opposed to a juvenile sentence (Burrow 2008a, b). This finding is consistent with

other research on transfer decisions. In a study of prosecutorial decisions to treat juveniles as adults, Shook (2011) found that juveniles charged with murder were much more likely than those charged with armed robbery or carjacking to be treated as adults. Studies of judicial waiver have also found that juveniles charged with more serious offenses such as murder are also more likely to be transferred (Bishop 2000; Bishop and Frazier 2000). These studies point to the reality that for many youth charged or convicted of murder, reverse waiver or decertification provisions are not likely to serve as a safety valve.

In large part, the findings from reverse waiver and judicial discretion studies are consistent with the provisions themselves. The criteria in reverse waiver provisions often parallel the criteria in judicial discretion provisions and generally require a court to determine whether a juvenile is amenable to treatment in the juvenile court based on consideration of a variety of factors. These factors include characteristics of the offense such as the seriousness of and youth's involvement in the offense, protection of the community from future harm, the maturity of a juvenile, the prior history of the youth in the juvenile justice system, and other aspects of an individual or an individual's history that might shed light on the question of amenability to treatment (Dawson 2000; Weatherly 1990 summarizing criteria in *Kent v. United States* 1968). One difference between many judicial discretion and reverse waiver mechanisms is that under reverse waiver provisions the burden shifts to the youth to show that he or she should be treated as a juvenile. In most instances, the youth must establish the probability of rehabilitation beyond a preponderance of the evidence. This is particularly difficult in the case of serious offenses such as murder, especially given that juvenile court jurisdiction ends in most states at or prior to age 21. The question being asked in reverse waiver or decertification hearings, then, is often much different than whether an individual should be given an opportunity, at some future point, to demonstrate that he or she has been rehabilitated.

This last point is also a consideration under traditional judicial discretion provisions. Regardless of which party (defense or prosecution) has the

¹²These states include the following: Alabama, Iowa, Louisiana, Massachusetts, Michigan, Nebraska, North Carolina, Pennsylvania, and South Dakota. In New Hampshire, LWOP is mandatory for felony murder but New Hampshire use a judicial discretion transfer provision. Pennsylvania is an example of a state that uses both statutory exclusion and mandatory sentences for felony murder. Under Pennsylvania law, all individuals charged with murder are considered to be adults. If convicted of either First or Second Degree Murder, LWOP is mandatory. First Degree Murder is defined as a criminal homicide committed by an intentional killing (18 Pa. Cons. Stat. Sec. 2502 (a) (1978)). Second Degree Murder is defined as a criminal homicide committed while defendant was engaged as a principal or an accomplice in the perpetration of a felony (18 Pa. Cons. Stat. 2502 (b) (1978)).

burden of establishing amenability to treatment, or lack thereof, demonstrating that a juvenile charged with extremely serious offenses such as murder should be retained in the juvenile court is difficult. Although arguments regarding the reduced culpability and potential for change can be made, the limited time that the juvenile court has jurisdiction over these juveniles, especially older juveniles, is a strong argument against retaining them in the juvenile court, as it becomes extremely difficult to assert that such a youth is amenable to treatment. In many respects, this situation speaks to the broader flaw in mandatory LWOP policies for juvenile offenders—the stark choice between release at age 21 or LWOP. Not providing judges with an opportunity to assess mitigating factors nor to afford a sentence that provides a juvenile with a meaningful opportunity for release, at some point, neglects key differences between juveniles and adults and the role that these differences should play in the punishment of young offenders.

Roper and Graham

Providing a detailed analysis of legislative provisions in these states is beyond the scope of this chapter. Further, it is beyond the scope of this chapter to determine the exact number of youth who are transferred to the criminal court through statutory exclusion or prosecutorial discretion provisions and receive a mandatory LWOP sentence. Despite these limitations, it is clear from the previous discussion that many juveniles receive LWOP sentences with little opportunity for judges to consider factors such as the developmental immaturity of a juvenile. It is also evident that in states that provide some room for discretion, through judicial discretion or reverse waiver mechanisms, the question being asked is not necessarily the correct one. Whether a juvenile has the potential for change or is less culpable than an adult is not necessarily the same as asking whether a youth is amenable to treatment in the juvenile justice system, particularly when jurisdiction ends in most states at age 21.

The problem of mandatory sentencing becomes more evident when considered within the frame-

work set out by the Supreme Court in *Roper* and *Graham*. As mentioned previously, both cases considered limits on the punishment of juvenile offenders under the eighth Amendment's cruel and unusual punishment clause. In *Roper*, the court considered whether it was cruel and unusual to execute an individual who had committed an offense prior to the age of 18. In the late 1980s, the Supreme Court decided two cases (*Thompson v. Oklahoma* 1988; *Stanford v. Kentucky* 1989) addressing the death penalty for juveniles. In *Thompson*, the Court held that it was unconstitutional to execute someone who was less than 16 years old at the time of their offense. A year later in *Stanford*, however, the Court held that it was permissible to execute an individual who was 16 or 17 years old at the time of their offense because there was no national consensus that evolving standards of decency were against the punishment. *Roper* also relied on the evolving standards of decency, and found that since *Stanford* five states had abolished the death penalty for juveniles and that 30 of the 50 states did not allow for the execution of juveniles.

Similar to *Thompson*, the majority opinion in *Roper* went beyond the evolving standards of decency standard and applied its own judgment to the question under consideration. In doing so, the Court extended its reasoning from *Thompson* regarding differences in the culpability of juveniles and adults and the potential of young people to change. To make this determination, the Court relied heavily on an article published in 2003 in *The American Psychologist* by Laurence Steinberg and Elizabeth Scott, as well as amicus briefs submitted by the American Psychological Association, the American Medical Association, and other organizations. Based on this research, the decision in *Roper* was based on three differences that distinguish juveniles from adults: (1) “a lack of immaturity and underdeveloped sense of responsibility” that often leads to “impetuous and ill considered actions and decisions” (p. 569), (2) “juveniles are more vulnerable or susceptible to negative influences and outside pressures, including peer pressure” (p. 569), and (3) “the character of a juvenile is not as well formed as an adult” (p. 570).

These characteristics led the Court to assert that a juvenile is not as culpable or blameworthy as an adult, that they could not with reliability be classified among the worst offenders, and that no penological interests—deterrence, retribution, incapacitation, and rehabilitation—supported the execution of minors. Based on this assertion, the Court developed a categorical rule prohibiting the use of the death penalty for anyone under the age of 18 at the time of their offense. The adoption of a categorical rule was based, at least in part, the Court's rejection of an individualized approach. In rejecting this type of approach, the Court argued that "differences between juvenile and adult offenders are too marked and well understood to risk allowing a youthful person to receive the death penalty despite insufficient culpability" (*Roper v. Simmons* 2005, p. 573) and expressed concern that "an unacceptable likelihood exists that the brutality or cold-blooded nature of any particular crime would overpower mitigating arguments based on youth as a matter of course, even where the juvenile offender's objective immaturity, vulnerability, and lack of true depravity should require a sentence less severe than death" (*Roper v. Simmons* 2005, p. 573). Further, the majority decision stated that "It is difficult even for expert psychologists to differentiate between the juvenile offender whose crime reflects unfortunate yet transient immaturity, and the rare juvenile offender whose crime reflects irreparable corruption" (*Roper v. Simmons* 2005, p. 573). Thus, it was clear that the Court did not have confidence in the ability of the criminal justice system to determine who should and should not receive the death penalty. The Court also turned to the "stark reality that the USA is the only country in the world that continues to give official sanction to the juvenile death penalty" (*Roper v. Simmons* 2005, 575) and the strict prohibition against the juvenile death penalty in a number of international treaties and conventions to justify its decision.

In addition to its direct effect of abolishing the death penalty for juvenile offenders, *Roper* was an extremely significant decision. Although it was consistent with numerous Supreme Court decisions that upheld differential treatment of young people in a variety of settings, *Roper* was the first

Supreme Court decision to address limits in the power of state to punish young offenders since *Thompson* and *Stanford*. This is important because, as discussed previously, nearly every state had enacted legislation easing the process of treating juveniles as adults over the last several decades, thereby increasing the potential punishments that young people can receive. By declaring that juveniles are "categorically less culpable than adults," the Court called into question sentencing schemes that treat juveniles the same as adults. While an important statement, the legal effect of *Roper* was unknown. Traditionally, the Supreme Court treats the death penalty differently and the effects of death penalty decisions often have limited application on other sentencing schemes. Thus, it was not clear whether the rationale and holding of *Roper* would apply beyond the death penalty.

That question, however, was answered in *Graham v. Florida* (2010). As noted previously, the issue under consideration in *Graham* was whether it was cruel and unusual punishment to sentence a juvenile convicted of a non-homicide offense to LWOP. Building upon its earlier analysis in *Thompson* and *Roper* that juveniles are less culpable than adults and are more capable of change, the Court held that sentencing juveniles convicted of non-homicide offenses to LWOP was cruel and unusual punishment. In confirming the analysis from *Roper*, the majority decision stated that "No recent data provide reason to reconsider the Court's observations in *Roper* about the nature of juveniles. As petitioner's amici point out, developments in psychology and brain science continue to show fundamental differences between juvenile and adult minds. For example, parts of the brain involved in behavior control continue mature through late adolescence" (slip opinion, p. 17). Based on the reduced culpability of juveniles and a long recognition that those "who do not kill, intend to kill, or foresee that life will be taken are less deserving of the most serious forms of punishment than are murderers," (slip opinion, p. 18) the Court held that "It follows that, when compared to an adult murderer, a juvenile offender who did not kill or intend to kill has a twice diminished moral culpability" (slip opinion, p. 18).

In addition to its assertion of differences between juveniles and adults, the Court also considered penological justifications for sentencing juveniles to LWOP. Given the severity of the sentence, life in prison without the possibility of release, the Court considered whether it met the goals of retribution, deterrence, incapacitation, and rehabilitation. Based largely on its determination that juveniles are less culpable than adults and have more potential for change, the Court found that “none of the goals of penal sanctions that have been recognized as legitimate – retribution, deterrence, incapacitation, and rehabilitation – provides an adequate justification” (slip opinion, p. 20). Further, the Court also employed international law as a basis to confirm its analysis. The Court concluded that the USA was the only country to sentence juveniles to LWOP for non-homicide offenses. Based on this determination, the Court stated that it “has treated the laws and practices of other nations and international agreements as relevant to the Eighth Amendment not because those norms are binding or controlling but because the judgment of the world’s nations that a particular sentencing practice is inconsistent with basic principles of decency demonstrates that the Court’s rationale has respected reasoning to support it” (slip opinion, p. 31).

Similar to *Roper*, Justice Kennedy wrote the majority decision in *Graham* and four other Justices signed onto his opinion. Unlike *Roper*, however, another Justice (Chief Justice Roberts) concurred in the decision in *Graham* but wrote a separate opinion. While believing that the LWOP sentence was not proportional in the case of Terrance Graham, the Chief Justice did not believe that a categorical rule was warranted. Instead, he argued that decisions should be made using a “narrow proportionality” basis where an “offender’s juvenile status” is taken into consideration on a case by case basis in determining whether the punishment is proportional to the crime. In making this determination, Chief Justice Roberts argued that “*Roper*’s conclusion that juveniles are typically less culpable than adults has pertinence beyond capital cases, and rightly informs the case-specific inquiry I believe to be appropriate here” (slip opinion, p. 6). Based on the Chief Justice’s

analysis of *Graham*’s case, he concluded that LWOP was disproportionate. Similar to *Roper*, however, the Court rejected the individualized approach and issued a categorical rule that it is unconstitutional to sentence an individual convicted of a non-homicide offense and under the age of 18 at the time of that offense to life without the opportunity for parole. It based this decision on the same rationale in *Roper*—the difficulty in determining whether a juvenile deserves such an extreme punishment and the risks inherent in having juries or courts make these decisions. The Court also based its rejection of an individualized approach on the argument that aspects of youthfulness—mistrust, rebelliousness, impulsiveness, difficulty in weighing long-term consequences—limited the ability of young people to work effectively with their defense counsel.¹³

Legal Effects of *Graham* on LWOP Sentences

As with *Roper*, the direct effects of *Graham* are unknown outside of the reality that the 129 juvenile non-homicide offenders serving LWOP need to be resentenced. Indeed, numerous questions about regarding what length of sentence is proportional for these individuals. Outside of the direct effects of the decision, substantial questions arise regarding the application of *Graham* to other juvenile LWOP cases. Although *Graham* resoundingly confirmed the view under Supreme Court jurisprudence that juveniles are different than adults, and, therefore, should be punished differently, JLWOP is not necessarily unusual. As discussed previously, estimates indicate that approximately 2,500 juveniles are serving LWOP, and, as of 2004. These numbers differ considerably from what the Court considered in both *Roper* and *Graham*. Further, although

¹³On November 7th, 2011 the Supreme Court decided to hear two cases involving JLWOP. The cases are from Alabama and Arkansas and the questions that the Court will consider involve age, mandatory sentencing schemes, and felony murder. Oral arguments are set for March 20th, 2012.

some states are moving away from LWOP for juveniles, a large majority of states still allow for the sentence and many do still apply it in practice.

Yet, there are a number of ways that *Graham* could apply to JLWOP. One question that will be considered legally is whether *Graham* applies to individuals serving LWOP for felony murder. As discussed previously, the majority decision stated that a juvenile who “who did not kill or intend to kill” had a “twice diminished moral culpability” as compared to an adult. A conviction for felony murder does not require that an individual killed or intended to kill, only that the individual was part of an underlying felony that resulted in a killing. Thus, there a reasonable argument that *Graham* applies to felony murder as well as other non-homicide cases. Further, the question of whether *Graham* is pertinent with regard to the issue of mandatory LWOP sentences for juveniles is quite relevant. Mandatory sentences reject the judgment of both *Roper* and *Graham* that juveniles are different than adults because they involve no consideration of aspects of developmental immaturity or other factors that Court found to necessitate that juveniles be treated differently than adults with regard to punishments. This question is even more salient under automatic transfer schemes where there is also little or no consideration of these factors. While there are potential difficulties in advancing these arguments, *Graham* has opened up avenues to challenge extreme punishments for young offenders.

Conclusion

Individuals sentenced to LWOP for crimes committed as juveniles are obviously convicted for very serious offenses and the question of how best to punish them has been around for a long time. The *Roper* and *Graham* decisions are quite instructive in this matter because they unequivocally establish that young people are different than adults and that denying their potential to change through long or extreme sentences such as LWOP is wrong. Yet, it is clear that this idea has not been implemented in any systematic way

in criminal justice policy and practice. In fact, legislative changes over the last several decades have increased the number of juveniles subject to adult punishments. Because state legislatures have the primary authority to set these punishments, absent a court decision striking down long or extreme sentences for juveniles, it is up to legislators to determine the appropriate level of punishment for young offenders.

When considering JLWOP or other extreme sentences, *Roper* and *Graham* present several policy options. One is similar to the framework articulated by Chief Justice Roberts—individualized decisions that account for consideration of aspects of youthfulness. While this approach would reduce some of the problems posed by mandatory sentencing schemes, such as no consideration of youthfulness, it also raises many of the problems discussed previously with regard to the ability of courts and juries to appropriately assess the diminished culpability of juvenile offenders and their potential for change. This latter point is especially important because it would require the court to determine the potential or probability of rehabilitation when handing down or assessing the sentence as opposed to at a future point after an individual has had a period of time to demonstrate that he or she has changed.

A second option, then, is to sentence a youth to a period of time after which he or she has an opportunity to demonstrate that he or she should be released. This option is preferable, in large part, because it does not deny young people the opportunity to show that they have changed and provides an opportunity to assess this change at a future point instead of requiring decision makers to predict the likelihood of change at the time of sentence. Obviously, the period of time that a youth must serve prior to parole eligibility is an issue that would stoke much controversy, as would the process of providing a “meaningful opportunity for release” as necessitated in *Graham*. There is, however, a growing body of knowledge from fields like developmental psychology, adolescent neuroscience, and criminology that can contribute to this debate as states increasingly consider the appropriate amount of punishment for young offenders.

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Transfer to Adult Court: Enhancing Clinical Forensic Evaluations and Informing Policy

8

Debra R. Chen and Randall T. Salekin

Transfer to adult court is a complex issue that has not yet received sufficient research attention. Transfer raises many salient questions for mental health professionals working within the juvenile justice system such as what risk a youth may pose to the community, how (im)mature the youth's decision making is, as well as the chief question of whether youth can be reformed. These questions encapsulate the essence of all juvenile justice youth evaluations, but are at a heightened level of importance in transfer cases. Despite meager numbers of research articles on this topic, in the past decade, significant strides have made toward better understanding the transfer of juveniles to adult court. For instance, Melton et al. (2007) produced an informative chapter to address the issue of transfer to adult court where they focused on amenability to treatment assessments.

Ewing (1990) wrote one of the first journal articles on transfer evaluations and discussed how psychologists could provide information on the dangerousness, maturity, and amenability constructs that are widely believed to be central to transfer that are now codified in the majority of state statutes. Ewing articulated that mental health professionals are in a unique position to address issues regarding amenability and maturity and that mental health professionals may also be able

to provide information on risk for dangerousness. Kruh and Brodsky (1997) wrote an elegant review of the research on transfer constructs and underscored the need for additional research on these key concepts if mental health professionals were going to be able to, more accurately, inform the courts. Salekin and colleagues started the process of gaining further clarification of the constructs that guide transfer by conducting two prototypical analytic studies (Salekin et al. 2001, 2002). Highlighted in these two scientific investigations were the core items believed to underpin each construct as seen through the lens of juvenile court judges and forensic clinicians involved in transfer evaluations. Finally, Witt (2003) provided a rich example of a transfer evaluation elucidating how a juvenile transfer case could be properly conducted and interpreted.

Prior to the aforementioned set of manuscripts, very little was known about how to conduct transfer evaluations. For the most part, this remains true today. That is, few studies have examined the nature and quality of waiver evaluations as performed in everyday practice (Brannen et al. 2006) and until recently (Grisso 1998; Salekin 2004; Salekin and Grimes 2008), no professional literature offered a coherent or systematic model for performing such evaluations. Grisso (2000) noted that the guidelines for conducting transfer evaluations were so lacking that searches of indexes of leading textbooks on child and adolescent psychiatry and psychology turned up few scholarly chapters on the topic (Grisso 2000; Kalogerakis 1992;

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Melton et al. 2007; Schetky and Benedek 2002; Weiner and Hess 2006).

The dearth of information and research on best practice in this area runs counter to the notion that clinicians have been conducting transfer evaluations since the inception of the juvenile courts (Melton et al. 2007). To put the lack of research in perspective, there are numerous articles and books available that describe, evaluate, and critique other types of forensic evaluations of adult defendants spanning from articles on criminal responsibility, competence to stand trial, risk for violence, as well as custody evaluations and evaluations of abuse and neglect. Yet, little has been conducted on transfer evaluations. Moreover, there is little known about the training of individuals who conduct transfer evaluations (Grisso 2000; Salekin and Grimes 2008). Because we are familiar with traditional models for training in psychology, it is likely that clinicians currently conducting these evaluations have requisite education in some areas of relevance (forensic psychology) but perhaps not other areas (e.g., clinical child and developmental psychology).

Taken together, Grisso (2000) has noted that clinicians conducting transfer evaluations may only be partially equipped for the task, have a miniscule literature base from which to work, and have few formal experts to whom they can turn to obtain guidance. Moreover, the constructs forensic clinicians are evaluating are often ill-defined or not well understood (see Salekin et al. 2002). Seen from this perspective, and given the large volume of transfer evaluations in most courts and the importance of psychological information to these decisions, the lack of information in the literature about any aspect of the evaluation in transfer cases is concerning and signals the need for further research and theory on transfer evaluations. Fortunately, progress is being made in this area and an expanding research base is available.

The goals of the present chapter are fourfold. First, we briefly discuss the juvenile justice system, fluctuations in violent crime, and the introduction of additional mechanisms for transfer. Second, we discuss the criteria for transfer to

adult court. Descriptions of criteria established by the US Supreme Court, by individual states, and by researchers and clinicians are provided. Third, a goal of the present chapter is to provide clinicians with current knowledge on how they can aim for an assessment that can accurately inform the courts about youth facing transfer. Transfer decisions are legal ones and we do not advocate offering ultimate legal opinions on whether or not youth should be transferred. We will provide guidelines for how clinicians can avoid bias in their reporting of information so as to avoid being harmful to adolescents and to be able to offer recommendations for how the youth can change. A fourth goal of the chapter is to examine how the clinical evaluation of youth might eventually help us shape policy for youth. This goal is centered on how the juvenile justice system could become even more developmentally sensitive without ignoring the protection of society. This portion of the chapter will discuss the ramifications of transferring youthful offenders to criminal court, including rates of recidivism and the social life of these individuals in prisons.

History of the Juvenile Court, Trends in Violence, and Legislative Change

Juvenile courts were created in the USA in the 1890s to address the popular belief that children and adolescents are developmentally different than adults and therefore should be processed in developmentally sensitive courts. However, in the first quarter of the twentieth century, critics of the juvenile justice movement suggested that the juvenile court system was not appropriately punitive toward serious younger criminals or that it did not appropriately control crime, especially for those who were violent and over the age of 16 years. Accordingly, by the mid-twentieth century, juvenile laws were revised to include provisions for the transfer of youthful offenders to criminal court (Tanenhaus 2000). These revisions were meant to serve as a safety valve to remove severe juvenile offenders from the less severe

youthful offenders. In the late 1980s to late 1990s, there was a significant rise of violent youthful crime, with an increase of 70% of the number of youthful offenders arrested for violent offenses during that same decade (Jordan and Myers 2007). Consequently, there was an increased public perception of the dangerousness of youthful offenders and society demanded greater crime control and harsher treatment of violent young offenders. In reaction, the juvenile justice system became more focused on crime control models with various states adding additional provisions for the transfer of offenders to criminal court (Woolard et al. 2005; Zimring 1998). These changes are reflected in the significant increase in the number of youthful offenders held in prisons from 1,600 in 1988 to 8,000 in 1998 (Austin et al. 2000). As of mid-2008, approximately 3,500 youthful offenders¹ were being held as adults in local jails and 6,400 youthful offenders were incarcerated in state prisons (West and Sabol 2009).

Despite ebbs and flows in the rate of violent crime in the US society and the varying rate of youth being transferred to adult court, the surges in violence over past decades have left us with a number of mechanisms for transferring juveniles to adult court. Currently, every state allows for the transfer of youthful offenders to adult court (Redding 2010). Recent estimates indicate that as many as 200,000 youthful offenders are being processed as adults on a yearly basis (Woolard et al. 2005). However, of that sum, approximately 8–10,000 of these offenders are processed by judicial waiver (Adams and Addie 2010), suggesting that the majority of these offenders are transferred by other mechanisms.

Mechanisms for Transfer to (or Back from) Adult Court

There are currently four different mechanisms by which youthful offenders can be processed in adult court (summarized in Table 8.1). The first

mechanism is judicial waiver whereby a judge determines after a hearing if the offender should be transferred (this procedure is currently allowed in 45 states, Snyder and Sickmund 2006). The second mechanism is statutory exclusion which indicates that the state's laws allow for the automatic transfer of offenders of a certain age who performed a specific crime (e.g., a 16-year-old who committed first-degree murder) (currently allowed in 29 states). The third mechanism is prosecutorial discretion wherein prosecutors have the right to prosecute a case in either juvenile or criminal court because both courts can claim jurisdiction for that case (currently allowed in 14 states). The minimum offender age range for transfer by judicial waiver, statutory exclusion, and prosecutorial discretion across the 50 states range from "no minimum" to 17 years, "no minimum" to 16 years, and "no minimum" to 17 years, respectively.

Depending on the state, the minimum age can depend on the nature of the crime, with laws allowing younger offenders (e.g., 12 years old) to be transferred if they are accused of more violent felonies against persons (e.g., murder) (see Snyder and Sickmund 2006). In general, there are several criteria which determine whether an offender will be transferred (a majority of which will be discussed later in this chapter); however, primary criteria include the offender's age and the severity of the offense. As demonstrated by Table 8.2, the minimum age at which an offender can be transferred is highly dependent upon the offense (e.g., if the crime was person, property, or drug related). The fourth mechanism by which juvenile offenders can be transferred to adult court is blended sentencing statutes, or extended jurisdiction statutes, which provide for a combination of juvenile and adult components. The adult components of these sentences are usually enforced only if the offender violates the juvenile component of their sentence or if they commit a new crime (Fagan 2008). Twenty-five states also provide for the reverse waiver, or decertification, of young offenders from adult to juvenile court. In these situations, the judge in the criminal court determines after a hearing that it is more appropriate to prosecute the case in

¹ For the purposes of this chapter, the term youthful offenders will be used interchangeably with the term juvenile offenders and refers to offenders aged 17 years and younger.

Table 8.1 Definitions of transfer mechanisms and the number of states in which they are currently allowed

Transfer mechanism	Definition	No. of states
Judicial waiver	Judge waives the offender after a hearing	45
Statutory exclusion	Automatic transfer due to state law	29
Prosecutorial discretion	Prosecutor chooses to charge an offender as an adult	15
Blended sentencing	Juvenile and adult components to the sentence	18

Table 8.2 Minimum age criteria for certain offenses by state (Griffin 2008)

State	Judicial waiver	Judicial waiver for any criminal offense	Certain felonies	Capital crimes or murder	Certain person offenses	Certain property offenses	Certain drug offenses	Certain weapon offenses
Alabama	14	14	16	16			16	
Alaska	NS	NS			16	16		
Arizona	NS		14	15	15			
Arkansas	14		14	14	14			14
California	14	16		14	14	14	14	
Colorado	12		12	12	12			
Connecticut	14		14	14				
Delaware	NS	NS	15	NS	NS	16	16	
D.C.	NS	16	15	15	15	15		NS
Florida	14	14						
Georgia	13	15		13	13	15		
Hawaii	NS		14	NS				
Idaho	NS	14	NS	NS	NS	NS	NS	
Illinois	13	13	15	13	15	15		15
Indiana	NS	14	14	10			16	
Iowa	14	14						
Kansas	10	10						
Kentucky	14		14					
Louisiana	14			14	14	15	15	
Maine	NS		NS	NS	NS			
Maryland	NS	15	NS					
Massachusetts				14				
Michigan	14		14	14	14	14	14	
Minnesota	14		14					
Mississippi	13	13	13	13				
Missouri	12		12					
Montana			12	12	12	16	16	16
Nebraska			NS					
Nevada	14	14	14	NS	14			
New Hampshire	13		15	13	13		15	
New Jersey	14	14	14	14	14	14	14	14
New Mexico				15				
New York				13	13	14		14
North Carolina	13		13	13				
North Dakota	14	16	14	14	14		14	
Ohio	14		14	14	16	16		

(continued)

Table 8.2 (continued)

State	Judicial waiver	Judicial waiver for any criminal offense	Certain felonies	Capital crimes or murder	Certain person offenses	Certain property offenses	Certain drug offenses	Certain weapon offenses
Oklahoma	NS		NS	15	15	15	16	15
Oregon	NS		15	NS	NS	15		
Pennsylvania	14		14	NS	14	14		
Rhode Island	NS	NS	NS	17	17			
South Carolina	NS	16	14	NS	NS		14	14
South Dakota	NS		NS					
Tennessee	NS	16		NS	NS			
Texas	14		14	14			14	
Utah	14		14	16	16	16		16
Vermont	10			10	10	10		
Virginia	14		14	14	14			
Washington	NS	NS						
West Virginia	NS		NS	NS	NS	NS	NS	
Wisconsin	14	15	14	10	NS	14	14	
Wyoming	13	13						

Note: Unless labeled as being specific to judicial waiver, the minimum ages provided apply to any transfer mechanism, with the exception of blended sentencing. Blank spaces indicate that the age is currently not addressed by state law and *NS* none specified

juvenile court than the adult court and then the offender will be decertified, or returned, to the juvenile court for processing.

Criteria for Transfer

In the landmark case *Kent v. United States* (1966), the US Supreme Court established guidelines for the judicial waiver of youthful offenders to criminal court. The *Kent* case provided eight criteria upon which transfer determinations should be made. These criteria are: “(1) the seriousness of the alleged offense to the community and whether the protection of the community requires waiver; (2) whether the alleged offense was committed in an aggressive, violent, premeditated, or willful manner; (3) whether the alleged offense was against persons or against property, greater weight being given to offenses against persons especially if personal injury resulted; (4) the prosecutive merit of the complaint, i.e., whether there is evidence upon which a Grand Jury may be expected

to return an indictment; (5) the desirability of trial and disposition of the entire offense in one court when the juvenile’s associates in the alleged offense are adults who will be charged with a crime; (6) the sophistication and maturity of the juvenile as determined by consideration of his home, environmental situation, emotional attitude, and pattern of living; (7) the record and previous history of the juvenile, including previous contacts with juvenile service programs, other law enforcement agencies, juvenile courts and other jurisdictions, prior periods of probation ... or prior commitments to juvenile institutions; and (8) the prospects for adequate protection of the public and the likelihood of reasonable rehabilitation of the juvenile (if he is found to have committed the alleged offense) by the use of procedures, services and facilities currently available to the Juvenile Court” (pp. 566–567).

Although these *Kent* criteria were established by the Supreme Court, states have been left to decide on their own how these criteria should be incorporated into the transfer process. Heilbrun et al. (1997) reviewed statutes of the 50 states and

the District of Columbia and examined the statutes' provisions regarding the transfer of youthful offenders to criminal court. The investigators found that the following criteria were repeatedly important to the decision to waive an offender: (1) the offender's treatment needs, (2) risk assessment, (3) characteristics of the offense, (4) sophistication–maturity, and (5) if the offender had a mental illness or intellectual disability. There is support that these five concepts can be narrowed further to include only three concepts: (1) potential dangerousness, (2) sophistication–maturity, and (3) amenability to treatment (Ewing 1990; Salekin 2002; Salekin and Grimes 2008). In juvenile court guidelines written by the National Council of Juvenile and Family Court Judges (NCJFCJ 2005) and published by the Office of Juvenile Justice and Delinquency Prevention (OJJDP), the NCJFCJ echoed that these three broad constructs encapsulate the necessary criteria in the decision to retain or waive jurisdiction of juvenile offenders. Although dangerousness has always been a factor to consider, maturity and amenability to treatment have more recently and increasingly, across the states, explicitly listed as criteria to consider in transfer decisions. Despite increasing consensus that maturity and treatment amenability are key constructs in understanding juvenile offenders, as mentioned, the defining features of each of these concepts have not been well understood. Because of the centrality of the constructs to transfer, each will be discussed below.

Risk for Dangerousness

Numerous legal and mental health scholars have acknowledged that the potential for dangerousness² is an important construct for juvenile court

judges in their consideration in the decision to waive a youthful offender to adult court (Brannen et al. 2006; Heilbrun et al. 1997; NCJFCJ 2005). Despite its importance, researchers have noted that it poses challenges. Specifically, three challenging issues arise with this concept including: (1) what is dangerousness, (2) how do we measure it, and, (3) to what extent does it have predictive merit? In the paragraphs that follow, we discuss how we define risk for dangerousness and three pertinent areas of research that may help clinicians better understand the risk that youth may pose to the community. These factors include developmental pathways to offending, psychopathy-like features, and prototypical items that are thought to be central to dangerousness. Many of the factors that make youth a potential risk overlap.

With respect to how to define risk for dangerousness, we recognize that there are likely a variety of ways in which the term can be defined. We, in this chapter, intentionally leave the term broad, because narrowing it further (e.g., risk for violence) may not accurately reflect the degree to which youth may be dangerous to the community due to their turbulent lifestyle (e.g., chronic offending, burglaries, and drug trade). We suggest where possible, clinicians provide information regarding general reoffending rates and more specific rates for violent reoffending. It may be the risk for violent reoffenses that is most pertinent to transfer, but providing both types of information (general and violent) offers a more comprehensive assessment of the youth's potential disruptive behavior and consequent potential risk to themselves and the community.

Developmental Pathways to Offending

Developmental pathways to antisocial behavior may serve as one helpful informative source when examining a youth's potential for future

²The prediction of future dangerousness can be either used to describe broad offending (general offending) or to describe prediction of future violence (Kruh and Brodsky 1997); clinicians would have to specify what estimates they were examining when providing estimates for dangerousness.

offending. Moffitt's (1993) seminal antisocial taxonomy paper described two trajectories for youths presenting with antisocial behavior: adolescence-limited and life-course-persistent antisocial behavior. This model could be very informative to those conducting transfer evaluations. As the title implies, there is little continuity in the antisocial behavior of individuals on the adolescence-limited trajectory. These individuals demonstrate antisocial behavior during adolescence and tend to have adequate interpersonal skills, average or better academic grades, and stable mental health status. In comparison, youth who fall in the life-course-persistent pattern exhibit antisocial behavior consistently early into and throughout their lives (e.g., biting in pre-school, petty crime during junior high, to felony crimes as adults). These individuals' antisocial behavior presents itself across situations (e.g., home, work, school) and has been associated with negative life outcomes such as addiction, unpaid debt, violent abuse, unstable relationships, and homelessness (Sampson and Laub 1990).

Over the past few decades, research has continued to show that the Moffitt (1993) taxonomy has validity. For instance, Bersani et al. (2009) examined the criminal careers of 4,600 offenders at age 12. These youth were monitored, and it was concluded that the early onset risk group was significantly more likely to be convicted of a violent crime than the low-risk group during adolescence. This finding demonstrated the potential predictive power of the Moffitt taxonomy at least in the short term. It should be noted, however, that the two groups' probability of offending were not different by the time the offenders were in their mid-1920s (Bersani et al. 2009). In another study, Piquero et al. (2001) followed the arrest and incarceration rates of 272 18-year-old males until the age of 33 and found that although 90% of them averaged more than one arrest at the age of 18, by the age of 28 years, 28% of the offenders averaged more than one arrest (controlling for time spent incarcerated). Lastly, in a discussion of the Pittsburgh Youth Study, Farrington et al.

(2008) concluded that when protective and risk factors are equally balanced in a group of youthful offenders, the percentage of offenders who went on to violently offend ranged from 3 to 6%. However, when the number of risk factors was higher than the number of protective factors, the percentage of offenders who violently offended in the future was dependent upon the difference: 11% for one risk factor, 33% for two risk factors, 52% for three risk factors, and 68% for four or five risk factors. Loeber's (1990) early supposition that there are different developmental trajectories children and adolescents can take in their delinquency/criminal careers is supported by this research.

There are a large number of risk trajectory studies in the literature available to a clinician considering risk assessment. Different methods of analysis, such as growth modeling and latent class growth analysis are now providing researchers with a varying number of descriptions of these trajectories. These studies examine desisters, moderate offenders, and severe offenders. In addition, studies are beginning to examine the moderators of developmental pathways (see Barker et al. 2011). Many of these studies are likely to provide a much clearer picture regarding the various trajectories of youth when it comes to reoffending. In deciding to use crime trajectories to inform one's assessment, it is recommended that the clinician be aware of the different life-routes youth can take and what factors might moderate the progression along a pathway. As an extensive review of all of the pertinent studies is outside the boundaries of this chapter, Table 8.3 provides just a few examples of the differences found in these aforementioned, and other studies, and is used here to provide an example of how clinicians can cumulate recent data on developmental pathways to inform their risk assessment. These models can be informative to the courts if clinicians can summarize this information to provide estimates of a youth's risk for reoffending to the courts based on perhaps dozens of studies with large numbers of youth in similar and dissimilar contexts.

Table 8.3 Examples of risk trajectory studies

Study	Group/class	Age of peak offending rate	Approximate rate of offending at peak age	Indication of desisting before/around age of 20	Labeled as low, moderate, or serious offending	Chronic/persister
Ezell and Cohen 2005	1	15	2.7	No	N/A	N/A
	2	15	2.7	Yes	N/A	N/A
	3	15	2.5	Yes	N/A	N/A
	4	18	1.25	No	N/A	N/A
	5	18	1	Yes	N/A	N/A
	6	25	2.5	No	N/A	N/A
Moffitt 2007	1	Adolescence	N/A	Yes	N/A	No
	2	Childhood	N/A	No	Serious	Chronic
	3	Childhood	N/A	No	Low	Chronic
Livingston et al. 2008	1	15	2.6	N/A	Serious	Chronic
	2	14	1	N/A	Moderate	N/A
	3	>16	1.25	N/A	Moderate	N/A
Kreuter and Muthen 2008	1	16	3	Yes	N/A	N/A
	2	18	2	Yes	N/A	N/A
	3	18	0.5	No	N/A	N/A
	4	16	0.5	Yes	N/A	N/A
	5	N/A	0.1	N/A	N/A	N/A
	6	N/A	0	N/A	N/A	N/A
van der Geest et al. 2009	1	20	1	Yes	Serious, nonviolent	N/A
	2	20	1	Yes	Serious, violent	N/A
Monahan et al. 2009	1	14	10	No	N/A	Persister
	2	14	10	Yes	N/A	N/A
	3	16	8	Yes	N/A	Desister
	4	N/A	N/A	No	Moderate	N/A
	5	14	2	Yes	Low	N/A

Psychopathic-Like Features

The research base for adolescent psychopathy has grown substantially in the last two decades (Salekin and Lynam 2010). In fact, there are now many more studies on this topic as research grows exponentially each year. This larger research base has shown that psychopathy in youth is predictive of later offending and that it is predictive of violent offending (for a comprehensive review see Leistico et al. 2008). Researchers can look to meta-analytic studies in this area to gain information on the relation between youth psychopathy and antisocial behavior (see Leistico et al. 2008; Edens et al. 2001; Forth and Book 2010). Researchers can

also examine individual studies regarding specific psychopathy measures not covered in meta-analytic studies. For example, psychopathy has been demonstrated to be a predictor of potential dangerousness when using the Antisocial Process Screening Device (APSD; Frick et al. 2003). Although research has shown that psychopathy may serve as part of a clinical evaluation for juvenile transfer, we do not support the use of the term psychopathy without properly up-dating court personnel as to what it means in terms of its moderate stability, potential treatment amenability and so forth (see Salekin and Grimes 2008; see also Andershed 2010) Although consideration of psychopathy and antisocial behaviors as predictors of future serious recidivism may provide useful information,

it is critical that clinicians be very cautious that they do not use the term to limit a youth's life chances. This is because there are limitations as to what we know about the long-term life outcomes of youth with psychopathic characteristics (Salekin and Lynam 2010). Fortunately, research is expanding in this area and in future decades more resolution on this topic may be forthcoming. At present, the best that can be expected is short-term prediction.

Prototypical Items

Researchers (e.g., Salekin et al. 2002) have attempted to better define the concept of future dangerousness through prototypical and factor analytic methods. It has been shown that clinical psychologists, forensic diplomats, and juvenile justice judges indicated that the following factors are related to potential dangerousness: (1) participating in serious and unprovoked violence; (2) demonstrating severe antisocial personality traits; (3) lacking in remorse, guilt or empathy; (4) having histories including violence against other persons; and (5) demonstrating a leadership role in the crime (Salekin et al. 2001; Salekin et al. 2002).

Relatedly, crime components have been interpreted by judges to be indicative of the dangerousness of an offender (NCJFCJ 2005; Sellers and Arrigo 2009). Therefore, certain components of the crime may serve to shed light on the dangerousness issue. There is evidence that elements of the crime can predict the transfer and decertification of youthful offenders (Burrow 2008a, b; Poulos and Orchowsky 1994). Specifically, the degree of violence, type of crime committed (e.g., homicide, robbery, or assault), and presence of a weapon (especially a firearm) are all significantly associated with the likelihood of a juvenile being transferred to adult court and to remain in adult court (Burrow 2008a, b; Harris 2008; Jordan and Myers 2007; Kurlycheck and Johnson 2004; NCJFCJ 2005). Past crime components can be considered in conjunction with different criminal trajectories and potentially psychopathic

features, as discussed above, and may help in the development of a broader conceptualization of the offender's potential dangerousness.

There is some evidence of convergence among the methods mentioned above. Specifically, some research suggests that the majority of youthful offenders with psychopathic traits fall on the life-course-persistent trajectory (Moffitt 1993). The occurrence of the life-course trajectory in individuals has a low base rate (Penney and Moretti 2005) but the individuals that make up this group are thought to account for higher rates of offending. For example, in her review of the literature examining the differential association of life-course-persistent offenders with serious and violent offending, Moffitt (2007) concluded that although life-course persistent offenders accounted for 10% of the offenders in one study, they accounted for 43% of the group's violent crime. The psychopathic youth are also more likely to offend violently which would fit with the life-course-persistent group analyses. Moreover, the individual items from prototypic studies are also likely to overlap with the key items that identify more chronic offenders in pathway models as well as psychopathic features further illustrating this overlap in characteristics for high-risk youth (see Salekin 2004; Spice et al. 2010).

Sophistication–Maturity

Youthful offenders' level of sophistication and maturity has also been shown to be an important consideration for juvenile judges in their determination to waive an offender (Brannen et al. 2006; NCJFCJ 2005). Possible explanations for this construct's influence include the evidence that youthful offenders' sophistication–maturity can affect their criminal decision making and the likelihood for them to reoffend in the future (e.g., their future dangerousness) (Cauffman and Steinberg 2000; Cruise et al. 2008; Salekin and Grimes 2008; Spice et al. 2010). In addition, juveniles' ability to have insight into their position, which is a component of sophistication, can affect their amenability to treatment in a positive way (Salekin 2002; Salekin et al. 2002;

Slobogin 1999). Furthermore, as the percentage of transferred juveniles who are 15 years of age and younger increases (this percentage increased from 7 to 15% from 1985 to 2005) (Adams and Addie 2009), the consideration of the sophistication–maturity levels of younger offenders may become increasingly important. For example, as more 13-, 14-, and 15-year-olds are evaluated for transfer, given their younger age, there may be an increased demand for consideration of how their sophistication and maturity levels may be similar to, or different from, those of adults.

Researchers (e.g., Salekin et al. 2002) have been interested in determining the factors which are central to sophistication–maturity. Sophistication–maturity has been established to include the following factors: (1) culpability and the ability to plan crimes, (2) criminal sophistication, (3) understanding behavior norms, and (4) recognizing alternative plans (Harris 2008; NCJFCJ 2005; Salekin et al. 2001, 2002). Related to these four factors, foresight/future orientation and decision-making skills (cost benefit analysis) have been also been rated as integral to the sophistication–maturity construct (Salekin 2002). In addition to the amount of planning for and participation in the crime, Harris (2008) found in her survey of judges, prosecutors, and defense attorneys, that they also consider the offenders' remorse as indicative of their sophistication. Remorse is likely to be indicative of guilt and morality. Therefore, it is not surprising that it is also recommended that clinicians consider moral development in their court evaluations of sophistication–maturity (Salekin and Grimes 2008). However, this aspect of maturity overlaps with risk and amenability.

Ewing (1990) suggested that cognitive and emotional maturity should be considered as part of the sophistication–maturity construct. He postulated that evaluating offenders' intellectual abilities not only provided information regarding their general intellectual functioning, but also their attention and memory, perception, and speed of processing. He added that achievement assessment could provide information regarding hindrances to the development of their sophistication–maturity. Moreover, the

offenders' emotional state and psychosocial development would also provide insight into their maturity (Ewing 1990; Harris 2008). Juvenile court and family court judges add that intellectual and developmental disabilities would be considered as part of the sophistication–maturity construct (NCJFCJ 2005). In addition, Grisso et al. (1988) study also found that independence and self-reliance and less clinically defined factors, such as composure and knowledge of street survival (being "streetwise"), loaded onto the sophistication–maturity construct.

Although sophistication–maturity is often treated as one construct, arguments have been made that separate consideration of different maturity factors is appropriate (Steinberg and Cauffman 1996; Steinberg et al. 2009). These models suggest that cognitive maturity, for example, might develop faster than social maturity. Alternately, however, maturity could be developing at the same rate in individuals across broad classes of functioning (cognitively, emotionally, and socially), but the youth's setting may result in youth prioritizing some aspects of maturity (e.g., social), less (see Steinberg et al. 2009). Thus, while there are various theories on the topic, there is not much data to support the notion for differential rates of growth in maturity components (Fischer et al. 2009).

One of the potential problems with the maturity construct is that we do not have a great deal of data in terms of what it predicts within the juvenile offender literature (although see Spice et al. 2010). Fortunately, research is beginning to emerge on this topic (Cauffman and Steinberg 2000; Salekin and Grimes 2008; Spice et al. 2010; Steinberg and Cauffman 1996; Steinberg et al. 2009). The literature does provide some insight into adolescent maturity and delinquent behavior. For example, some research has shown that 8th, 10th, and 12th graders who are more calm and responsible, and have better perspective-taking skills, are less likely to make antisocial decisions (Cauffman and Steinberg 2000). In addition, Cruise et al. (2008) have shown that male adolescent offenders with more perspective and temperance reported lower nonviolent delinquent behaviors and those with lower temperance levels

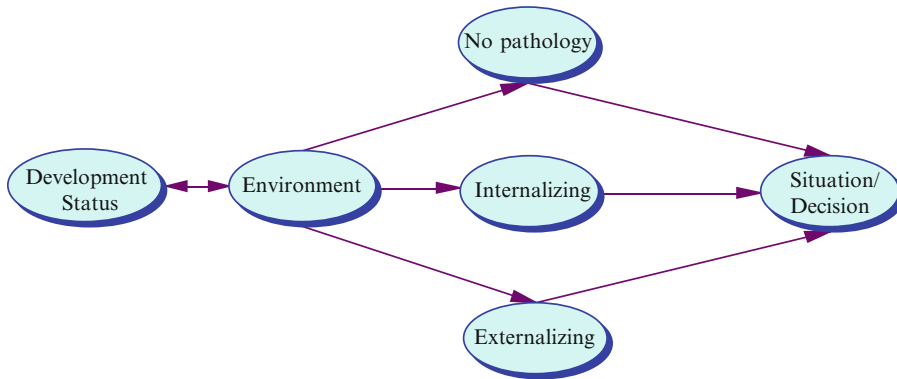


Fig. 8.1 Model for maturity incorporating individual development, external factors, and presence of pathology

reported significantly more violent delinquent acts. It has also been shown that psychosocial maturity can predict change in alcohol use, but not marijuana use, in 1,000 male serious juvenile offenders (Mauricio et al. 2009).³ Alternately, Spice et al. (2010) have shown that sophistication–maturity can also be a risk factor if the maturity is not prosocial in nature. This point is also articulated by (Steinberg et al. 2009).

Despite the complexity of the construct, we contend that clinicians can provide information on the maturity of youth which should then help to inform, in context with other factors, legal decisions and treatment plans. Salekin and Grimes (2008) provided a model that captures multiple factors to be considered in such evaluations (see Fig. 8.1). This model suggests that clinicians consider the youth’s environment, developmental status, level of psychopathology and their predicament to determine their level of maturity. The maturity construct is so imperative to the notion of the juvenile justice system that

incorporating risk and amenability into the model is also necessary. In addition to considering the above model as part of an evaluation, following Ewing’s (1990) suggestion that offenders’ intellectual functioning and achievement levels be assessed can also be important. According to Ewing (1990), evaluations for transfer to criminal court can include the use of tests such as the Wechsler Intelligence Scale for Children—Fourth Edition (WISC-IV; Wechsler 2003), the Stanford–Binet 5 (SB5; Roid 2003), and/or the Woodcock–Johnson Test of Achievement, Third Edition—Standard Battery (WJ-III; Woodcock et al. 2001), all of which are well established and widely accepted. Furthermore, Ewing (1990) suggested that tests such as the Children’s Apperception Test (CAT; Bellak and Bellak 1982) or the Thematic Apperception Test (TAT; Murray 1943) can help explore factors inside, or outside of the offenders’ awareness which can contribute to their maturity (e.g., internal or external locus of control).

³Clinicians may consider referring to a growing line of research examining fMRI research; efforts have been made to demonstrate that brain functioning in adolescents is different from that of adults. However, conclusions in this field often refer to culpability in areas where the science is not adequately designed to address culpability (see Aronson 2007). Therefore, we would argue that that best way for psychologists to assist the courts is to examine developmental maturity in the context of the other variables they believe to be pertinent.

Treatment Amenability

Amenability to treatment is another critical concept in transfer evaluations (NCJFCJ 2005; Salekin et al. 2001; Burrow 2008a, b). Because it is less frequently studied, researchers have used prototypical and factor analytic methods even more so in order to help better define this concept.

For instance, Salekin et al. (2001, 2002) found that similar factors loaded on the amenability to treatment concept: (1) responsibility and motivation to change; (2) consideration and tolerance of others (e.g., able to tolerate frustration, caring toward others); (3) family cooperation (e.g., stability of the offender's home); and (4) susceptibility to peer influence, prosocial behavior, and good court conduct (e.g., good court conduct, social competence). To help identify items which compose these four factors, Grisso et al. (1988) asked judges, referees/hearing officers, prosecuting attorneys, defense attorneys, intake and probation officers, and mental health professionals working within juvenile courts across 30 states to identify items which they believed defined these concepts. They found the following factors to have more than 0.50 loading onto the "motivation to accept intervention" construct: (1) motivation to change behavior, (2) sense of guilt, (3) respect for the court, (4) receptiveness to adult assistance, (5) potential to change with treatment, (6) respect for authority, (7) insight into own problems, and (8) acceptance of decisions made by court workers. Their data also indicated that an unsocialized family and family's caring and resource capability loaded onto this construct. These findings suggest that core items may play a particularly important role in the decision to waive a juvenile to adult court. In addition, there is evidence that the results of previous treatment attempts constitute an important component of amenability of treatment concept (Howell 1997; NCJFCJ 2005).

Importantly, recent studies have shown that amenability can have a protective effect for adolescent offenders (see Leistico and Salekin 2003). For instance, Salekin et al. (2010a, b) discovered that youth high in motivation to change are less likely to offend three years after they are initially assessed for their amenability to treatment (i.e., motivation to change). Spice et al. (2010) have shown that amenability is inversely associated with violent conduct disordered symptoms and is also negatively associated with transfer to adult court. These findings suggest that amenability may be important information to provide court personnel with as well as the specific statistics for how protective the variable may be.

Considering that one of the *Kent* criteria includes whether the offender can be "reasonably rehabilitated" through the Juvenile Court's current capabilities and available services (*Kent v. United States* 1966), courts determining transfer cases (see, e.g., *P.K.M. v. State* 1989) have stressed the importance of considering only currently available resources in the decision to waive an offender. However, others, like Melton et al. (2007), have suggested that clinician recommendations regarding treatment amenability should include not only readily available interventions, but also available interventions that may be more difficult to establish, and a consideration of all treatments that may work, but are not currently accessible. Regardless of the information provided by an evaluation, however, state laws provide for the transfer of a juvenile if there is reason to believe that the juvenile court is unable to rehabilitate an offender (Heilbrun et al. 1997). Therefore, there is reason to believe that recommendations unrealistically beyond services available to the juvenile court would be irrelevant to many juvenile court judges' decision to waive an offender (Grisso 2000; NCJFCJ 2005).

The definition of treatment in this context is also essential to the consideration of offender rehabilitation. Mulvey (1984) suggested that a variety of interventions could fall under the category of treatment and that statutes imply that there is an assumed general definition of treatment. He added that a few states have defined added qualifiers regarding treatment such as "treatment is not limited to the psychotherapy or mental health interventions" in the State of Virginia (p. 201). Grisso (2000) added that states' treatments include probation programs, rehabilitation facilities, and mental health facilities run not only by the state's facilities but also other states' facilities as well.

Evaluation of amenability to treatment should include consideration of psychological disorders and the degree to which they are either amenable or resistant to change and greater detail on the disorder itself should be provided (Salekin and Grimes 2008). For example, psychopathy in adolescents may be linked with difficult and potentially disruptive behavior in treatment settings,

but there is research to show that progress can also be made with this group, including reductions in offending (Caldwell et al. 2006; Salekin 2010; Salekin et al. 2010a, b). However, as mentioned earlier, specialized treatment may not be available in all juvenile justice systems. Therefore, evaluations should carefully consider needed treatments and whether they are currently or could be made available to the offender. In addition, it can be helpful to consider the offenders' motivation for change and the offenders' families' expectations of treatment as these factors have been shown to affect amenability to treatment. There is also some evidence that the offender's age should be considered, since developmental research and the courts tend to find younger offenders to be more amenable to treatment than their older counterparts (Loving and Patapis 2007). This does not, however, mean that strong efforts should not be made to treat older adolescents. Rather, while acknowledging that treatment may be difficult, strategies to facilitate prosocial development and transitions to young adulthood should be attempted.

Simultaneous Consideration and Assessment of all Three Factors

Once mental health professionals know the standard being evaluated, the criteria that underlie the standard, and the psychological concepts they will evaluate as well as the research that accompanies those constructs, they can proceed to the next stage of the evaluation which is to comprehensively assess the youth (Grisso 2000). On beginning the evaluation, it is key for the forensic expert to allow adequate time to gather and assess the data required for this complex undertaking. The first step is to review the relevant documents, including police, medical, psychiatric social, and school reports. A comprehensive developmental history including neighborhood, school, and home environment is critical. Contacting court personnel and teachers is essential. A broad perspective in gathering the information is important because context may be at least as relevant as personality and behavior. The specific nature of

the interview should be clearly articulated to the youth and the youth must be warned that confidentiality *will not* be preserved. The expectation of the report to the court and possible court testimony about the juvenile should be made explicit. Clinicians must be sensitive to the child comprehension and situation.

Once these factors have been carefully dealt with, the transfer evaluation is likely to center on *Kent* criteria. Decision makers in the transfer process (likely to be judges or prosecutors) are likely to consider all three psychological constructs simultaneously as well as other factors. Some attention has been paid to the relative importance of each of these constructs on the decision to transfer an offender to adult court. Brannen et al.'s (2006) survey of juvenile court judges found that of the three constructs, potential dangerousness had the greatest impact on juvenile judges' decisions in transfer cases. Yet, assessment of risk for dangerousness, is as mentioned, an imprecise science. Nonetheless, this sentiment has been echoed in Sellers and Arrigo's (2009) review of decisions filed in decertification hearings rely on dangerousness. In the six hearings they evaluated, the courts repeatedly acknowledged that when violent crimes were committed, the level of violence indicated degree of potential dangerousness. In addition, the courts' statements often referred to the necessity of providing for the protection of society from the dangerous juvenile offender in comparison to the needs of the individual. For example, the courts stated that in *Otis v. State* (2004) that "it could be inferred from the serious and violent nature of the offense that the protection of society demands that Otis be tried as an adult" (p. 607). In addition, the courts repeatedly confirmed that they were not required to equally weigh all factors and that there was no specific equation to use in arriving at a transfer conclusion. The authors concluded that often the dangerousness of the offender was serious enough to render the other two constructs' evidence of lesser import to the courts. Therefore, there is some evidence that the potential dangerousness factor is more heavily weighted as compared to the other two in juvenile transfer cases.

Table 8.4 Risk sophistication treatment inventory (RSTI) constructs

Risk for dangerousness	
Violent and aggressive tendencies (R-VAT)	
Planned and extensive criminality (R-PEX)	
Psychopathic features (R-PPF)	
Sophistication–maturity	
Autonomy (S-AUT)	
Cognitive capacities (S-COG)	
Emotional maturity (S-EMO)	
Treatment amenability	
Psychopathology-degree and type (T-PAT)	
Responsibility and motivation to change (T-RES)	
Considerate and tolerant of others (T-CAT)	

Despite the weighted importance of potential dangerousness, clinicians are recommended to consider all three constructs for their evaluations. Traditionally, these factors have been evaluated by clinical interview alone. Grisso et al. (1988) provides a structure for the evaluations that might be used. This system entails traditional clinical interviewing. This system could also be coupled with appropriate psychological measures to augment the traditional interviewing. With respect to measurement, the Risk-Sophistication-Treatment Inventory (RSTI; Salekin 2004) (see Table 8.4) is one instrument that has been shown to be reliable and valid and centers on the three constructs that appear to be salient in transfer cases (Salekin 2004; Spice et al. 2010). The RSTI, through a semi-structured interview and a clinician rating form, examines youthful offenders' presenting problems, family history, relationships with non-family members, education and employment history, criminal history, developmental maturity, treatment history, and perceived level of responsibility for the crime they are accused of committing. These items capture the items discussed as central components of the potential risk, sophistication–maturity, and amenability to treatment concepts discussed earlier. Clinicians may also want to consider methods which examine these three concepts separately, although notably, there are very few measures to assess maturity or amenability, and these two constructs are quite important in juvenile cases.

Nonetheless, there are several actuarial and specialized scales that may also facilitate with the assessment. With respect to dangerousness assessments, a number of instruments have been designed to examine the chances of future criminal behavior (see, e.g., Borum and Verhaagen 2006; Mulvey and Iselin 2008). If one is interested in measuring youthful offenders' risk for violence there are several measures available including the structural assessment of violence risk for youth (SAVRY; Borum et al. 2005), the youth level of service/case management inventory (YLS/CMI; Hoge 2005), and, as mentioned, the RSTI (Salekin 2004; Leistico and Salekin 2003; Salekin et al. 2005; Spice et al. 2010). The YLS/CMI also assesses treatment needs, which overlap with the amenability concept. In addition, the SAVRY examines protective factors, which are also likely linked to amenability. Although many of these aforementioned measures do not tap developmental maturity, a key juvenile offender concept.

If the evaluation is focused on more severe conduct disorders, clinicians may choose to use a measure of conduct disorder symptomatology or measures of psychopathy for its relevance to future dangerousness (see Salekin and Lynam 2010; see also Grisso et al. 2005; Murrie et al. 2004). The Psychopathy Checklist: Youth Version (PCL:YV, Forth et al. 2003) has been studied as a forerunner in this field (Book et al. 2006; Corrado et al. 2004; Edens et al. 2001; Gretton et al. 2004). In addition, it is not uncommon for juvenile justice systems to administer risk assessment tools to juvenile offenders upon processing, the results of which can be incorporated as collateral data into clinical evaluations (Krysik and LeCroy 2002; Turner and Fain 2006). It should be noted that the use of risk assessment in youthful offenders as predictors of future violence is only moderately predictive of later offending (see, e.g., Grisso and Appelbaum 1992; Meyers and Schmidt 2008; Welsh et al. 2008; Schwalbe et al. 2007). It should always be acknowledged that a percentage of youth, even those at risk, do not reoffend despite a measure having some predictive capabilities.

Considerably less is available in terms of measuring maturity and treatment amenability aside

from the RSTI (Salekin 2004; Spice et al. 2010). As mentioned earlier, however, researchers may want to augment their assessments with intelligence and achievement tests as well as tests that facilitate maturity and treatment amenability questions. Ewing (1990) commented that clinicians may want to augment their assessments with a CAT or TAT in that some constructs might be better assessed through a youth's performance on such a task. Researchers may also want to develop future tasks that hone in on maturity more directly.

As with any forensic evaluation, the clinical interview can be an invaluable tool for evaluations for juveniles. Judges may request and choose to examine this information when considering transfer or waiver to adult court. Interviews can provide clinicians with flexibility in exploring offenders' criminal and incarceration history, treatment history, academic achievement and school attendance, family dynamics and supports, peer relationships and influences, and history of antisocial behavior, all of which can be central to the simultaneous assessment of risk (Wiebush et al. 1995) and the assessment of psychosocial maturity and amenability to treatment (Salekin and Grimes 2008). Assessments that include structured interviews are likely to glean critical information regarding psychopathology. Lastly, evaluations for transfer should include a review of all relevant records, including police, court, school, and medical records, as these documents can provide important third-party information which can corroborate test results and interview data.

Informing the Courts

Transfer evaluations can provide an opportunity for clinicians to educate the court regarding the importance of the constructs of sophistication–maturity and amenability to treatment if the two constructs are being underemphasized. As just discussed, the courts are often primarily concerned with offenders' risk for dangerousness (Brannen et al. 2006). We understand and appreciate this

concern—we do not argue against the importance of keeping society safe. However, it is essential to evaluate an offender's potential risk trajectory in tandem with their sophistication, treatment needs, and treatment amenability. An emphasis of the constructs of sophistication–maturity and amenability to treatment can, hopefully, highlight a treatment model for the offender instead of a protection-from or punitive model. By providing a broader picture of youth, courts will be more aware of the developing adolescents' need for continued growth. In the next section, we offer our concluding comments and also raise some issues that require further thought if we are to continue to work toward a more developmentally sensitive model for handling youthful offenders.

Further Considerations and Concluding Remarks

If a new system were to be developed to handle youth who currently find themselves facing transfer, several issues need to be considered. First, several arguments could be justifiably made supporting the transfer of juvenile offenders to adult court. For example, there is no doubt that some juvenile offenders commit serious and violent crimes and that they should be appropriately contained and/or required to make some repayment to society. There are a small percentage of youthful offenders who pose a very serious threat to public safety (Scott and Steinberg 2008). In addition, it seems appropriate that there are situations when juvenile systems cannot adequately protect society from harm by some violent offenders. Arguments can be made that it is better to be more conservative toward the incarceration of violent juvenile offenders than inappropriately liberal. In addition, there is evidence that in terms of specific crimes, juvenile transfer does have a specific deterrent effect (Winner et al. 1997). Furthermore, it can be important to remove violent offenders from the juvenile system so that less serious youthful offenders will not be negatively influenced by them as thus have an opportunity to rehabilitate.

However, there is also concern about thwarting the healthy development of youth. There is

some research to show inequities in the processing and handling of youth who are tried as adults (e.g., lengthier times in the system) (Kurlychek and Johnson 2004; Rudman et al. 1986; Redding 2003; Steiner 2009). In addition, the prison system has not yet developed programming which can guarantee the appropriate counseling and educational interventions for and the safety of the youthful offenders for whom they are responsible (Austin et al. 2000; Bishop 2000; Torbet et al. 1996). As well, there are concerns about youthful offenders' interaction with adult offenders which could have negative impact on their prosocial development (Flaherty 1980; Forst et al. 1989). Moreover, there are concerns that the transfer of juveniles to adult court does not serve as a deterrent for all youth (Bishop et al. 1996; Hahn et al. 2007; Lanza-Kaduce et al. 1995; Singer and McDowall 1988; Steiner and Wright 2006; Winner et al. 1997). As Austin et al. (2000) suggested, our jail and prison systems are still struggling with creating appropriate programming for youthful offenders. Finally, although research regarding the assessment of juveniles is sharpening, it remains clear that research regarding risk assessment and the prediction of dangerousness indicates only modest success. As such, we are unable to predict with high levels of certainty long-term serious and violent recidivism. Therefore, one way to affect change is strongly suggested that clinicians consider offenders' sophistication–maturity and amenability to treatment to predict long-term future recidivism in conjunction with potential dangerousness and not weigh only potential dangerousness as the most important criteria. This would allow the courts to more selectively determine which youth are truly mature/immature and/or potentially most likely to benefit (not benefit) from treatment.

Moreover, it is recommended that forensic evaluations for the transfer of juvenile offenders to criminal court include information which stresses the short-term accuracy of predictions of future risk and the longer periods of assessment become part of policy. Such policy is backed by research which suggests that risk factors are best predictive of recidivism during the offenders' next developmental stage and not for the following 20

or 30 years of the offenders' lives (Mulvey 2005). Thus, it is recommended that after youthful offenders are transferred to adult court, that evaluations for future risk for dangerousness be periodically performed since there is the possibility that the offenders would no longer fall in the high-risk category as they might have been when they were transferred (or even while they are being considered for transfer). There is, of course, the possibility that they will continue to be at high-risk to violently recidivate. However, there also is the possibility that their risk scores may decrease from mid to late adolescence, as some of the research suggests (Farrington et al. 2008). Similar arguments could be made for measures of sophistication–maturity and amenability to treatment: the maturity and treatment amenability of a young child or adolescent could be significantly different from that of an older adolescent. This underscores the importance of multiple assessments of maturity across time for youth in correctional settings.

Currently, there is no ideal situation which provides for consideration of developmental changes of youthful offenders facing transfer. Individual consideration of each youth facing transfer may provide an increased opportunity for the justice systems to identify the individuals who do fall into the small percentage of youthful offenders who are violent and a serious danger to society. In the alternative, a more developmentally appropriate option would be to provide blended sentences for all violent youthful offenders, such that they will be evaluated at the beginning of the juvenile component of their sentence and at the end of the juvenile component. Having two (or more) assessments of potential risk, sophistication–maturity, and treatment amenability, before and after serving a juvenile sentence, may help inform whether imposing the adult component of the blended sentence is appropriate. For example, if offenders' risk levels have lowered since their first assessment, when they were first transferred to criminal court, these changes can be considered before the juvenile offender is potentially sent to prison. This option can accommodate not only the sensitivity required in the consideration of youthful

offenders, but also the concern of the justice systems for the general public's safety. These developmentally appropriate systems would use the constructs of risk, maturity, and amenability to treatment to determine the treatment needs of youth over time. In closing, there is currently no optimal solution for how to handle difficult cases but our hope is that through more accurate clinical assessments and an evolving juvenile justice system that a more effective system will ultimately evolve to promote the prosocial development of all youth.

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Need for and Barriers to Inclusion in Health Research of Justice-Involved Youth

9

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Recent estimates suggest that there are approximately 1.7 million referrals handled by juvenile courts nationally in 2007. Although some 78% of juvenile cases did not result in detention, the remaining numbers did remain substantial (Knoll and Sickmund 2010). In many jurisdictions youth are placed in custody when, as per a judge's decision, there are no other alternative solutions in the family or community that can meet the needs of the youth, safeguarding their own welfare and reducing re-offending (Clough et al. 2008).

However, there are problems inherent in the incarceration of young people. Minority youth, in particular, are overrepresented at every level of the juvenile justice system (Nofziger and Kurtz 2005; Piquero and Buka 2002; Redding and Arrigo 2005; Snyder 2005). For example, in 2003, although Black youth represented only 16% of the juvenile population in the US, they represented 45% of all juvenile arrests for violent

crimes (Snyder 2005). Such overrepresentation of ethnic minority groups is common not only in the US, but in other societies as well. For example, indigenous people of Australia are overrepresented in their criminal justice system (Australian Bureau of Statistics 2010) at a level that is 23 times higher than their non-Indigenous counterparts (Taylor 2006).

Further, it has been observed that various threats to adolescent health appear to occur more frequently among those in detention than among their peers in the general community (Copeland et al. 2007; Grisso 2008). Specifically, the majority of juveniles in custody meet criteria for psychiatric disorders other than conduct disorder (Domalanta et al. 2003; Teplin et al. 2002; Vermeiren et al. 2006; Wasserman et al. 2002, 2004). Detained juveniles show symptoms of a broad array of disorders including, but not limited to, Conduct Disorder, Oppositional Defiant Disorder, Attention Deficit Hyperactivity Disorder, Learning Disorders, and various types of Anxiety and Depression. There are estimates suggesting that these other disorders are seen in nearly 70% of female detainees and 60% of male detainees (Teplin et al. 2002); moreover, approximately 50% have two or more disorders (Vermeiren et al. 2006).

Such elevated rates of “problems” are characteristic of juvenile detainees not only in the domain of mental health, but also in other health domains. In general, children and youth in custody appear to be more vulnerable to a full spectrum of health concerns. Both retrospectively and

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prospectively, juvenile detainees tend to have less access to routine health care, do not have up-to-date immunizations, lack appropriate developmental screenings, and seem not to seek preventative health care services. It has been observed that, as a group, juveniles in detention, a priori and a posteriori of their placement in custody, frequently receive health care predominantly in acute situations and mostly through emergency departments (Crosby et al. 2003).

Given the tremendous social costs associated with high-risk youth (Cohen 1998), it is imperative to improve the health and well-being of juvenile detainees, as well as to tangentially develop the capacity of these youth to integrate effectively into their old or new communities. Young people entering the juvenile justice system represent a unique and underserved segment of the population. For them, entering a juvenile detention center presents an opportunity (often rare and sometimes the first) for screening, evaluation, and a review of basic health care needs, from dental to psychological, that may have been neglected, the remediation of these needs, health education, and consultation. Yet, given the public costs of a day spent in detention, a question arises of how to spend these costs most efficiently. Which services, assessments, and interventions will maximize outcomes and control expenses? Only research can provide informed recommendations on how to achieve this balance. Similarly, to achieve the goal of improving the well-being and strengthen the potential of juvenile detainees requires a detailed understanding of the underlying physical and mental health issues of these children and youth. Armed with that understanding, treatments programs can be developed and their efficacy determined. To do so, however, requires that youth in detention participate in well-conceived and highly ethical research studies that can define the issues and identify remediation strategies. Often, however, such research is difficult to near-impossible to conduct.

Currently, the body of health research on juveniles in detention has been referred to as both limited and inadequate (Grisso 2008). The literature contains references to a substantial need for more information about multiple related issues,

including the epidemiology of health problems, especially sexual and mental-health, in detention centers (Wasserman et al. 2003; Williams et al. 2005), predisposing factors, screening strategies and prospective studies of treatment outcomes (Bailey et al. 2006; Desai et al. 2006; Fazel et al. 2008). Similarly, more research is needed even on those aspects of health care in detention centers that are becoming standard modes of care delivery. For example, screening and treatment for sexually transmitted diseases (STDs) have become standard features of health care in juvenile detention centers, but there are limited data on the classification, etiology, and impact of STD on children and youth in detention. Similarly, other health problems may be identified and cared for in detention (e.g., dental problems), but limited epidemiological data are available on the many health problems impacting detained juveniles. A recent assessment of juvenile detention centers (Gallagher and Dobrin 2007) found that only a minority of the 726 detention centers surveyed met the minimal standards of care proposed by the National Commission on Correctional Health Care (NCCCHC). There is no doubt that juveniles who enter detention centers are underserved and at greater risk for health problems.

Yet, even though there is a recurring refrain throughout the literature that more research is needed in the field of juvenile psychology and psychiatry, such research is still far from being fully considered and realized. Quite to the contrary, it is rather more common to find difficulties and roadblocks in realizing the goal of research on this population. For example, it is notable that the two major associations responsible for the accreditation of juvenile justice facilities demonstrate differing attitudes and guidelines concerning the conduct of research. This dichotomy occurs despite both of these organizations having expressed their principal support of research in juvenile justice facilities. Specifically, the *NCCCHC*, points out (2001) that research in correctional settings can be conducted if, in part, the project recognizes that consent is based on an understanding of the risks and benefits of such participation and the subject's knowledge that adequate care is available outside the research protocol. In its 2004

standards, the NCCHC issued a standard that supports legitimate research interests while protecting participants, and refers to the Code of Federal Regulation as the appropriate oversight mechanism (2004). The *American Correctional Association* (ACA), standards, however, suggest (1991) that research activities related to programs, services, and operations be supported, while recommending that facility administrators review and approve research projects to ensure compliance with existing policies. Thus, in the former, the accent is on participants and their full realization of risks and benefits with a subsequent consent (or not) to participation. In the latter, there is an accent on administrative policies and rules, emphasizing the necessity (or desirability, to put it in softer language) for administrative approval of the research. These accents, although subtle, reflect institutional values and priorities, and their potential conflicts of interest, which trickle down the system all the way to the “grass-roots” level of research approval. This level of approval resides in the Institutional Review Boards (IRBs) at research institutions and correctional facilities, and is necessary for researchers to ethically gain access to juveniles in detention.

In this essay, the tension between the current pressure to use evidence-based approaches to the assessment and treatment of juvenile detainees, the need for research to generate such approaches, and obstacles that complicate the opportunities to generate such evidence is discussed. This discussion revolves around a number of issues that have arisen where, due to the developmental trajectories often loaded with risk factors, stress, and vulnerabilities that are common in the subpopulation of juvenile detainees, services are recognized as most needed, but research topics are perceived as sensitive and even problematic. As the literature on the legal, ethical, and scientific aspects of research with detained juveniles is not extensive, the discussion that follows is structured around three illustrations of specific facets of this literature. Although not comprehensive, the essay captures the extent of the problem and delineates some possible steps toward removing multiple barriers to providing evidence-based services to juveniles in detention.

Illustration One

As mentioned above, national studies have demonstrated the high incidence of mental health disorders in juvenile detention, with these rates tending to be higher for female than male detainees (Teplin et al. 2002). Estimates of the prevalence rates of serious mental health problems among children and youth in the general population are approximately 9–13%; among juvenile detainees these rates are 18–26% (Cocozza and Skowrya 2000; Grisso 2000; Teplin 2000). Moreover, juvenile detainees suffer a high prevalence of comorbid disorders (Lennings et al. 2003; Stathis et al. 2006). Screening of young people in CT detention centers is consistent with national findings suggesting that some 65% of young people have significant mental health problems (Desai et al. 2006). Post-traumatic stress disorder (PTSD) prevalence estimates for youths in juvenile justice services were found to range from 11 to 50%, two to eight times higher than among youth in the general population. In addition, 89% of children in CT detention centers report some exposure to trauma, with one in three youths reporting victimization trauma (Ford et al. 2000, 2008).

One cluster of such disorders is related to substance abuse, which is a known correlate of criminality, although mechanisms of this association might be different for males and females (Grella and Joshi 1999). It is also known that the risk of substance abuse is higher among persons who have been traumatized as compared to persons who do not have a history of trauma (Breslau et al. 2003; Chilcoat and Breslau 1998). Moreover, of note is that girls in detention are more likely than detained boys to have experienced severe neglect (Chesney-Lind and Sheldon 2004), out-of-home placement (Lewis et al. 1982; McManus et al. 1984), and sexual or physical abuse (Lord Zankowski 1988), regardless of their race and ethnicity (Chauhan et al. 2009). In this context, it is of particular importance that girls in detention have more severe drug-related (Holloway and Bennett 2007; Kim and Fendrich 2002) and other mental health problems (McManus et al. 1984; Weatherhead 2003), compared to their

boy counterparts. Girls are also more vulnerable to relapse abusing substances (Grella et al. 2003). It has been suggested that for many girls substance use and abuse is a coping strategy for escaping from stress (Nelson-Zlupko et al. 1995). Girls are more likely to identify substance use as a problem (Gearon et al. 2003; Peters et al. 1997), whereas boys are more likely to engage in concurrent drug use, even when in detention or immediately prior to arrest (Kim and Fendrich 2002). Also, gender differences are pronounced in differences in drug toxicity (Franconi et al. 2007; Nicolson et al. 2010), behavior response to intoxication (Becker et al. 2001), exposure, addition, treatment, and relapse (Wetherington 2007). The specifics of these biases among detained juveniles are different from those in the general population where men—male adolescents (Opland et al. 1995) and college students (McCabe et al. 2007)—have been observed to be generally more likely to report drug use and abuse than females. Thus, gender biases are prevalent in the literature on substance abuse among juveniles in detention; yet, they are not understood as well as the reasons that these biases are different in the detained subpopulation compared to the general population. The smaller proportion of girls, compared to boys, in the juvenile justice system means that expenses per capita for services similar to those provided for boys are substantially higher for girls (Feinman 1994). It has been stated that because of gender differences in the manifestation and causality of substance use and abuse, and the high per capita expenses for girls in detention, female juveniles experience more barriers to drug and other mental health treatment (Inciardi et al. 1993). Yet, this hypothesis has not been carefully verified.

Similarly, as a group, compared to their peers in the general population, juvenile detainees have a much higher death rate, with early detention, multiple detention and drug-related offences as indicators of high mortality risk (Coffey et al. 2004). Approximately one in four juveniles who commit offenses report a previous suicide attempt (Howard et al. 2003). This issue of suicide attempts in custody is of particular concern. In the general population, suicide is recognized as

the third leading cause of death in children, adolescents, and youth (Eaton et al. 2006). It has been found that 8.8% of young people in the US have attempted suicide in the last 12 months (Hacker et al. 2006). Clearly, in the secure settings of detention, due to restrictions of means and activities, the rates of suicide are lower. Yet, as mentioned above, this subpopulation has higher rates of suicidal behavior risk factors as compared to the general population (Wasserman and McReynolds 2006). Hayes (2004) identified 110 suicides which occurred in US juvenile detention centers between 1995 and 1999 noting that a majority were male, occurred within the first 4 months of confinement, were associated with histories of substance abuse, mental illness, and suicidal behavior. Moreover, although restricted and highly controlled, the conditions of confinement are stressful, and some juveniles find it extremely difficult to cope with detention and incarceration (Bonner 2006). Many young people in custody reflect on and reevaluate their lives (Champion and Clare 2006; Paton et al. 2009) and revisit their views of morality (Kiriakidis 2008b); these “reflective” moments might generate feelings of worthlessness and increase susceptibility to suicide. An investigation of detained juveniles who have attempted suicide has demonstrated that these individuals have fewer adequate coping mechanisms when confronted with stress (Chagnon 2007). Moreover, increased risk of suicide attempts in custody has been reported to be related to being a violent offender, being in residential care, the experience of being bullied in custody, contact with a psychologist in the community, the presence of a social worker for the family, and family history of alcohol abuse and suicide (Kiriakidis 2008a). Bullying behavior (e.g., teasing, threats, untrue rumors, name calling, and physical attacks) in detention is highly prevalent; 30–60% of detainees report that they have been subjected to bullying (Ireland and Ireland 2000; Ireland and Archer 1996; Nagi et al. 2006; Power et al. 1997), and up to 60% report that they observed bullying most days or every day (Ireland and Archer 1996; Power et al. 1997). Bullying is reported by suicidal detainees more often than by their non-suicidal

detained peers. Moreover, it has been reported that 34% of adult-incarcerated suicide victims felt bullied before committing suicide (Blaauw et al. 2001). It is thought that juvenile detainees at risk for suicide attempts are characterized by many risk factors that are also characteristic of their suicidal peers in the general population (Beautrais 2003; Daniel and Fleming 2005; Hacker et al. 2006; Kim et al. 2005; Lieb et al. 2005; Sheras 2000). Yet, there are some distinct characteristics of suicidal detained juveniles that are shared by their suicidal peers living in the general community—that is being bullied and being violent (Kiriakidis 2008a). Moreover, there have been reports connecting juvenile detention and correction facilities with victimization. Thus, it has been stated that between 2004 and 2007, various institutions of juvenile custody processed more than 13,000 claims of abuse (Mohr 2008). Moreover, in 2004 alone, members of personnel of such institutions have been accused of sexual abuse against juveniles 2,821 times (Mohr 2008).

Although elevated rates of mental-health problems among juvenile detainees are commonly reported in the literature, the reasons for this elevation are not understood. In general terms, three hypotheses prevail: (1) mental health problems lead to heightened rates of arrest, detention, and incarceration; (2) arrest and placement in custody elicit and/or magnify mental health problems; and (3) mental health problems and arrest, detention, and incarceration are related through other common risk factors (White et al. 2010).

To illustrate the first hypotheses, the literature is replete with references to heightened rates of affective disturbances (i.e., anxiety and depression) among juvenile detainees, but these phenomena are not well understood (Hirschfield et al. 2006; White et al. 2010). There are many observations that juvenile detainees have a higher likelihood than their peers in the general population of being exposed to violence, both as witnesses and as victims in their homes and communities (Abram et al. 2004; Cauffman et al. 1998; McMackin et al. 2002; Ruchkin et al. 2002; Steiner et al. 1997; Wood et al. 2002), as well as in custody (Connell and Farrington 1996;

Ireland 1999, 2002). Moreover, detained juveniles describe their lives as abundant in instability and transition, and financial and parental deprivation (Paton et al. 2009). Also, it is well known that liability to depression is higher, at least double, in females as compared to males, both in the general population (Offord et al. 1987) and among juvenile detainees (Teplin 1994). As per the first hypothesis, affective disturbances in a particular subgroup of the general population express themselves in antisocial behavior. Unfortunately, research indicates that the likelihood of trauma-exposed juveniles who suffer from affective disturbances receiving the appropriate treatment while in detention is rather low; such low likelihood has been associated with the inadequacy of mental health screening, diagnosing, and serving inside detention facilities (Glisson 1996; Pear 2003; Teplin et al. 2005a).

However, there is also evidence supporting the second hypothesis. Thus, early research (Kashani et al. 1980) has indicated that among detained juveniles diagnosed with major depression, 38% reported an onset of symptoms after being detained, though it is unknown whether placement in custody increased the level of affective disturbances in these detainees or whether it was already high. Recently, to investigate this question, youths who were first placed in custody at age 15 (treatment group) were matched with control boys (no official arrest or reported confinement during adolescence); a propensity score matching procedure generated 34 pairs for anxiety and 37 pairs for depression. No differences were found between the treatment and control groups in levels of either depression or anxiety at the age of 16. Yet, there appeared to be some important “local dynamics” in affective regulation across this year of development between the ages of 15 and 16. Thus, it was reported that confinement might have been associated with an increase in concurrent anxiety problems, whereas being released from confinement might have been associated with a decrease in depression (Holman and Zeidenberg 2006; Kashani et al. 1980; White et al. 2010). Of note, however, is that the number of studies aimed at understanding the texture of causality between mental health

problems and custody is relatively small, so more research is needed.

The third hypothesis seems to be the most widely accepted in the literature. It is assumed that juvenile detainees possess some inherent vulnerability factors that are exacerbated by poor developmental conditions; this “back luck squared” is what leads to antisocial acts resulting in arrest and detention. Being detained, in turn, selectively impacts the already vulnerable system further.

High rates of mental health disorders should assume adequate treatment. Indeed, juveniles in custody are presumed to receive a minimum of psychiatric care (American Association of Correctional Psychology 2000). However, according to recent reports (The President’s New Freedom Commission on Mental Health 2003; U.S. Department of Health and Human Services 2000), detained juveniles are profoundly underserved. Thus, even though it has been reported that the majority, >70%, of detention centers exercise screening for mental health disturbances (Goldstrom et al. 2000), it has been observed that only 15.4% of detainees receive treatment (Teplin et al. 2005a). Further, among those who do receive treatment, it has been stated to be distributed disproportionately, with the needs of males, older youths, and racial/ethnic minorities being met less than those of females, younger detainees, and non-Hispanic whites (Garland and Zigler 1994; Lopez-Williams et al. 2006; Teplin et al. 2005a).

When causes of such a lack of services are discussed, two sets of reasons are typically considered. First, juvenile detainees, as a group, possess many characteristics that have been associated, in the general mental health literature, with lower rates of treatment. Among these characteristics are racial/ethnic minority status (Heflinger et al. 2006; McMiller and Weisz 1996), with African American and Hispanic detainees having received significantly fewer past services than non-Hispanic white youths (Angold et al. 2002; Cuffe et al. 2005; Garland et al. 2005; Hazen et al. 2004; Lopez-Williams et al. 2006); poverty and poor education (Buckner and Bassuk 1997; Heflinger et al. 2006; Pumariaga et al. 1998); small social networks (Harrison et al. 2004;

McKay et al. 1996); inadequate health insurance and ineligibility for Medicaid (Flores et al. 2002; Gresenz et al. 1998; Holl et al. 1995; Moffitt and Slade 1997; Thomas et al. 2004), a lack of parity between behavioral health disorders and general medical conditions (U.S. Department of Health and Human Services 1999); and a history of arrest (Rogers et al. 2001; Teplin et al. 2002).

Second, individually, the juveniles themselves have perceptions and attitudes toward treatment that often are viewed as barriers in the pathway of services. Specifically, it has been reported that seeking services (Kim and Fendrich 2002; Lopez 2003) and staying in treatment (Ortega and Alegria 2005) are determined by the individual’s perceived need for treatment, which does not appear to differ by race/ethnicity or gender (Dembo et al. 2010; Fiorentine and Anglin 1994; Kim and Fendrich 2002; Longshore et al. 1993). The perceived need for treatment among juvenile delinquents has been reported to be rather low (Paton et al. 2009). Juvenile detainees report being highly selective about whom they ask for support, rarely seeking support from professionals even if they are extremely distressed (Paton et al. 2009). In fact, the most common sources of support for these troubled youth are peers and family (Whitaker et al. 1990). Interestingly, girls were reported to be less likely than their male counterparts to participate in treatment (Anglin et al. 1987; Finkelstein 1994). Beliefs that one’s problems will go away or that one can handle them on his/her own have also been associated with lower levels of treatment (Abram et al. 2008; Johnson et al. 2001). Low levels of perceived need for treatment and associated beliefs are not specific to juveniles in detention; they have been reported as rather common among youth in the general population (Samargia et al. 2006) and other subpopulations in need of treatment (Flisher et al. 1997; Johnson et al. 2001). Moreover, current attitudes toward treatment have been reported to be related to whether juveniles have received services before (Garland et al. 2005; Hazen et al. 2004; Rosenblatt et al. 2000; Shelton 2002; Timmons-Mitchell et al. 1997; Veen et al. 2010). Prior services were associated with fewer concerns about what others may think about them

and about affordability of services. Once again, these concerns are not specific to the population of juvenile detainees and are common among untreated youths (Flisher et al. 1997) and adults (Sareen et al. 2007; Wang 2006) with mental health needs in the general population. Yet, previous experiences with services were reported to be associated with more skepticism about treatment and higher levels of beliefs that problems would go away without services (Abram et al. 2008). A number of qualitative studies (Allan 1998; Biering 2007; Paton et al. 2009; Ugarriza 2002) have identified specific barriers to seeking, delivery, and receiving of services by juveniles in detention. These barriers include, but are not limited to (a) limited appreciation by detainees of their own psychological needs, demonstrated by the detainees themselves and by the systems that serve them; (b) communication difficulties; and (c) detainees' denial of needing support. Given that juveniles typically do not have the capacity to seek services on their own (Ashley and Foshee 2005; Samargia et al. 2006) and the fragmented nature of systems of care—child welfare, juvenile justice, school sectors (Goldstrom et al. 2000; U.S. Department of Health and Human Services 1999)—it is very important to coordinate efforts in delivering such services among various members of the social network of juveniles (Pescosolido et al. 1998). In summary, although the prevalence of mental health disorders among juvenile detainees is high and the need for mental health services is omnipresent, it appears that detained children and youth do not view treatment as an accessible and effective resource (Abram et al. 2008).

This illustration stresses the quintessential meaning of the “double (or should it be referred to as multifold?) vulnerability” of juvenile detainees as research participants. Most of these young individuals arrive to detention having already been severely challenged by life. Their early development has been jeopardized by many of their families. Many of them suffer from physical and mental health disturbances to varying degrees. In addition, the environment of detention does not appear to be recognized as highly healing and therapeutic. Moreover, these individuals are in

the midst of legal proceedings, to which issues of confidentiality, integrity, and fairness are essential. So, how can these young individuals even be considered for involvement in research? The answer to this question is that involving this subpopulation of juveniles in research is absolutely critical for the development of the best treatments possible. As has been indicated in this essay, this group of young people is quite different from their general population counterparts and, given how costly it is for taxpayers to serve them, it is super-important to make sure that only effective (highly effective) and evidence-based assessment and treatment approaches, as shown in this particular subpopulation in research settings, are exercised with these young people.

Illustration Two

Due to the fact that juvenile detainees, as a group, are particularly marked by experience and behavior associated with the transmission of STDs—specifically, their history of physical and sexual abuse, early sexual debut, multiple sex partners and partnerships in high-risk sexual networks, inconsistent use of condoms and contraception, and substance abuse (Kahn et al. 2005; Robertson et al. 2005; Teplin et al. 2003, 2005b)—they are considered to be at particularly high risk for STDs (Katz et al. 2004; Kelly et al. 2000). Yet, as indicated above, often these juveniles have no source of health care other than what may be provided through detention (Bauer et al. 2004; Feinstein et al. 1998), and they arrive at detention both untested (and undiagnosed) and untreated. Correspondingly, STD screening of juveniles in detention provides a rather unique opportunity to access this subpopulation of high-risk children and youth, who are otherwise hard to reach. Yet, quite surprisingly, it has been reported that less than half of the juveniles in surveyed detention centers were tested for STD at the time of being surveyed (OJJDP 1994; Teplin et al. 2003), despite the recommendations from the NCHC and the ACA.

Researchers have offered a number of insights into the nature of this discrepancy (Miller et al. 2009). In fact, many barriers to acting on the

recommendations from both the NCCHC and ACA, both to screen and treat, have been identified. Specifically, providers have mentioned issues of procedural confusion (e.g., who collects specimens, how and when; how they are transported to laboratories; how the results are communicated back to the facilities; and how follow-up decisions are made), lack of resources (e.g., inability to screen all juveniles 24/7, inability to modify awarded contracts to reassign responsibilities for collecting specimens from medical to security personnel), lack of flexibility in providing services (e.g., inability to engage in sample collections on weekends), but, most importantly, explicit and implicit differences in the priorities and beliefs of the providers of security and medical services to this population. These discrepancies have arisen in a culture of providers who are mostly focused on issues of the detainees' transportation, release, and placement, which are addressed by security services who maintain no communication with medical services; this disconnect, inevitably has impacted medical treatment delivery within and outside of detention centers. Yet, it has been shown (Miller et al. 2009) that high levels of screening, case yield, and treatment rates can be accomplished and sustained, even in the presence of many barriers.

Similar to STD, juvenile detainees are also at elevated risk for hepatitis C infection (van der Poorten et al. 2008). For example, it has been shown (Murray et al. 2003; Ogilvie et al. 1999) that Australian juvenile detainees are characterized by very high rates of hepatitis C; specifically, their rate of hepatitis C was almost double the rate in those youth who are diverted from detention to their communities. Moreover, Aboriginal adolescents were reported to have a rate seven times that of the national average. Although many risk factors are distinctive of detained juveniles—sexual promiscuity, social disadvantage and tattooing (Murray et al. 2003; Ogilvie et al. 1999; Van der Poorten et al. 2007)—the risk factors specific for hepatitis C include primarily use of injectable drugs and heroin. Especially alarming are high rates of new infection (Champion et al. 2004; Dore et al. 2003a, b; Fox et al. 2005), indicating the likely practice of needle sharing

occurring while in custody. Simple measures, such as providing sterile injecting equipment (Weatherhead 2003), although highly effective from the public-health perspective, have been reported to be difficult to implement (van der Poorten et al. 2008).

This illustration stresses the importance of engaging in this research with a prior understanding of why, when both efficiency and effectiveness of treatment have been demonstrated, it is so difficult to disseminate and upscale this intervention to the status of “treatment as usual.” What elements of this intervention are critical for its success and what elements can be omitted? What are the outcomes of these interventions in terms of both gains to welfare of detained juveniles and reduction of the rates of repeated offences? Finally, what are some ways that treatment may be translated into prevention? And awareness and behavioral change activated so that infection can be avoided?

Illustration Three

At-risk youth represent a significant health-care concern in all jurisdictions of the USA, including the State of Connecticut (CT). In CT, within the population of juveniles as a whole, unintentional injuries are the leading cause of death, followed by malignancies in the 10–14 year old age group, and suicide in the 15–19 year old age group (State of Connecticut 2007). In addition to high mortality, teens and young adults have extremely high rates of hospitalization for other reasons. Specifically, they demonstrate the highest hospitalization rates for assault including fighting, stabbing, and firearms. Based on 2004 data, the rates of child maltreatment included more than 24,000 substantiated petitions of abuse or neglect; there were 745 cases of substantiated child sexual abuse. Similarly, family or domestic violence rates were as high as 20,320 cases; of these there were 27 family violence homicides. Children were involved in almost 20% of the cases, and were in the household at the time of the violence in more than 20% of the incidents.

Suicide among teens was reported at a rate of 8.3 per 100,000. Finally, the highest rate of self-inflicted injury in CT between 2000 and 2004 was among the 15–19 year old age group, at the rate of 67.6 per 100,000 (State of Connecticut 2008).

Along with these statistics for the overall juvenile population in CT, we can shed some light on the healthcare of juvenile detainees in CT based on some limited information collected from this group. A random selection of detainees admitted to detention in 2006 ($N=372$, representing close to 20% of the unique admissions in that calendar year) indicates an average age of 14.45 years, with 70% male and 30% female detainees. Forty-five percent of those admitted were Black, 30% Hispanic, and 25% White; the proportion of other ethnic/racial groups was negligible. Sixty-eight percent of youth had some form of health insurance, either state (36%) or private (33%). However, 28% had no insurance or none that could be ascertained. Surprisingly, insurance was more often present in those families who reported emotional problems among their children, $X^2=24.1$, $p<0.001$. Additionally, we have found that a large number of children have medication prescribed prior to admission to detention (48%, Chapman personal communication). Of the young people admitted to detention, 44% had a general medical problem as reported by them or their parent or guardian. Although no comparative studies involving this subpopulation and the subpopulation of non-detained justice-involved juveniles are known to us, this frequency appears to be elevated compared to the general population of youth in the USA (<http://www.cdc.gov/healthyyouth/healthtopics/index.htm>). Most common problems were respiratory problems such as asthma (21% reported). Additionally, we have found that a large number of children have medication prescribed prior to admission to detention (48%, Chapman personal communication). Five percent had been exposed to a contagious disease in the prior year and 6.7% had been hospitalized for a medical reason in the prior year. An additional 11.9% had been in a psychiatric hospital in the preceding year. Of mental health problems reported by juveniles

themselves, anger was the highest at 13.2%, followed depression at 8.9%, and attention deficit disorder at 4.6%. A history of cerebral trauma was noted in 6.3% of these young people. There was a report of prior psychiatric treatment in 42.7% of young people detained. Prescriptions for psychotropic medication had been written prior to admission for 16.7% of detainees while 11.6% received a non-psychotropic medication, excluding inhalers for respiratory problems, which were prescribed to 9.7% of these children. Of note is that these data are comparable to those collected through national surveys of youth in detention (Sedlak and McPherson 2010). Clearly, research is needed to understand why the health of children and youth who end up in detention appears to be so much worse than their counterparts' from the general population.

Thus, these data describe a subpopulation of US children and youth who are primarily minority males and females, with approximately half having a physical and/or mental health problem and substantial portion of whom are on medication. More than one third of these children and youth are uninsured. Clearly these individuals as a group would benefit from improved understanding of the development and remediation of their physical and/or mental health problems, including the most efficacious approaches to these problems in the context of the juvenile justice system.

In considering the legal and regulatory factors involved in research, it is worth noting that clinical research is occasionally mentioned in laws, specifically in the charges to different agencies of government. These references generally are supportive of research in concept. The CT General Statute (CGS 46b-121m) mandates a review of some sort of the programs serving juvenile offenders provided by the Judicial Branch, so that they may be evaluated on a number of issues including compatibility with policies pertaining to research in delinquency prevention and early intervention (CGS 52-146g). Also, CT law requires the Commissioner of the Department of Children and Families to "Undertake, contract for or otherwise stimulate research concerning children and youths" (CGS 17a-6(h)). Similarly,

the state agency charged with mental health care, the Department of Mental Health and Addiction Services, is given the authority to “keep records and engage in research and the gathering of relevant statistics” (CGS, 17a-450(c)(a)(2)). CT law recognizes a legitimate role for research in that statute, as it allows a mental health facility director to authorize a researcher to review detainees’ information, provided that records are not removed from the facility and that the researcher seeks to preserve the anonymity of the subject. It is important to note, however, that many of the statutory charges listed above are applicable to one agency but not another.

At the federal level, DHHS and the FDA recognize that appropriate clinical care for children is more complex than scaling down adult regimens and therefore have taken steps to promote research that will identify the discrepancies in treating youth and adults. For example, NIH grant requests must include children in the research design unless exclusion can be justified on ethical or scientific basis (NIH Grants Policy Statement section 4.1.15.7). Likewise the 2007 Pediatric Research Equity Act amended FDA regulations to encourage research on appropriate treatment and dosing regimens for pediatric populations. While these policies and regulations do not address the special case of detained pediatric patients, they are consistent with the need to address conditions that plague detained youth.

The dearth of research involving detained youth therefore does not stem from any lack of desire to assist this population, but rather from the fact that there are seemingly endless hurdles to initiating research, so many that the research is often abandoned before it is even fully conceived. Researchers generally hit the first impasse at the IRB, first at their home institutions, then in the organizations overseeing juvenile detention centers. Most academic institutions apply the DHHS regulations for research involving human subjects (45CFR46) to all research under the institution’s purview. Thus research proposing to target detained youth as participants is subject not only to the Common Rule requirements, but also to Subparts C and D for research involving prisoners and children, respectively. The special provisions for prisoners and children arose from the recog-

inition of the potential vulnerabilities of these populations. In particular, issues related to the ability of children and prisoners to provide voluntary informed consent free from coercion or undue influence. Public awareness of notorious examples of research involving children (Amdur and Bankert 2007) and prisoners (Hornblum 1998) in research for reasons unrelated to the scientific integrity of the research but rather for the convenience or ease of continued access has led to both regulations and a cautious approach on the part of the IRB. In applying the subparts, the IRB often demands justification of why the research design requires that this vulnerable population be included rather than using non-prisoner adults or at least youth who are not presently detained. IRBs that do not routinely review research related to the health and other concerns of detained youth are likely to consider most research as not necessitating inclusion of this doubly vulnerable population. IRB approval is further inhibited by the common lack of understanding on the part of the research community of the vulnerabilities and special considerations that must be made for detained youth. For example, a key approval criterion for the IRB is that there be adequate protection of the privacy and confidentiality of the resultant research data. Researchers unfamiliar with the constraints of working in the prison or detention system are often ill prepared to adequately address confidentiality provisions and hence appear unqualified to conduct the proposed research. The microcosm of the IRB approval process is representative of one of several approvals that must be granted prior to initiating any research.

This illustration stresses the importance of considering both federal and local (state) situation and guidelines in planning research involving juvenile detainees. Although the national profile of the US subpopulation of juveniles in detention and residential placement is well described (Sedlak and Bruce 2010), each state introduces its own specific considerations into this profile. Moreover, although there are some general federal guidelines pertaining to doing clinical research in detention, these guidelines, as well as the regulations for services, are interpreted locally.

Concluding Comments

This essay opened with a statement that detention reflects, in many cases, the failure of communities to address the needs of their children and youth. It is important here to state that there is an incredible effort being put toward the development of various community structures that can provide alternatives to incarceration, such as diversion, and community-based treatments (Clough et al. 2008). Yet, these efforts, both in the US and worldwide, face a tremendous number of barriers. First, working with juvenile detainees is demanding and requires much expertise that is not necessarily available in each and every community. Second, not every community has suitable diversion (i.e., alternative to detention and residential placement) options, and sometimes a diversion requires traveling to a neighboring (or semi-neighboring) community, which might not be possible for many clients of the juvenile justice system. Some of these barriers can be seen as insurmountable—e.g., detoxification from petrol sniffing when no local detoxification services are available (Clough et al. 2008). Third, in all countries, the juvenile justice system is delivered by the majority, reflecting its particular values, and in highly diverse societies this inevitably creates barriers of culture and language, often resulting in miscommunication and partial understandings at all levels of service delivery to the juvenile offender. Fourth, diversion programs tax both care-givers and communities, resulting, quite often, in exhaustion caused by the difficult behaviors of a diverted (i.e., kept in a community under specific court-ordered services rather than detained) juvenile. Although help is provided by appropriate diversion personnel (Lee et al. 2008), this support often is not enough, so that tension escalates and a subsequent spiral of delinquency occurs. Fifth, continuity of services are critical, and these services should include not only the immediate social network of the juvenile (e.g., his/her probation officer and other service-related practitioners), but also police representatives, because it is typically police officers who make the first decision

about prosecution or diversion. Sixth, diversion programs require a tremendous amount of cohesion among the various stake-holders delivering them. It has been shown that for diversion programs to succeed, they have to form active working networks and coalitions between various stake-holders and service providers within the communities. Yet, creating such networks is often a challenge on its own. There is research into factors that predict coalition effectiveness (Zakocs and Edwards 2006). The key factors appear to be diverse membership, member agency collaboration, leadership style, active member participation, formalization of rules of service and its delivery, and group cohesion (Riggs et al. 2008).

These “must(s),” above, are demanding of expertise, time, and funds. An example of such a “must to do it all” program is *Fast Track*—an early childhood intervention for conduct problems, which is a comprehensive systemic intervention involving both children and their social network (i.e., parents and other significant adults). Although such systemic interventions are inevitably expensive, they have been stated (Foster et al. 2006) to be cost-effective when they target a subpopulation that is particularly costly to society when left untreated. It has also been noted (Foster et al. 2006) that, although there is a societal willingness to pay for such costly intervention when they target early conduct disorder to prevent the subsequent criminal and violent behavior that are highly associated with early conduct problems, for a program to reach its public health potential, it has to overcome a number of barriers. For expensive programs, the most obvious barrier is the cost itself. To illustrate (Foster et al. 2006), at any given time, the US population includes approximately 2.1 million 5-year-olds. Given the estimate that about 5% of these children are at risk for the development of conduct disorder (Hinshaw and Anderson 1996), an amount of \$6.72 billion would be needed to deliver this intervention to at-risk children throughout their childhood and adolescence (i.e., for a 10-year period). These costs are comparable with the costs of Early Head Start, and comparable or smaller than programs developed for juvenile offenders, such as boot camps of Multisystemic

Family Therapy (Aos et al. 2004). Of note is that these costs are substantially lower than the costs of detention and residential placement.¹ Yet, early investment, i.e., investment in prevention, is much different from an investment in remediation and correction, although the literature contains examples of direct comparisons of the cost effectiveness of a broad span of policy alternatives, both preventive and remedial (Aos et al. 2004). Remediation and correction assume that the crime has happened and there is no other needed action but to respond to it. Taking people off the street and locking them up to ensure public safety, at least temporarily, is understood by the public to mean tangible benefits in terms of saved lives and protected property. Prevention assumes that the crime might not happen, but it does not guarantee it not happening, making it difficult for decision makers to overcome the mental barrier to investing in prevention. Prevention programs are designed to produce public and private benefits over time; it is not easy to identify the financial returns associated with prevention. Yet, society recognizes and accepts the responsibility of schooling its young. It has been argued (Foster et al. 2006) that a provision of preventive support for troubled children (e.g., children diagnosed with conduct disorder) that can help them to avoid a lifetime of failure is also important. But that, again, calls for research, moreover, longitudinal research. *Fast Track* requires a long-term multiyear investment—but how can such an investment be justified without research, both prospective and retrospective?

In conclusion, this analysis of the literature only confirms the conclusions previously made almost a decade ago (Cocozza and Skowrya 2000). A large number of juveniles in detention require physical and mental health treatment. In spite of the substantial literature supporting this assertion, the system still demonstrates a lot of shortcomings in terms of assessments and services aimed at maximizing the effectiveness and delivering such

treatment. Yet, there has been notable progress during the last decade, both in terms of the development of adequate assessment tools and treatment models, and debugging the implementation and dissemination of evidence-based treatment programs and paradigms. Thus, much more is needed—research, funding, policy—but appraisal of the problem and public engagement with it has been unfolding and progressing.

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¹For comparison, the costs of running state prisons in 2001 was estimated at \$38 billion (Bureau of Justice Statistics 2004).

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Toward Establishing Standards of Practice in Juvenile Forensic Mental Health Assessment

10

Kirk Heilbrun and David DeMatteo

Recent decades have witnessed substantial advances in the science and practice of the forensic mental health assessment (FMHA) of juveniles. Such evaluations may be conducted in the juvenile court to inform such legal decisions as diversion, competence to stand trial, adjudication and placement, and transfer into criminal court. They may also be conducted on adolescents in criminal court, on issues such as reverse waiver, competence to stand trial, and mental state at the time of the offense. For the purposes of this chapter, we will focus on the evaluation of adolescents in juvenile and criminal contexts, excluding family and civil issues such as child custody and personal injury. FMHA will be defined as “evaluation that is performed by mental health professionals as part of the legal “decision-making” process, for the purpose of assisting the decision maker or helping one of the litigants in using relevant clinical and scientific data” (Heilbrun 2001).

How are standards of practice and standards of care developed for juvenile FMHA? In the first section of this chapter, we describe and distinguish between these distinct (albeit related) concepts. Next, we will draw upon two sources providing a broad, integrative overview of

FMHA: (1) foundational principles (Heilbrun 2001) that have subsequently been expanded in scope (Heilbrun et al. 2009); and (2) the report by the National Research Council (2009) on the status of forensic science in the USA. Each of these sources will be reviewed in order to identify principles and recommendations that have distinctive application in juvenile FMHA; these will be termed *juvenile-specific*. Other principles and recommendations that apply comparably to juveniles and adults will be called *foundational*. Taken together, these sources and this analysis will provide a broad, integrated basis for standards of practice in juvenile FMHA. We conclude with a procedural precaution: standards of practice are developed and endorsed by a field, so the extent to which these recommended standards will be implemented remains to be seen.

The Nature of Standards of Practice and Care

As juveniles continue to come into contact with the criminal justice system at near historically high rates (see e.g., Puzanchera 2009), the number of FMHAs conducted with juveniles is likely to keep pace. Evaluations to assist courts to determine whether a juvenile’s case should be heard in adult court or family court, evaluations of a juvenile’s competence to stand trial, and evaluations to assist with placement decisions are several examples of evaluations routinely conducted with juveniles. Despite several advances in the

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field of juvenile FMHA over the past two decades, including the development of psychometrically sound forensic assessment instruments [e.g., Structured Assessment of Violence Risk in Youth (Borum 2006); Youth Level of Service/Case Management Inventory (Hoge and Andrews 2002)] and an accompanying body of research on juvenile risk and protective factors (e.g., Borum and Verhaagen 2006; DeMatteo and Marczyk 2005), several researchers have concluded that the quality of juvenile forensic assessment practice is inconsistent and often of questionable quality (e.g., Christy et al. 2004; Hecker and Steinberg 2002; Ryba et al. 2003).

Part of the variability seen in juvenile FMHAs likely stems from the evaluation preferences of forensic mental health professionals. Different evaluators use different assessment strategies and write reports that differ in both content and style. In other words, there are widely differing *standards of practice* among evaluators. However, it is also likely that some of the variability in quality may result from the relative lack of legal guidance as to what constitutes minimally satisfactory practice in juvenile FMHAs. In legal parlance, this is referred to as a *standard of care*. The absence of standards of practice and care have implications for the consistency and quality of juvenile FMHAs.

In this section, we first examine the important distinctions between standards of practice and standards of care, which are occasionally blurred in the literature. Next, we discuss the reasons behind the absence of standards of practice and care in juvenile FMHAs, and the benefits of establishing such standards. Finally, we will describe sources of authority that may contribute to the development of these standards, with a particular focus on standards of practice (which are often used to establish standards of care).

Standards of Practice vs. Standards of Care

Although the terms “standards of practice” and “standards of care” are occasionally used interchangeably, they are distinct concepts that differ

in four important respects. First, standards of practice are defined as either the customary way of doing things (i.e., the industry standard) or as “best practices” in a specific field (Caldwell and Seamone 2007). For example, evaluators in a particular geographic location may routinely conduct short juvenile placement evaluations that result in brief and conclusory reports, while evaluators conducting other types of evaluations may conduct lengthier evaluations and write reports with greater detail. By contrast, standards of care are judicial, legislative, or administrative determinations that establish minimally acceptable standards of professional conduct in a particular context (see American Law Institute, Restatement (Second) of Torts § 282 1965). As such, while standards of practice is a clinical/practice concept, standards of care is a legal concept.

Second, the standards of practice are internally established by the field itself. This can happen informally through the “adoption” of a particular practice as the customary way of doing things, such as the increased use of a psychological instrument that has been demonstrated to be psychometrically sound and relevant to a particular legal question in juvenile proceedings (e.g., risk of recidivism). Standards of practice can also be established more formally through the development of practice guidelines for practitioners, such as the *Specialty Guidelines for Forensic Psychologists* (Committee on Ethical Guidelines for Forensic Psychologists 1991). By contrast, standards of care are externally imposed by a court of law in the context of a specific dispute (e.g., a court decides that a clinician is liable in a negligence claim for failing to protect identifiable third parties from a serious threat of future violence; e.g., *Tarasoff v. Regents of the University of California* 1976), established by a legislature (e.g., state legislation defining psychologists as mandated reporters of child abuse), or enforced through administrative regulation (e.g., a regulation from a state licensing board identifying the minimum educational and training requirements for the independent practice of psychology).

Third, adherence to a standard of care is mandatory because such standards carry the force of law. Regardless of whether the standard of care is

established by a court, legislature, or administrative body, adherence is required. By contrast, adherence to standards of practice is an aspirational goal, but not mandatory. Standards of practice articulated by a professional committee or organization may identify “best practices,” but adhering to such guidelines is often framed as strongly suggested rather than mandatory.

Finally, failing to adhere to a standard of care may constitute negligence and potentially expose one to civil liability (e.g., monetary fines) (American Law Institute, Restatement (Second) of Torts § 282 1965). By contrast, deviating from a standard of practice does not result in legal liability, although it may result in the imposition of sanctions from the profession itself (e.g., monetary fines or expulsion from professional organizations), or the imposition of sanctions by the discipline through an administrative law body, such as a state licensure board (e.g., limitations on the ability to practice independently).

Absence of Standards and Benefits of Establishing Standards

When compared to adult FMHAs, relatively little attention has been paid to standards of practice in juvenile FMHAs. Although there have been several attempts to establish guidelines for improving the quality of FMHAs, most of these efforts have been directed primarily at adult FMHAs (e.g., Grisso 2003; Melton et al. 2007). As such, those who conduct juvenile FMHAs lack the type of guidance that is available for many types of adult FMHAs. However, as will be discussed shortly, a set of foundational principles of FMHA, theoretically applicable to all types of FMHAs, may provide some guidance toward the establishment of standards of practice in juvenile FMHA, which would likely serve to improve the consistency and quality of juvenile FMHAs.

A standard of care is a required element of a negligence-based professional malpractice claim, along with the elements of breach of the standard of care, resulting damages, and a causal connection between the breach and damages (see Dobbs et al. 1984). As such, the absence of a standard of

care has effectively managed to insulate forensic mental health professionals from malpractice liability. Although certain behaviors are likely to result in a malpractice claim (e.g., breach of confidentiality, sexual misconduct with patients, failing to report child abuse), it is safe to conclude that in the large majority of contexts forensic mental health professionals enjoy little risk of being sued for malpractice (see Melton et al. 2007). There may be other reasons why forensic mental health professionals are not subject to malpractice claims, such as the disenfranchised nature of many of the juveniles (and their families) with whom the evaluators work and the granting of judicial immunity to expert witnesses (see Greenberg et al. 2007). Nevertheless, the absence of a standard of care is perhaps the greatest impediment to maintaining a malpractice claim against a forensic mental health professional.

The development of a standard of care would likely provide several benefits. First, such a standard would help to ensure that forensic mental health professionals are providing minimally acceptable standards of professional conduct. In this regard, a standard of care would help to differentiate between conduct that is problematic, but does not fall below minimally acceptable standards, and more serious conduct that constitutes a legally remediable cause of action. Second, a standard of care would protect a party injured by professional misconduct by providing a legal remedy. Third, the defining of minimally acceptable standards of professional conduct would protect forensic mental health professionals from baseless allegations of professional misconduct. Finally, the development of a standard of care and the resulting ability of injured parties to seek justice in court would likely be viewed as a positive step in the maturing of our profession.

Establishing Standards of Practice in Juvenile FMHA

The relationship between standards of practice and care warrants some discussion. Although distinct concepts, one informs the other. Specifically, courts often look to standards of practice established by a

discipline when determining minimally acceptable standards of professional conduct in a particular situation. Therefore, standards of practice should ideally come before standards of care.

There are several sources of professional authority that can theoretically influence the development of standards of practice in juvenile FMHA (for a discussion, see Heilbrun et al. 2008). In this chapter, we will focus on two particular sources: foundational principles of FMHA that have been developed using multiple sources of authority, and broad recommendations for improvements in the practice of forensic science made by an interdisciplinary National Research Council committee.

Principles and Recommendations Relevant to Juvenile FMHA Standards of Practice

Foundational Juvenile FMHA Principles and Recommendations

There are some respects in which the forensic assessment of juveniles is comparable to other FMHA, with different populations and on different legal questions. For the purposes of this chapter, we have considered a broad set of FMHA principles (Heilbrun et al. 2009) and a number of recommendations for the promotion of forensic science (National Research Council 2009). Each of these documents contains a number of items that appear foundational for juveniles. As may be seen from reviewing each (see Tables 10.1 and 10.2), the majority of these principles and recommendations identify areas in which juvenile FMHA is comparable to that conducted with other ages and for differing legal questions. Among the FMHA principles, these include general items underscoring the importance of familiarity with relevant literature, honesty and impartiality (including control of evaluator bias), and effective (but not adversarial) presentation. The preparation stage encompasses the clarification of the evaluator's role (and avoidance of a dual role) as well as the financial arrangements, and using a model to guide data gathering, interpretation, and

communication. In the data collection stage, such foundational principles include the importance of multiple sources of information that are selected for relevance and accuracy—and obtaining such information under circumstances that are reasonably quiet, private, and distraction-free. Data should be interpreted while considering the possibility that the individual being evaluated is not reporting accurately, something that can be gauged through using both third party information and specialized assessment tools. The reasoning about findings can be influenced by the scientific model involving hypothesis testing and disconfirmation. Findings should be well supported and described in a way that does not change much during cross-examination; the “ultimate legal question,” if answered, should be addressed in a way that reflects awareness of its nonclinical and nonscientific components.

Additional principles that also appear foundational for juveniles involve communication: describing findings in a straightforward, clear, jargon-free fashion supported by the evidence obtained in the evaluation, so there is little substantive change on cross-examination. Using sections and subheadings in the report can help the reader distill the specific findings, and also help the expert to retrieve them during testimony. Such testimony should depend heavily on the findings of a thorough evaluation; preparation in advance for testimony with the attorney can facilitate effective presentation on direct examination. The expert should have sufficiently mastered the stylistic aspects of expert testimony, as maximally effective testimony combines substance with such style (Brodsky 1991, 1999, 2004).

The majority of the recommendations from the National Research Council (2009) report seem to apply as well to juveniles as they do to other populations, and for other legal questions, in the justice system. As may be seen in Table 10.2, the recommendations to develop best practice standards, certify scientist-practitioners, promote peer-reviewed research, support specialized education, provide funding for relevant research and education, establish model reports, and develop new technologies can all be applied in straightforward fashion to the assessment of juveniles.

Table 10.1 Revised FMHA principles (Heilbrun et al. 2009) and their juvenile equivalents

Updated principle of FMHA	Juvenile equivalent
<i>Generally</i>	
Be aware of the important differences between clinical and forensic domains	Be aware of the important differences between clinical and forensic domains, which may be less pronounced because of the prioritization of rehabilitation in the juvenile system
Obtain appropriate education, training, and experience in one's area of forensic specialization	Obtain appropriate education, training, and experience in one's area of forensic specialization and human development
Be familiar with the relevant legal, ethical, scientific, and practice literatures pertaining to FMHA	Identical
Be guided by honesty and striving for impartiality, actively disclosing the limitations on as well as the support for one's opinions	Identical
Control potential evaluator bias in general through monitoring case selection, continuing education, and consultation with knowledgeable colleagues	Identical
Be familiar with specific aspects of the legal system, particularly communication, discovery, deposition, and testimony	Be familiar with specific aspects of the legal system, including communication, discovery, deposition, and testimony—particularly those which apply distinctively to the juvenile system
Do not become adversarial, but present and defend your opinions effectively	Identical
<i>In specific cases: preparation</i>	
Identify relevant forensic issues	Identify relevant forensic issues, focusing particularly on the recurring issues of risk and rehabilitation (needs and amenability)
Accept referrals only within area of expertise	Accept referrals only within area of expertise, which should include human development as well as clinical and forensic expertise
Decline the referral when evaluator impartiality is unlikely	Decline the referral when evaluator impartiality is unlikely, including strong beliefs that would impair balancing public safety and rehabilitation for adolescents
Clarify the evaluator's role with the attorney	Identical
Clarify financial arrangements	Identical
Obtain appropriate authorization	Obtain appropriate authorization, which is somewhat more complex for adolescents who are younger than 18
Avoid playing the dual roles of therapist and forensic evaluator	Identical
Determine the particular role to be played within forensic assessment if the referral is accepted	Identical
Select the most appropriate model to guide data gathering, interpretation, and communication	Identical
<i>In specific cases: data collection</i>	
Use multiple sources of information for each area being assessed. Review the available background information and actively seek important missing elements	Identical
Use relevance and reliability (validity) as guides for seeking information and selecting data sources	Identical
Obtain relevant historical information	Obtain relevant historical information, with particular emphasis on the distinctive domains of family, school, and peers

(continued)

Table 10.1 (continued)

Updated principle of FMHA	Juvenile equivalent
Assess clinical characteristics in relevant, reliable, and valid ways	Assess clinical characteristics in relevant, reliable, and valid ways, accounting for less stability in personal characteristics because of developmental changes
Assess legally relevant behavior	Assess legally relevant behavior while compensating for developmental influences of instability of capacities
Ensure that conditions for evaluation are quiet, private, and distraction-free	Identical
Provide appropriate notification of purpose and/or obtain appropriate authorization before beginning	Provide appropriate notification of purpose and/or obtain appropriate authorization before beginning, accounting for additional complexities when youth are not yet 18
Determine whether the individual understands the purpose of the evaluation and the associated limits on confidentiality	Determine whether the individual understands the purpose of the evaluation and the associated limits on confidentiality, gauging impact of developmental immaturity as well as clinical and cognitive deficits
<i>In specific cases: data interpretation</i>	
Use third party information in assessing response style	Identical
Use testing when indicated in assessing response style	Identical
Use case-specific (idiographic) evidence in assessing clinical condition, functional abilities, and causal connection	Use case-specific (idiographic) evidence in assessing clinical condition, functional abilities, and causal connection. "Clinical condition" includes developmental immaturity
Use nomothetic evidence in assessing clinical condition, functional abilities, and causal connection	Use nomothetic evidence in assessing clinical condition, functional abilities, and causal connection. "Clinical condition" includes developmental immaturity
Use scientific reasoning in assessing causal connection between clinical condition and functional abilities	Identical
Carefully consider whether to answer the ultimate legal question. If it is answered, it should be in the context of a thorough evaluation clearly describing data and reasoning, and with the clear recognition that this question is in the domain of the legal decision maker	Identical
Describe findings and limits so that they need change little under cross-examination	Identical
<i>In specific cases: written communication</i>	
Attribute information to sources	Identical
Use plain language; avoid technical jargon	Identical
Write report in sections, according to model and procedures	Identical
<i>In specific cases: testimony</i>	
Base testimony on the results of the properly performed FMHA	Identical
Prepare	Identical
Communicate effectively	Identical
Control the message. Strive to obtain, retain, and regain control over the meaning and impact of what is presented in expert testimony	Control the message. Strive to obtain, retain, and regain control over the meaning and impact of what is presented in expert testimony. The judge may be more active in questioning the expert, adding questions that are not adversarial

Indeed, these recommendations are largely consistent with what has been advocated in forensic psychology (Heilbrun and Brooks 2010) and

forensic psychiatry (Wettstein 2005) to improve the quality of practice in these respective areas. The extent to which these recommendations will

Table 10.2 National Research Council (2009) forensic sciences report recommendations adapted for juvenile FMHA

Report recommendation	Juvenile FMHA equivalent
Develop best practice standards	Identical
Certify scientist-practitioners	Identical
Promote peer-reviewed research and technical development	Identical
Improve forensic education and promote educational standards	Identical
Provide funding to support research, education, and practice	Identical
Provide funding for relevant state and local agencies	Identical
Develop and implement new technologies in FMHA	Identical
Establish standard terminology and model reports	Identical
Competitively fund peer-reviewed research on the scientific bases of validity of forensic methods	Identical
Develop and establish quantifiable measures of reliability and accuracy of forensic analyses	Develop and establish quantifiable measures of reliability and accuracy of forensic analyses, accounting for diminished stability of capacities resulting from developmental changes
Publish reliability and validity data in good journals	Identical
Promote research on observer bias and human error in forensic examinations	Promote research on observer bias and human error in forensic examinations, including longitudinal research to minimize error resulting from developmentally induced instability of capacities
Develop specialty tools	Identical
Develop quality improvement procedures to ensure best practice and minimize error	Develop quality improvement procedures to ensure best practice and minimize error, including longitudinal measures of capacity stability
Develop a national forensic science code of ethics; encourage individual societies to incorporate this code into their own ethics	Identical
Fund interdisciplinary graduate training	Fund interdisciplinary graduate training, including training in human development

actually succeed in improving practice will depend partly on how well practice standards can be developed to incorporate empirical evidence, a point addressed by several other recommendations made in the NRC report (fund research on the validity of forensic methods; publish these data in good journals; develop specialty tools that have empirically supported reliability and validity in the specific legal contexts in which they are applied).

Juvenile-Specific FMHA Principles and Recommendations

In addition to foundational principles and recommendations, there are a number of points from each of these sources that were considered to have specific implications for juvenile assessment. These are described in the present section.

Be aware of the important differences between clinical and forensic domains, which may be less pronounced because of the prioritization of rehabilitation in the juvenile system. This distinction may be less clear with juveniles than adults, given the importance of rehabilitation in the juvenile system. Two very important constructs in juvenile transfer/reverse transfer and adjudication/placement—reoffense risk and treatment needs/amenability—reflect the importance of assessing what the youth needs and how s/he will respond to risk-relevant interventions.

Obtain appropriate education, training, and experience in one's area of forensic specialization and human development. Those conducting FMHA should be familiar with the relevant scientific evidence and clinical issues associated with juveniles, as well as the important aspects of law. Perhaps the major difference between

juvenile and criminal FMHA involves the developmental influences on adolescents. The level of developmental maturity affects a variety of aspects of the evaluation, including the stability of assessed characteristics and the cognitive and psychosocial judgment influences on the individual's functional-legal capacities (Steinberg and Scott 2003).

Be familiar with specific aspects of the legal system, including communication, discovery, deposition, and testimony—particularly those which apply distinctively to the juvenile system. It is generally important to be familiar with the legal system when conducting forensic evaluations. But the juvenile system has several distinctive aspects that must be considered particularly. These include timeframes for completing evaluations (often shorter), rules of evidence affecting testimony (less formal), and preparation for testimony (incorporating the unexpected, including questioning by the judge).

Identify relevant forensic issues, focusing particularly on the recurring issues of risk and rehabilitation (needs and amenability). Risk and rehabilitation are two prominent forensic issues in juvenile FMHA. These recur across juvenile legal questions (e.g., transfer and reverse transfer, adjudication and placement). Accordingly, evaluators should be well aware of the scientific and professional literatures relevant to each, particularly in the area of risk-needs assessment (Hoge and Andrews 2010). Specialized tools have been designed and validated to measure both risk and needs; these include the Youth Level of Service/Case Management Inventory (Hoge and Andrews 2002), the Structured Assessment of Violence Risk in Youth (Borum 2006), and the Risk-Sophistication-Treatment Inventory (Salekin 2005).

Accept referrals only within area of expertise, which should include human development as well as clinical and forensic expertise. Forensic evaluators should have substantial familiarity with criminal justice populations, relevant clinical and scientific issues, and applicable law to conduct

any kind of evaluation for the courts. The evaluation of adolescents in the juvenile system requires another level of expertise: knowledge of human development and its applicability to juvenile FMHA (Grisso 1998; Grisso et al. 2003).

Decline the referral when evaluator impartiality is unlikely, including strong beliefs that would impair balancing public safety and rehabilitation for adolescents. Various influences can limit an evaluator's capacity for impartiality in FMHA. Such influences include financial, professional, and personal. One such influence that is particularly applicable to juvenile FMHA involves personal and professional beliefs about adolescents that would make it difficult to balance the issues of risk and rehabilitation, offering a candid and well-supported opinion about each and accurately integrating these issues to yield an overall opinion about rehabilitation needs and amenability in the context of appraised risk.

Obtain appropriate authorization, which is somewhat more complex for adolescents who are younger than 18. FMHA can be authorized by court order or through the request of the defendant's attorney. A court order provides sufficient authorization for both adult and adolescent defendants who are the subject of forensic assessment. Attorney-requested justification, however, can be slightly more complex in juvenile FMHA. Typically an attorney representing a juvenile serves as a proxy, providing permission for the youth to participate in the evaluation that would otherwise come from a parent or guardian. However, in cases where legal custody is shared by more than one parent or guardian, it could be important to clarify the implications of different views on retaining the attorney who would then provide such permission via proxy.

Obtain relevant historical information, with particular emphasis on the distinctive domains of family, school, and peers. Juvenile FMHA, like that conducted with adults, should incorporate relevant aspects of that individual's history. Because adolescents are younger, however, the nature of the relevant history differs. Personality

and psychopathology are less fully developed. The important historical domains are family, school, peers, clinical functioning, and offending.

Assess clinical characteristics in relevant, reliable, and valid ways, accounting for less stability in personal characteristics because of developmental changes. It is always important to assess individuals' clinical and personality functioning, whenever possible using measures that satisfactory reliability and appropriate validity for this particular purpose. Some aspects of personality functioning (e.g., impulsivity, extraversion) tend to be fairly stable in adults. This is less true in adolescence, so the evaluator cannot be confident that a given characteristic, assessed in the present, was at the same level in the past (for evaluations requiring reconstruction) or will be at a comparable level in the future (for assessments involving prediction). The impact of developmental change must be considered with adolescents.

Assess legally relevant behavior while compensating for developmental influences of instability of capacities. Legally relevant behavioral capacities can also be unstable over time for developmental reasons. Evaluators must consider such developmentally influenced instability in the same way they account for potential change in personal characteristics and clinical symptoms with adolescents.

Provide appropriate notification of purpose and/or obtain appropriate authorization before beginning, accounting for additional complexities when youth are not yet 18. This was discussed earlier in this section under the principle of obtaining appropriate authorization.

Determine whether the individual understands the purpose of the evaluation and the associated limits on confidentiality, gauging impact of developmental immaturity as well as clinical and cognitive deficits. It can be challenging under any circumstances to determine whether the individual being evaluated has meaningfully understood the notification of purpose delivered before beginning the evaluation. It can be even more

difficult with younger adolescents, particularly when developmental immaturity is combined with clinical symptoms or cognitive deficits. But the evaluator is well advised to be cautious with adolescents or children under the age of 14, seeking to determine whether a notification is not understood because the youth has not yet attained the cognitive and psychosocial maturity to meaningfully appreciate the nature and consequences of participating in FMHA.

Use case-specific (idiographic) evidence in assessing clinical condition, functional abilities, and causal connection. "Clinical condition" includes developmental immaturity. There are two sources of evidence that the evaluator can apply toward measuring relevant clinical symptoms, functional-legal capacities, and the causal relationship between symptoms and functional-legal deficits. The first is idiographic—the individual's own history serving as a frame of reference for how his or her present capacities, symptoms, and behavior compare to his or her potential in these areas. It can be difficult to use history as a measure of the potential for cognitive or psychosocial maturity. It may be unclear how quickly an adolescent defendant will develop these relevant capacities, but they have not had them before.

Use nomothetic evidence in assessing clinical condition, functional abilities, and causal connection. "Clinical condition" includes developmental immaturity. The second source of evidence for measuring developmental maturity involved comparing the adolescent defendant to others of comparable age, and assessing how they function in specific areas relevant to others of similar age. When cognitive and psychosocial judgment limitations are observed in youth younger than 14, it is likely that developmental immaturity is having an important influence on such deficits—and the impact of this influence increases in inverse proportion to the age of the youth being evaluated.

Control the message. Strive to obtain, retain, and regain control over the meaning and impact of what is presented in expert testimony. The judge may be more active in questioning the expert,

adding questions that are not adversarial. There are times in juvenile court in which careful preparation for direct examination, as well as anticipation of important areas for cross-examination, is confounded by direct questioning by the court. The forensic clinician cannot treat such questions as adversarial. This means that efforts to control the meaning and impact of testimony, which are appropriate in response to cross-examination, are not indicated in response to questions from the judge. Rather, the expert should attempt to answer the judge's questions as simply, directly, and completely as possible.

Strengthening Forensic Science in the USA (National Research Council 2009)

Despite the application of most of the recommendations in this report to juvenile forensic assessment in a foundational way, there appear to be four recommendations that can be modified somewhat for juvenile evaluations. These are discussed in this section.

Develop and establish quantifiable measures of reliability and accuracy of forensic analyses, accounting for diminished stability of capacities resulting from developmental changes. Some of the challenges noted earlier with respect to developmental immaturity—particularly gauging its impact on cognitive, clinical, and psychosocial judgment functioning—should be addressed through developing specialized measures of the different capacities needed for functioning on various legal questions. Further, such measures should measure the cognitive and psychosocial judgment aspects of maturity explicitly, and link them with potential deficits in functional-legal capacities. The “moving target” aspect of cognitive and psychosocial maturity adds to the challenge of developing such measures. It would be necessary to norm them with a large sample over time, or at least stratify the validation samples according to age to create a meaningful estimate of how these capacities are likely to change through maturation.

Promote research on observer bias and human error in forensic examinations, including longitudinal research to minimize error resulting from developmentally induced instability of capacities. This relates directly to the importance of research on developmental maturity for youth in the justice system, and the impact of such maturity on deficits in relevant functional-legal capacities. Trying through clinical judgment to separate the influence of developmental immaturity, intellectual deficits, and clinical symptoms is very likely to lead to unfounded speculation. Structuring these judgments would help. The development of empirically supported specialized forensic assessment tools, normed longitudinally, can reduce error, and the impact of human bias, considerably.

Develop quality improvement procedures to ensure best practice and minimize error, including longitudinal measures of capacity stability. This concerns the broader point about the importance of ongoing feedback about quality that has the potential to improve all forensic assessment (Heilbrun and Brooks 2010; Wettstein 2005). But if researchers can investigate capacity stability longitudinally in adolescents, tracking how developmental maturity is likely to affect such capacities, then this should lead to the development of specialized tools to assist in the forensic assessment of adolescents. It should also yield criteria that can be used for “quality improvement,” allowing forensic administrators and policy makers as well as researchers to investigate the accuracy of judgments about developmental maturity and predictions about how it will affect youths' capacities in the future.

Fund interdisciplinary graduate training, including training in human development. Certainly some of the principles and recommendations discussed in this chapter, considered as they relate to juveniles in particular, could be implemented more successfully with greater integration of the science of human development into graduate training in forensic psychology and psychiatry. This could be done more effectively with enhanced funding at different levels of such training.

Regardless of whether such funding becomes available, however, a more intensive integration of human development into training those who will eventually conduct juvenile evaluations seems a reasonable goal that should yield meaningful improvement in this area.

Conclusion

We noted in the beginning of this chapter that standards of practice are developed by the field, not promulgated by authors of a single chapter. It is worth repeating that caution. It is also useful to observe that there are a number of ongoing projects at present that should contribute to recognized standards of practice in forensic psychiatry (including the development of practice guidelines for different kinds of legal questions; see Mossman et al. 2007) and forensic psychology (e.g., the updating of the *Specialty Guidelines for Forensic Psychologists*). These are noteworthy projects that should be continued and expanded as these fields grow.

Our strategy in this chapter has been somewhat different, however. Rather than attempt an exhaustive list of projects and sources like these, we have identified two broad, integrative documents that bring together law, ethics, science, and practice. Further, we have considered these documents in adapted form, as they might apply to juvenile forensic assessment both foundationally and specifically. In doing so, we have identified a number of areas—some broad, others highly specific—for the fields of forensic psychiatry and forensic psychology to consider as they move toward a clearer articulation of practice standards applicable to the FMHA of juveniles.

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The assessment process involves the collection, processing, and synthesis of information about the individual. The outcome of the assessment is generally expressed as a judgment or opinion which may, in turn, be expressed as a categorization (e.g., bipolar depression, autistic, high risk for violent offending) or as a position on a quantitative scale (e.g., 76 percentile on measure of spatial ability, 80% likelihood of reoffending). Formal and informal assessments are conducted in juvenile justice systems by police, prosecuting attorneys, probation officers, mental health professionals, and others, and these assessments are used as the basis for important decisions about the youth.

While the assessment process is critical to the quality of decisions made about the youth, many juvenile justice systems depend on badly flawed assessment processes (Heilbrun 2001; Hoge 1999a, 2008; Hoge and Andrews 1996; Mulvey and Iselin 2008). In some cases, no systematic assessments are conducted. In other cases, the assessments are carried out by unqualified individuals or reflect an absence of adequate standards and procedures. Ample research now exists to show that justice systems that depend on structured and validated assessment procedures are more effective in producing reduced reoffending rates than those that do not use these procedures.

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The use of standardized assessments constitutes one of the most important of the principles of best practice (Andrews and Bonta 2006; Grisso 2005b; Hoge 1999a, 2008; Hoge and Andrews 1996).

Contexts and Purposes of Assessments

Table 11.1 provides an outline of the major decision areas encountered in juvenile justice systems. These range from the initial police contact with the youth to final discharge from the system. Some of these decisions relate to legal issues involving, for example, judgments about guilt or innocence. Those are outside the scope of our interest. However, many other decisions involve assessments relating to the psychological functioning of the youth or his or her circumstances. For example, a decision of the police or prosecutor to formally charge the youth may be affected by judgments about the youth's cognitive abilities or emotional maturity. Other decisions such as waiver to the mental health system may involve more complex diagnoses relating to the youth's psychiatric status. Disposition or sentencing decisions made by a judge or magistrate may be affected by a probation officer's assessment of the family circumstances of the youth. These are all important decisions and highlight the importance of conducting careful and valid assessments of the youth.

As suggested by the above examples, the focus of assessments will vary. In some cases, the

Table 11.1 Major decision areas in juvenile justice systems

Pre-arrest diversion
Arrest
Criminal charge
Pretrial detention
Waiver to adult court
Competency to stand trial
Adjudication
Sentencing/disposition
Rehabilitative intervention planning

concern is with documenting the criminal history of the individual. In others, the concern is with describing or diagnosing internal conditions of the youth, relating, for example, to his or her emotional state or propensity for violence. In still other cases, the goal is the identification of problems existing with family circumstances, educational achievement, peer group associations, or substance abuse. Yet another focus may be on the attitudes and values of the young person.

Many decisions require that the assessment be expressed as an evaluation of risk for engaging in future criminal behavior (criminogenic risk). This may be a factor in decisions about pretrial detention or diversion. For example, programs designed to divert youth out of the criminal justice system without further processing are generally reserved for low-risk individuals. The risk level may also be a consideration in deciding on an appropriate disposition following a finding of guilt. This could, for example, be the basis for deciding whether custody or community supervision is the appropriate course of action.

Assessments may also focus on criminogenic needs. In this case, we are attempting to identify the risk factors that can be changed through interventions to reduce the probability of future offending. For example, association with antisocial peers is a risk factor, but is something we can influence and, to the extent that we succeed, we can reduce the risk level. Needs assessments are very important wherever risk management is a concern and where interventions or treatments are to be provided within the judicial action. A related focus of assessment is on strength or protective factors presented by the youth or his or

her circumstances. These are often relevant to decisions about dispositions assigned to the youth.

Under some circumstances, legal criteria may be available for guiding the assessment process. For example, specific psychiatric assessments may be indicated where decisions are to be made regarding competence to stand trial (Grisso 2003, 2005a). In still other cases, agency policy or professional standards may guide the assessment process. However, rules or regulations for the conduct of assessments are often not available, leaving open the possibility for decisions to be based on invalid or biased assessments (Grisso 2003, 2005a; Hoge 2008; Mulvey and Iselin 2008). Legal and ethical issues will be explored more fully later in the chapter.

Categories of Assessment Instruments

Two major bases for categorizing assessment instruments and procedures are available. These involve a distinction between screening and assessment tools and between clinical and standardized assessments.

Screening Versus Assessment Instruments

A distinction is sometimes made between screening and assessment procedures, although the line between these is not always entirely clear. Screening instruments are generally relatively simple measures designed for use with all individuals within a group. The purpose is to provide a preliminary indication of potential problems, with the understanding that more thorough assessments will be conducted where these are identified. The Massachusetts Youth Screening Instrument-Version 2 (MAYSI-2; Grisso and Barnum 2003), for example, is a self-report form used as a preliminary screening device for detecting emotional, behavioral, and psychological disturbances. It does not yield psychological diagnoses but does provide initial information about symptoms that may require more intensive assessments. Screening measures

of this sort generally do not require a high level of training or expertise for administration or interpretation.

Psychological assessments, on the other hand, involve more thorough analyses of psychological or behavioral functioning. This might, for example, involve a comprehensive evaluation of cognitive and personality functioning through the use of standardized tests and clinical interviews. This would be appropriate where signs of serious disorder are present or a decision relating to competency to stand trial is required. Many comprehensive psychological assessments will require the services of a mental health practitioner such as psychiatrist or psychologist.

However, as we will see below, other assessment procedures can be conducted by nonmental health professionals such as probation officers, youth workers, or teachers. For example, the How I Think Questionnaire (HIT; Gibbs et al. 2001) is a self-report measure of antisocial attitudes and values that can be used by a youth worker or probation officer as an evaluation tool. The Youth Level of Service/Case Management Inventory (YLS/CMI; Hoge and Andrews 2002, 2010b), described in more detail below, is a comprehensive measure of criminogenic risk and needs that can be administered by a probation officer with specialized training.

Clinical Versus Standardized Assessments

Two general approaches to the conduct of assessments can be identified. Clinical assessments involve the unstructured collection of information and the interpretation of that information on the basis of past clinical experience. A probation officer, for example, might conduct an open-ended interview with a youth, interview parents, examine file information, and conclude that the youth is high risk for continued criminal activity. Some clinical assessments do involve a certain amount of structure, but clinical interviews are relatively unstructured and allow the assessor considerable latitude in collecting and interpreting information. Decisions within juvenile justice systems are

often based on clinical assessments (Mulvey and Iselin 2008; Wasserman et al. 2003).

Standardized assessments, on the other hand, represent more structured procedures for forming assessments. These are instruments or procedures with (a) fixed stimulus, response, and scoring formats; (b) yielding quantitative scores; and (c) for which normative and psychometric data are available. The Wechsler Intelligence Scale for Children-IV (WISC-IV; Wechsler 2004) and the Minnesota Multiphasic Personality Inventory-Adolescent (MMPI-A; Butcher et al. 1992) are examples of standardized psychological measures. Several standardized measures for assessing risk and need in juvenile offenders will be described later.

Mechanical or actuarial prediction represents a special form of standardized assessment procedures whereby the procedures yield a specific prediction regarding an outcome. We will examine some comprehensive risk/need assessment instruments later and see that they yield specific estimates of risk for reoffending.

It is customary to distinguish two forms of actuarial assessment (Bonta 1996). Static measures include only historical and invariant items (e.g., age at first arrest, number of convictions). Static/dynamic actuarial measures, on the other hand, include both static and dynamic risk factors. The latter are generally theoretically and empirically grounded and are potentially useful in evaluating risk for reoffending and in identifying need factors requiring intervention.

Still another form of assessment is referred to as guided professional assessment or structured professional judgment (Borum and Douglas 2003; Borum and Verhaagen 2006; Webster et al. 2002). This involves the use of clinical judgments within a structured framework. Risk and need items based on empirical research are defined within the measures, but the combination of the items and the formulating of an overall risk/need estimate are based on the discretion of the clinician. The items usually reflect static risk, need, and protective variables. Examples will be presented in a later section.

Considerable research is now available demonstrating that the use of standardized assessments,

particularly static/dynamic actuarial or guided professional assessments, is preferable to a dependence on clinical assessments (Borum and Verhaagen 2006; Dawes et al. 1993; Grove and Meehl 1996; Hoge 1999a, 2008). There are a number of reasons why these procedures yield more valid predictions of behavior. First, a broad assessment of the youth is encouraged by including all risk, need, and protective factors associated with youth crime. The assessor is discouraged from focusing only on a narrow range of factors. Second, and related, the use of the standardized assessments discourages a dependence on simplistic stereotypes. For example, instead of viewing the youth as a “14-year-old male” or a “Hispanic female,” the assessor is encouraged to consider the full range of characteristics of the youth and his or her circumstances. Third, the use of a structured instrument assists the professional in synthesizing the information collected.

Examples of Assessment Instruments and Procedures

This section will provide an overview of the major categories of assessment instruments and procedures relevant to juvenile justice settings. More thorough discussions may be found in Grisso (1998a, b), Grisso et al. (2005), Hoge (2008), and Hoge and Andrews (1996, 2010a).

Two broad categories of assessment instruments can be identified. The first includes measures developed for general application but relevant to assessment in juvenile justice settings and the second includes instruments and procedures specifically developed for forensic application.

General Application Measures

A large number of personality tests, structured interview schedules, rating/checklist, and attitude measures have been developed that have proven useful in assessing juvenile offenders.

The MMPI-A (Butcher et al. 1992) and Reynolds Adolescent Depression Scale (RADS) are two examples of the many standardized personality

tests useful in the psychological assessment of adolescent offenders. These tests generally require special training in scoring and interpretation.

Structured interview formats designed for assessing behavioral and emotional pathologies may also play a role in forensic assessments. Examples include the Diagnostic Interview Schedule for Children (DISC; Shaffer 2000) and Child and Adolescent Functional Assessment Scale (CAFAS; Hodges 2000).

Standardized rating and checklist measures have also proven very useful in these assessments. These may serve as screening tools for the preliminary identification of problems or as part of more intensive psychological assessments. The parent, teacher, and youth forms of the Child Behavior Checklist (CBCL; Achenbach and Rescorla 2001) have proven invaluable in identifying behavioral pathologies in youth. More focused rating instruments such as the MAYSI-2 (Grisso and Barnum 2003) and Aggression Questionnaire (AQ; Buss and Warren 2000) may also be useful. Some of the rating/checklist measures are only suitable for use by mental health professionals, but others can be used by probation officers, teachers, or youth workers with some training in scoring and interpretation.

Forensic Assessment Instruments

This category includes instruments and procedures specifically developed for assessments in juvenile justice systems. Some of these are specialized measures designed for evaluating legally relevant considerations. Examples include the MacArthur Competence Assessment Tool-Criminal Adjudication (MacCAT-CA; Poythress et al. 1999), Risk-Sophistication-Treatment Inventory (Salekin 2004), and Instruments for Assessing Understanding and Appreciation of Miranda Rights (Grisso 1998b). Further discussions of these instruments may be found in Grisso (1998a), Grisso et al. (2005, and Melton et al. 2007).

Several standardized self-report measures of antisocial attitudes, values, and beliefs are available, including the Criminal Sentiments Scale-Modified (CSS-M; Simourd 1997) and HIT (Gibbs et al.

Table 11.2 Comprehensive risk/needs assessment instruments

Measure	Reference
Arizona Juvenile Risk Assessment Form	Ashford et al. (1986)
Early Assessment Risk Lists for Boys and Girls	Augimeri et al.(2001) and Levene et al. (2001)
Estimate of Risk of Adolescent Sexual Offense Recidivism	Worling and Curwen (2001)
Hare Psychopathy Checklist—Youth Version	Forth et al. (2003)
Juvenile Probation and Aftercare Assessment Form	Baird (1985)
Structured Assessment of Violence Risk in Youth	Borum et al. (2003)
Washington State Juvenile Court Risk Assessment	Barnoski (2004)
Youth Level of Service/Case Management Inventory	Hoge and Andrews (2002, 2010b)

2001). The latter is especially important because it helps identify specific aspects of defective reasoning that can lead to antisocial actions.

Comprehensive risk/need assessment instruments constitute another important category of measures. These are generally in the form of structured checklists and employ either an actuarial or structured professional judgment approach. These instruments are potentially useful to assist in all phases of the forensic decision process except adjudication. This includes decisions regarding pretrial detention, pre-charge diversion, post-charge waivers to the mental health or adult systems, and post-adjudication placement and treatment decisions.

Table 11.2 identifies the major standardized risk/need assessment instruments and procedures. Detailed descriptions of these instruments are available from Borum and Verhaagen (2006), Hoge (2008), Hoge and Andrews (1996), and Wiebush et al. (1995). Two examples of the approach will be presented for illustrative purposes.

The YLS/CMI (Hoge 2010; Hoge and Andrews 2002, 2010b) is a standardized actuarial measure providing estimates of risk for reoffending and a framework for developing case plans based on a risk/needs/strengths assessment. The risk/needs section of the inventory contains 42 items reflecting

characteristics of the youth (e.g., “truancy,” “chronic drug use”) or his or her circumstances (e.g., “parent provides inadequate supervision”). The section yields an overall risk/needs score and scores for the following domains: prior and current offences/dispositions; family circumstances/parenting, education/employment, peer relations, substance abuse, leisure/recreation, personality/behavior, and attitudes/orientation. An opportunity is also provided to indicate areas of strength. Subsequent sections provide formats for developing a case plan based on the risk/needs/strength assessment. Reliability and validity research has been reported for the measure (see Hoge 2010; Hoge and Andrews 2010b).

The Estimate of Risk of Adolescent Sexual Offense Recidivism-2 (ERASOR; Worling and Curwen 2001) is an example of a structured clinical assessment tool focusing on youthful sex offenders. It is designed to evaluate risk for sexual reoffending on the part of individuals who have previously committed a sexual assault and to offer guidance in the development of treatment strategies. Twenty-five risk items are represented, including “deviant sexual interest,” and “antisocial interpersonal orientation.” The assessor categorizes the level of risk as low, moderate, or high based on the total number of items checked and the assessor’s judgments about the pattern of risk observed. Psychometric research has been reported for the scale (Worling and Curwen 2001).

Comprehensive Assessment Batteries

Complex decisions relating to mental health issues may require the conduct of a comprehensive assessment by a mental health professional. This would be true, for example, where a decision regarding competency to stand trial is required or a decision must be made regarding a disposition for a youth with a serious behavioral disorder. Figure 11.1 provides an example of a comprehensive assessment battery suitable for use by a psychologist directed by the court to provide a mental health evaluation prior to assist in a forensic decision.

Review of File Information

Interviews

Semi-structured interview with youth

Semi-structured interview with parent

Cognitive Aptitude and Achievement Measures

Wechsler Intelligence Scale for Children–IV (Wechsler, 2004)

Kaufman Test of Educational Achievement (Kaufman & Kaufman, 1985)

Personality Test

Minnesota Multiphasic Personality Inventory–Adolescent (Butcher et al., 1992)

Rating Measures of Behavioral Pathology

Child Behavior Checklist–Parent Version (Achenbach & Rescorla, 2001)

Child Behavior Checklist–Teacher Report Form (Achenbach & Rescorla, 2001)

Broad-Based Risk/Needs Assessment Measure

Youth Level of Service/Case Management Inventory (Hoge & Andrews, 2002, 2010b)

Fig. 11.1 Model assessment battery for a comprehensive risk/needs assessment

Evaluating Assessments

Reliability and validity are the two major bases for evaluating psychological measures. The basic forms of these constructs are defined in Table 11.3, and only a brief review of some of the basic constructs will be provided here. You are referred to Grisso (2005b), Hoge (2008), and Hoge and Andrews (1996) for more thorough discussions of these psychometric procedures as they apply to forensic assessments.

Reliability refers to the stability or consistency of a measure. More formally, it refers to the relative proportion of true and error variance in a measure. Three standard procedures are available for evaluating reliability: test–retest, inter-rater agreement, and internal consistency. Each provides a somewhat different approach to detecting

the extent to which extraneous or error factors are affecting scores on a measure. Reliability coefficients are generally expressed through correlation coefficients.

Reliability constitutes an essential condition in a measure. Lack of stability or consistency in a measure seriously interferes with its utility in applied assessment situations. If, for example, we found that scores on a personality test were affected by factors not related to the personality trait being assessed and that scores fluctuated in a more-or-less random fashion over time, we could have little confidence in that measure.

Validity is a more difficult construct to define since it is used in a number of different ways in different contexts. However, when referring to psychological tests or procedures, the term refers in its broadest sense to the meaningfulness of scores from a measure (Messick 1995; Sattler

Table 11.3 Definitions of psychometric terms

<i>Reliability</i>	The stability or consistency of a measure; formally defined as the relative proportion of true or error variance within a measure
<i>Content validity</i>	The adequacy with which a measure represents the conceptual domain it is expected to encompass
<i>Construct validity</i>	The theoretical meaning of scores from a measure; the accuracy with which the measure represents the construct in question
<i>Criterion-related validity</i>	Extent to which scores from a measure relate to a criterion of performance; the two forms of criterion-related validity are concurrent and predictive validity
<i>Dynamic predictive validity</i>	The sensitivity of a measure to changes in the dimension being assessed; also referred to as treatment validity
<i>Incremental predictive validity</i>	The extent to which a measure exhibits improvements in prediction relative to other procedures

and Hoge 2006). Table 11.3 defines a number of different forms of validity, but only two will be noted in our discussion.

Construct validity is sometimes regarded as the key form of validity and may be defined as referring to the theoretical meaning or accuracy of a measure. It also refers to the extent to which a measure is measuring what it says it is measuring.

Some illustrations of the definition may be useful. In raising a question of the construct validity of an intelligence test, we would be raising a question about the meaningfulness of scores from the test. Just what does a full-scale score of 113 mean as far as the cognitive functioning of the youth is concerned? We could also ask how well that score reflects what we consider the meaning of “intelligence.” Consider a second example. If we raised a question about the construct validity of a measure of risk for reoffending, we would be asking about the actual meaning of scores from the measure. What definition of risk underlies the measure or to what extent do scores from the measure reflect a theoretical definition of risk? Construct validity may be evaluated through theoretical and empirical procedures (Messick 1995; Sattler and Hoge 2006).

Criterion-related validity is a second form important for our purposes. It refers to the extent to which scores on a measure relate to some criterion of performance. The two forms of criterion-related validity are concurrent validity

(where predictor and criterion scores are collected at the same time) and predictive validity (where predictor scores are collected at one point and criterion scores at a later time).

Criterion-related predictive validity is particularly important in applied settings because we often need to know how well scores from a measure predict future behavior or performance. For example, the comprehensive risk/need measures described above are designed to identify the current risk and need factors exhibited by the youth as a means of estimating likelihood of engaging in continued criminal activity. Data from criterion-related predictive studies would provide us with that kind of information. The simplest procedure for evaluating predictive validity is through the correlation of predictor scores with the outcome of interest (e.g., new arrests). However, a number of more sophisticated statistical procedures are available for this purpose (Grisso 2005b; Quinsey et al. 1998).

Many psychological measures are evaluated with reference to normative data. This is true, for example, of the actuarial risk/need instruments. The translation of raw scores from those measures into specific predictions of the likelihood of reoffending is based on normative data collected from samples of individuals. However, the adequacy of the norms will depend on the representativeness of the normative sample and, more specifically, to the relevance of the sample to the

individual being assessed. Norms based on a sample of adolescent males may not be relevant to adolescent females.

It is important to have some familiarity with the meaning of the reliability and validity constructs, and it is important to obtain information about the reliability and validity of instruments being considered. Measures that do not display adequate levels of reliability and validity are of no value to us.

Practical and Ethical Issues

The following section reviews some practical and ethical issues to be considered in designing an assessment system.

Selecting Relevant Measures

A choice of assessment measure or procedure should be guided, first, by the purposes of the assessment (Heilbrun 2001, 2010). There would be little value, for example, in using a personality test to aid in a decision about pretrial detention or an intelligence test to guide a decision about length of probation. Ethical and legal considerations dictate that a psychological assessment must be appropriate to the decision in question.

It is important to note that forensic decisions are often narrow in scope, requiring, for example, a judgment about competence to stand trial. In some cases, specialized forensic measures such as the MacCAT-CA (Poythress et al. 1999) might be appropriate.

It is also important to insure that the assessment instrument is appropriate for the individual being assessed. This depends on the relevance of available normative, reliability, and validity data for the youth. For example, a personality test developed and evaluated with samples of boys between 8 and 12 years may not be relevant for a 17-year-old girl. Age, gender, and the presence of physical or mental handicaps are among the factors that should be considered in selecting assessment tools. Many of the standardized aptitude, personality, and behavioral measures have been evaluated for a wide range of respondent types, but this is not true

of all instruments, and it is important to keep this issue in mind in selecting assessment tools. It is also important to recognize that assessment instruments developed for adults are not necessarily relevant to children and adolescents.

Juvenile justice systems must sometimes deal with youth from different cultural and ethnic backgrounds. These often present special problems in the selection of assessment instruments. Not all measures have been evaluated with reference to nonmajority groups. Language may also be a barrier in the conduct of assessments with these youth.

Evaluating the Measures

The importance of researching the reliability and validity of measures being considered has already been discussed. Information about the psychometric properties of measures is available from manuals or guides accompanying the instrument and from a search of the research literature. Reference materials such as the *Mental Measurements Yearbook* can also be an important source of psychometric information.

Cost

The cost of test materials and their administration is also a factor to be considered in evaluating the suitability of measures. Psychological services are sometimes expensive, and it is important to weigh those costs against the potential benefits of using the services. However, research shows that following principles of best practice, including the use of standardized assessment procedures, can lead to significantly reduced levels of reoffending. The savings there will often offset the costs of the assessment.

Professional Expertise

Standardized assessment instruments and procedures require varying levels of training and experience, and this must be considered in planning the assessment. As we have seen, some of

the tools can be used by professionals such as probation officers, youth workers, or teachers with some special training. In other cases, however, the assessments must be conducted by qualified mental health professionals such as psychiatrists or psychologists. It is also important to insure that the use of assessment tools is continually monitored and that retraining is provided assessors when appropriate.

All professionals involved in the assessment process in the juvenile justice system should have a thorough understanding of child and adolescent development. The cognitive, emotional, and moral systems of children and adolescents are in a state of development, and a sensitivity to the stage of development of a specific youth is extremely important (Grisso and Schwartz 2000; Vincent and Grisso 2005; Steinberg 2002). It is not necessarily the case that professionals knowledgeable and skilled in dealing with adults also have the qualifications for dealing with youth.

Importance of a System View

Juvenile justice systems are embedded within a larger system serving the needs of youth, including educational, mental health, and child protection/welfare systems. Too often these systems do not work in a coordinated way to meet the needs of youth. Sharing of information collected in assessments is often a particularly problematic area. It is important to overcome professional and system barriers to cooperation to effectively serve these youth.

Ethical and Legal Considerations

A variety of ethical and legal issues arise in connection with forensic assessments (Grisso 2005a; Grisso and Applebaum 1998; Heilbrun 2001, 2010; Heilbrun et al. 2008; Melton et al. 2007). Issues of due process and confidentiality are of particular importance.

Insuring that due process is observed in the treatment of youth within the juvenile justice system is of paramount importance. The use of an assessment instrument or procedure should not

result in a decision on detention, sentencing, or rehabilitation that is unfair to the youth. This situation might arise, for example, where a risk assessment is used as a basis for a decision about the length of a sentence. This would normally be considered a violation of due process.

Insuring that informed consent rules are followed is sometimes complicated in the context of the juvenile justice system. Assessment always constitutes an invasion of the individual's privacy. This is generally viewed as justified in the case of assessments ordered by the courts. Where this type of order does not exist, the youth should be fully informed about the purpose of the assessment and the uses that will be made of the assessment information. Obtaining the consent of the youth (or parent under some circumstances) is generally required under these circumstances (Grisso and Vincent 2005).

Some juvenile justice systems provide explicit guidelines regarding these ethical and legal issues, while others may provide ambiguous guidelines, or none at all. The goal should be to encourage all systems to provide explicit guides for the conduct and uses of assessments (Mulvey and Iselin 2008). This will help to insure that all youth are treated in a fair and consistent manner.

Professional associations have also developed general guidelines regarding the conduct of assessments, and these will apply as well to forensic assessments. Examples include the Standards for Educational and Psychological Testing (American Educational Research Association, American Psychological Association 1999), the Ethical Guidelines for the Practice of Forensic Psychiatry (American Academy of Psychiatry and the Law 1995), and the Ethical Principles of Psychologists and Code of Conduct (American Psychological Association 2002).

Conducting the Assessment

A number of practical issues arise in the conduct of assessments (Hoge 1999b, 2008; Sattler and Hoge 2006). These relate to the establishment of a positive rapport with the youth, the collection of interview data, the integration of information from a variety of sometimes conflicting sources,

and the preparation of a report. Inadequate training of professionals in these processes is often the source of faulty assessments.

Summary

This chapter has stressed the importance of conducting careful assessments of the youth prior to any decision. These assessments should be based on standardized assessment instruments and procedures whenever possible. The latter should be selected on the basis of the forensic decision being made and on relevance for the youth and his or her circumstances. Considerations relating to age, developmental level, gender, and ethnic identity are of particular importance.

Several advantages have been cited in connection with the use of standardized measures. First, a growing body of research demonstrates that higher levels of validity are associated with these measures than with unstructured or clinical procedures (Grove and Meehl 1996). This should in turn lead to more effective decision making. Second, it is easier to evaluate the reliability and validity of standardized measures since it is possible to quantify the predictor and criterion. This is generally not possible with subjective clinical procedures. Third, the use of standardized measures ensures some consistency in the assessment and decision processes since the criteria for assessments and decisions are visible and concrete. Finally, standardized measures help provide a link with theoretical and research developments. For example, the comprehensive risk-need instruments described above are based on the latest research regarding the correlates and causes of antisocial behavior in youth.

Certain cautions in the use of standardized assessments have also been stressed. The importance of considering the relevance of the measure for the forensic decision and the youth has been stressed. This should also involve evaluating the relevance of the psychometric support for the group from which the youth is drawn. Observing professional discretion is also important. Standardized assessment instruments and procedures are designed to assist in the decision

process. However, final decisions about the client must rest with the professional responsible for the decision.

Decisions made within juvenile justice systems have important consequences for youth and society. The quality of these decisions will depend very directly on the quality of the information provided about the young person. In many cases, the assessment is flawed and invalid information is used as a basis for a decision. It is important for juvenile justice systems to include a commitment to standardized assessments in their mission statements and to insure that adequate assessment procedures are followed.

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Historically, youth presenting with mental health disorders in the juvenile justice system have posed many challenges to those who adjudicate, care for, educate and provide direct services for them. Until recently, accurate descriptions, including the number of youth with mental health disorders in the juvenile justice system have been vague. Incomplete and poor sampling techniques, unsound methodological practices, unstandardized and unconventional assessment methods, and disagreement regarding the definitions of mental disorders have contributed to the ambiguity surrounding descriptions of this segment of the population (Isaacs 1992; Coccozza 1992; Shufelt and Coccozza 2006). Unfortunately, the absence of and disparity of any existing information has impeded the provision of mental health services to youth.

In recent years, the rate at which youth with mental disorders have been showing up in the juvenile justice system is such that the juvenile and mental health systems are faced with a crisis (Coalition for Juvenile Justice 2000). Recent studies that have used better methodological practices, broader sampling techniques and more psychometrically sound assessment methods have led to more accurate estimates of the juvenile population (Shufelt and Coccozza 2006).

Although sources continue to vary, the numbers with mental disorders are, nonetheless, alarmingly high. Data clearly support that between 65 and 70% of the youth involved in the justice system meet the criteria for one or more DSM-IV diagnosis (Coalition for Juvenile Justice 2000; Shufelt and Coccozza 2006; Teplin et al. 2002; Wasserman et al. 2005).

In a comprehensive study conducted to examine mental health problems and substance abuse disorders among youth involved in the juvenile justice system, the National Center for Mental Health and Juvenile Justice (NCMHJJ), in collaboration with the Council of Juvenile Correctional Administrators (CJCA), found that 70.4% of youth met the criteria for at least one mental health disorder (Shufelt and Coccozza 2006). Among mental health disorders, disruptive behavior disorders were found to be most prevalent, followed by substance use disorders, anxiety disorders, and then mood disorders. Given that the percentages of youth in the juvenile justice system diagnosed with Disruptive Behavior disorders of the DSM (i.e., conduct disorder (CD), oppositional defiant disorder (ODD), and attention-deficit/hyperactivity disorder (ADHD)) are highly prevalent (estimates range from 30% to over 50%), researchers in this study decided to systematically remove youth with specific disorders to conduct their analyses (Shufelt and Coccozza 2006; Wasserman et al. 2004). First, youth who had a diagnosis of Conduct Disorder were removed from the study and researchers found that over 66% of the youth still met criteria

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for another DSM-IV mental health disorder (Shufelt and Coccozza 2006; Coalition for Juvenile Justice 2000). Returning to the entire study population, researchers then conducted analysis by removing youth from the study with the diagnosis of Substance Use Disorder. They found that 61.8% of the youth still met criteria for a mental health disorder other than substance use. Researchers then took the original population of the study and conducted analysis including all mental health disorders except Conduct Disorder and Substance Use. Results indicated that after removing these two disorders, 45.5% of youth still met the criteria for at least one mental health disorder (Coalition for Juvenile Justice 2000). Conclusions indicated that neither Conduct Disorder nor Substance Use disorders could account for the high prevalence of mental health disorders among youth in the study. These findings highlighted the complexity and severity of the mental health issues of youth in the juvenile justice system.

Additional results from the study conducted by the Coalition for Juvenile Justice indicated that among youth having at least one mental health disorder, 17% were conferred with at least two disorders, 19% met the criteria for at least three disorders, and 43% of youth had four or more mental health diagnoses (Shufelt and Coccozza 2006). Among youth having a mental health diagnosis, 60.8% also met the criteria for a substance use disorder. Youth diagnosed with a disruptive behavior disorder were most likely to have multiple or co-occurring substance use disorders.

The number of females involved in the juvenile justice system has been steadily rising since 1989 and comprise the fastest growing segment of the juvenile justice system (Skowrya and Coccozza, 2007; Coalition for Juvenile Justice 2000; Snyder and Sickmund 2006; Veysey 2003). It is estimated that since 1989, the number of females entering the system has increased by 50% whereas the number of males arrested has actually declined by approximately 10% (American Bar Association 2001; Snyder 2000; Veysey 2003). Because the research regarding youth in the justice system has typically been conducted with males, even less is known about female juvenile offenders. Evidence from recent

research indicates that females in the juvenile justice system are more likely than males to have mental health concerns with some estimates exceeding 80% of the population (Wasserman et al. 2005).

Of the youth in the juvenile justice system, it is estimated that at least 20% are impacted by mental illness such that daily functioning is significantly impaired (Abram et al. 2003; Skowrya and Coccozza 2007; Teplin et al. 2002). Table 12.1 depicts prevalence rates of mental health disorders among youth in the juvenile justice system.

Screening Versus Assessment

Mental health screenings and assessments are both used for evaluative purposes; however, the manner in which they are used and conducted with juveniles differs in several ways. Table 12.2 features the basic differences between screenings and assessments.

Screenings serve as filters. Within the juvenile justice system, screenings have typically served to identify youth who present with emotional and mental health issues that require immediate attention, further investigation or intervention (Trupin and Boesky 1999; Grisso and Barnum 2000; Williams 2007). Screenings are brief and usually standardized measures that provide an indication of which youth need more in-depth assessment and can assist in identifying areas of functioning in need of further attention. They are not intended to provide formal diagnoses, guide intervention planning, or facilitate important decision making in the justice process. Rather, they provide broad “barometers,” if you will, about the overall level of functioning of a youth at that specific point in time. Screenings conducted with juveniles should be broad enough in scope to cover all major areas of functioning: academics, behavior, emotional and mental health, medical, adaptive and cognitive functioning.

Assessment, on the other hand, is more comprehensive and individualized in nature and may lead to the formulation of diagnostic impressions. Most assessments utilize more than one method of data collection and rely on more than one

Table 12.1 Prevalence of youth in the juvenile justice system diagnosed with specific mental health disorders (by percent)

Mental health disorder	Males	Females	Total
Any mental health disorder	66.3 ^a	73.8 ^a	69.0 ^a
	66.8 ^b	81.0 ^b	70.4 ^b
	67.0 ^c	80.0 ^c	68.5 ^c
			50.0–75.0 ^d
Any mental health disorder except conduct disorder	60.0 ^a	70.0 ^a	n/r
Any mental health disorder except conduct disorder or a substance use disorder	n/r	n/r	45.5 ^b
Any disruptive behavior disorder	41.4 ^a	45.6 ^a	31.8 ^c
	44.9 ^b	51.4 ^b	
	37.8 ^a	40.6 ^a	46.5 ^b
Conduct disorder (CD)	52.8 ⁶	52.8 ⁶	31.7 ^c
			50.0 ^d
Oppositional defiant disorder (ODD)	17.5 ^a	14.5 ^a	2.8 ^c
Attention-deficit/hyperactivity disorder (ADHD)	21.4 ^a	16.6 ^a	2.3 ^c
	18.5 ^f	11.7 ^f	
Any substance use disorder	50.7 ^a	46.8 ^a	46.2 ^a
	43.2 ^b	55.1 ^b	49.3 ^c
Affective/mood disorders (i.e., major depressive disorder, bipolar disorder)	18.7 ^a	27.6 ^a	18.3 ^b
	14.3 ^b	29.2 ^b	9.1 ^c
	10.6 ^f	29.2 ^f	n/r
Major depressive disorder (MDD)	n/r	1.2 ^f	n/r
Anxiety disorders (i.e., generalized anxiety disorder (GAD), social anxiety, obsessive-compulsive disorder (OCD), posttraumatic stress disorder (PTSD))	21.3 ^a	30.8 ^a	34.4 ^b
	26.4 ^b	56.0 ^b	18.9 ^c
	32.0 ^d	60.0 ^d	
Psychotic disorders	1.0 ^a	1.0 ^a	n/r
	3.3 ^f	2.7 ^d	

n/r Not reported

Note: Accurate prevalence rates for eating disorders, posttraumatic stress disorder (PTSD), mental disabilities and pervasive developmental disorders (PDD) (e.g., Asperger's syndrome, autism) as they occur in the juvenile justice population are not available at this time

^a Teplin et al. (2002)

^b Shufelt and Coccozza (2006)

^c Wasserman et al. (2004)

^d Coalition for Juvenile Justice (2000)

^e Wasserman et al. (2005)

^f Fazel et al. (2008)

source of information. Assessment may involve the use of many instruments over the course of the process, as well as information from multiple sources or informants and periods of time. Further discussion of the components of good assessment will be explored further in this chapter.

Reasons for Assessment

When there is a request for mental health assessment to be conducted with a youth, it is important to keep in mind its purpose. For youth

involved in juvenile justice, there are typically several reasons why assessments are conducted (Grisso and Underwood 2004; Skowrya and Coccozza 2007):

Initial Referral or Contact with the Juvenile Justice System/Intake

Assessments completed after a youth initially comes into contact with the legal system and during intake into a juvenile system are the most frequently conducted. It is often the case that youth

Table 12.2 Mental health screenings versus assessments

Dimension	Screenings	Assessments
Function	<ul style="list-style-type: none"> - Filter or guide assessment; target areas in need of immediate intervention and attention; target areas in need of in-depth assessment - Short term (e.g., immediate, 2–4 weeks) - Upon entry into the juvenile justice system; intake; transition; reassignment 	<ul style="list-style-type: none"> - Identify psychopathology; diagnostic; lead to intervention and treatment planning; assist with long-term planning, decision making, and placement determination - Long-term (i.e., weeks to months) - Follows screening; initial contact and referral to system; intake; start of judicial processing; entry into secure placement; reentry and transition back into the community
Focus		
Timing		
Scope	<ul style="list-style-type: none"> - Broad and shallow 	<ul style="list-style-type: none"> - Broad and in-depth; comprehensive and individualized
Length of process	<ul style="list-style-type: none"> - Brief (typically 10–30 min) 	<ul style="list-style-type: none"> - Components may be over several sessions, hours and/or days
Approach	<ul style="list-style-type: none"> - Efficient, single, and few simple methods employed; may use standardized procedures and protocols; may be unidimensional or multidimensional 	<ul style="list-style-type: none"> - Comprehensive, individualized and intensive; multiple-methods of data collection; multiple sources of information; multidimensional with targeted unidimensional measures
Methods used	<ul style="list-style-type: none"> - Typically paper and pencil measure(s) or rating scale; may include interview of youth and record review 	<ul style="list-style-type: none"> - Interviews of youth, care providers, educators, service providers, paper and pencil measures; comprehensive behavioral rating scales; targeted behavioral rating skills; direct observation; psychosocial history; review of all mental health, medical and educational records; formal testing; personality inventories; synthesis of all relevant information
Measurement	<ul style="list-style-type: none"> - Over one or two short periods of time; capture presence of symptomology at given point in time; “snap shot” of youth 	<ul style="list-style-type: none"> - Collect and review data over time, subjects, settings, and situations
Personnel involved	<ul style="list-style-type: none"> - Nonclinical professionals; laypersons; social service personnel; probation and parole personnel 	<ul style="list-style-type: none"> - Mental health professionals (e.g., social workers, counselors, psychologists, psychiatrists); may involve specific, highly trained educators and medical professionals

are assessed just after entry into the justice system and treatment plans are developed from these results. Intake assessments can provide rich information about the background of a youth; however, should remain “open-ended” so that additional information obtained can be added as an addendum to the evaluation report. In doing so, the initial evaluation almost becomes a living, breathing document and testament regarding each youth.

Placement

Judicial systems frequently order mental health assessments and evaluations to determine placement of youth in particular facilities, wards or settings (i.e., a group home vs. secure care) post-disposition. Careful consideration regarding placement should be given to youth with multiple diagnoses, mental disabilities and youth who present with trauma-related symptomology. Caution is also warranted when decisions about homogenous grouping are being considered. For example, grouping youth together who tend to be very disruptive and/or violent does not lend itself to easily obtaining treatment gains. Such a practice may be convenient with respect to housing and may work well with the design of the physical plant of a juvenile facility; however, the likelihood of obtaining treatment gains may be largely reduced by doing so. Many factors need to be considered when making placement decisions about youth.

Treatment, Intervention, and Eligibility for Specialized Services

Perhaps the most important (and obvious) reason for mental health assessment is to guide decision making regarding treatment and intervention. Results of assessment should *always* lead to treatment and/or intervention, regardless of intensity of need. However, it is commonly the case that only the most ailing individuals receive access to care. Although recent studies indicate that between 60 and 70% of the juvenile population

has a diagnosable mental health disorder, only the most impaired individuals are typically treated (about 20%) (Shufelt and Coccozza 2006). All youth in need of services should have access to a structured continuum of care that utilizes research- and evidence-based practices. Unfortunately, many mental health care systems function reactively instead of in a manner that is proactive and preventive. Funding to provide state-of-the-art services is simply unavailable. Knowing the extraordinary prevalence rates of mental illness among the juvenile population, treatment planning and service provision should top the priorities among juvenile justice reform efforts.

Mental health assessments are also often conducted to assist in determining whether a youth is eligible to receive special services (e.g., special education), and to ascertain whether he or she qualifies for or needs highly specialized treatments or programs (i.e., a therapeutic group for individuals presenting with trauma-related symptoms or treatment for youth who have sexually perpetrated).

Prognosis

Sometimes, assessments are conducted to estimate prognoses among youth and to attempt to predict future behavior in individuals. Such predictions may be directed toward ipsative comparisons (i.e., previous vs. current behavior in a specific individual), or comparative in that one individual's behavior is measured against another's or a group of individuals (i.e., normative comparisons) (Mesco et al. 1995).

Progress Monitoring and Treatment Effectiveness

For youth with mental health issues who have been involved in the juvenile justice system for periods of time, assessments should be conducted frequently. Specifically, supplemental assessments should be conducted when there have been significant changes in symptomology and/or when treatment plans have undergone major revisions.

For youth who are stable with respect to functioning, comprehensive assessments should be conducted at least once per year, with supplemental assessments being conducted quarterly. During periods between more comprehensive assessments, mental health status should be vigilantly monitored along multiple dimensions. Progress monitoring is an integral part of every treatment program. Assessment conducted to estimate progress will not need to be as comprehensive as an initial or intake evaluation; however, substantial measures should be administered to capture the behaviors targeted for treatment and the presence of any symptomology that was of previous concern.

Reentry and Release

Judicial systems that are fairly progressive include mental health assessments as part of a youth's reentry or release plan. Such assessments provide information about overall stability of a youth pending reentry into society or release from probation/parole, and also provide current information about services a youth may require to ensure a successful transition back into society.

Challenges in Assessing Juveniles

The justice system is faced with numerous challenges when it comes to assessing juveniles. First and foremost, adolescents, in and of themselves, are developmentally dynamic and complex individuals. At any given point during adolescence, their skill acquisition, cognitive, emotional and social faculties are developing at rapid, but unsteady and uneven rates. For example, a sudden spurt in physical development is not necessarily accompanied by a parallel spurt in social and emotional functioning. That is, it is highly unlikely that a youth's physical, social, and emotional skills are developing at the same time and/or rate. In fact, it is more often the case during puberty that the physical attributes of adolescents develop earlier than other areas of functioning (e.g., social skills). This factor alone speaks to

the importance of conducting assessments that are *timely* and *ongoing*.

Next, we consider the dynamic nature of mental illness. The onset and symptomology of many mental illnesses (e.g., mood and anxiety disorders, substance use disorders, eating disorders) wax and wane and are impacted by life stressors, environmental issues, familial events, neurochemical changes in the human body as well as a host of other factors. It is critical that our assessments are comprehensive and multidimensional in their approach in order to depict an accurate picture of each youth. Additionally, unlike adult mental disorders, adolescent mental disorders do not easily fit into diagnostic groupings (Mash and Barkley 1996). Actually, disorders among youth in the juvenile justice system are more likely to be comorbid (or co-occurring) rather than occur in isolation as single diagnoses, (Mash and Barkley 1996; Grisso and Underwood 2004).

Now, when we consider the nature of adolescence and mental illness together, it becomes imperative to approach assessment with an open mind. Results of an initial intake screening and assessment when a youth is 14 years of age may look quite different than a comprehensive assessment that is conducted 3 or 4 years down the road as that adolescent begins the transformation into adulthood.

Apart from the fact that they comprise a dynamic and complex segment of our population, there are a number of challenges involved in assessing juveniles presenting with mental health issues.

Timing of Screening and Assessment

Most researchers agree that youth should be screened as soon as possible after initial contact or referral is made to the juvenile justice system (Grisso and Underwood 2003, 2004; Williams 2007). Some have recommended that mental health screenings should be conducted within 24 hours of admission to a juvenile facility and should include brief assessment of any acute mental illness (e.g., psychosis), risk for suicide or harm to self (or others), the use of psychotropic medications, substance abuse, and risk for

violent behavior (Teplin et al. 2006). Whereas such screenings are essential to the adequate processing of youth within the justice system, some youth who are identified as needing further assessment never receive additional and more in-depth assessment. Unfortunately, in some settings, results of screenings are interpreted to be diagnostic indicators and have been used to formulate treatment plans and guide important decisions for youth. These are overextensions and inappropriate uses of screening measures. While critical and essential on entry into the justice system, mental health screenings only represent the presence of specific behaviors and symptoms “at the moment” in which screenings are conducted. Thus, Results of some screenings should not be interpreted beyond a short period of time, and should *not* be used in isolation to formulate diagnostic and treatment impressions. Upon entry into the justice system, youth may be detoxifying from substance use, may be in an irritable state from being arrested, or even may be in a state of trauma from the happenings surrounding his/her legal events. Additionally, screenings and assessments conducted immediately after entry into the justice system may be biased, skewed, and unidimensional in nature, and lack perspective due to an overreliance on youth self-report.

Scope of Screenings

Screenings for youth in the justice system have progressed significantly over the past decade and have served as efficient methods for identifying the needs of youth. Prior to the early 1990s, there were few screenings for juveniles in existence (Skowryra and Coccozza 2007). Although there have been many advancements in the methodologies of juvenile screenings, screenings currently being used continue to “miss” many youth with needs because their content is limited in scope. Specifically, some instruments in circulation do not adequately screen youth for the presence of trauma-related symptoms, specific types of anxiety disorders, suicidal ideation, eating disorders, self-mutilation and other self-destructive behaviors that may escalate when a youth becomes

detained. Importantly, screening processes also need to have the capacity to detect whether a youth has a mental disability or impairment upon entry into the justice system, as these youth have unique communication, management, and care needs.

Cost

The cost of instruments used to conduct mental health screenings and assessments can vary considerably. Behavioral rating scales, inventories, structured interviews and schedules, as well as formal batteries such as intelligence tests and neuropsychological tests, can be quite costly with respect to the expense of the materials, the methods used to score and interpret results, as well as the time expenditures of highly trained personnel to administer measures accurately and according to standardization specifications. Unstructured interviews, direct observations, and the review of records generally do not require the purchase of instruments or measures; however, they do take time to perform. In the case of record reviews and the gathering of historical data, a great deal of time-related resources may run up the costs of assessments as the use of highly trained personnel may be consumed for several hours in order for a thorough assessment to be completed.

For most commercially marketed assessment instruments, test authors and publishers must specify the level of professional training that is required to administer a particular instrument. For example, in order to administer a formal intelligence battery, an advanced degree in psychology or psychiatry is required. An individual with a Master’s degree in psychology or psychometry may administer, score, and interpret a formal battery; however, it must be under the supervision of a licensed psychologist.

Assessment Styles and Expertise of Mental Health Personnel

In a world where budgetary considerations often prevail over the ability of administrators to recruit and hire the most highly trained mental health professionals to work with the children and

adolescents who come into contact with the justice system, there is a harsh reality that the individuals hired to fulfill the duties of mental health professionals in the juvenile justice system may not be appropriately trained to work with youth. It just makes sense that the most highly skilled professionals should be hired to work with the most challenging youth. Even with unlimited resources, administrators sitting at the helm of a justice agency may possess limited knowledge as to who to hire and who would be best suited to work with the youth under their care. The mental health professionals hired to assess and treat youth should have an extensive background in working with children and adolescents. Their training should be behavioral and cognitive-behavioral in nature. Mental health professionals trained in other approaches, say in psychodynamic or psychoanalytic approaches, may be somewhat less successful in working with the juvenile population due to the limited research which supports the use of these approaches with this segment of the population. Similarly, with respect to social service personnel and those individuals who work in security, individuals recruited from an adult correctional background will also have limited success in working with youth unless provided with additional, specialized training.

Psychometric Properties of Screening and Assessment Instruments

There are many instruments available to assist in the assessment process. A primary consideration in selecting an instrument to use for assessment has to do with how well the measure is constructed and how strong the instrument is psychometrically and methodologically. If a well-thought out screening and assessment process is in place within a juvenile agency, but little consideration has been given to the quality of instruments being used, the data gleaned from such processes will be of little value to practitioners.

At minimum, the *reliability* and *validity* of assessment instruments should be completely

reviewed before attempting to administer them systemically in any juvenile agency. The psychometric *reliability* of an instrument refers to how consistently an instrument measures the construct of interest (Dawis 1992; Green 1992; Witt et al. 1994). Specifically, if a practitioner uses an instrument several times with an individual, the reliability refers to the likelihood that he or she will obtain the same results after each administration (Dawis 1992; Green 1992; Witt et al. 1994). There are many ways to measure the reliability of assessment instruments. For example, there is test-retest reliability, equivalent- or parallel-form reliability, split-half reliability, and coefficients that represent the internal consistency of an instrument, each of which serves a distinct and important function (Witt et al. 1994).

The *validity* of an instrument refers to how well the instrument actually measures the actual construct of interest (Dawis 1992; Green 1992; Witt et al. 1994). For example, does an instrument designed to assess the presence and level of symptoms associated with depression actually do that, and if so, how well? Have the items on the instrument been well developed and do they correlate well with items on other instruments that purport to measure the same or similar constructs? High reliability is necessary but not sufficient to establish high validity in an instrument. An instrument can be highly reliable, but may not effectively measure the construct of interest.

An in-depth discussion regarding the psychometric properties of assessment instruments is well beyond the scope of this chapter; however, the importance of understanding the principles and theory underlying sound test methodology is not to be overlooked or underestimated. For additional information, readers are encouraged to seek out texts specifically allocated to the discussion of test and measurement methodology.

Assessment Practice

Across the nation, facility types and settings vary widely in determining which youth are assessed and evaluated. In a review of the *Juvenile Residential Facility Census (JRFC)* for the year

2002, the Office of Juvenile Justice and Delinquency Prevention reported that approximately 53% of the 2,287 reporting facilities used in-house mental health professionals to conduct assessments and evaluations of all youth on their premises (Snyder and Sickmund 2006). Another 34% of those facilities reported that their in-house mental health professionals assessed and evaluated some, but not all youth (Snyder and Sickmund 2006). Additionally, when public and private facilities were compared, 62% of privately run facilities reported to conduct in-house assessments and evaluations of all youth as opposed to only 41% of publicly run facilities (Snyder and Sickmund 2006). Facilities that reported to provide mental health treatment on-site were also found to be more likely to assess all youth in their care when compared to facilities whose treatment needs were met outside of the facility (Snyder and Sickmund 2006). The JFRC report also provided that youth were more likely to be assessed by an in-house mental health professional as the size of the facility increased. In facilities with capacities from 51 to 100 youth, approximately 57% reported assessing all youth within their care. In contrast, in facilities with 200 or more youth in their care, this proportion rose to at least 60% (Snyder and Sickmund 2006). For facilities caring for 11–20 youth, only about 50% of the facilities reported that all of their youth were assessed for mental health needs.

Facilities may often adopt a “one-size-fits-all” approach to screening and assessing the youth in their care. All youth in a system may be processed using rather generic screenings and assessments without consideration of individual needs. While some youth may be filtered through to receive treatment, the needs of many youth may be missed because the screenings and assessments used are not comprehensive enough or sensitive enough to detect the presence of specific symptomology. Additionally, a youth may receive a comprehensive assessment at some point in his/her life, but all treatment recommendations may be bound to those results from that point. Good assessment practices dictate that they are *dynamic* and *ongoing* processes.

Methods of Assessment

The methods involved in an assessment typically refer to how the assessment is being conducted and the means by which data are gathered. For example, methods may include interviews of the youth, the youth’s caregiver and other relevant adults involved in the youth’s life (e.g., educators), the use of behavioral rating scales that target specific groups of behaviors and symptoms, the inclusion of formal testing instruments (e.g., an intelligence test), direct and indirect observation, and the organization of anecdotal and historical information. Depending on the state, agency, setting, and sometimes individual practitioner, the methods used to assess youth vary widely. Unless a youth has entered a system in which there are standard protocols and procedures in place for screening and assessment, the information gathered for a given assessment may be inconsistent and quite inaccurate. The methods used during an assessment may range from individual interview of a youth by a case-worker or psychiatrist in a single 30-minute session, to a comprehensive assessment including interviews, rating scales, observations and formal testing that involves an entire multidisciplinary team. Given the lack of standards in screening and assessment in juvenile systems, it is no wonder that there is such a high rate of disagreement across practitioners regarding mental health diagnoses (Basco et al. 2000; Jensen-Doss and Weisz 2008).

Time for Assessment

The greater the number of youth being screened and assessed by a system, the less time typically spent assessing a specific individual (Grisso and Underwood 2004). Consequently, less time for assessment usually means that more limited methods are used to gather data. The time allocated for assessing juveniles is often directly related to the methods used. There are a number of screening and assessment instruments that take only 10–20 min to administer. However, only so much information can be collected during that time. Assessments utilizing best practices can

take many hours, the involvement of multiple professionals and span several days. The time taken for assessment can be streamlined by having all professionals who come in contact with the youth work together to avoid duplicating assessment components (e.g., psychosocial histories, formalized testing, administration of rating scales). Juvenile systems are often organized in manners that are inefficient and ineffective such that mental health professionals may be addressing concerns independently from educational and social service professionals. In the end, each team may have conducted their own cognitive screenings, screens for ADHD, psychosocial histories, and the like, leading to an accumulation of duplicate sets of data, personnel inefficiencies and inaccuracies in the identification of pertinent issues. The need to streamline assessments is not just needed to improve the quality of services provided to youth, but to also reduce waste and the cost of assessments.

Communication Across Agencies

When youth become involved in the justice system, there are typically multiple agencies that are activated to provide services. Communication across these agencies is often impeded for several reasons. First, the infrastructure of a given system may simply not support communication processes and foster professional relationships across agencies. Within the community, there may be no interagency agreements established among service providers to provide a continuum of care for youth. Trust across agencies may not be established or fostered and nurtured. The sharing of data and important information should be accomplished efficiently and in the spirit of doing what is best for youth in the care of each agency. As in personal relationships, professional relationships are effortful and involve time and personnel. Second, there may be untrained administrators who lack vision and clarity about the purpose and direction of an agency. Administrators in the juvenile justice system should be those with appropriate training regarding children and adolescents and have a passion to work with this population. It is not appropriate

to move administrators from an adult correctional system into one designated for juveniles. Juveniles are constantly changing and are dynamic beings and differ from adults in many ways: developmentally, socially, behaviorally, emotionally, and mentally.

Third, there may be a critical shortage of personnel who are allocated to follow-through with youth as they transition through the justice system. Assumptions are often made that information will travel with the youth, when, more often than not, it does not. Personnel who do facilitate transition processes and provide case management services may find themselves inundated with caseloads and paperwork and find little time to synthesize relevant information that will lead to a “best practices” treatment approach for each youth. They may also find that they are in need of knowledge and support about whom should be involved in the “information loop” regarding a youth.

Lastly, concerns regarding confidentiality keep many agencies from communicating with each other, especially when it comes to the results of sensitive assessment information. Having access to previous assessment results can vastly assist service providers and also serve to notify them as to which areas of functioning in specific youth may need to be further explored and addressed. A by-product of this lack of communication is that unfortunately, youth are often administered duplicate measures as they travel and progress through the system.

In many systems, the presence of more service providers does not necessitate the delivery of a wider or more effective range of services. Actually, the more agencies involved in service delivery, the more difficult the coordination of the services becomes and the more cumbersome the efforts to ascertain outcome and effectiveness. Often the more agencies that are involved in a youth's life, the less personalized, less consistent and less effective they are. The involvement of many agencies with a youth may signify that a youth has intensive needs, or that a region has many resources; however, this does not assure that the youth actually receives what he or she needs. Just because a youth has assistance from a health clinic, a mental health practitioner, the school social worker, a community outreach

group, and a member of the clergy, it does not mean that he or she is going to receive maximum benefit unless all service providers are clearly communicating and are actually delivering a quality service product that is evidence based. Specifically, each member of the service delivery community needs to have clearly defined goals and measures in place, as well as methods to accurately capture the gains achieved through use of their “program.” These expectations need to be effectively communicated to other service providers and done so in a manner that can complement and/or assist professionals in other agencies.

There is something to be said for simplicity. Systems that are basic in structure and who offer continuity and consistency in service delivery may achieve greater outcomes for youth over large, powerful systems that are overly complex and bogged down in process and procedure. When multiple agencies are involved in service delivery, whether they are members of social services, law enforcement, education or a university, resources that can be allocated for direct services to youth can easily become depleted as valuable personnel positions are filled by administrators of these participating agencies. Because each agency requires oversight and management, each agency requires that it is administrated and administrated according to local, state, and federal protocol. Therefore, instead of improving service delivery or smoothing out the speed bumps across agencies, the notion of “seamless service delivery” can become an even loftier goal as the number of agencies increases. Finally, the more agencies involved in the life of a youth, the more the bureaucratic issues surface and the more the youth truly become “lost in the system.”

Assumptions That Guide Assessment Practices

In essence, there is no substitute for good assessment. Good assessment reduces error and improves overall accuracy in targeting areas of concern. One reason there has been such disagreement regarding classifications, taxonomies, categories of impairment, and level of risk among youth is

because assessment methods and practices have indeed varied across settings, examiners, and agencies.

Although this notion may seem a bit simplistic, in approaching assessment, it is important to remember that mental health disorders occur outside of the mental health professional’s office. Rather, as practitioners, we need to keep in mind that disorders impact the entire youth—across settings, times of day, with different people, in different situations. For children and adolescents, the educational context is one in which special considerations need to be given in order to assist youth in becoming more successful in school. Thus, multidisciplinary teams are better suited to address these needs than professionals working independently as specialists.

Members of the multidisciplinary teams should include a child psychiatrist, pediatrician, or nurse practitioner, a behaviorally or cognitive-behaviorally trained child and adolescent psychologist, masters level social workers and counselors, teachers, activity and recreation staff and residential counseling staff. These teams should review intake or any other assessment information collectively, and collaborate on diagnostic and treatment progress during frequent and regularly scheduled team meetings. In essence, these teams should serve as data-driven, problem-solving teams who review assessment and treatment-related data, including graphically represented treatment data, frequently and regularly. Treatment of each youth should stem from a holistic approach such that the needs of the entire child are addressed and not piecemealed.

Mental health assessments should employ multidimensional and multiple-method practices (Wasserman et al. 2004; Witt et al. 1994). The goal of conducting a comprehensive mental health assessment is to collect *enough* data and the *right kind* of data such that a clear picture of the presenting concerns are depicted and questions posed by the referral source can be answered. The assumptions postulated by Witt et al. (1994) are helpful:

1. “*Children and adolescents present with individual differences.*” These differences must be interpreted contextually, in which such behaviors occur. In understanding this, as mental

- health professionals, we determine whether such differences are cause for concern.
2. *“Tests provide us with samples of behavior. They only assist in the decision-making and problem-solving processes.”* Thus, in using screenings and assessment instruments, it is how we synthesize and interpret the data collected from these processes that leads us to make informed decisions; not the scores themselves.
 3. *“Assessments are conducted to improve intervention activities.”* Fundamentally, assessment should *always* lead to treatment and intervention. It is all too often that agencies and organizations, become bogged down in the taxonomies of mental health and “what” to call a youth and “how” to classify he or she. Ultimately, however, regardless of what the cluster of presenting symptoms are called, at the end of the day, the presenting behaviors of concern will remain if not addressed. If results of mental health assessment lead a clinician to identify a youth with a mental health diagnosis or psychiatric disorder, the primary reason in doing so should be to enhance communication across caregivers, mental health professionals, judicial professionals, and other pertinent adults in an adolescent’s life. The purpose of using any classification system or taxonomy is to “facilitate interdisciplinary communication that occurs routinely in the process of treatment planning, and which is required for legal storage and retrieval of information to subserve legal, financial and other special service needs,” (Mesco et al. 1995).
 4. *“The assessor is properly trained.”* This assumption addresses one of the challenges addressed earlier. Many individuals in the fields of special education and mental health are inadequately trained. For assessment results to be meaningful and helpful, we must assume that the individuals conducting them have the appropriate skills and approach assessment from a perspective that is consistent with what we know about children and adolescents.
 5. *“Assessment methods contain error.”* By nature of the principles of testing methodology, we know that even the most psychometrically sound instruments contain error. Even tests and screening measures that researchers consider to have adequate reliability and validity have error. Interviews, regardless of how structured and standardized, contain error. Every form of measurement used in mental health assessment has some degree of error. Some methods simply have more than others. As practitioners, we must choose to use instruments and methods, and combinations of such that lead us to minimize error to the greatest degree possible.

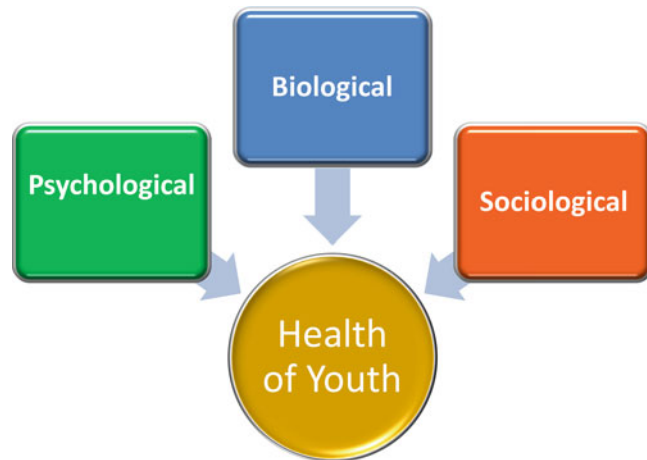
Biopsychosocial Versus Biomedical Perspectives of Human Illness and Behavior

Biopsychosocial Assessment

In a seminal article published in 1977 by psychiatrist George L. Engel, he expressed that there was a need for a new model of health and medicine (Engel 1977; McLaren 2002). Coining the “biopsychosocial model (BPS),” he postulated that biological, psychological and social factors all contribute to human functioning and they should be considered when investigating illness (see Fig. 12.1). This is contrary to the traditional biomedical model, which approaches human illness from the perspective that the presence of a pathogen, genetic or developmental abnormality is responsible for the illness in the body.

Whereas the biomedical model focuses on symptom reduction and the underlying physiologic aspects of illness, the basic tenets of the BPS support the treatment of human illness from a holistic perspective. Therefore, because attention is given to many more factors in this approach, much more information is required to conduct a biopsychosocial assessment to formulate hypotheses about illness and the subsequent treatment plan. This person-centered approach to obtaining information encourages individuals

Fig. 12.1 Biopsychosocial factors which contribute to overall youth wellness



to provide as much information about physical, psychological, and sociological factors as they are willing to do, including the occurrence of major life stressors, their relationships with family members, and their beliefs about their presenting symptoms. Mental health professionals who conduct interviews for biopsychosocials ask open-ended questions, such as “Tell me more about how you are sleeping ...” instead of traditional, closed-ended questions, such as “How are you sleeping?”

For youth in the juvenile justice system, using a biopsychosocial approach to gather information can lead to the establishment of much more effective and holistic treatment programs rather than using a traditional biomedical model. Because we know that youthful offenders usually have multiple factors involved in their criminal activity, it behooves mental health professionals to approach assessment this way. Formulating a “big picture” about a youth is much more helpful than “piecemealing” the treatment of symptoms here and there. Additionally, in using a biopsychosocial approach, the likelihood of any treatment effects to be long-standing and enduring are greatly improved. Table 12.3 contrasts the hypothetical assessment and treatment of a youth presenting with depression from the biomedical and biopsychosocial approaches.

In recent years, the BPS has been used more extensively in the mental health field. However,

there has been relatively little empirical examination of the use of this model (Meyer 2009), and this holds to be especially true within the juvenile justice setting. Specifically, the components required to comprise an effective biopsychosocial assessment have received little attention in the literature (Meyer 2009).

What is known, is that the components included in a biopsychosocial will vary depending on the setting, point of process in the juvenile system, and referral question(s) being asked. Table 12.4 outlines those components recommended for inclusion in a biopsychosocial assessment.

Due to their complexity, and the sheer volume of information being gathered and synthesized for assessment, the report from a comprehensive biopsychosocial assessment can become the “cornerstone” so to speak, of the entire assessment of the youth. Throughout the biopsychosocial process, many components can and will overlap but the data gathered can be complementary to other components. For example, interviews with youth, caregivers and educators, the mental status exam, and record reviews may be conducted independently or conducted as a sub-component of the biopsychosocial. Depending on the content of each, interviews, the mental status exam and record reviews may stand alone and make specific contributions to the comprehensive mental health assessment. Similarly, rating scales

Table 12.3 A comparison of the biomedical and biopsychosocial approaches addressing hypothetical depression in an adolescent

	Biomedical	Biopsychosocial
Approach to addressing illness	<ul style="list-style-type: none"> Assess and reduce physical symptoms associated with depression (e.g., sadness, hopelessness, fatigue, loss of interest, suicidal ideation) 	<ul style="list-style-type: none"> Assess and reduce physical, emotional, and social factors which may be contributing to and maintaining symptoms associated with depression
Biological and physiological factors	<ul style="list-style-type: none"> Address physical, neurochemical, and physiological factors associated with depression 	<ul style="list-style-type: none"> Address physical, neurochemical, and physiological factors associated with depression
Psychological factors	<ul style="list-style-type: none"> Not addressed 	<ul style="list-style-type: none"> Address negative thoughts, cognitive-behavioral factors, cycles of negative thinking, emotionality/lability
Sociological factors	<ul style="list-style-type: none"> Not addressed 	<ul style="list-style-type: none"> Investigate and address environmental influences contributing to depression (e.g., poverty, family dynamics, SES, education level)
	<ul style="list-style-type: none"> Treatment 	<ul style="list-style-type: none"> Treatment
	<ul style="list-style-type: none"> Psychotropic medication; lifestyle changes (e.g., change diet and increase exercise) 	<ul style="list-style-type: none"> Psychotropic medication; nutritional balance; lifestyle changes (e.g., change diet and increase exercise)
	<ul style="list-style-type: none"> Not addressed 	<ul style="list-style-type: none"> Teach methods to self-monitor symptoms and behaviors; teach cognitive-behavioral self-management techniques to improve coping and management of emotional swings; improve overall self-regulation
	<ul style="list-style-type: none"> Not addressed 	<ul style="list-style-type: none"> Educate about environmental influences; explore ways to manage and cope with family dynamics; explore ways to improve self-efficacy; address environment, outcomes and ability to effect change (e.g., going back to school)

Table 12.4 Recommended components of a biopsychosocial assessment

Biopsychosocial assessment	
(I)	Demographic/identifying information
(II)	Reason(s) for referral
(III)	Current symptoms/behaviors of concern (per referral source) <ul style="list-style-type: none"> • Review of cognitive functioning, the presence of suicidal ideation and/or thoughts of harming self or others, thoughts of becoming victimized by adults and/or other youth • Youth's description and beliefs about his/her presenting concerns (nature of symptoms and behaviors, intensity, severity and duration)
(IV)	Emotional/psychiatric history <ul style="list-style-type: none"> • Youth's account of his/her history of psychological/psychiatric disorders (including treatment) • Coping strategies • Prior outpatient and inpatient treatment • Prior residential treatment • Psychotropic medications (current and previous) • Family psychological/psychiatric history (nature of disorders and behaviors, intensity, severity and duration, extent to which psychopathology has impacted family functioning, history of treatment(s), and use of psychotropic medications) • Strengths • Concerns/needs/issues/services needed
(V)	Family history <ul style="list-style-type: none"> • Family of Origin (individuals present during youth's childhood, marital status of biological parents, description of family and home environment, special circumstances during childhood (i.e., emancipation)) • Current family (individuals living in current household, description of family dynamics) • History of domestic disturbances and abuse
(VI)	Medical history <ul style="list-style-type: none"> • Surgeries, traumas, accidents, broken bones, injuries, other physical issues or conditions, physical limitations, head or brain injuries • Current nonpsychotropic medications, vitamins and supplements • Nutritional development and noted deficiencies • Strengths • Concerns/needs/issues/services needed
(VII)	Substance use history <ul style="list-style-type: none"> • Youth's history of substance use/experimentation • Family substance use history • Strengths • Concerns/needs/issues/services needed
(VIII)	Developmental history <ul style="list-style-type: none"> • Physical development (chronological age, prenatal history, birth, developmental milestones, sensorimotor functioning, motor development) • Emotional development • Cognitive development • Social development • Strengths • Concerns/needs/issues/services needed
(IX)	Educational history <ul style="list-style-type: none"> • Last grade completed, last school attended, current grade in school • Educational performance (review of grades, school performance, results of standardized testing and benchmark assessments) • Behavioral history in school (history of office discipline referrals, nature of referrals, suspensions, expulsions, alternative school attendance, review of onset of behavioral concerns)

(continued)

Table 12.4 (continued)

Biopsychosocial assessment

	<ul style="list-style-type: none"> • History of special education services (including associated related services such as speech therapy, occupational therapy, counseling, psychological services) • Strengths • Concerns/needs/issues/services needed
(IX)	Legal history <ul style="list-style-type: none"> • History of arrests/current charges/pending charges • Probation/Parole information (if applicable) • Concerns/needs/issues/services needed
(X)	Personal history <ul style="list-style-type: none"> • Spiritual/religious affiliation • Cultural/ethnicity affiliation • Community involvement • Recreational involvement and preferences
(XI)	Mental status examination (described elsewhere in this chapter)
(XII)	Youth's strengths and areas of need/barriers to treatment
(XIII)	Summary of information, interpretation of findings, conclusions, and treatment and intervention recommendations

Reference: Excerpts from the McHenry County Mental Health Board, Crystal Lake, IL website, downloaded on February 22, 2010, from http://www.mc708.org/.../QualityManagement/Documents/Completing_the_Biopsychosocial_Assessment

and the results of formal testing may also be incorporated into the biopsychosocial report. Informal observational data are gathered throughout the assessment process. For example, observations are conducted during interview(s), mental status examinations (MSEs), formal testing (if such testing is warranted), and other components of the comprehensive assessment. Additional observational data are collected during formal observations using a structured protocol, and when observing for the presence/absence of specific behaviors. Such observations can provide excellent information regarding the relative frequency, duration, and latency of specified, targeted behaviors of interest. Nonetheless, all such data contribute to the overall, “big picture” and clinical presentation of a youth.

During interviews with youth, mental health professionals need to take into account his/her verbal skills, and in particular, verbal expression. Some youth have very limited vocabularies, expressive language deficits, and skewed perceptions of family dynamics. Clarification may be needed for both the interviewer and the youth regarding the questions being asked. It is often helpful to ask the youth to diagram (or assist

in diagramming) a family tree and significant individuals in his/her life. In later discussions with youth, this diagram can be helpful in referencing specific individuals, situations, and or living arrangements of the youth and serve to reduce miscommunications.

The relationships between the biopsychosocial assessment, clinical interviews, other interviews with youth, parents and caregivers, educators, and other relevant adults, and the MSE should be fluid and dynamic in nature. Some clinicians may choose to use the biopsychosocial assessment as the “anchor” of the comprehensive mental health evaluation, such that all other assessment components fit “into” this framework. This framework would hold results of direct observations, personality inventories, behavioral rating scales, functional behavioral assessments (FBAs) and any formal testing conducted. Other clinicians may choose to simply use the biopsychosocial assessment as an independent component of the comprehensive evaluation. Figure 12.2 depicts the use of the biopsychosocial assessment as the anchor of the entire mental health assessment. Figure 12.3 depicts the biopsychosocial as a component only of the entire mental health assessment process.

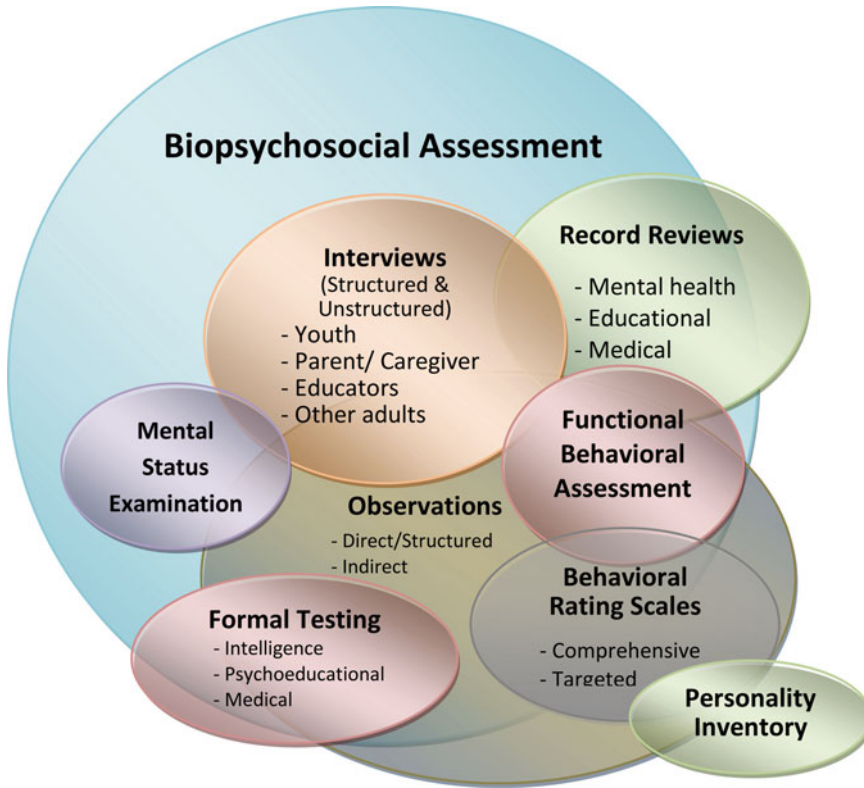


Fig. 12.2 Comprehensive mental health evaluation components anchored around the biopsychosocial assessment—model 1



Fig. 12.3 Comprehensive mental health evaluation using individual assessment components, including the biopsychosocial assessment—model 2

Components of Comprehensive Biopsychosocial Assessment in Juveniles

According to Ollendick and Hersen (1984), “the effects of developmental ability and developmental change are primary considerations in the selection of behavioral assessment procedures.” This may be particularly applicable to conducting assessments with adolescents and juveniles.

In this section, we will discuss the components of good mental health assessment with juveniles. Whereas much time may be devoted to describing the attributes of the many instruments available for use, this would be well beyond the scope of this chapter. Therefore, throughout the discussion of the components, examples of proposed methods, instruments, and measures will be provided and should not be considered to represent the range of instruments and options available.

Interviews

Many mental health professionals continue to rely on the clinical interview as the primary diagnostic tool (Dulcan 2010), yet it is also “one of the most underresearched areas of mental health assessment,” (McConaughy 2005). Among the variety of assessment components available, the interview, in conjunction with the MSE, are perhaps most predisposed to judgment, subjectivity, and unreliability. Without the support of more objective and empirically derived data, the practice of conferring diagnoses based solely on these methods is error prone and will more than likely lead to disagreement among treatment providers and perhaps even mis-diagnosis. Interviews are important, clinical tools in the mental health assessment process; however, should serve as components in the assessment process, not *the* assessment.

Interviews may be formal or informal, structured or unstructured. Interviews may be conducted with youth, caregivers, educators who work with the youth, social service personnel, individuals from probation and parole, and any other individuals who may provide reliable and relevant

information about the youth. Many evaluators and clinicians use interviews that have been developed in-house and for purposes that are specific to the assessments being conducted. These interviews are usually informally developed, administered, unstructured, and nonstandardized. The use of informal or unstructured interviews serve to complement other information gathered during the assessment process and facilitate the formulation of hypotheses about the youth’s functioning. By interviewing multiple informants, the perspectives of several individuals who have important information about the youth may be considered and can contribute to the “big picture” that is being built through the assessment process.

Structured (formal) and semistructured interviews. There are times during assessment when the administration of a more definitive measure can assist in formulating hypotheses about cases that are difficult, complex, and about youth who have volatile and unstable histories. Structured interviews such as the *Diagnostic Interview for Children and Adolescents-IV (DICA-IV)* (Reich et al. 1997) follow specified formats, such that questions must be asked in a certain order and stated as written. Structured and semistructured interviews are designed to address the challenges that are apparent in difficult cases or in situations where diagnosis is likely to be unreliable (Summerfelt and Antony 2004). In unstructured interviews, the clinician is solely responsible for the questions used, and in how a clinical impression and/or diagnosis is obtained. The structured and semistructured interviews address issues in a manner that is standardized in terms of content, format, and item order. It is because of the structure that the diagnostic formulation process becomes more reliable and consequently more accurate. *Considerations in choosing an interview to use with youth.* Before deciding to use a structured or semistructured interview, take care that the instrument is suited for use with the juvenile population and can address the issues at hand. Psychometric properties are a priority when choosing an instrument. To be of sufficient utility, structured interviews need to have adequate reliability and validity and also have broad diagnostic scope and depth (Summerfelt and Antony

2004). Sometimes, the ability for the interview instrument to assess a broad variety of disorders sacrifices the instrument's ability to assess the depth of information available about each disorder. Such "trade-offs" are not uncommon in using structured interviews (Summerfelt and Antony 2004). The level of structure in an instrument may directly improve its reliability; however, may also sacrifice the validity of the diagnosis (Summerfelt and Antony 2004). Other considerations when choosing a structured or semistructured interview include practical issues, such as, "How long does the interview take to administer?" and "What is the training level required to administer the interview?" The cost effectiveness of an interview may significantly decrease if it can only be administered by a licensed psychologist or psychiatrist.

Additional considerations when using interviews with youth pertain to the approach of the interviewer. Because youth involved in the justice system may have communication difficulties, sultry or defensive attitudes, interviewers may find that they need to work especially hard to establish a healthy and positive rapport with an adolescent. Interviewers also need to be adequately trained in the methods of objective interviewing so as not to turn the interview into an interrogation.

Mental Status Examinations

MSEs are similar to physical examinations used in the medical field (Ryan 1995) and may be blended into a complete clinical interview. They serve to assess a youth's current levels of mental functioning, awareness, and lucidity and are typically conducted during initial intake assessments (or assessments in which the youth is initially coming into contact with a system) and to obtain baseline information about a youth's mental state at that point in time. There are many varieties of MSEs ranging from those that are formal and rather structured, to those which are brief and consist of only a few questions. Most of the information needed to complete an MSE may be incorporated into a clinical interview and ultimately

the biopsychosocial assessment conducted with the youth. This clinical interview may take approximately an hour (Ryan 1995). Clinicians may choose to use only a segment or a few questions of an MSE during follow-up sessions or as "barometers" over the course treatment with a youth. MSEs generally explore the following aspects of functioning:

1. *Appearance, attitude, and behavior*—During this segment, the clinician observes the youth to collect information about hygiene, dress, grooming, posture, the appropriateness of the youth's behavior, facial expressions, attitude during the interview, motoric activity, and mannerisms.
2. *Speech*—Over the course of the interview, the manner in which a youth speaks and uses language is observed. Specifically, a clinician is interested in briefly assessing how spontaneously a youth engages in conversation, the fluency with which he/she speaks, prosody, articulation, the rate of speech, such as whether it is pressured or halting, and whether a youth perseverates or engages in echolalia.
3. *Affect and mood*—Affect refers to the "outward manifestation of mood" (Ryan 1995). Mood refers to the "pervasive emotion or feeling state which affects an individual's perception of the world" (Ryan 1995). During an interview, the congruency between affect and mood are observed by a clinician. For example, a youth may describe themselves as being in a "happy" mood, but present with a rather dull and depressed affect to the clinician.
4. *Thought processes*—As they engage in conversation during interview, a clinician will observe how a youth presents with respect to thinking. In other words, "How does this individual put thoughts together?" To obtain this information, a clinician may observe how well speech is produced, whether thoughts are coherent and sensible, whether the thoughts of a youth stream together well and how well a youth can present an idea. Does the youth jump around from one topic to another or does he/she stick to the topic at hand?
5. *Orientation to person, place, situation, and time*—This portion of an MSE provides an

indication as to whether a youth's senses are intact, and whether he/she is oriented to the here and now.

6. *Concentration, attention and memory*—To assess concentration, attention, and memory, the clinician may ask the youth to recall a series of numbers both forward and backward, count backwards by five, and recall objects or words after several minutes.
7. *Intelligence*—The assessment of intelligence during an MSE is an estimate of a youth's overall fund of general knowledge by the clinician based on his or her observations over the course of the interview. It is a very broad and subjective "guesstimate" of a youth's intellect and cognitive and should not be used for formulating diagnostic impressions of mental abilities.
8. *Judgment and insight*—Information about a youth's judgment and insight may be obtained throughout the interview. The clinician may ask the youth about decisions he/she has made and direct questions that will provide information about the awareness a youth has about his or her emotional state.

As with any of the components described here, the results of MSEs must be used in conjunction with other information gathered during assessment. Considerations must be given to culture, environment, and education level of the youth being interviewed. For example, for youth who are significantly behind academically, they may not be able to count backwards by specified numbers when asked to do memory-related exercises. Their clothing and hygiene may be poor due to environmental or living conditions. Specifically, a youth from a lower SES background may have only two pair of pants and may appear disheveled for those reasons and not those related to the presence of specific pathologies. The affect of a particular youth may not be congruent with mood because they are angry and defensive or may not even be able to accurately describe how they are feeling. Speech patterns may be odd because the youth has deficits in fluency and expressive language. Clinicians who work with children and adolescents may naturally offer considerations to

these aspects of a youth's functioning; however, individuals who have historically worked with adults may attribute these deviations to some form of pathology. In assessing a youth's intelligence, lack of opportunity may lead a youth to present with a rather limited fund of general knowledge. Therefore, it is important that questions are culturally relevant and simply stated when phrasing questions. Finally, and perhaps most importantly, patience is most needed when seeking information from youth who may present as being defensive or hostile. Time spent up front to build rapport with a youth is essential to establishing any trust between a youth and practitioner and will go a very long way to foster a trusting and therapeutic relationship. Practitioners working with juveniles may find themselves constantly having to "prove themselves" to youth in order to maintain communication that is reciprocal and qualitative.

Record Review

A thorough review of available records is essential for accurate case formulation and treatment. Throughout the assessment process, the mental health professional should be constructing the "big picture" of each youth. Historical information contributes to answering the assessment questions of duration and settings of symptoms and presenting behaviors. Although often difficult to obtain, a concerted effort should be made by the juvenile agency to obtain copies of any records of the youth.

Mental Health

Information about a youth's previous mental health treatment is highly desirable and most helpful in formulating plans to address the needs of youth. Information regarding psychiatric diagnoses, prior hospitalizations, the prescription of psychotropic medications, as well as the success of previous treatment regimes are highly relevant to the biopsychosocial assessment. Information about substance use and any prior treatment should also be included in requests for records and reports.

Educational

The educational records and histories of juveniles are sometimes communicated about in a manner that is separate from those pertaining to mental health and medical issues. In using a biopsychosocial approach, and perhaps we should refer to this model as a “biopsychosocial” approach, the needs of the entire youth are addressed in a manner that is seamless and overarching. Consideration of a youth’s academic abilities and performance should be given high priority among treatment concerns. After all, children and adolescents are supposed to spend most of their time in school! The manner in which the mental health assessments of youth are approached are perhaps most relevant to how well they will perform academically! Where is the student functioning academically? What are his best and worst subjects? Is he able to sustain attention throughout the school day? Are his symptoms associated with posttraumatic stress disorder (PTSD) interfering with his ability to pay attention in class? Does he have a history of being suspended or expelled from school? Does he receive special education services?

Up to 50% of juveniles have histories of receiving special education services. Although there has been some disagreement regarding the terminology that describes them, there is wide agreement in the field that youth with learning disabilities (LD) or specific learning disabilities (SLD), mild and/or moderate mental disabilities (MMD), and emotional disturbance (ED or EBD) (i.e., an emotional or behavioral disorder), are overrepresented in juvenile correctional facilities (Casey and Keilitz 1990; Meisel et al. 1998; Murphy 1986). Youth in the juvenile justice system are three to five times more likely to be eligible to receive special education services (Leone and Meisel 1997).

Because youth in the juvenile justice system are much more likely to have educational concerns, it is critical that attention be given to obtaining as much information as possible about academic histories and performance. The educational concerns of youth are often overshadowed by their social maladjustment, illegal behavior, and the need to keep troubled youth secured from society. What often tends to be overlooked is that

the behavioral concerns exhibited by many youth stem from the fact that they are behind academically or have significant academic deficits. The period of time in which they are in secure care can be used opportunistically to remediate skill deficits and to assist youth in making important academic gains, whether it is teaching them basic literacy skills, helping them to prepare for a General Education Diploma (GED) exam, or enrolling them in entry-level college courses.

Educational assessments of youth should be approached broadly and then progress to more specific assessment as needed. The use of formal measures is not always necessary up front and agencies should be cognizant of using screenings that capture pure academic skills of youth. Upon entry into the juvenile justice system, record review should provide some indication as to the grade level on which a youth is functioning. Does he or she have grade retentions and what is the last grade he or she completed successfully? For youth who are markedly behind their respective grade levels (i.e., greater than 2–3 years behind), it is essential to know how fluent they are in reading, writing, and performing basic math calculations. For youth in secure care, the mean reading level has been estimated to be equivalent to the fifth grade. Therefore, when assessing very basic academic skills, the use of curriculum-based measurement (CBM) may be helpful in obtaining information as to the grade level on which a youth is performing.

Originally developed in the 1980s by Deno and Mirkin and associates, Fuchs and Fuchs, and Mark Shinn, CBM offers efficient, standardized methods to assess fluency across the basic skills of reading, writing, and mathematics (Deno 1985, 1992; Fuchs et al. 1984; Shinn 1989). Measures used for CBM are reliable and valid and offer systematic, yet highly sensitive methods of assessing student progress across the course of an academic year (Stecker 2010). CBM is used in several ways. Typically, measures for CBM benchmarking are administered three to four times per year to obtain indices of student progress and are representative of skills that students should have mastered across the span of the school year. CBM probes may then be administered weekly or even

more frequently in accordance with intervention plans developed to address specific skill deficits. Thus, CBM is excellent for identifying fluency-based academic skills in need of remediation or intervention. For these reasons and because measures used for CBM are highly sensitive to changes in student performance, they can assist in pinpointing student skill deficits and the grade level on which students are performing in the three critical subject areas. Sets of passages commonly used to conduct CBM of reading are those published by the Center on Teaching and Learning at the University of Oregon (i.e., dynamic indicators of basic early literacy skills (DIBELS)) and PsychCorp (AIMSweb).

Keep in mind that CBM is most appropriate for youth who are functioning on elementary and early middle school levels. For youth who are higher functioning and for whom basic fluency is not a concern, more sophisticated and comprehensive measures of academic functioning may be administered (i.e., standardized tests). Agencies should work closely with school systems, the education departments in each state, and universities offering expertise in this area to determine what is most feasible for their organization. For more information, readers are encouraged to visit the website of the National Association of School Psychologists (NASP).

Medical

It is critical to the well-being of the youth in the justice system, that accurate information be obtained about their medical histories. Again, as part of the “big picture,” professionals treating the youth in their care need to know whether they have medical conditions (e.g., asthma, an STD, HIV), previous injuries (e.g., orthopaedic, a closed or traumatic head injury), and/or any known allergies to foods and materials, and so forth.

Observations

Any behaviors that are directly observable can be systematically recorded and measured (Witt et al. 1994). While many assessment instruments seek to assess constructs and traits that are

perhaps not directly observable (e.g., formal intelligence batteries), assessments that are observation based are those based solely on what the examiner or observer can observe. Observations can be either direct or indirect in nature and may occur in the context of other assessments, such as MSEs, formal testing, or interviews. They can also be conducted to capture the behavior of a specific individual, several individuals, or groups of individuals.

Indirect Observations

Indirect observations are those which capture behaviors of interest in a second-hand manner. That is, observational data may be collected from individuals who witnessed the behavior(s) of interest, have indicated it through behavioral rating scales, or data may be collected from records which reflect that the behavior occurred some time ago (i.e., via an historical reflection of the behavioral occurrence). These methods are indirect because the data are not collected directly by an observer and the occurrence of behavior relies on the informational quality of other reporters.

Direct Observations

Direct observations are those which occur in the here and now and are conducted in the place and time during which the behavior is recorded. Direct observations may be formal or informal. Informal direct observations are those which are conducted by the examiner or practitioner and may be conducted in various contexts. For example, throughout the interview process, the examiner or interviewer should record his or her anecdotal behavioral observations of the interviewee's behavior during the interview. Observational data should include the noting of the youth's body position, eye contact and engagement, the youth's demeanor and overall behavioral presentation, willingness to engage in conversation, his/her attitude toward the examiner, and so forth. There are many, many aspects of behavioral functioning that may be recorded during interviews and other assessment components such as the mental status exam, and most practitioners have protocols for recording the most important behaviors of interest. Other informal but direct

observations may be conducted casually and naturalistically. For example, a practitioner may observe a youth during transitions between activities, to obtain information about social interactions during meals, and activity during recreational activities.

In more formalized direct observations, the observer captures data on a first-hand basis and records only behaviors that meet operationally defined standards that are determined a priori. During formal (or structured) observations, the observer predetermines which behaviors will be targeted for observation, and those behaviors are typically defined in an *operational* manner. *Operational definitions* of behavior refer to descriptions of specific behaviors (e.g., noncompliance) that are clear, unambiguous, and explicit (Witt et al. 1994). By operationally defining a behavior, the possibility of erroneously capturing the behavior is greatly decreased, and the reliability of the data gathered increases such that if more than one individual were asked to observe the behavior, there would be high agreement among them as to what the behavior would look like (i.e., high interrater agreement and reliability). According to Kazdin (1984), operational definitions of behavior should be “clear, objective, and complete. Observers should be able to read the definition of behavior and use it to record behavior.”

Why are formal direct observations helpful? They assist in quantifying the instances and occurrences of the behaviors of concern. Formal, direct, and structured observations can capture various types of information about behavior such as *frequency*, *duration*, and *latency*, as well as the *intensity* of specified behaviors and they can provide quantifiable information to the practitioner about behavioral severity. In doing so, the ability to determine baselines of behavior improves dramatically, as does the ability to determine whether associated interventions have been effective.

In using observational-based assessment, there are various types of recording methods. The type of recording method used depends on the dimension of the behavior of interest. Table 12.5 provides an overview of observational recording methods.

Behavioral Rating Scales

Behavioral rating scales have become widely used as components of comprehensive assessments. They are considered to provide both social validity (Kazdin 1977), and face validity (Jensen and Haynes 1986), and can be cost-efficient to use since little training is required for those who complete them. There are limited time commitments involved on the part of mental health professionals who oversee their administration (Kalfus 1995). Behavioral rating scales and inventories are the “most common methods for quantifying teacher and parent judgments” (Witt et al. 1994), with a popular advantage being that they are scored in an objective manner.

Responses on behavioral rating scales can be as simplistic as circling “yes” or “no,” or as broad as those on a 7-point Likert-type scale which allows respondents to identify the “degree” to which a behavior or symptom is present.

Many of the commercial behavioral rating scales offer parallel versions of the same instrument in order to obtain ratings from multiple informants. For example, a number of rating scales are published with self-report (or youth versions), parent/caregiver, and teacher/educator forms available. However, in scoring and interpreting the results of these instruments, the potential for rater biases, the underreporting or overreporting of behaviors and symptoms of informants and the presence of response biases need to be considered carefully.

Behavioral rating scales have advanced tremendously over the past two decades. Aggressive research and product development have facilitated the development of a vast array of instruments that assess many types of disorders and sets of behaviors in the mental health field. Some, of course, are better developed than others. Astute practitioners should investigate the product development behind each instrument and ensure that the psychometric properties such as the reliability and validity are stable and strong. In using a specific behavioral rating scale, it is important that the normative sample from which the instrument was developed includes members of the population for which it is intended. An additional and

Table 12.5 Observationally based recording methods

Recording method	Description and types of data	Behavior(s) recorded	Example
Event-based	Frequency of behavior; number of times a behavior occurs during a specific period of time	Behaviors with discrete beginnings and ends	Number of times a youth hits another, spits, interrupts others; number of positive comments to peers; instances of noncompliance; number of times a youth cries over a period of time (e.g., day); frequency of auditory hallucinations
Interval-based: Behaviors are sampled across a specified period of time (observation period is divided into intervals (i.e., 10- or 15-s intervals over a 10-min period)). Types of interval-based recording:	Behaviors that occur and do not occur during a specific period of time	Continuous behaviors	Out-of-seat behavior; on-task behavior; sleeping
(A) Partial-interval recording	Behavior is recorded if it occurs at any time during the specified time interval	Frequently occurring behaviors (may underestimate behavioral frequency)	Hand raising; on- and off-task behavior; taking sips of a drink; throwing objects
(B) Whole-interval recording	Behavior is recorded if it occurs during the entire observation interval	Frequently occurring behaviors (may overestimate behavioral frequency)	On- and off-task behavior; sleeping; out-of-seat behavior; talking during class
(C) Time sampling	Behavior is recorded if it occurs at either the beginning or the end of an observation interval	Frequently occurring behaviors (can be inaccurate for behaviors of short duration)	On- and off-task behavior; sleeping; out-of-seat behavior; talking during class
(D) Sequential time sampling	Same as time sampling, except more than one youth is observed. Youth are observed sequentially (i.e., one right after the other)	Frequently occurring behaviors (can be used to compare rates of behavior for different youth) (can be inaccurate and underestimate high frequency behaviors)	Same as above
Time-based	Use temporal aspects of behavior to capture data: duration, latency, interresponse times (measurement of importance is the time, not the occurrence of the behavior). Measurement involves how long a behavior lasts, the time between behavioral events	Behaviors in which the periods of time involved are more important than the behaviors themselves	Duration: Time of engagement in an activity; length of a tantrum; length of time sleeping Latency: Time between request and compliance by youth; time between question and response by youth
Permanent product(s)	Measurement of actual by-products of behavior. Typically involve the results of other behaviors	Written work; vandalized property; pictures and drawings; unkempt personal belongings, room, dormitory, classroom	Number of correct answers or responses; number of square feet on a wall that was defaced by graffiti; drawings depicting violence or negative themes

Witt, J. C., Elliott, S. N., Kramer, J. J., & Gresham, F. M. (1994). *Assessment of Children: Fundamental Methods and Practices*. Madison, WI: WCB Brown & Benchmark.

important consideration pertains to the readability level of each scale, as well as the age range for which the instrument was designed. For youth who have limited reading fluency and comprehension skills, it can be daunting for them to be handed a booklet containing over 200 items. In these cases, the recommendation is to read items to youth or find another, shorter and easier to read measure that can capture the behaviors of interest. Most rating scales may be administered either individually or in group format.

Behavioral rating scales can assess many types of behaviors. A scale may be constructed to assess broad sets of behaviors, symptoms and/or skills, or a scale may be constructed to assess a specific set of symptoms or behaviors to assist with targeted assessment.

Comprehensive/Multidimensional Rating Scales

Comprehensive and/or multidimensional rating scales are those which assess a variety of areas, issues or concerns, including the presence of symptoms associated with various childhood disorders, social skills, the susceptibility to certain pathologies, adaptive behavior skills, and so forth. They are typically complexly structured but may be used across a wide variety of settings, including schools, clinics, and forensic facilities. Some of the most well-developed and most commonly used comprehensive scales are the *Behavior Assessment System for Children-Second Edition (BASC-2)* (Reynolds and Kamphaus 2004), the *Achenbach System of Empirically Based Assessment (ASEBA)* (Achenbach et al. 2003) and the *Connors Comprehensive Behavior Rating Scales (Connors CBRS)* (Connors 2008). For most instruments, computer programs are available to assist with scoring and interpretation.

Targeted/Unidimensional Rating Scales

Targeted and/or unidimensional rating scales are those which assess a specific set of skills or symptoms. For example, when results of screen-

ings and comprehensive rating scales lead a clinician to believe that a youth may have an anxiety disorder, a targeted rating scale like the *Revised Manifest Anxiety Scale (RC-MAS)* (Reynolds and Richmond 1985) or the *Multidimensional Anxiety Scale for Children (MASC)* (March 1997) may be used to collect additional data regarding the youth's symptom presentation. Targeted scales have been developed to address many types of disorders and concerns. For example, there are rating scales to assess social skills in children and adolescents such as the *Social Skills Improvement System (SSIS)* (Gresham and Elliott 2008), eating disorders, and the presence of symptoms associated with trauma and traumatic stress, the *Trauma Symptom Checklist for Children (TSCC)* (Briere 1996). Targeted rating scales developed to assess the presence of symptoms associated with depression in children and adolescents include the *Reynolds Adolescent Depression Scale-Second Edition (RADS-2)* (Reynolds 2002), the *Children's Depression Inventory (CDI)* (Kovacs 2003), and the *Multiscore Depression Inventory for Children (MDI-C)* (Berndt and Kaiser 1996). Each of these instruments may provide clinicians with more specific, additional information about areas of concern. Although most involve self-report, some targeted rating scales also offer parallel forms just as comprehensive and multidimensional measures do to obtain information across informants.

Substance use is often explored through the administration of targeted rating scales. For example, the *Substance Abuse Subtle Screening Inventory, Third Edition (SASSI-3)* (Miller et al. 1997), was designed to identify individuals who have a high probability of exhibiting a substance dependence disorder. Although reported to be fairly methodologically sound, criticisms of the *SASSI-3* include the use of inconsistent terminology when referring to substance-related issues and its limited clinical utility.

Personality Inventories

Personality inventories often accompany clinical interviews in assisting clinicians with the diagnosis

of personality disorders. However, personality disorders are not nearly as commonly assessed among youth because the onset of personality disorders does not typically occur until early adulthood. The *Minnesota Multiphasic Personality Inventory for Adolescents*, the *MMPI-A*, (Butcher et al. 1992), is perhaps the most renowned instrument for assessing personality in adolescents and does so by providing 68 scores over four sets of scales: validity scales, basic clinical scales, content scales, and supplementary scales. The adolescent version of the adult *MMPI-2* is one of only a few comprehensive measures available to assess personality and syndromal clusters of personality dynamics in adolescents. Other personality assessment instruments for adolescents include the *Millon Adolescent Personality Inventory (MAPI)* (Millon et al. 1993b), the *Millon Adolescent Clinical Inventory (MACI)* (Millon et al. 1993a), and the *Personality Assessment Inventory-Adolescent (PAI-A)* (Morey 2007). The *Adolescent Psychopathology Scale (APS)* (Reynolds 2004) may also be helpful as it includes five scales which assess personality disorders and also assesses other domains.

Formal Testing/Diagnostic Batteries

After screenings and preliminary assessment results lead to the formulation that a youth may have a significant deficit in cognitive functioning, academic skills, or possibly a neuropsychological area such as executive functioning, more in-depth assessment may be conducted using formalized batteries. Formal testing and diagnostic batteries require highly trained professionals to administer, score, and interpret them. These individuals are usually psychologists, neuropsychologists or psychiatrists, or individuals with adequate graduate coursework who can work under the supervision of a licensed psychologist. Formal batteries and diagnostic instruments are administered in a standardized manner, which requires that the examiner administer the test the same way to every individual to whom it is administered. Administration manuals accompany formal tests and practice is usually required

for an examiner to become proficient in administration of each battery. Within administration guidelines, there are strict parameters as to whether a testing session can be interrupted and there may be subtests which are timed or administered with time restrictions. The scoring of formal tests are adhered to normative samples. After they are converted, raw scores may be reported in a variety of formats such as percentiles, stanines, standard scores, and percentile ranks and results may be described as belonging to a range of functioning (e.g., “borderline intelligence,” “mild mental impairment”).

Intelligence

There are a number of well-developed comprehensive batteries which assess intelligence in children and adolescents. The *Stanford-Binet Intelligence Scales-Fifth Edition (SB-5)* (Roid 2003), and the *Wechsler Intelligence Scale for Children-Fourth Edition (WISC-IV)* (Wechsler 2003) are two of the oldest and most widely used instruments used in the industry today. Both instruments have a rich history of development and evolution over the years, have been extensively researched and both are considered gold standards in the mental health field. The *SB-5* and the *WISC-IV* measure multiple dimensions of intelligence, including verbal and nonverbal reasoning, as well as visuo-spatial and perceptual skills and short term memory capacity.

Results of intelligence tests (i.e., IQ scores), are considered to be highly sensitive pieces of information and should be kept confidential. Results of intelligence tests have the potential for scores to be misused, misinterpreted, and misunderstood by individuals who are untrained in their interpretation. There are some situations in which actual IQ scores are released; however, it is typically much more acceptable to report the ranges in which IQ scores fall rather than the actual score(s). For example, instead of reporting a full scale IQ score of 73, an appropriate report would reflect “range of functioning: borderline” or “...the full scale IQ score is within the Borderline range.”

There are shorter versions of the lengthier and more comprehensive intelligence tests, which may be used if in-depth information about an

individual's cognitive functioning is not needed. For example, the *Wechsler Abbreviated Scale of Intelligence (WASI)* (Wechsler 1999) and the *Kaufman Brief Intelligence Test, Second Edition (K-BIT-2)* (Kaufman and Kaufman 2004c) are abbreviated versions of the comprehensive intelligence tests (the *WISC-IV* (Wechsler 2003), and the *Kaufman Assessment Battery for Children, Second Edition (KABC-II)* (Kaufman and Kaufman 2004b), respectively, in that provide broader estimates of cognitive functioning than the comprehensive measures. These abbreviated measures are sufficient if a clinician is simply interested in obtaining an estimate of a youth's level of intelligence and if the purpose of the assessment is to simply rule out whether the youth may be at-risk for a mental disability.

Neuropsychological

The prevalence of youth involved in the juvenile justice system who present with neuropsychological disorders is not really known at this time. Due to the nature of the difficulties of youth in the justice system, specialized instruments are often helpful during assessment. For example, for youth with histories of severe substance use, it is not uncommon for a youth to have associated difficulties with memory, attention, and concentration, among other issues. Assessment using a neuropsychological instrument that targets the assessment of memory function may assist in providing information regarding the presence of any deficits from the substance use. There are also a number of instruments developed to assist with the assessment of executive functioning, an area in the brain often impaired after traumatic brain injuries, and also associated with symptoms associated with ADHD and other impulse-related disorders. One such instrument is the *Behavior Rating Inventory of Executive Function (BRIEF)* (Gioia et al. 2000), a rating scale that includes self-report, caregiver/parent and educator forms of the measure. Neuropsychological assessment can consist of paper and pencil measures, the use of rating scales, and the completion of computerized vigilance tasks, which assess attention to task, attention to detail, response time and impulsivity.

Psychoeducational

Due to the close relationships between mental health disorders and learning difficulties, comprehensive assessments of youth may include the administration of a psychoeducational battery that provides indices of academic levels of functioning. For example, the *Wechsler Individual Achievement Test (WIAT)* (Wechsler 2009) the *Kaufman Test of Educational Achievement, Second Edition (KTEA-II)* (Kaufman and Kaufman 2004a) and the *Woodcock-Johnson Psychoeducational Achievement Battery-Third Edition (WJR-3)* (Woodcock et al. 2001) assess a broad range of academic skills and can assist in ruling out or confirming specific diagnoses.

Academic Data

Although sometimes overlooked in mental health assessments, educational performance and academic-related data are rich in information regarding the performance and abilities of youth. In conducting mental health assessments, practitioners should consider the following: How well has the youth been performing in school? Is the youth 2 or more years behind peers in grade placement and/or academic functioning? Is the youth in the correct grade, but struggling with academic materials? Are the issues related to mental health impeding and/or interfering with his/her academic success and progress? How long have academic areas been impacted? Are there subject areas in which the youth has more difficulty?

Functional Behavioral Assessment

FBA's are not included in most traditional mental health assessments. Rather, they are typically thought of as methods used to assess problematic behavior in schools. When more formally (and stringently) used, functional behavioral analyses are used to assess the functions of aberrant behaviors in low functioning individuals and in children with pervasive developmental disorders (PDD) such as Autism and Asperger's Syndrome. Functional assessments and analyses

are typically conducted within the school, hospital, or residential settings. In 2004, the Individuals with Disabilities Act (IDEA), provided that FBAs be included as a component in the assessment of problematic behavior that occurs in school settings and in particular, among students with disabilities (Riffel 2005). Whereas the notion of determining the function of a specific behavior is noteworthy, the ultimate goal of utilizing FBAs was to ensure that an intervention plan would accompany each assessment and that the plan was highly relevant to the behaviors of interest. Thus, FBAs make a substantial contribution to the data needed to develop a function-based intervention plan.

Because FBAs target problematic behaviors and determine the underlying “functions” or reasons that such behaviors occur, it simply makes sense to use FBAs with youth who exhibit some of the most problematic behavior that practitioners and service providers have to address in any setting. Through the use of direct observation, record reviews, interviews, the completion of rating scales, and the manipulation of the variables thought to be associated with the behaviors of interest, an FBA leads to a description of the functions that a youth’s behavior serves (e.g., avoiding the completion of academic tasks, the use of profanity, fighting, the use of self-mutilation, basic noncompliance) (Clark 2006; Frey et al. 2010; Riffel 2005; Sugai et al. 1999). Data from FBAs lead practitioners to the development of hypotheses about why specific behaviors occur and should also lead to the development of skill competencies related to the targeted behavior (Baer et al. 1968; Shriver et al. 2001). For example, if a youth is involved in an altercation involving physical aggression, the intervention based on data from the FBA should not only reduce the frequency of physical aggression, but also build positive and acceptable replacement behaviors so that the youth learns to better handle strong emotions and social conflicts. Aberrant behaviors typically occur for the following reasons: to avoid a person, situation (or task), or setting; to obtain attention from someone, to obtain access to something, someone, or something to eat, and to provide self-stimulation (Broussard and Northup 1995, 1997; Durand and Crimmins 1988).

Comprehensive mental health assessments should incorporate the use of data derived from functionally related behavioral assessments as part of good practice and to develop effective, data-driven intervention plans.

Projective Techniques

Projective measures, such as the Rorschach inkblot test or Thematic Apperception Test (TAT), are traditionally rooted in psychoanalytic psychology and were developed to essentially tap into the hidden emotions and internal conflict within each individual (Cramer 2004; Exner 1995; Soley and Smith 2008). Projective approaches are supposed to access an individual’s subconscious and reveal aspects of the personality that have been repressed (Soley and Smith 2008). Although there have been attempts to standardize and develop elaborate scoring systems for many projectives, they are inherently subjective in administration, scoring, and interpretation and offer little substance to a comprehensive evaluation of youth. The psychometrics of projectives such as reliability and validity, are weak at best, and are considered to be poor indicators of overall functioning. Though many empirical studies have been conducted using projectives, little scientific evidence exists to support their use. Additionally, they were originally developed for use with higher functioning adults and are not appropriate for use with children and adolescents, whose personalities are still developing and evolving. Whereas some projective approaches, such as the use of children’s drawings, can be helpful in the therapeutic venue (e.g., art therapy), information derived from such sources should never be used in isolation to make important decisions about youth or to diagnose.

Overassessment

Since there are many components available for use with assessment, mental health professionals can easily be overwhelmed with choices, the availability of instruments and methods to be used. This can, unfortunately, lead to “overassessment”

of the youth with whom they work. Not every youth needs to be assessed using all components as presented here. Good practice dictates that we use what is needed to answer the questions posed by the referring source. It is easy to get bogged down in the notion that “more is better.” However, at some point during every assessment, enough data become available to make informed decisions. It is at this point that the assessment should be complete at that point in time. If additional questions arise at a later date, addendums may be added and further, targeted assessment may be conducted.

Lessons Learned

Many individuals can be trained to conduct assessments. However, it is in the interpretation of the results and the manner in which data are synthesized that take true skill, experience, and analytical sleuthing. With skill, mental health professionals can maximize the utility of any assessment component and not over- or under-rely on any one contributor to the assessment. Rather, a skilled practitioner will be able to consider the contribution that each assessment component can make to the overall picture being developed of the youth being assessed.

Lessons regarding the mental health assessment of youth in the justice system may be learned from special education law and the guiding principles of assessment outlined by IDEA. Assessments conducted for special education require specific components and criteria to be met in order for a child or adolescent to qualify to receive services. It is certainly not the goal of this writer to advertise special education evaluations or to serve as a proponent for special education evaluations. However, an examination of how these evaluations are conducted may be helpful in understanding how to approach assessment with the juvenile justice population.

For practitioners in the field, mental health assessment should be a dynamic, ongoing process. Consideration should be given to the timing and sensitive nature of the information obtained from each assessment component and all aspects

of a youth’s functioning should be regarded when formulating the “big picture.” The utilization of multiple-method and multidisciplinary assessment approaches will be most comprehensive and lead to the most thorough results. In turn, these results have the greatest likelihood of leading to the most seamless and streamlined delivery of services available for the youth that we serve.

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Introduction

The term “court clinics” is as ill defined as it is ubiquitous in contemporary forensic psychological practice. A clinic, in a medical context is, “An institution, building, or part of a building where ambulatory patients are cared for” (Stedman 2000, pp. 362). Elsewhere, it is defined in similar terms as a facility or “a medical establishment run cooperatively by several specialists sharing the same facilities” (Houghton Mifflin and Co 1997). A true understanding of the term “clinic” is further complicated by the addition of myriad qualifiers (e.g., legal clinic, children’s clinic, and juvenile law clinic). A juvenile court clinic may have psychological services as a major function of its core mission including service provision and evaluation (MAJCC 2010) or a court clinic may have little or nothing to do with psychology as is the case in a number of legal clinics which provide assistance to attorneys or law students related directly to the practice of law, focus on representation and education around the legal rights of young people (Georgetown University Law Center 2010).

A variety of roles can be defined for the forensic practitioner. These may include child custody evaluations, determinations of disability a variety of civil court functions defined state by state,

assistance in jury selection or trial consultation, determination of civil competence, or other matters. However, for the purpose of this chapter, we are speaking solely about juvenile court functions. For our purposes, the term juvenile court clinic in this chapter focuses specifically on the provision of psychological services to children and youth in the juvenile justice system for both forensic and treatment purposes, the latter specific to the disposition of a legal case.

Mental health practitioners frequently consider a court clinic to be a bridge between the mental health field and the juvenile court since each has its own priorities, training, and language (Kahn 2007). Court clinics function and exist in adult service as well as juvenile services. Recent emphasis and funding of mental health courts have become something of an extension of this concept with varying reports of success. These mental health courts are similar in nature to juvenile court clinics in that there is assumed to be some basic structured model though many lack access to new resources or creative alternatives (Steadman et al. 2001).

These innovations support the assertion that juvenile court and mental health tend to go hand in hand. In this chapter, we look at the history of the juvenile court, the trend towards greater reliance by the court on psychology and social science, legal bases for this reliance, and the development of court clinics as well as the standards or lack thereof in juvenile clinical court practice. Finally, we address some of the future needs of the emerging field of court clinics, necessary standardization of its elements, and direction of practice.

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A Brief History of Juvenile Court for Delinquents

Juvenile justice is heavily influenced by social norms which are constantly changing. For example, in Renaissance Europe a case of breaking and entering along with the theft of wine by some young people in a southern German town in 1526 resulted in a label of engaging in a nocturnal disturbance. No punishment was given. Today, however, this activity would have surely brought the attention of the law and/or the mental health community but then was seen as youthful exuberance (Schindler 1997). Thus, there is evidence that youthful indiscretions could be considered a different issue than adult offenses even in the sixteenth century.

Changes in justice functioning occurred slowly. By the mid-eighteenth century British lawyer William Blackstone described the concept that some individuals were not capable of committing a crime and introduced the line between infant (roughly below age seven) and adult (greater than age 14) with a broad gray zone in between these years. Although Blackstone illustrated a dilemma which exists even today, he sowed the seed for differential handling of juveniles and adults as far back as 1760 (American Bar Association 2007). In Britain, the mid-nineteenth century saw the legal introduction of the concept of young people through the passage of the Youthful Offenders Acts of 1854, 1857, 1861, and 1867 at roughly the same time worries about child labor and child homelessness began to be of interest (Bradley 2008). Also at this time, reformers in the USA spoke sincerely of opportunities for rehabilitation. The result was a decrease in executions, however the lack of an effective classification system for prisoners meant that many offenders, young and old were required to share space. By 1899 reform movements resulted in the passage of the *Illinois Juvenile Court Act*. This Act involved procedural changes in handling of juvenile cases which until that time did not differ greatly from adult proceedings with the exception of recognition of the concept of infancy. Ultimately the Act created procedural change in that juvenile court judges began to require an inquiry into the character of

the child such that a determination of fitness for rehabilitation could be made. Also in 1899 the Denver Juvenile court established a model that was instrumental in the passage of reform acts in that state. The result was that children in court were considered basically good individuals gone astray due to social or psychological circumstances (Fox 1996).

However, prior to the establishment of juvenile courts, social concerns with the poor prompted the development of institutional care for children by 1825 when the Society for the Reform of Juvenile Delinquents established its first house of refuge (Steinberg and Schwartz 2000). With these changes the juvenile court began in earnest and worked in an informal way in many jurisdictions until watershed cases such as *Kent v. US*¹ and *In re Gault* 1967² extended strong due process protection to juveniles and resulted in a more adversarial court system.

Although adult and juvenile systems were not separated until 1899, there was an inherent assumption in the system that immaturity might mitigate responsibility for a criminal act where “infancy” was an absolute defense against responsibility, usually age 7–10 depending on jurisdiction (Melton et al. 2008). After the development of the juvenile court, the ideal of rehabilitation was the norm in these courts, whereas prior to this justice was retributive. Because of the strong rehabilitative nature of the courts, there was little attention to due process needs until *Kent v. US* in 1966 and *In re Gault* 1 year later.

Court Clinics, Roles, and Definitions

Melton and colleagues (2008) describe three primary functions of the mental health clinician in juvenile court. These functions are to answer

¹In *Kent v. US*, the Court ruled that a juvenile defendant is entitled to due process protections accorded to all citizens.

²In the *Gault* case, the Court rejected the doctrine of *parens patriae* as a founding principle of juvenile justice and ruled that the handling of Gault’s case violated the due process clause of the 14th amendment.

Table 13.1 Functions of the juvenile court clinician

Juvenile Court Clinician (Melton et al. 2008)	Juvenile Court Clinician (Grisso 1998)
Answer forensic questions raised by the court	Translate the legal standard into standards with relevance to legal community and mental health
Evaluate a child's amenability to treatment or rehabilitation	Evaluate the defendant regarding those constructs
Consult with attorneys on issues related to young clients, assist in preparing juveniles for court appearances, or to offer expert testimony	Communicate the results of evaluation in order for the court to apply the legal standard

forensic questions raised by the court, to evaluate a child defendant's amenability to rehabilitation or amenability to treatment, and finally to consult. Grisso (1998) describes the clinician's role also as threefold, although he put forward different functions. First, translating the legal standard into constructs with relevance for the legal community as well as mental health; evaluating the defendant with regard to those constructs; and communicating the results of this evaluation to the court in such a way that they can be applied in addressing the legal standard. See Table 13.1 for a breakdown of functions.

There is limited definition to the term juvenile court clinic as we use it here, but it is best described by Grisso who states that "A *court clinic service* is any individual or group of practitioners responsible for meeting the daily evaluation needs of a juvenile court" (Grisso 1998, p. 25). Alternately, services may be provided through case by case contractual arrangements where professionals provide evaluation for the courts as the need arises (Grisso 1998).

Integrating Mental Health Evaluative Services into Juvenile Courts: The Argument for Integration

Not everyone believes that mental health belongs in the courts. Theorists have suggested

...that problems in living experienced and expressed in terms of so-called psychiatric symptoms are basically similar to bodily diseases. Moreover, the concept of mental illness also undermines the principle of personal responsibility, the ground on which all free political institutions

rest...For a society, it precludes regarding individuals as responsible persons and invites, instead, treating them as irresponsible patients. (Szasz 1974, p. 262).

Szasz claims suggest that the entire concept of mental illness breeds dependency and presumably nullifies concepts of free will. This is especially meaningful to the legal system and while Szasz' opinion is strong it is not without detractors as well as supporters. Morse (2007) argues that there is no problem of free will in forensic psychology and psychiatry since free will is not a basis of any legal doctrine and therefore should not be addressed by forensic psychologists and psychiatrists. In addressing programs managed by the judiciary, Zarella and Bishop (2003) argued that adopting programs and services not related to core functions of the judiciary places the judiciary at risk of violating the doctrine of the separation of powers and might indeed jeopardize judicial independence particularly if there should it be perceived that a judge has a stake in outcome.

It seems that the driving factor behind the integration of mental health and court functions is the relationship between occurrence of symptoms found in the court referred population as described above, as well as the belief that difficulties or failing in the ability to access care in the mental health system leads to displacement into the criminal justice system (Kutcher and McDougall 2009). Similarities among the correlates of adolescent inpatients and juvenile justice are noted by Sanislow et al. (2003) who described correlates of suicide risk among psychiatric inpatients and juvenile detainees. Similarly, Cropsey et al. (2008) reported factors such as gender, sexual activity, parental involvement in the legal system, substance use, a disruptive behavior

disorder in childhood, and a history of aggression as correlates. In their sample of 636 medical files, they report 43.6% as having a history of juvenile justice involvement. Meanwhile community-based care, which is delivered across child-serving agencies, has been reported to decrease juvenile justice system involvement in certain communities where this was tried (Foster et al. 2004).

Shanok and Lewis (1977) found no difference between juvenile court and child guidance clinic cohorts on the prevalence of psychiatric symptoms. Serious concerns including suicide have been identified in juvenile court populations (Battle et al. 1993). Serious psychiatric diagnoses were found in a population of Flemish young people adjudicated by the Belgian juvenile courts (Vermeiren et al. 2000). In this study, internalizing and externalizing problems among juvenile court youth were consistent with reports among clinical groups and ADHD, depression, substance abuse, and PTSD were commonly found, as was conduct disorder, but only in about one-half of subjects (Vermeiren et al. 2000). A Dutch study completed at roughly the same time noted that 65% of young people before the juvenile court had a psychiatric disorder, while less than one-half received orders for a forensic evaluation. This finding prompted the authors to recommend diagnostic examinations for all juveniles 12–14 years, violent offenders, sexual offenders, substance abusing juveniles, those with family history of psychiatric problems, criminal contact, or violence (Doreleijers et al. 2000). Applying the European estimates to US courts indicates an incredibly large number of children who might potentially be serviced by juvenile court clinics. In 2005, juvenile courts handled nearly 1.7 million delinquency cases (Puzzanchera and Sickmund 2008). However, in the late 1980s, it was suggested that in the USA, children were referred for court clinic evaluation more often based on probation impressions of dysfunction rather than other clinical factors (Barnum et al. 1989).

Certainly requirements of evaluation in a pre-adjudicatory setting create significant conflicts with fifth amendment rights guaranteed to youngsters in juvenile court under *Gault*, as well as issues outlined in the Ethical Principles of

Psychologists [General Principle A: Beneficence and Nonmaleficence (American Psychological Association 2002)] and raises issues regarding the right to refuse treatment (*Washington v. Harper* 1990³), especially if the outcome is incarceration. Perhaps more significantly, certain forensic questions such as waiver to adult court must be done prior to adjudication and creates a distinct legal dilemma for the individual (Barnum 1990).

A further significant question is if the court clinics or court evaluations work and under what circumstances. Although rehabilitation remains the ideal goal of the juvenile court, Cauffman and colleagues (2007) identified legal factors (e.g., number of prior referrals, violent nature of a charge) to be likely to impact disposition.

This reported success in system integration is contrasted with problems inherent in contact with the juvenile justice system (Bonham 2006). This latter point is cogently made by Gatti et al. (2009), suggesting that the juvenile justice system can do a great deal of harm to the individual. It is potentially problematic since it targets youth who are poorest, disinhibited, and most poorly supervised. They note that the negative impact of the juvenile justice system increases as intensity and system involvement increase. While acknowledging potential problems in the competing roles of juvenile justice, and the risk of turning the juvenile justice system into the mental health system for youth (a term coined as “iatrogenic injustice”) Grisso (2007) emphasizes that there have been singular improvements in the juvenile justice system through the establishment of prevalence of mental disorders, development of screening tools, and development of empirically based treatment. He also points out that numbers of incarcerated have decreased due to diversion strategies and that many youth are safer after years of working to improve knowledge of mental health needs.

Juvenile court clinics should aid the court in understanding the nature of the adolescent,

³In this case, the Court established that a mentally ill prison inmate can be treated against their will if the prisoner is dangerous to self or others and in the prisoner's best interest.

adolescent development and cognitive, emotional, and behavioral problems. Additionally, juvenile court clinic staff must understand the basics of juvenile justice practice, forensic principles, and Constitutional protections. The goal of this is to provide the trier of fact with needed information, to match the child to appropriate treatment where possible, and *to do no harm*, in the sense of avoiding Grisso's description of iatrogenic injustice.

Integrating Mental Health Evaluative Services into Juvenile Courts: Theory and Practice

There are two distinct trajectories of mental health service provision in juvenile courts. First, the provision of services to incarcerated youth has been an important consideration for a number of years. Management of children and youth in detention or correctional settings has benefited from group guidelines for care and treatment as well as strong consideration of the needs of these young people and a desire to enhance training and standardize practice (Wasserman et al. 2003). While case law has made significant impact on serving mental health needs of incarcerated youth and adults (see *Estelle v. Gamble* 1976,⁴ *Washington v. Harper* 1990), this has not been the case for the juvenile court clinic. In fact, case law has benefited from input of psychological research and testimony (e.g., in *Roper v. Simmons* 2005⁵ Justice Kennedy cites a number of researchers and theorists in delivering the opinion of the court). Yet with the exception of decisions impacting admissibility of evidence little case law currently exists which compels standardization of clinical evaluations of juveniles facing charges in the court.

What does exist is a newer understanding of how these functions occur (Grisso and Quinlan

2005), standards for delivery of service by psychologists (Committee on Ethical Guidelines for Forensic Psychologists 1991), and development of training standards for screening and assessing youth (Otto 2009).

Grisso and Quinlan (2005) note that the services provided by juvenile court clinics are relatively similar though they may be provided in a number of several ways, either by a court clinic model where providers are in or near the court building, through a community mental health model where an institution designates individuals to perform juvenile court ordered evaluations, or by a private practice model where private practitioners provide services using an hourly or capped fee for service model. They further note that the majority of evaluations are provided through the court clinic model (46%) followed by the private practitioner model (37%), then by the community mental health model (12%). Financial arrangements most commonly encountered were evaluations performed by employees on salary and the majority of funds were generated by juvenile court budgets. There are questions raised by this research as to benefits of one model over another. The authors note that perhaps some greater efficiency exists in the court clinic model and that private practitioners responded that their reimbursements made it difficult to perform evaluations which met their own standards.

The standards to be applied in the application of testing can be found in two primary areas. The Standards for Educational and Psychological Testing (Standards) (American Psychological Association 1985) and the Specialty Guidelines for Forensic Psychologists (SGFP) (Committee on Ethical Guidelines for Forensic Psychologists 1991) both provide important information on the use of assessment. The Standards provide a general guideline for evaluating test practices. It emphasizes basic necessities including the fact that users should have basic sound technical and professional backgrounds for test use and provides extremely important outlines of key concepts such as validity and reliability in test use. The SGFP describe desirable professional practice "by forensic psychologists, within any

⁴*Estelle v. Gamble* addresses deliberate indifference to medical needs of prisoners.

⁵In this case, the Court ruled that execution of an individual for a crime committed before reaching the age of 18 is impermissible.

subdiscipline of psychology (e.g., clinical, developmental, social, and experimental), *when engaged regularly* as forensic psychologists” (Committee on Ethical Guidelines for Forensic Psychologists 1991, pp. 656–657). It is the latter document that is especially pertinent for court clinics since it applies to the psychologist “...acting, with definable foreknowledge as a psychological expert on explicitly psycholegal *issues, in direct* assistance to courts, parties to legal proceedings, correctional and forensic mental health facilities, and administrative, judicial, and legislative agencies acting in an adjudicative capacity” (Committee on Ethical Guidelines for Forensic Psychologists 1991, p. 657). The specialty guidelines highlight several important areas of practice including competence, relationships, confidentiality and privilege, and others. It is the SGFP that serves as the benchmark for measuring and evaluating forensic practice among psychologists. Though the original guidelines cited were published in 1991, a number of iterations have followed and the most recent draft (September, 2008) of SGFP can be found at the American Psychology and Law Society website <http://www.ap-ls.org/aboutpsychlaw/SpecialtyGuidelines.php>.

While the necessity of guidelines cannot be understated legal constructs emphasize professional practice and take alternative approaches to developing the field of forensic psychology. Grisso and Vincent (2005) describe the premise of forensic assessment as assuring due process in the adjudication of young people in the juvenile justice system. Due process issues include capacities to make decisions, evaluation of mental disorders in the context of transfer. The forensic assessments are described as being differentiated into three types of tolls: clinical instruments, risk of harm instruments, and forensic assessment instruments, the latter being employed to evaluate specific competencies and abilities.

However, employment of proper tools is not sufficient to proper assessment practice. Those individuals regardless of discipline involved in juvenile court evaluations must be knowledgeable about child development, show understanding of psychopathology specific to adolescence, have a basic understanding of the legal system

and the legal process, be aware of the local juvenile justice system and services in the area, and be competent to work with children from diverse ethnicities and backgrounds (Otto 2009).

Juvenile Court Clinics: Practice Consideration

Any consideration of the role of the juvenile court clinic must include discussion of necessary training, background, and competencies in dealing with forensic work. Though there are no specific degree requirements for juvenile forensic clinic work, Grisso and Quinlan (2005) report that the majority of individuals providing evaluations to juvenile courts were trained in clinical psychology (71.3%) followed by counseling psychology, psychiatry, social work, and educational psychology in order of descending rank. Psychologists, however, were not necessarily established as able to provide testimony on matters involving mental disorders until a federal appeals court established that some psychologists could do so in 1962 in *Jenkins v. United States*.⁶

While there are differences in training, approach to evaluation, and the development of respective professions, Grisso (1993) argues that forensic psychiatry and forensic psychology share many things such as common theoretical bases and the fact that each are outsiders in the legal world. Though distinctions are made between practice specialties arguments exist that greater information can bridge gaps in expertise (Kayser and Lyon 2000), competent practice involves sensible interviewing, review of collateral information, and use of psychometrics where appropriate. Of considerable importance is the use of psychometrics which are valid and reliable. However, collaboration between specialties can be especially helpful in complex cases and can benefit from one another’s expertise in matters such as quality control and training (Grisso 1993).

⁶This case established that some psychologists are capable of rendering expert testimony in a case involving mental disorder.

Though there is frequent appreciation expressed for evidence-based models and principles in juvenile justice, case law has established criteria for admissibility of evidence including psychological evidence in a number of cases (e.g., *Frye v. United States*⁷ in 1923 and with more specificity later in *Daubert v. Merrell Dow Pharmaceuticals*⁸ in 1993). This was later extended to expert testimony in *Kumho v. Carmichael*⁹ in 1999 and rules are established for admissibility of expert testimony opinions and admissibility of test results (see Federal Rules of Evidence, Article VII; Committee on the Judiciary House of Representatives 2001).

The notion of a subspecialty of forensic psychology developed following the 1962 ruling in *Jenkins v. United States* (Heilbrun et al. 2008). By the 1970s there were directions for training specific to forensic psychology suggested which included graduate training in forensic psychology including the combined JD/PhD degree, introductory courses for those from other specialty areas followed by in depth seminars in forensic psychology and field placement in forensic psychology (Poythress 1979). As a result of an invitational conference on training in education and the law held in 1995, referred to as the Villanova Conference for its venue, distinctions have been made in levels of training citing an entry level training or legally informed clinician, a secondary level or proficiency level, and a final tertiary level of specialization (Packer and Borum 2003).

There are persistent ideas for training yet a review of the SGFP reminds us that a forensic psychologist is one who is regularly engaged in the practice of forensic psychology as defined by acting as a forensic psychologist meaning "...all forms of professional psychological conduct

when acting with definable foreknowledge as a psychological expert..." (Committee on Ethical Guidelines for Forensic Psychologists 1991, p. 657). So there are many ways to achieve status as a forensic psychologist, though certification through the American Board of Forensic Psychology (ABFP) through the American Board of Professional Psychology is a desirable means of recognizing expertise.

Otherwise, expertise needs to be established by exercising reasonable standards of practice and standards of care. The two are defined by Heilbrun et al. (2008) who define a standard of care as judicially determined, externally established, with mandatory adherence, a breach of which exposes the individual to potential damages. However, in establishing the distinction, Heilbrun and colleagues note that there is also an absence of a universally accepted standard of care in forensic mental health assessment due to historical debates over the importance of empiricism vs. theory, regulatory and policy considerations, and judicial deference to self-regulation.

In an earlier article, Otto and Heilbrun (2002) supported a number of goals to enhance professional forensic practice including updating the SGFP, dissemination of relevant information about forensic practice at multiple areas, and training of consumers of forensic assessments. In revisiting the issues presented regarding the field, Heilbrun and Brooks (2010) describe the changes in the field since the publication of Otto and Heilbrun (2002) noting improvement in treatment focus and a greater dissemination of knowledge of forensic psychology issues. They cite national reports and adapt recommendations from other fields of science to forensic science and make five major recommendations including integrating forensic science into a proposed National Institute of Forensic Science outlined in a report by the National Research Council, improve the quality of forensic mental health evaluation practice, expand the scope of the field to include treatment innovations and interventions as well as specialized tools, to expand consultation to settings that provide forensic services, and to deal with the issue of racial disparity in the juvenile justice system (Heilbrun and Brooks 2010).

⁷Frye establishes that evidence admitted must be sufficiently established to have gained general acceptance in the field it comes from.

⁸Under the Federal Rules of Evidence, scientific testimony must be not only relevant but also reliable. *Daubert* offered four factors for consideration including testing, peer review, error rates, and general acceptance.

⁹Held that the *Daubert* factors may be applied to experts who are not scientists but offer specialized opinion.

Increasingly, the status of forensic psychology will be dependent upon adherence to ethics and standards of practice. It is possible that development of standards of care supported by Heilbrun et al. (2008) would provide a specific, valuable enhancement to the field. In the interim, knowledge of the particular ethical risks involved (Knapp and VandeCreek 2001; Hess 1999; Bush et al. 2006) is necessary training for those practicing in the forensic field and the field of juvenile court clinics. Yet adherence to ethical principles must also encompass the overwhelming notion that children are more vulnerable than adults, holding special rights, and in need of specific protections (Zerby and Thomas 2006).

Developing and Managing Competent and Efficient Court Clinic Models

As described above there are three main models of service delivery in a juvenile forensic court setting: the Court Clinic model (CC) where staff are employees of the jurisdiction served, the Community Mental Health (CMH) where a community hospital or health care agency is dedicated to providing court evaluations, and a Private Practitioner model (PP) where forensic evaluation is provider on a fee for service basis. These descriptors are taken from Grisso and Quinlan's (2005) work and abbreviations borrowed from their article.

In spite of how the payment and organizational structure function it is worth prioritizing who is the client. In these cases, the court is the client and should be conceived of as such. Recollection of such a relationship allows for a bit of perspective when evaluating employees of contractors providing service. The justice system can exist without forensic psychology but the reverse is not true. That is not to say that separate, clinically focused quality assurance measures should not be put into place, but it is to emphasize that the goal of the court clinic is to provide valid, reliable, timely, and useful information of a psychological nature to the court for

the administration of justice. Ultimately, the judge is the "boss." This is said however with the understanding that it is a somewhat simplistic view. Any organization will require management for service delivery, and courts should not be bound by administrative function. However, there are psychological and management functions that must be accounted for, these are best done separately.

It is not possible for any nonclinically trained manager to evaluate the psychological work of forensic examiners. Therefore, some sort of dual model is highly desirable and can be accomplished in several ways. First, government agencies are ultimately responsible to taxpayers for efficient use of public resources. Because of this, parsimonious use of expensive resources must be justified. One major issue in forensic practice is the tendency to obtain evaluations with poorly formulated referral questions. These can prompt unnecessary testing, unnecessary costs to the taxpayer, redundancy in evaluation, and a disagreeable response from the juvenile being evaluated who may take issue with multiple evaluations.

Additionally, not all juvenile court evaluations are best answered by one particular practitioner such as a psychologist or psychiatrist. Although psychology is the dominant means of service delivery in all areas identified, there are questions involving medical or biological issues which are best addressed by a physician, neuropsychological issues best addressed by a neurologist or neuropsychologist, and issues of cognition, achievement, and personality may be best answered by the psychologist. Further, many of the cases presenting themselves to the court for disposition require only a treatment plan and referral. In these cases, less is more and reliance on mental health providers, such as social workers and counselors, well trained in identifying psychopathology, finding resources, determining referral questions, and highlighting issues, is an exceptional cost-saving measure for juvenile court clinics rather than exposing each individual to expensive psychological testing or costly psychiatric interview.

Once basic functions of identification of referral questions and determining appropriate specialty evaluations are completed, it is important to

turn to quality. The quality component of the court clinic has two major bifurcations: preemployment/contracting quality assurance, and continuing quality assurance. The latter is further separated into two areas: peer review and education.

As described above there are no current practice standards for forensic psychology adopted which have potential for considerable weight (Heilbrun and Brooks 2010). As such there is little ability to rely on practice standards. There are particular training programs available and candidates with forensic experience are perhaps desirable though an understanding of children and child development is essential (Otto 2009).

The juvenile court clinic is dependent upon local standards (see Heilbrun and Brooks 2010 for a comprehensive listing of individual state requirements for training and certification in forensic mental health) and national or organizational credentialing to ensure expertise in forensic matters. The American Board of Forensic Psychology is one such credentialing body. Hiring of quality providers may best be accomplished by (1) setting minimum standards of education and training in forensics, (2) establishing ongoing, peer-reviewed quality assurance feedback models, and (3) establishing a system of continuing education or support for continuing education, especially one with a mentor or continuing supervision component.

Juvenile Court Clinics and Agenda's for the Future

It seems that the plans and desires of the field of forensic psychology are sound and periodic calls for review of the state of the field are accurate and beneficial (Grisso 1987; Poythress 1979; Otto 2009; Otto and Heilbrun 2002; Heilbrun and Brooks 2010). For established court clinics, of whatever fashion the development and adoption of practice standards even at a local level is desirable. Further, there is great potential for the juvenile justice system to become the de facto mental health system. This must be avoided through adequate knowledge of community resources and referral. While these resources may be limited

the use of such resources is vital if one is to avoid over reliance on state systems.

Evidence-Based Practices

This raises the issue of evidence-based practice. While this practice is essential, it is necessary to understand exactly what is evidence based. The term evidence based is attached to a variety of instruments and interventions which is clearly promising, but can be confusing unless a common sense definition for evidence based is considered. That is, as suggested by Schneider (2009) "don't employ a technique or procedure or prescribe a pill until you have satisfied yourself through the examination of the empirical evidence that it has been demonstrated to work." Schneider emphasizes that while evidence-based practices may put the practitioner on the right path towards decision making, employment of any particular practice is still clinical judgment. Additionally, the rights of individuals to have input into their treatment is a factor that may at times be at odds with evidence-based practices, but need not be since the concept of shared decision making can exist in the presence of a thorough clinical consultation and informed discussion (Barratt 2008).

Managing Limited Healthcare Resources

Knowledge of local mental health resources is necessary when juvenile court clinics develop functions related to service recommendation. To avoid over reliance on government or juvenile justice system interventions a broad range of treatments should be considered, especially when local services are difficult to obtain due to access issues or geographic impediments. Maximization of benefits of the integration of juvenile justice and mental health go beyond the forensic or diagnostic functions of the juvenile court clinic. Indeed, spending on diagnostic functions in relation to interventions raises interesting philosophical points and generates study of how to distribute resources and manage entitlements

(Semkow 1985). However, access to special services may emanate from a thorough juvenile court clinic evaluation when previously undiscovered or undiagnosed disabilities are made manifest. These findings might have enormous rehabilitative and quality of life issues for the young people referred. Additionally, evaluative findings (e.g., cognitive and emotional disabilities) carry great import for both forensic and rehabilitative processes.

Research

Ensuring adequate evidence-based practice requires the juvenile court clinician to read and perhaps participate in research, empirical, and otherwise. For a great number of social science practitioners, this means relearning a new system of analyzing questions and issues. For the psychologist well versed in data analysis and empirical evaluation, there will be the need to understand case law, the importance of legal precedent, and a new world of case research (see Morris et al. 1997 for a comprehensive guide to understanding and participating in legal research).

Guidance on research in legal settings is available in a number of areas. For example, there may be concern in some systems that instituting a study utilizing a randomized design is undesirable and contrary to the concept of fairness desired by the judicial process. This is not so. The issue of the ethics of randomized design in legal settings has been established. Standards issued by the Federal Judicial Center suggest that there are conditions which must be established in order for randomized experiments to be considered. First, there needs to be current practice or policy-requiring improvement, there needs to be significant uncertainty around the value of the proposed intervention for study, there should be no other means of determining the value, and the rights of the individual must be protected (Boruch 1997). Although not specific to the justice population as a whole forensic populations that we are discussing here are subject to special protections in research settings as outlined in the Code of Federal Regulation Section 46 subparts C (prisoners) and subpart D (children) (Department of Health and Human Services 2009).

Disproportionate Minority Contact

One of the overarching goals of US courts in the twenty-first century is the continued development of fair and equitable systems of justice. In the USA, minorities are grossly over represented in all stages of the juvenile justice system with African-American youth accounting for greater over representation than any other minority group (Hsia et al. 2004). It is not entirely clear how much racial divergence is seen in mental health measures with some suggestion that white youth report higher incidence of suicidal ideation and drug problems, but not more anxiety, thought disturbance or depression than African-American youth in a large sample of juvenile justice youth screened (Vincent et al. 2008). Conversely, Desai and colleagues (2012) did not find increases in risk to be related to mental health screening status.

It is made clear by Heilbrun and Brooks (2010) recent article on forensic science and forensic psychology that diversity will need to play a key role in future goals for forensic practice. To that end, some considerations for juvenile court clinics should be kept in mind. In spite of the importance of this issue, there is virtually no guidance as to what one must look for in an instrument when using it with ethnic minorities that will adequately guarantee cultural competence (Grisso 2005). The idea is not new, but lagging. In 1999, the National Multicultural Conference and Summit was held, hosted by American Psychological Association (APA) Divisions 17 (Counseling), 35 (Psychology of Women), and 45 (Society for the Study of Ethnic Minority Issues), and issued calls for multicultural guidelines governing competencies to be adopted by APA. Changes in population demographics will greatly modify American culture in the next few years and as various groups issue calls for framework development and plans for diversity to exist in future endeavors (e.g., health psychology; Yali and Revenson 2004; advanced practice psychiatric nursing; Mahoney et al. 2006), so should forensics.

A definition of cultural competence offered suggests that mental health services are culturally competent to the degree to which they are compatible with the cultural and linguistic

characteristics of the community; attention to cultural characteristics of the population served; factors involved in the infrastructure of the organization (values reflecting the importance of cultural competence, communication with partner organizations, human resources, governance, and so on); and direct service support (e.g., availability and accessibility) (Hernandez et al. 2009).

Extending this to the juvenile court clinic involves conceiving of the court clinic as a part of the community. This is not a simple concept since decreased utilization of courts (and therefore court clinics) is more desirable than increased use. However, when considering the juvenile court clinic itself, one might ask several questions to evaluate competence. First, is the clinic itself diverse. Are staff and individuals in contact with the young people representative of the ethnic background of the community served, are they knowledgeable about the cultural norms of the community and are they linguistically compatible. Second, are services of the court clinic compatible with local populations? Are instruments and measures race neutral or have instruments been normed on young people represented in the community, are data provided on any score differences on these scales, and have the instruments been translated (Grisso 2005)? Do the weight of factors considered in an assessment such as a risk assessment lean heavily upon factors tied to the community. Are court clinic values consistent with local cultural norms? Do brochures and informational forms or letters of reminder for appointments consider language differences? Is there a policy statement addressing diversity and cultural competence, and what is the level of cultural competence among the individuals working in the juvenile court clinic? Has there been training or a breadth of experience to suggest that one is not bound to their own culture, and can these issues be discussed in an open, non-threatening fashion? Are recommendations culturally appropriate, relevant, and suitable for the population served? Finally, do recommendations consider that public transportation might be the only means of accessing recommended services and may be a hardship.

Summary

As described, the juvenile court clinic in modern juvenile justice practice is another innovation developed in the greater process of the evolution of the juvenile court. In that sense, the development of juvenile court clinics is a historical imperative. The juvenile court clinics are poorly defined, are made up of multiple professionals practicing in a wide variety of formats, and in spite of this are thought of as a discrete and understandable entity. The juvenile court clinic is an archetype, developed through the marriage of psychology and law. This marriage and the juvenile court clinics emerged because of the significant overlap between problematic behavior resulting in court referral and problematic behavior resulting in psychological referral. They emerged because of a shared constituency.

The assertion that there is a shared group in juvenile court has ample evidence in research. However, practice considerations differ vastly between evaluative and treatment components of forensic practice where the latter has been heavily influenced by case law as well as scholarly research and the former has probably provided an equal or greater impact on case law. This is not without significant philosophical problems and challenges. Concepts of crime and punishment are subject to popular thought reflected in legislative action and considerations of free will are significant, though probably more so in areas of adult court though high-profile juvenile crimes can create great conflict within a community. Conversely, there is some indication that juvenile court clinic services arise from observational or other factors and may be under utilized.

The juvenile court clinic is a small cog in the wheel of the justice system. But one that needs to function well never the less. For individuals involved in the juvenile court clinic several basic competencies must exist. First, there must be training and experience with children and an understanding of child and adolescent development. There must be an understanding of the legal process, especially of the legal customs in the local area of practice as well as a broader

appreciation for Constitutional issues. There needs to be an understanding of what is required according to law and practice standards of the profession including ethical responsibilities and admissibility of expert opinion and admissibility of opinion which relies upon testing when appropriate. Finally, as the field seeks to establish itself as one marked by fairness, an understanding of cultural factors within the communities one practices and overall cultural competence must be established.

Goals for the juvenile court clinic in the twenty-first century must make the service fiscally responsible to obtain needed funding, but must also be cognizant of its limitations. It must above all, avoid harm. One major dilemma that can be encountered is the potential for the juvenile justice system and the juvenile court system to become the primary gateway into the mental health system or to become a substitute mental health system.

Practitioners in the system must know local resources including community practitioners, clinics, and other means of accessing treatment. When necessary, searches and assistance in finding psychological care to families seeking help is desirable.

The juvenile court clinic must maintain its integrity by adherence to ethics, but also by a clear vision of the standards it adopts, the sense that it gets of the experience desired by candidates to work or consult in the clinic, and by a solid and dependable quality assurance process. This should include peer review of case actions, reports, and interventions, ability to engage multidisciplinary partners when necessary, knowledge and ability in developing appropriate referral questions which truly aid the court in discovering what is necessary for the case before them and making proper connections between questions identified and resources accessed. When necessary, multidisciplinary evaluations will be required.

Finally, one of the more pertinent issues facing juvenile court clinics in the coming years is the issue raised by Otto (2009) and Heilbrun and Brooks (2010) that being the issue of cultural competence. Failure to ensure appropriate

evaluation and recommendations based on cultural or linguistic misunderstanding cannot exist in a fair system, the one which we in our respective mental health professions are privileged to be part of.

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The History, Development, and Testing of Forensic Risk Assessment Tools

14

Jay P. Singh

Predicting the weather is easy compared with predicting violence
Monahan and Steadman (1996, p. 932)

With interpersonal violence currently a leading cause of death (World Health Organization 2004) and recent reports suggesting that approximately 100,000 juveniles are arrested for violent crimes each year in the USA alone (Puzzanchera 2009; Puzzanchera et al. 2010), establishing valid and reliable methods of identifying children and adolescents who will commit violent acts is an important public health and safety issue. One method of identifying future offenders is through the use of *risk assessment tools*, structured instruments designed to predict the likelihood of anti-social behavior. Numerous juvenile and adult risk assessment tools, the manuals of which claim high rates of predictive validity and reliability, have been introduced in recent decades (Bonta 2002; Schwalbe 2007). The investigation of these measures' psychometric properties has produced a sizeable literature which has often come to conflicting conclusions as to which tools produce the highest rates of predictive validity in different contexts (Singh and Fazel 2010).

Despite major uncertainties regarding which risk measures are most accurate and the populations and study designs in which they perform best, forensic risk assessment tools are currently used in correctional, psychiatric, and court settings in many Western countries, including the USA

(Archer et al. 2006), Canada (Hannah-Moffat and Marutto 2003), the UK (Dolan and Rennie 2008), Sweden (Swedish Council on Health Technology Assessment 2005), the Netherlands (de Ruiter and Hildebrand 2007), Australia (Thompson and Putnins 2003), and New Zealand (Vess 2008). These instruments are used to influence medico-legal decisions related to individual liberty and public protection (e.g., involuntary hospitalization, length of mandated treatment, discharge from psychiatric hospitals and detention centers), making their predictive validity of considerable importance.

The aim of the following chapter is to provide readers with a foundational understanding of the core concepts in forensic risk assessment. A history of the field is presented, dominant approaches to contemporary risk assessment are described, and methods for developing and testing the predictive validity of risk assessment tools are discussed. By becoming familiar with the terminology and methodology commonly used in this important subfield, readers will be prepared for a more detailed conversation of the violence risk assessment literature on juvenile populations.

A Brief History of Forensic Risk Assessment

The concept of *risk* first emerged in the seventeenth century in the context of gambling (Parton 1996). The term was used to describe the probability of financial loss or gain at the throw of the

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dice. Statistical models of risk prediction soon followed, and as the construct developed into the eighteenth century it was adopted by the growing insurance industry, prompting the construction of the first risk assessment instruments (Kemshall 1996). It was not until the twentieth century, however, that scientists began attempting to systematically assess dangerousness.

The first major development in the field of forensic risk assessment came in 1928, when University of Chicago sociologist Dr. Ernest Burgess and his students developed the first statistical prediction scheme for assessing the risk of recidivism (i.e., reoffending) in parolees. In his seminal article, *Factors Determining Success or Failure on Parole*, Burgess (1928) used a unit scoring approach [now referred to as the “Burgess method” (Hakeem 1948, p. 376)] in which he assigned an unweighted score of +1 for the presence of each of 21 characteristics, which Burgess postulated systematically increased parolees’ likelihood of violating the conditions of their release (such *risk factors* are discussed in the following section, Risk versus Protective Factors). Using a calibration sample of some 3,000 parolees, Burgess found that 76% of participants who his instrument judged to be at high risk of recidivism went on to reoffend over five years (Burgess 1928).

Burgess published his instrument at a time when assessments of dangerousness in psychiatric and correctional settings were based primarily on brief clinical interviews that lacked standardization (Schauer 2003). The predictive validity of such *unstructured clinical judgment*—a clinician’s assessment of risk based on his or her intuition, theoretical knowledge, and professional experience (Westen and Weinberger 2004)—was not questioned by research or practice (Meehl 1954). Thus, promising *actuarial models* (i.e., models relying on a statistical algorithm to make predictions) such as Burgess’ were considered academic and were not widely implemented. Where Burgess’ instrument was implemented, however, it resulted in a greater standardization of risk assessment procedures, increased rates of predictive validity, and improved communication between correctional institutions (Gross 2008).

The first critical examination of the unstructured clinical approach came in 1954 with Professor Paul Meehl’s influential text, *Clinical vs. Statistical Prediction: A Theoretical Analysis and a Review of the Evidence*. In this book, Meehl made the claim that clinicians could not predict offending better than actuarial formulae. As clinicians’ assessments of dangerousness were used to influence many important decisions pertaining to individual liberty and access to therapeutic resources, Meehl’s work started a major debate about the predictive validity and reliability of clinical judgment (Westen and Weinberger 2004).

In the 1960s and 1970s, dissatisfaction with unstructured clinical judgment grew. A series of seminal court decisions in the USA, including *Baxstrom v. Herold* (1966) and *Dixon v. Attorney General of the Commonwealth of Pennsylvania* (1971), provided researchers with natural experiments to investigate the predictive validity of clinical predictions of future offending (Cooper et al. 2008).

In *Baxstrom v. Herold* (1966), the US Supreme Court held that a legal determination of dangerousness was needed to permit involuntary hospitalization at the end of an offender’s sentence. As a result of this ruling, nearly 1,000 mentally disordered offenders whom clinicians had identified as “dangerous” were transferred from New York state maximum security hospitals to general psychiatric units. Steadman and Coccozza (1974) followed the *Baxstrom* sample for 4 years and found that only 20% of those individuals who clinicians predicted would be violent went on to be arrested for a violence offense.

In the related case of *Dixon v. Attorney General of the Commonwealth of Pennsylvania* (1971), the US District Court for the Middle District of Pennsylvania held that the Mental Health and Mental Retardation Act (1966), a law which allowed for the involuntary hospitalization of mentally disordered offenders at the end of their sentences without a formal hearing, was unconstitutional. As a result, the court ordered that persons who had been involuntarily committed under the Mental Health and Mental Retardation Act be discharged or recommitted after a fair

hearing (Weiner et al. 2003). Thornberry and Jacoby (1979) followed approximately 400 mentally ill offenders who had been discharged subsequent to the *Dixon* decision. The researchers found that only 11% of those individuals who clinicians had predicted would be violent went on to be arrested for a violent crime within four years of discharge.

In response to such discouraging findings, the American Psychiatric Association published a report on the role of clinicians in violence risk assessment. The report concluded:

The clinician should not regard the prevention of future violence as within his proven capability. It has been noted that ‘dangerousness’ is neither a psychiatric nor a medical diagnosis but involves issues of legal judgment and definition, as well as issues of social policy. Psychiatric expertise in the prediction of ‘dangerousness,’ is not established and clinicians should avoid ‘conclusory’ judgments in this regard.

American Psychiatric Association 1974, p. 3

Finally, in 1981, Dr. John Monahan published a decisive monograph entitled, *The Clinical Prediction of Violent Behavior*. In this work, Monahan (1981) used evidence from the 1960s and 1970s to reassert Meehl’s (1954) claim that clinicians are unable to predict violence at rates above chance. Monahan concluded:

[P]sychiatrists and psychologists are accurate in no more than one out of three predictions of violent behavior over a several-year period among institutionalized populations that had both committed violence in the past (and thus had high base rates for it) and those who were diagnosed as ‘mentally ill’.

Monahan 1981, pp. 48–49

Enjoying widespread popularity, the monograph signified the beginning of a “second generation” (Monahan 1984, p. 141) of risk assessment, where research into the predictive validity of unstructured clinical judgment was largely replaced by research into the development of actuarial risk assessment schemes. During the 1980s, actuarial instruments designed for adults including the Statistical Information on Recidivism scale (SIR; Nuffield 1982) and the Level of Service Inventory (LSI; Andrews 1982) were published and their utility tested in countries including the USA and also England, Wales, and Canada, which

passed legislation allowing clinicians to involuntarily hospitalize mentally disordered offenders at the end of their sentences if they were judged to be at risk of harming others (Criminal Code of Canada, §753, 1985; Mental Health Act, §41, 1983). While these laws did not mention the use of structured tools, specifically, their passing resulted in increased scrutiny of the validity and reliability of assessment procedures.

During the 1990s, continued interest in the development of risk assessment tools led to an increase in research on risk factors for antisocial behavior. Multisite longitudinal research projects, such as the MacArthur Risk Assessment Study helped to clarify the relationship between socioeconomic and clinical factors and offending (Monahan et al. 2001; Torrey et al. 2008). A number of studies were also conducted to systematically investigate risk factors for offending in juveniles, specifically (e.g., Hawkins et al. 1998; Hoge et al. 1996; White et al. 1994). In addition to innovative work in research design and reporting, the literature of this decade also included discussion as to whether legislation [e.g., the UK’s proposed Dangerous Severe Personality Disorder (DSPD) Programme; Department of Health 1999] should be passed, allowing for the use of actuarial risk assessment tools to predict violence risk in mentally disordered offenders or sexual offenders in order to preventatively detain those found to be at high risk.

In the 2000s, the focus of the field began to shift from risk assessment to risk management. It was argued that reintroducing clinical judgment into risk assessment procedures might assist mental health professionals in making more educated treatment decisions (Douglas et al. 2003; Douglas and Skeem 2005). To this end, instruments which use clinical judgment to supplement actuarial scales, an approach referred to as *structured professional judgment* (SPJ), gained popularity. Recent surveys suggest that the use of SPJ instruments is growing in forensic settings in Western countries, such as the USA (Archer et al. 2006; Lally 2003) and the UK (Khiroya et al. 2009). However, there is limited meta-analytic evidence to suggest that these tools produce commensurate rates of predictive validity to actuarial

measures (Guy 2008; Singh et al. 2011). In addition to the increased popularity of the SPJ approach, the 2000s also saw the publication of the first widely implemented risk assessment tools for juveniles (for a review, see Schwalbe 2007), recognizing that the assessment of violence risk in children and adolescents should not be identical to adults.

Contemporary Approaches to Forensic Risk Assessment

The present section describes the two currently dominant approaches to juvenile risk assessment: actuarial prediction and structured professional judgment. Risk and protective factors measuring either static or dynamic risk are also examined, as they are the building blocks of statistical and clinically based instruments.

Actuarial Versus Clinically Based Instruments

As noted previously, both the actuarial and structured professional approaches to risk assessment have developed in response to findings that unstructured clinical judgment, for many years the standard method of prediction, produces generally low rates of predictive validity (Daniels 2005; Hanson and Morton-Bourgon 2009). The poor performance of the unstructured approach may be due to judgments of dangerousness being made without consideration of factors which studies have suggested are empirically associated with offending (Hanson 1998). Unstructured clinical predictions also have poor rates of inter-rater reliability due to their subjective nature (Hanson and Morton-Bourgon 2009).

To increase validity and reliability, forensic researchers began to develop actuarial risk assessment instruments. These second generation tools estimate the likelihood of antisocial behavior through assigning numerical values to factors empirically associated with offending. A statistical algorithm is then used to combine these numerical values and translate individuals' total risk scores into probabilistic estimates

of future misconduct. As each individual is appraised using the same criteria and no subjective clinical judgment is used, scores on actuarial instruments can be directly compared. In addition, as they rely on statistical algorithms rather than professional judgment, actuarial tools are generally considered more reliable than clinical predictions (Harris and Tough 2004; Latessa and Lovins 2010).

Recently, instruments employing the structured professional judgment approach to risk assessment have gained popularity (Douglas and Skeem 2005). In this third generation approach, clinicians use scales composed of factors which have been found to be empirically associated with offending to guide their judgments (Douglas et al. 1999). Supporters of the approach argue that clinically based tools do more than assess the risk of future offending; they also supply information that can be used for treatment planning and risk management (Douglas et al. 1999; Gray et al. 2010). By reintroducing professional judgment into the clinical decision-making process, SPJ instruments address criticisms that purely actuarial predictions do not take into account individual differences (Sreenivasan et al. 2000).

Risk Versus Protective Factors

The item content of actuarial and SPJ tools consists of risk factors and protective factors. *Risk factors* are biological (e.g., traumatic brain injury), psychological (e.g., impulsivity), or sociological (e.g., low socioeconomic status) characteristics which systematically increase the likelihood of future antisocial behavior. *Protective factors* are those biological (e.g., healthy exercise regime), psychological (e.g., high self-esteem), or sociological (e.g., prosocial peers) characteristics which systematically decrease the likelihood of future offending.

Risk and protective factors are routinely identified using longitudinal methodology in which a sample is followed for such a duration as to allow for the possibility of offending. The biopsychosocial characteristics of those who offend are analyzed to see if they differ from those who do not. If, after a thorough investigation of

confounding (i.e., the presence of third variables that explain the association between the characteristic and the outcome) and temporality (i.e., the characteristic preceding the outcome), the presence of a given characteristic is associated with a significant increase in the likelihood of offending, it is considered a risk factor. If the presence of a characteristic is associated with a significant decrease in the probability of offending, it is considered a protective factor.

Until recently, the investigation of protective factors was neglected in favor of studying risk factors (de Vogel et al. 2007). However, focusing on risk factors may bias clinicians toward negative perceptions of their patients because individuals' potential for development is ignored (Rogers 2000; Sheldrick 1999). Evidence suggests that by identifying protective factors and putting interventions into place that increase their prevalence and accessibility in high risk populations, communities may effectively decrease rates of offending (Hoge et al. 1996; Rogers 2000). The results of recent clinical trials for interventions designed to increase the prevalence of protective factors in high risk juveniles have been particularly encouraging (e.g., Lodewijks et al. 2009).

Static Versus Dynamic Item Content

Risk and protective factors measure either static traits or dynamic states. *Static* factors are those historical characteristics that cannot be changed (e.g., previous violence or history of substance abuse), while *dynamic* factors are present, potentially changeable facts or subjective states (e.g., current substance use or feelings of suspicion). Using static factors to predict the likelihood of future offending establishes an *absolute level of risk*. Absolute risk ratings are commonly used for the purposes of preliminary screening and conducting comparisons of risk at the group level (Sjöstedt and Grann 2002). As the information needed to score static item content on risk assessment tools does not rely on clinical judgment or patient self-report, it may have the benefit of greater objectivity and, therefore, reliability. However, overemphasizing static risk factors can

lead to a possibly mistaken perception of an individual posing an irreversible risk to society (Sullivan et al. 1995).

As risk management and crime prevention have begun to attract more attention, there has been increasing interest in the identification of dynamic factors (Douglas and Skeem 2005). Measuring the likelihood of future offending using dynamic item content establishes a *relative level of risk* which is useful in measuring an individual's changing level of risk in response to an intervention or change in life circumstances. Available research suggests that dynamic risk factors contribute information regarding the probability of future offending that static risk factors do not (Beech et al. 2003; Hanson and Harris 2000; Mills et al. 2003). Thus, to prevent future offending and inform treatment planning, it may be important to take into account changes in an individual's socioemotional functioning. However, overemphasizing dynamic factors can lead to unstable (and, therefore, what some may consider unusable) risk ratings (Sullivan et al. 1995).

The Development of Risk Assessment Tools

The present section discusses the methodologies currently recommended for combining static and dynamic risk and protective factors into actuarial and SPJ schemes.

Developing Actuarial Risk Assessment Tools

The development of actuarial instruments is a primarily statistical task. Given that the aim of risk assessment is prediction, regression modeling is used to select item content for these tools. As outcomes of interest in forensic risk assessment are often binary events (e.g., committing or not committing a criminal offense), logistic and Cox regression are the methodologies of choice (Agresti 1996; Gagliardi et al. 2004). The goal of logistic regression is to estimate the likelihood of a dichotomous outcome occurring, while the goal of Cox regression is to estimate the hazard (i.e.,

the risk at a given time) of a dichotomous outcome occurring. Both logistic regression and Cox regression can be used to develop multivariate prognostic models (Harrell et al. 1996), assessing the unique contribution of multiple predictor variables through maximum likelihood estimation.

Once a parsimonious set of predictor variables has been identified using regression modeling, the next step in developing an actuarial risk assessment tool is to decide whether items will be weighted. Parameters commonly used to weight items include regression coefficients and base rates of offending (Menard 1995; Nuffield 1982). Alternatively, the unweighted Burgess method may be used.

The final step in constructing an actuarial instrument is to identify a cut-off score which can be used to classify individuals as being at high risk or low risk for offending. A tool's cut-off point is routinely identified as the risk score that balances rates of sensitivity (i.e., the proportion of offenders accurately identified by the tool) and specificity (i.e., the proportion of non-offenders accurately identified by the tool). Alternatively, researchers may choose to use two cut-off thresholds: one to classify individuals as being at high risk of offending (individuals who score at or above this score can be considered a danger to others) and one to classify individuals as being at low risk (individuals who score below this score can be considered not to be a danger to others). This approach results in three risk categories: low, moderate, and high.¹

Developing of Clinically Based Risk Assessment Tools

Rather than rely on statistical modeling to select item content, authors of instruments that employ SPJ use previous empirical research and clinical

theory to select which risk and protective factors to include (Webster et al. 1997). Recently developed SPJ instruments (e.g., Watts et al. 2004) have also interviewed panels of mental health professionals to enquire as to which factors are generally agreed to be the most useful in predicting future offending. Once authors have decided which items to include on their instrument, they arrange the items into scales (e.g., the social/contextual scale of the Structured Assessment of Violence Risk in Youth; Borum et al. 2002). Clinicians use these scales as *aide-mémoires* when making professional judgments concerning the likelihood of future offending (Guy 2008). Clinical judgment is used in place of weighted risk scores and cut-off thresholds to place an individual into a risk category (e.g., low, moderate, or high).

Evaluating the Predictive Validity of Risk Assessment Tools

Once a risk assessment tool has been developed, its predictive validity may be evaluated. This section briefly discusses the research methodology and outcome measures used in primary studies, which attempt to establish the predictive accuracy of a risk instrument. Finally, an overview is presented of the three major forms of review which are used to summarize the results of these primary studies.

Primary Study Methodology

Primary studies in the forensic risk assessment literature are generally designed such that a risk tool is administered to all participants in a sample, leading to predictions as to who will offend (Heilbrun 2003). The sample is then followed to determine whether individuals who were predicted to offend and do, and vice versa. Using this approach, individuals are classified into one of four categories: true positives (TP), false positives (FP), true negatives (TN), and false negatives (FN). A TP is an individual who is predicted to offend and does. A FP is an individual who is predicted to offend but does not. An individual

¹There also exist risk assessment tools which use a derivation of the low/moderate/high binning scheme. For example, tools such as the Youth Level of Service/Case Management Inventory (YLS/CMI; Hoge and Andrews 2002) classify individuals into one of four risk classifications: low, moderate, high, and very high risk.

Box 14.1 Testing predictive validity using 2×2 contingency table data

		Outcome	
		Offender	Non-offender
Test result	Positive	True positive (TP)	False positive (FP)
	Negative	False negative (FN)	True negative (TN)

$$\text{Sensitivity} = \text{TP}/(\text{TP} + \text{FN})$$

$$\text{Specificity} = \text{TN}/(\text{TN} + \text{FP})$$

$$\text{Area under the curve (AUC)} =$$

$$\frac{1}{2} \sum_{i=1}^k (\text{Sens}_{i-1} + \text{Sens}_i) \times (\text{Spec}_{i-1} + \text{Spec}_i)$$

$$\text{Positive predictive value (PPV)} = \text{TP}/(\text{TP} + \text{FP})$$

$$\text{Negative predictive value (NPV)} = \text{TN}/(\text{TN} + \text{FN})$$

$$\text{Diagnostic odds ratio (DOR)} = (\text{TP} \times \text{TN})/(\text{FP} \times \text{FN})$$

who is predicted to not offend and does not is referred to as a TN. Lastly, an individual who is predicted to not offend but does is referred to as an FN. These outcomes are commonly organized into a 2×2 contingency table (Box 14.1).

Outcome Measures

Data from 2×2 tables may be used to calculate effect sizes which measure the ability of a risk assessment tool to accurately identify offenders and non-offenders. Studies in the juvenile risk assessment literature often use a single outcome statistic to summarize their predictive validity findings, commonly an index of sensitivity and specificity, the *area under the curve* (AUC). Other frequently used outcome statistics in the risk assessment literature include the *positive and negative predictive values* (PPV and NPV, respectively). Another outcome statistic, commonly used in prediction studies in the medical literature (Glas et al. 2003), is the *diagnostic odds ratio* (DOR). The equations for these outcome statistics are provided in Box 14.1.

Area Under the Curve

The receiver operating characteristic (ROC) curve plots a risk assessment tool's sensitivity against the inverse of its specificity across score thresholds. The area under the ROC curve can be interpreted as the probability that a randomly selected offender has a higher test score than a

randomly selected non-offender and is currently considered the preferred measure of predictive accuracy (Kroner 2005). As it measures a risk assessment tool's ability to predict an outcome that has already occurred, the AUC is limited by its retrospective orientation. In addition, forensic experts have suggested that the AUC may be being misused such that findings are interpreted too optimistically (Sjöstedt and Grann 2002), and a recent meta-analysis concluded that the effect size may not be useful in comparing instruments (Singh et al. 2011).

Positive and Negative Predictive Values

The PPV is the proportion of individuals who are predicted to commit an offense who actually offend, while the NPV is the proportion of individuals who are predicted by a tool not to commit an offense who do not offend. The predictive values are prospectively oriented as they measure whether a test's prediction of whether an individual will offend or not comes true. As the aim of risk assessment is to identify individuals who will or will not offend in the future, the PPV and NPV are perceived favorably in the forensic literature (Large et al. 2010). The predictive values are dependent upon the base rate of the outcome of interest (e.g., self-report, arrest, charge, conviction, incarceration), although this may be considered a strength when investigating tool utility in a population with an epidemiological established base rate of offending. What constitutes a "strong" or a "weak" PPV or NPV may differ depending on the outcome of interest. Therefore, general guidelines have not been established for interpreting the predictive values.

Diagnostic Odds Ratio

The DOR is the ratio of the odds of a positive test result in an offender (i.e., the odds of a true positive) relative to the odds of a positive result in a non-offender (i.e., the odds of a false positive). The DOR is not base rate dependent and, unlike the AUC, takes into account a risk assessment tool's manual suggested cut-off score. Further, as researchers and clinicians are familiar with the concept of an odds ratio, the DOR may be easier for nonspecialists to comprehend than the

currently preferred AUC. While the DOR has not been as frequently used in the forensic risk assessment literature as the AUC or the predictive values, recent meta-analytic evidence suggests that the DOR may be one of the most useful effect sizes for comparing risk assessment tools' predictive validity (Singh et al. 2011).

Review Methodology

As the number of primary studies concerning juvenile risk assessment has grown, a number of reviews have been published. Reviews are helpful to the field in that they allow large quantities of information to be quickly assimilated by readers, be they researchers, clinicians, policymakers, or nonprofessionals (Cochrane Collaboration 2006). The contemporary literature on topics related to juvenile risk assessment contains three kinds of review: *narrative reviews* (e.g., Borum 2003; Edens et al. 2001), *systematic reviews* (e.g., Gerhold et al. 2007; Worling and Långström 2003), and *meta-analyses* (e.g., Cottle et al. 2001; Olver et al. 2009; Schwalbe 2007). Understanding the methodology and relative strengths and weaknesses of each form of review may assist in their critical appraisal.

Narrative Reviews

Narrative reviews summarize the available literature on a given topic from the theoretical and experiential perspective of the reviewer (Kirkevold 1997). A primary strength of narrative reviews is that they may cover a broad variety of issues concerning a particular subject. However, narrative reviews may be strongly influenced by the viewpoint of their authors, as reviewers often take sides on a controversial issue. A weakness of narrative reviews is therefore that they can be subjective representations of the literature, and if a particular piece of research does not support the authors' viewpoint, they may choose to exclude it rather than present it and appraise its validity (or lack thereof). To obtain an objective overview of the available literature, all those works identified using a

systematic search which meets a set of prespecified inclusion and exclusion criteria must be included. Without taking such a systematic approach, a review is not considered reproducible (Collins and Fauser 2005).

Systematic Reviews

Using a systematic search strategy and predefined inclusion and exclusion criteria to identify eligible studies, systematic reviews address the potential selection biases of narrative reviews. As reproducible systematic searches are used, readers of systematic reviews may be confident that a representative sample of work on a given topic has been included. Systematic reviews allow researchers to evaluate the consistency of results from primary studies. If consistent findings are reported by multiple studies, it strengthens these findings' credibility. If inconsistent findings are discovered, the reviewer can theorize why such discrepancies occur. In addition to identifying trends, systematic reviews also allow researchers to identify gaps in the literature that future research may address. The principal weakness of systematic reviews is that they do not quantitatively synthesize the results of primary studies and cannot, therefore, calculate summary effect sizes or systematically investigate which sample or study design characteristics led to inconsistencies in study findings (i.e., sources of heterogeneity).

Meta-analyses

Meta-analytic methodology maintains the strengths of systematic reviews while allowing for the statistical combination of primary study results. Researchers conducting meta-analyses use systematic searches and apply prespecified inclusion and exclusion criteria to identify studies of interest. Effect sizes, tabular data, or individual participant data from the identified study manuscripts or obtained from study authors is then quantitatively synthesized. In addition to calculating summary effect estimates, meta-analytic methodology also allow researchers to statistically investigate the influence of sample demographics (e.g., participant age) and

study design characteristics (e.g., length of follow-up) on effect size. Potential weaknesses of meta-analytic methodology include (1) the combination of studies which measure different outcomes in different populations (i.e., the apples and oranges problem), (2) the combination of studies of varying quality (i.e., the garbage in, garbage out problem), and (3) the analysis of a nonrepresentative group of studies due to publication bias [i.e., the file drawer problem (Rosenthal 1979)].

Conclusion

This chapter provided background on key concepts underlying the field of forensic risk assessment. We explored the history of the field of forensic risk assessment and concluded that the construction of tools for predicting violence in juveniles is a relatively new development. The two currently dominant approaches to juvenile risk assessment, the statistically based actuarial approach and the clinically based structured professional approach, were described. We discussed how these instruments are methodologically designed and explored how the predictive validity of such tools is tested both in primary studies as well as in reviews. With a thorough understanding of the basic concepts of risk assessment, readers are now prepared to read about which risk and protective factors have been found to be empirically associated with juvenile offending and which assessment and risk management strategies appear most promising for child and adolescent populations. The necessary background now in place, these topics are investigated in the next chapter.

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Mary Alice Conroy

Recent years have brought increasing national concern regarding violent behavior in the juvenile population (Borum 2000). Actual statistics in this regard have varied markedly depending upon definitions, specific time periods, and measures used. For example, in 1996, Snyder et al. reported that the rate of serious juvenile crime—particularly homicides—increased a startling 150% between 1985 and 1994. On the other hand, Snyder and Sickmund (1999) later reported rates for the same population were declining between 1993 and 1999. When looking specifically at male offenders, rates have significantly declined since the peak in 1994 (Viljoen et al. 2008). Nonetheless, high profile media attention, often given to serious incidents of juvenile violence, can direct national attention on the issue regardless of frequency.

A more complicated question is estimating the likelihood of juveniles re-offending. It is relatively rare for adolescents who commit violent crimes to go on to chronic criminal careers as adults. In fact, approximately 80% of those who commit violence as juveniles will desist from this behavior by the age of 21 (Borum and Verhaagen 2006). On the other hand, a small percentage of juvenile delinquents (estimated at between 5 and 10%) are found to commit violent offenses at

all stages of development, ranging from early elementary school into adulthood (Borum and Verhaagen 2006). Most common, however, is what is known as “adolescent-limited” violence that begins and ends during the teenage years. Exact data on recidivism within this group is difficult to derive for four reasons: (a) adolescents tend not to be consistent in choice of victims or behavior across situations; (b) even somewhat serious offenses often result in the individual being released to family members rather than being arrested; (c) even violent behavior may be treated as an institutional infraction within a school or correctional environment rather than referred to law enforcement; and (d) adolescents are more likely than adults to be referred for some form of diversion rather than being subject to prosecution and entered into a formal data system.

Risk for future violence has become one of the most commonly asked questions in the juvenile justice system (Conroy and Murrie 2007). Juvenile courts frequently request such assessments to assist in determining the advisability of pretrial diversion, final disposition, possible conditions of probation, or placement decisions. Less common, but potentially very consequential, are decisions as to whether a juvenile should be tried as an adult, in which case a risk assessment is generally mandatory (*Kent v. U.S.*, 1966; Salekin and Grimes 2008). Juvenile authorities, tasked with balancing treatment needs of particular juveniles against public safety requirements, also utilize risk assessments to determine what specific factors to target with what services and in

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what setting (Olver et al. 2009). The result has been a dramatic increase in the number of formal risk assessments conducted for the juvenile justice system (Schwalbe 2007). This is likely to increase further with the increasing use of mental health courts.

In the following chapter, the important distinctions between risk assessments of juveniles and those conducted for adults, as well as the distinction between risk assessment and threat assessment, will be explained. This will be followed by discussions of the most salient risk factors, protective factors, and instruments especially designed to measure these. The importance of idiographic factors in any analysis and applications to unique populations (e.g., female offenders, sexual offenders) will be addressed. Finally, attention will be focused on the most important follow-up to risk assessment: risk management.

Juvenile Versus Adult Risk Assessment

Authorities generally agree that risk assessment of juvenile offenders is quite different from risk assessment of adults, requires a somewhat different set of competencies, and may require a different set of management techniques (Borum 2000; Borum 2003; Borum and Verhaagen 2006; Grisso 1998). A major difference is that antisocial conduct is much more common among the juvenile population. In fact, some would suggest that it comes close to being normative (Borum 2000, Viljoen et al. 2008). Whereas history of violent behavior is a reliable predictor for adults, it is particularly challenging to assess risk for any juvenile beyond the adolescent years simply because the majority of delinquent youths—even those who commit serious violence—cease criminal activity after entering adulthood (Borum 2000; Moffitt 1993). Very little evidence exists allowing evaluators to distinguish which juveniles will fall into which group. The American Psychological Association recently submitted *amicus curiae* briefs to the U.S. Supreme Court detailing extensive professional literature

demonstrating the problems with predicting adult behavior based upon adolescent history (American Psychological Association 2004, 2009). Statistically it can be argued that the safest juvenile risk assessment would estimate that all youths are at low risk for reoffending (Grisso 1998). Of course, such an approach would be of no value to the consumer. There is a particular dearth of research for offenders below the age of 13 (Augimeri et al. 2010).

To conduct an adequate juvenile risk assessment, one must be cognizant of the many developmental variables impacting this population. There are enormous developmental changes that take place during the adolescent years that must be considered (Viljoen et al. 2008). Risk factors may vary by age. For example, research indicates that the influence of peers versus the influence of family varies with the stage of adolescent development (Augimeri et al. 2005). This would emphasize the need to re-assess the youth's risk as time passes. Research has demonstrated considerable developmental variability in things such as impulse control, the ability to evaluate risk, and the ability to take the perspective of others (Borum and Grisso 2007). In addition, personality characteristics are much less stable in adolescents than in adults (Borum et al. 2010).

Juveniles ordinarily exist in contexts quite different from those of adults. They frequently live in family constellations, in neighborhoods, and attend schools over which they have little choice. Yet these environments are apt to significantly impact behavior, both past and future. Exposure to violence within the family or to a criminogenic neighborhood may have particularly marked effects on youth in middle childhood (Ingoldsby and Shaw 2002).

Risk Assessment Versus Threat Assessment

Before addressing specific elements critical to juvenile risk assessment, it is essential to clearly distinguish it from threat assessment. Risk assessment is done in response to questions of

the likelihood an individual will commit some general type of crime of violence in the future. However, particularly since the tragic events at Columbine High School and Virginia Tech University, courts and administrative bodies often pose inquiries regarding specifically *targeted* violence (Cornell 2004). Borum (2006, p. 193) explained the importance of this distinction

...because the factors considered and the assessment approach may differ.

...These (threat) assessments should arguably rely on a fact-based assessment approach and may—for a variety of reasons—not rely primarily on base rates or a tally of empirically based risk factors for general violence.

Threat assessments are generally precipitated when a youth comes to the attention of school or juvenile justice authorities due to a concern about the potential for violence toward a particular person or in a particular setting. It is often the case that the juvenile has no prior history of violence but, rather, some type of suspicious behavior has been noted. Threat assessment approaches have been developed primarily by the U.S. Secret Service and its associated mental health consultants. (For additional information, see Borum and Reddy 2001; Vossekul et al. 2002).

Risk Factors

Unlike threat assessment, risk assessment is typically aimed at evaluating risk for future crime and violence generally. Examinees typically have some history of violent behavior to form the basis for the assessment. The following section will address specific factors, both risk and protective, that a mental health professional will need to explore in conducting a risk assessment of a juvenile offender.

Research has identified numerous factors that may put a juvenile offender at risk for future violence during the remainder of his/her adolescence. However, there are a few factors that are discussed extensively in the literature, and these will be discussed here. Consideration of empirically supported risk factors is a critical element of any risk assessment.

Some factors are, by their nature, static. That is, they are historical or otherwise unlikely to change. Examples would include a history of violent behavior or having grown up in a criminogenic, crime-infested neighborhood. Static factors are helpful in conducting an initial risk assessment; however, they are rarely helpful in assessing change over time or the effectiveness of interventions. Dynamic factors, on the other hand, are things which are subject to change over time, and may be the targets of specific intervention. For example, impulsive behavior or specific criminal attitudes would be described as dynamic. Such variables may form the primary focus of risk-management efforts.

The reader should be cautioned that risk factors are of greatest importance when they are cumulative (Augimeri et al. 2010; Conroy and Murrie 2007). For example, Loeber et al. (2005), in a study of 1,500 young men, found that those with four or more risk factors for homicide were 14 times more likely to commit such violence than those who had fewer. Nonetheless, it is possible that a single factor would have over-riding predictive weight (e.g., serial homicide). Given the generally cumulative effect of risk factors, evaluators need to consult a broad amount of collateral information to conduct a thorough investigation.

History of Violent Behavior

As with adults, prior violent behavior is probably the single best predictor of future violence (Borum and Verhaagen 2006; Brame et al. 2001; Conroy and Murrie 2007; Hoge 2010; Viljoen et al. 2008). Long-term studies further indicate that a younger age at the onset of violent behavior is also predictive of repeat offending (Hawkins et al. 2000; Elliott 1994; Loeber et al. 2005). Although not limited to violent behavior, other research indicates that antisocial behavior that begins prior to age 15 is often followed by criminality, substance misuse, and general adverse outcomes in early adulthood (Moffitt et al. 2002) and continuing through age 50 for both violent and non-violent offenses (Samuelson et al. 2010). More predictive than any one type of violence or the severity of

violence is a chronic history of violence across multiple settings (Loeber et al. 2001).

Psychopathic Personality Features

The term psychopathy is generally applied to a constellation of negative personality characteristics commonly found in criminal populations. Hare and Hart (1993) defined it as:

...a cluster of personality traits and socially deviant behaviors: a glib and superficial charm; egocentricity; selfishness; lack of empathy, guilt, and remorse; deceitfulness and manipulateness; lack of enduring attachments to people, principles, or goals; impulsive and irresponsible behavior; and a tendency to violate explicit social norms (p. 104).

As measured by Hare's Psychopathy Checklist—Revised, the construct has been found to be highly correlated with violent reoffending in adult populations (DeMatteo et al. 2010). Two measures of this construct have been developed for use with adolescents: the Psychopathy Checklist: Youth Version (PCL-YV) (Forth et al. 2003) and the Antisocial Process Screening Device (Frick and Hare 2001). Since the publication of the PCL-YV, data have continued to mount indicating that high scores on this instrument are associated with violent, as well as general, recidivism in youth (Gretton et al. 2004; Edens and Cahill 2007).

Despite the aforementioned data, a number of serious concerns have arisen in regard to the use of psychopathy as a violence risk factor in juveniles. First, it is sometimes difficult to distinguish normative adolescent traits (e.g., impulsivity, conflict with authority) from those indicative of psychopathy (Conroy and Murrie 2007). Second, although there appears to be a moderate relationship between juvenile psychopathy and recidivism in adulthood, data remain sparse and there is considerable variability among studies (Edens et al. 2007). Whether this constellation of traits established in adolescence remains stable into adulthood remains uncertain. Third, more research is needed to determine whether the PCL-YV is appropriate for risk assessment among females and ethnic minorities (Odgers et al. 2005).

A final, but major, concern in the use of psychopathy in risk assessments of juvenile offenders is the impact of the label itself. Research indicates the label is both negative and powerful (Boccaccini et al. 2008; Edens and Vincent 2008; Murrie et al. 2007). This opens the question as to whether use of the term becomes overly prejudicial.

Psychopathology

Impulsivity is a major feature of numerous diagnoses commonly applied to adolescents. Impulsivity has been found to be correlated with violent behavior from preadolescence (White et al. 1994) into young adulthood (Brennan et al. 1993). Therefore, the trait of impulsive behavior as part of any psychopathology would enhance risk (Connor 2002).

There is general agreement that many young offenders suffer from some type of psychological disorder (Grisso 2004; Teplin et al. 2002). Research on the relationship of specific diagnoses to youth violence is somewhat sparse. A Conduct Disorder diagnosis indicates the youth is prone to antisocial activities; however, this is more a description of behavior, absent any known etiology or pathology. Bipolar Disorder has been generally thought to manifest as anger and aggression in youth, rather than the more typical mania or depression seen in adults (Vincent and Grisso 2005). However, at the time of this writing that diagnosis was being called into question and being considered for significant revision. Some research would suggest an association between Posttraumatic Stress Disorder and aggression in youth—particularly among females (Cauffman et al. 1998; Vincent and Grisso 2005). However, the data remain preliminary.

Context

As has already been noted, an adequate risk assessment requires that a juvenile be considered in context. Most youth remain, to at least some degree, part of a family unit. Exposure to family

violence, parental criminality, and the early disruption of family relationships are all correlates of later violence (Elliott 1994; Farrington 1989; Hawkins et al. 1998). Negative peer relationships, particularly involving gang affiliations, are also significant (Farrington 1989; Hawkins et al. 2000; Hinshaw and Lee 2003). Neighborhoods where crime is prevalent will expose children to negative role models at an early age and consequently encourage early onset violent behavior (Borum and Verhaagen 2006). Problems in school leading to negative attitudes toward the academic environment are also a factor (Elliott 1994; Hawkins et al. 1998).

Substance Abuse

Substance abuse is strongly associated with recurrent violence in both adults and juveniles. DeMatteo and Marczyk (2005) note a considerable body of evidence indicating that the majority of youth in correctional facilities were abusing some type of substance at the time of their offense. However, evidence also suggests that age may interact with substance abuse as a risk factor. An extensive meta-analysis found that substance abuse was a much greater risk factor for children below the age of 12 than for those between the ages of 12 and 14 (Hawkins et al. 2000). Given the evidence, it might seem that substance abuse would be a critical risk factor for juvenile violence. However, the base rate of substance abuse for juvenile offenders in general is so high that it does not differentiate between those who are likely to act out violently in the future from those who are not (Conroy and Murrie 2007). That is not to say that alcohol or drug abuse may not be a salient precipitant of violent behavior for a particular individual.

Protective Factors

In 2000, Rogers took issue with forensic psychologists who simply looked at empirical factors that enhance the potential for violence while ignoring more positive variables that might

mitigate the risk. Protective factors, as commonly defined, are more than simply the absence of an identified risk factor. Rather, they are positive traits, experiences, or contexts that have been found to reduce the risk for violence in a particular population. A commonly cited definition of protective factors characterizes them as "...variables that reflect involvement with and commitment to conventional society, that control against nonnormative activities, and that refer to activities incompatible with normative transgression" (Jessor et al. 1995). Unfortunately, research identifying particular protective factors is relatively sparse. However, what has been done is primarily in the area of juvenile violence.

One factor that stands out as protective for youth is strong school performance and an overall bonding to the academic environment (Borum 2006; Hoge et al. 1996; Lodewijks et al. 2010; Rodney et al. 2005). Adolescents who are motivated to excel in non-criminal activities and have long-term goals involving education are more likely to realize the negative consequences of violent behavior. Another critical protective element is an established ability to form a close relationship with a positive adult role model, whether in the family, in school, or in the community (Borum 2006; Conroy and Murrie 2007; Hawkins et al. 1998; Lodewijks et al. 2010; U. S. Department of Justice 1995). Forming such a relationship would involve both an ability to engage in social bonding and the ability to see an authority figure in a positive light. It would also indicate an amenability for forming a therapeutic relationship with an appropriate provider. Beyond relationships with individual adult role models, a strong social support system overall has been found to be protective (Lodewijks et al. 2010; Resnick et al. 2004). This would include having positive peer attachments, that is, relationships with other adolescents who are pro-social in orientation and not part of the criminal subculture. It would also include family members who support the juvenile's rehabilitation efforts. In terms of personality traits, resilience appears to play a significant protective role (Borum 2006; Borum et al. 2010). Exploring resilience would mean examining negative events in the adolescent's life and determining the typical response.

Protective factors appear to play a particularly important role when evaluating adolescents who are at high risk for violence. These factors also appear to be stronger in combination.

Structured Assessment Devices

The first instruments designed to assist evaluators in conducting risk assessments were targeted at adults. However, over the past 10 years, a number of these have been developed specifically for the juvenile population. At the present time, both courts and juvenile justice agencies frequently seek some device that has been well validated that will give them the needed risk-assessment information.

Instruments have several distinct advantages. A well-validated assessment device (i.e., one with high levels of predictive validity) will give the evaluator scientific backing for any opinion provided. Instruments assist evaluators in being thorough and avoiding idiosyncratic thinking. Instruments also provide a common vocabulary that can facilitate communication. Significant concerns have been raised about assessments done in an unstructured manner (Borum 1996), and use of a structured approach is much preferred. Finally, instruments usually provide operational definitions of known risk and protective factors.

Some risk-assessment instruments were developed to be strict actuarial devices, while others facilitated the application of Structured Professional Judgment (SPJ). An actuarial device provides a very specific mathematical formula one must use to calculate a number, based upon scores assigned to various factors, that will then correspond to the appropriate risk category. For example, the Youth Level of Service/Case Management Inventory was designed as an actuarial assessment. Its content is empirically derived and results in quantitative estimates of risk, as well as needs (Hoge 2010). An instrument based upon SPJ, on the other hand, provides a scientific, but more flexible guide, to reaching a conclusion. For example, the Structured Assessment of Violence Risk in Youth (SAVRY) is designed

to be just such a guide (Borum et al. 2010). The SPJ approach allows for consideration of individual variables unique to a particular case, whereas the actuarial approach does not. Such instruments will likely require more clinical expertise than a pure actuarial device. SPJ devices may have a scoring system (since such is necessary for research purposes); however, the developers may advise the user that the scores are only for research purposes.

It must be said that no particular currently available risk-assessment instrument for juveniles represents the “gold standard.” Studies have varied in results when attempts were made to compare the instruments. Part of this is simply due to the fact that these are relatively new devices and have not been validated on multiple samples (Schwalbe 2007). Nonetheless, it might be helpful to give a very brief description of two commonly used instruments.

The SAVRY

The SAVRY is an SPJ instrument designed to provide evaluators with a guide to exploring a set of empirically supported risk and protective factors for juveniles. It includes both static (historical) factors and more dynamic (social and clinical) predictors of risk. It also includes six scientifically based protective factors. The factors on the list are not weighted (as elements would be in an actuarial device). Rather, it is left to professional judgment to determine the importance to assign to each area explored. (For a complete description of the instrument, see Borum et al. 2010).

The Youth Level of Service/Case Management Inventory

The YLS/CMI was developed in a fashion similar to its adult counterpart, the Level of Service Inventory—Revised (LSI-R). It is theoretically, as well as empirically, based, applying the “risk/needs/responsivity” principles honed by the developers. Specifically, this paradigm asserts

that a solid risk assessment will address providing services for very high *risk* youth, in a way that considers the unique *needs* of the individual, using an approach to which the individual can best *respond*. It addresses eight domains: offense history, family, education/employment, peers, substance abuse, leisure, personality, and attitudes. Although initially developed as an actuarial, the authors agree it can also function as a useful guide in the application of SPJ. The final section is specifically formulated to assist the user in developing targeted interventions. (For a complete description of the instrument see Hoge 2010).

Idiographic Factors

Empirically supported risk factors are by their nature nomothetic, that is, based on group data. In his formulation of principles for forensic assessment, Heilbrun (2001) emphasized the need to use case-specific data in addition to that gleaned from empirical studies. Idiographic factors are those unique to an individual or the particular context. For example, psychosis is relatively rare in juveniles and most major symptoms of psychosis have not proven to be empirically supported violence risk factors in any population. However, in the case of a juvenile who is actively psychotic and commits murder based upon a delusional belief, it would certainly be a major issue to consider. In fact, it might be the single most important issue to address. To use another example, suppose a juvenile with a serious history of violence acquires a significant disability that significantly restricts mobility. Depending upon the exact disability, this could reduce his risk of future violence from high to low. Substance abuse could be a huge risk factor for a particular individual if it is found that the person is addicted and commits all of their violent acts while intoxicated.

Context must also be considered as an idiographic factor. Will the youth be functioning in a crime-infested neighborhood or in the structured environment of a state school? Context can change and will sometimes be changed intentionally to reduce risk. If context changes, will access to victims be reduced?

One method that will help to uncover idiographic risk factors is an anamnestic analysis. An anamnestic approach is “a specific type of clinical assessment whereby the examiner attempts to identify violence risk factors through a detailed examination of the individual’s history of violent and threatening behavior” (Otto 2000, p. 124). A conscientious evaluator will meticulously examine each instance of major violence in the individual’s history to determine what led up to the incident and what triggered the egregious behavior. The result should be an understanding of both how and why the person became violent. Frequently, this will involve some interaction of traits unique to the individual and a particular context or situation.

Special Populations

Significant research on the factors that contribute to and predict risk of juvenile violence has only begun to accumulate in the last two decades. To date, this research has focused primarily on male offenders from the mainstream population. Much of the research also refers to criminal activity in general and, at best, breaks the events vaguely into violent and non-violent categories. Courts and administrators, as well as mental health professionals, should keep this in mind when applying data to females, ethnic populations, or those who specialize in particular types of offenses.

Female Offenders

Research on violence among juveniles has focused almost exclusively on males because they appear to commit the vast majority of violent offenses in this age group. Some data suggest that violence among female juveniles has been increasing (Odgers et al. 2005). Yet, there is some evidence that female violence frequently goes unreported (Lodewijks et al. 2010), making it more difficult to research. What little work has been published indicates there may be significant differences.

An early meta-analysis indicated many of the same risk factors that apply to males also apply to

females (Simourd and Andrews 1994). However, additional investigation has revealed subtle differences. History of violence and early age of onset may be slightly less a predictor for females than for males (Odgers et al. 2005). A history of sexual abuse, mental disorder, and problems with attachments may also be affecting females more than males (Odgers et al. 2005). Female violence is more likely to be directed at family members or intimate partners (Skeem et al. 2005). Incarcerated young women are much more likely to have been abused than their male counterparts, and evidence indicates that trauma may be closely related to violent behavior by this population (Borum et al. 2010). Disruptive attachments early in life may have greater effects on girls than on boys (Moretti and Odgers 2006).

Only limited research has been conducted on the validity of various risk-assessment instruments with juvenile females. Even when results from females were reported, the sample was often relatively small. Olver et al. (2009) found some support for the use of the YLS/CMI with female youths. Findings regarding the PCL-YV have been mixed, and it is difficult to draw conclusions (Olver et al. 2009; Odgers et al. 2005). For children under the age of 12, a set of gender-specific risk-assessment tools (EARL-20B and EARL-21G) have been developed and show some early promise (Augimeri et al. 2010).

Juvenile Sex Offenders

Making a scientifically grounded assessment of a juvenile's risk of sexual reoffense is difficult. Juveniles are not only heterogeneous as a group, but even less likely than adults to select a particular type of victim (Wijk et al. 2006). Juvenile recidivists are much more likely than adults to engage in a variety of criminal activity. Although it may be possible to assess risk for violence in general, it is rarely possible to assess risk for an additional sexual offense (Witt and Conroy 2009).

Instrument development for this population is still in its infancy. A meta-analysis by Olver et al. (2009) found the weakest predictive accuracy to

be for sexual recidivism. Borum et al. (2010) admit that the SAVRY has been disappointing in assessing risk for sexual recidivism. Some specialty instruments have been developed for this population, most notably the Juvenile Sex Offender Assessment Protocol (JSOAP-II) and the Estimate of Risk of Adolescent Sexual Offense Recidivism (ERASOR). Although research initially yielded some moderate support, later studies have called into question the predictive validity of either instrument (McCoy 2007).

Risk Management

It has been strongly argued that the ultimate reason for conducting a risk assessment is *preventing* recidivism rather than simply *predicting* it (Douglas and Kropp 2002; Olver et al. 2009). Given that most adolescent offenders desist from criminal activity and given that they are personally somewhat malleable during adolescence, it would seem that intervention may be both short term and potentially effective. A well-grounded risk assessment should always be at the heart of any risk management plan. Risk management is best achieved by taking each risk factor that is potentially dynamic and designing an intervention to address it (Conroy and Murrie 2007). One of the most frequent mistakes in risk management is to select targets to be addressed based on intuition or programs that happen to be readily available.

Given that adolescence is a time of rapid change it will be necessary to repeatedly reassess risk and the effectiveness of any risk management plan at short intervals (Vitacco and Vincent 2006). Given that early onset of violent behavior is a key risk factor, early activation of a risk management plan is also critical (Hoge and Andrews 1996).

It is in the best interests of both the juvenile and the larger society that the most effective interventions be selected and modified as needed. Some well-intentioned interventions may, in fact, be counterproductive. For example, evidence suggests that programs aimed solely at raising

self-esteem, programs designed to induce fear of punishment, and peer counseling with deviant peers may actually cause harm (Viljoen et al. 2008). On the other hand, Sheidow and Henggeler (2005) cited evidence strongly supporting multi-systemic therapy, multidimensional treatment foster care, and functional family therapy as community-based programs effective in reducing recidivism risk. Whatever the intervention selected, it is essential that it is designed to identify the specific factors that put this individual at risk for future violence.

Into the Future

Risk assessment is becoming a regular part of the forensic armamentarium utilized by courts and criminal justice agencies. Much progress has been made in recent years to provide a strong scientific basis for recommendations made. Anyone purporting to assess violence risk in juveniles must be intimately familiar with the available science. They must also recognize the changing nature of the published data and strive to remain current.

To be competent in evaluating juvenile risk, the mental health professional must be fully cognizant of the most current empirical data regarding factors found to elevate the risk for future violence in this population and the relative salience of each. Protective factors are too often ignored but should be explored and integrated into any risk assessment. Juveniles are a very heterogeneous population, and evaluators must consider whether available data can be applied to a particular sub group (e.g., females, ethnic populations, offenders with very specific victims). Juveniles are also individuals, and what triggers violence in a specific person or context may be unique. Courts are becoming increasingly interested not only in risk assessment but in developing strategies to mitigate risk. Risk management addresses ways in which risk can be reduced while at the same time allowing the target individual the least restrictive and most therapeutic environment. Finally, evaluators need to be clear about the limitations of any assessment performed.

Much more research is needed to enhance risk-assessment strategies and tools. It is essential that juveniles be recognized as a very heterogeneous group and that research address the many components. Structured assessment devices need to be expanded and validated on multiple samples. Researchers need to continue educating, not only practitioners, but potential consumers of risk-assessment data on the key findings.

Finally, risk management needs to be adapted to flow directly from risk assessment. Precious time can be wasted and juvenile offenders harmed by programs that do not address their level of risk, do not address what is needed to reduce the specific risk factors, and are not tailored to the target individual.

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Becoming More Therapeutic: Motivational Interviewing as a Communication Style for Paraprofessionals in Juvenile Justice Settings

16

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LINE STAFF: What's wrong, Joe?
JOE: My mom didn't show up again
for visitation.
LINE STAFF: I'm sure she has a good reason.
I bet she'll be here next week.
JOE: Whatever.
LINE STAFF: Maybe she got busy.
JOE: I doubt it.
LINE STAFF: Or had to work.
JOE: She don't work.
LINE STAFF: I'm sure it'll be all right. Just keep
working your program. Maybe
I can come visit you Sunday.
JOE: rolls his eyes.

Introduction

Juvenile justice across the nation is becoming less punitive and more therapeutic (Hsia and Beyer 2000). Systems were once about punishment,

retribution, and compliance obtained through coercion and fear. The culture of many facilities was of an adversarial nature: “us” vs. “them.” Now, the focus is on rehabilitation, meaningful social interactions, natural, logical consequences, and staff as active participants in the change process (Walters et al. 2007). Efforts to reform the system include reducing the use of secure-care facilities in favor of community-based programs, such as multisystemic therapy and multidimensional treatment foster care programs (Center for Children's Law and Policy,) as well as improving the conditions of youth requiring 24-h surveillance, such as the Missouri Model (Annie E. Casey Foundation 2008). Juvenile justice systems are moving toward the use of evidence-based practices, including interventions such as the Intensive Aftercare Program (Wiebush et al. 2005) and Thinking for a Change (Bush et al. 2011). Yet, models outside of corrections may offer valuable applications in both community and residential settings. For example, motivational interviewing (MI) (Miller and Rollnick 2002), originating from tobacco use and alcohol abuse treatment programs, is widely applied in various therapeutic milieus, such as group and individual counseling in substance abuse (e.g., Foote et al. 1999; Miller et al. 2003) and mental health settings (e.g., Handmaker et al. 2002) as well as brief, targeted interventions developed for healthcare settings (Resnicow et al. 2002).

Motivational interviewing is “a client-centered, directive method for enhancing intrinsic motivation to change by exploring and resolving

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ambivalence” (Miller and Rollnick 2002, p. 25). While the core skills applied in MI are common counseling techniques, such as the use of empathic reflection and maintaining positive regard for the client, the philosophy (or the “spirit and principles”) of MI is crucial to understanding *how* the counseling techniques are applied. Rather than viewing the client as either ready for change or not, MI techniques are used in a directive manner to find the “diamond in the rough” (any evidence that the client might desire change) and polish the gem in order to build motivation and commitment to change. Resistance to change is viewed as an interpersonal phenomenon which the counselor must learn to skillfully reduce by “rolling with resistance.” The counselor seeks to elicit “change talk;” to uncover what the client is “motivated for” rather than asking the client, “Why don’t you want to change?”

Juvenile Justice and Motivational Interviewing

Several challenges exist when working with offenders of any age. First, individuals in the criminal justice system are often mandated to receive treatment and are frequently viewed by practitioners as unmotivated or resistant to change, resulting in case plans or treatment plans that tend to dictate to the client with little input from the offender. Second, offenders who are in secure settings are “captive clients” and the perception may be that collaboration with the client is not necessary (Ginsburg et al. 2002). Lastly, there is the temptation to “fix” the offender; to be the expert who knows best; who presents the arguments for change and tells the offender what he/she should do (Ginsburg et al. 2002). At its worst, the justice system has relied upon confrontational approaches justified as necessary “to get through” to offenders; approaches that would be unacceptable as treatment for most mental health disorders (Viets et al. 2002).

All of these challenges create an adversarial environment that does not promote advancement of the reformation of the juvenile justice system. MI, however, lends itself well to managing

resistance by enhancing engagement and adherence in treatment (Carroll et al. 2006; Zweben and Zuckoff 2002) and ultimately facilitating change in a respectful, therapeutic manner. The amount of literature published in the past 10 years demonstrates the great interest criminal justice researchers, administrators, and practitioners have placed on MI, including MI texts and training manuals written for adult and juvenile corrections (McMurrin 2002; Ginsburg et al. 2002; National Institute of Corrections Academy 2009; Bogue and Nandi 2003; Ferns et al. 2004; NIC resources) and probation/parole settings (Clark 2005; Clark et al. 2006; Harper and Hardy 2000; Walters et al. 2007).

While MI is widely applied in adult and juvenile criminal justice settings (McMurrin 2002; Walters et al. 2007), much of the empirical studies of MI’s effectiveness with criminal justice populations have primarily focused on substance abuse treatment (McMurrin 2009). For example, Stein et al. (2006) examined treatment engagement in incarcerated adolescents. Youth received either a single motivational interviewing feedback session or a single relaxation training (RT) session, both followed by treatment as usual. Adolescents who received the MI session rated the therapeutic relationship better than youth who received the RT session (Stein et al. 2006). Additionally, youth who received the RT session demonstrated significantly more negative treatment engagement compared with the MI group (Stein et al. 2006). Negative treatment engagement is defined as “counternormative talk and reference to delinquent activities” during treatment which result in iatrogenic effects of intervention groups (Stein et al. 2006, p. 26).

The avoidance of labeling offenders (labels are believed to reduce motivation for change) is another benefit of applying MI in criminal justice settings. Additionally, MI allows the therapist to view motivation as fluid, multifaceted, and malleable rather than “in denial” and “not ready for treatment.” MI ultimately offers a method for interacting with offenders in a manner more consistent with the cultural change desired within juvenile justice and the broader criminal justice system (Mann et al. 2002).

Paraprofessionals and Motivational Interviewing

Researchers have examined the training of paraprofessionals (Cooperman et al. 2007), mid-wives (Kropa 2007), and school personnel (Burke et al. 2005) in the use of MI techniques in brief counseling interventions toward targeted behavior change. Additionally, the training of lay people as peer counselors can be seen in the National Cancer Institute's (2005) *Body and Soul* curriculum that incorporates MI techniques as core skills in the training modules. The *Body and Soul* project examined a nutritional intervention targeted at African-American church members in an effort to reduce the cancer rate. Results found that attendance at project events, receipt of educational materials and self-reported quality of the MI calls contributed to increases in fruit and vegetable intake and decreased fat consumption among African-American church members (Campbell et al. 2007).

Another trend in the implementation of MI by individuals outside of the counseling profession is the use of MI techniques in residential therapeutic settings (Wood et al. 2011). In this setting, MI skills are viewed less as a counseling approach and more as a communication style to reduce resistance and increase client engagement in the therapeutic milieu. MI can be described as a "way of being with people" (Burke et al. 2002). Therefore, the learned clinical skills are not used in targeted interventions, but rather "on the fly" to communicate better with clients. The use of MI as a communication tool has the potential to enhance the reform efforts toward a more therapeutic culture within the justice system (Mann et al. 2002).

Thus, very little empirical research on MI has been conducted with juvenile justice populations (Alexander et al. 2008; Feldstein and Ginsberg 2007). However, the efficacy of MI in related fields, including use by paraprofessionals, lends support to its application in juvenile justice settings.

Implications for Training

Before designing a plan to implement MI, several questions arise. Do we train direct care staff the

same way we train counseling staff? What skills and background does the direct care staff need? How will we adapt our training methods? What type of follow-up is needed to encourage and enhance implementation of the techniques?

The literature includes a plethora of training outcomes, supervision techniques, and barriers and facilitators to implementation at the agency level. A recent systematic review of the MI training literature revealed that the types of professionals targeted for training included physicians, medical students, nurses, dietitians, medical assistants, mental health professionals, substance use professionals, and probation officers (Madson et al. 2009). Most studies describe training individuals who have advanced degrees (beyond bachelor degrees). The length of training varied from less than 8 h to more than 24 h, averaging 9–16 h of formal training, and may include follow-up/booster sessions and ongoing contact with the trainer as a coach/supervisor. Training results included increases in participant confidence in using MI, MI knowledge, interest in learning more about MI, intention to use MI, and actual integration into one's practice based on self-report (Madson et al. 2009). Objective evaluations have found improved MI-related skills (Miller 2000; Moyers et al. 2005).

There is much to consider when an agency decides to train staff and implement a particular therapeutic approach. When an agency or program decides that a change is needed, the process of diffusion begins (Rogers 2003). From an organizational standpoint, an agency's administration may choose to include staff input at this point to discuss options to address the needed area of change. Once a decision is made to implement a new practice (in this case, MI), the dissemination process begins—usually involving training. Some key factors to promote implementation and adherence include administrative support for the new approach, resources, staff time devoted to training and ongoing supervision (Berger et al. 2009), having a champion or "change agent" (ATTC 2000), and the "goodness of fit" of MI with the individual's philosophy of how people change (Moyers and Yahne 1998; Wood et al. 2011). As mentioned previously, the provider may believe that confrontation is the only way to produce

change in a juvenile. This approach is often reinforced when the staff person feels he or she is “right” and “wins” when the youth complies, albeit temporarily. Thus, the challenge in training line staff is to help staff accept the spirit and principles of MI as a client-centered approach; that their job is not about *making* someone change (or comply); but rather helping to elicit and build one’s motivation for change.

Application of Motivational Interviewing in the Milieu

Let us review the scenario presented at the beginning of this chapter. The script was developed based on the experiences of the authors in a secure-care setting. We use the scenario to role-play or act out common “traps” staff may find themselves falling into—with the best of intentions, yet lead the client away from change. After each script is acted, we ask the training participants to tell us what happened in that scenario. How did it work for the youth? Was it helpful to the youth? Did it facilitate change? In the opening scenario, the staff person attempted to placate the youth; to “fix it” for him. Is “fixing it” what the youth needs to learn in order to cope? Did the youth feel understood? What could the staff person do instead? We teach participants that *empathy* is the key to positive communication. While reflections are not the only important counseling skill used in MI, it can be a significant determinant of the client’s response to treatment (Miller and Rollnick 2002). Let us try that again:

LINE STAFF: What’s wrong, Joe?
JOE: My mom didn’t show up again for visitation.
LINE STAFF: Oh, I’m sorry to hear that. Must be pretty disappointing.
JOE: Yeah.
LINE STAFF: What do you think happened?
JOE: I don’t know. Shrugs his shoulders.
LINE STAFF: Must be hard to imagine why she couldn’t come today.

JOE: Yeah, not like she works or doesn’t have a ride or something. I just don’t get it, man.
LINE STAFF: There’s no clear reason to you.
JOE: Nods his head in agreement.
LINE STAFF: What do you say we get some games out until visitation is over?
JOE: Yeah, sure. That’s cool.

Imagine the line staff having only those few moments to help a youth with a situation that could conceivably lead to an outburst later in the day had the youth’s disappointment and frustration not been acknowledged. Notice the staff person did not *solve* the youth’s dilemma. And hopefully the staff person will inform the youth’s case manager or counselor regarding the youth’s reaction to the missed visit. The line staff simply acknowledged the youth’s feelings. By attempting to show the youth we understand and we are listening, the staff person has further developed his/her rapport with that youth, and reduced the chance of future resistance from that youth, particularly as the staff person attempted to redirect the youth into another activity.

Training

Miller and Moyers (2006) describe eight stages in learning MI. The training of beginners (such as line staff) will involve the early stages with future training sessions focusing on later stages (Miller 2008). The first stage is “Overall Spirit of MI” which teaches participants about the spirit of MI (or ACE: autonomy, collaboration, and evocation; see Table 16.1) and the principles (or EARS: Express Empathy, Amplify Ambivalence, Roll with Resistance, and Support Self-Efficacy; see Table 16.2). The developers of the *Body and Soul* training DVD made the decision to avoid discussing theory and instead stripped the concepts down to the basics and explain why these techniques are helpful and motivating. Whether or not the exclusion of the spirit (ACE) and principles (EARS) during workshop sessions is detrimental to the implementation of MI is not known.

Table 16.1 Spirit of MI

ACE	Description
Autonomy	Responsibility for change is with the client Client is free to take counsel—or not Client presents arguments for change
Collaboration	A partner-like relationship with the client Exploration rather than exhortation Support rather than persuasion or argument
Evocation	Counselor does not IMPART things (wisdom, insight, reality) Find these things within and draw them out of the client Evoking, calling forth things within the client

Table 16.2 Principles of MI

EARS	Description
Express empathy	Seeking to understand the client's feelings and perspectives without judging, criticizing does not mean agreement or approval. Acceptance and respect builds self-esteem and rapport
Amplify ambivalence	May involve identifying and clarifying the <i>person's own</i> goals and values which are in conflict with his behavior
Roll with resistance	The client is not an opponent to be outsmarted or defeated Your response will influence whether resistance increases or diminishes
Support self-efficacy	Support the client's belief in his or her ability to succeed Hope and faith are important elements of change

Miller and Moyers (2006) assert that learning the spirit and philosophy of MI is the first step in the learning process and have included it in all of their training on MI. It is also the opinion of the authors that learning ACE and EARS is an integral part of understanding MI as a therapeutic style to be followed by staff in the residential setting. The focus on ACE helps line staff identify the value of autonomy of the youth, and collaboration between staff and youth in promoting behavior change—concepts that were likely not trained or encouraged for staff who previously worked in traditional, correctional settings. Additionally, the principles, EARS, provide a guide for using the core counseling skills described in the second stage.

The second stage of learning MI is “OARS: Client-Centered Counseling Skills.” In this stage, participants become more comfortable practicing OARS: open questions, affirmations, reflective listening, and summarization. Depending upon the length of training available and the level of staff to be trained, the third stage may be targeted as well, “Recognizing Change Talk and

Table 16.3 Stages of learning MI

Getting the spirit of MI
Developing client-centered skills (OARS)
Recognizing change talk
Rolling with resistance
Developing a change plan
Consolidating commitment
Integrating MI with other interventions

Resistance.” This stage builds on the participants’ skills in identifying change talk: desire, ability, reasons, and need for change. The third through eighth stages (see Table 16.3) can be targeted in future training sessions or “boosters” to gradually build staff skills. Additionally, it remains to be seen how valuable these advanced skills are for line staff that are supporting the work of the counselors, not actually providing the individual therapy.

Miller (MINT 2004) suggests that to provide an introduction to MI, allow 2 h to 1 day. More advanced training levels require 2- to 4-day workshops, such as advanced clinical training,

Put an E, A, R, or S in front of the statement that best represents that aspect of EARS. Each letter will be used only once.

____ “I noticed yesterday that you walked away from your peer when he was trying to make you give him your snack. You handled that well.”

____ “It’s difficult for you to understand the judge’s decision.”

____ “You’d like to stay out of trouble, and you also aren’t sure you can avoid trouble and the people you’ve been hanging out with.”

STAFF: “Sounds like you’ve made up your mind.”

Fig. 16.1 EARS activity

supervisor training, and training for trainers. In the authors’ experience, the length of time devoted to training MI is dependent upon the experience level of the staff to be trained, as well as how the particular system has responded to the reform efforts. Line staff workers who continue to be resistant to the ideas presented in the reform of the system will have greater difficulty adapting their supervision styles and “buying into” the spirit and principles of MI. Some line staff may require a considerable amount of time to assimilate MI concepts into their beliefs about juvenile supervision, and may need substantial support in applying the skills during training role-plays. These staff will also need a great deal of “on the job” support and skills reinforcement beginning soon after the formal training sessions.

Basics of Motivational Interviewing

ACE and EARS. To help staff understand what the “spirit” (or ACE) of MI looks like, a scripted scenario can be used. By having a couple of participants each read a role in a scripted scenario, trainee engagement in the learning process can be enhanced as well as providing a realistic situation from which to learn about the therapeutic

aspects of ACE. To help trainees apply the principles (EARS), sample statements are used to identify which aspect of EARS is best reflected (see Fig. 16.1). This helps participants better identify how the principles may be enacted.

OARS. There are many activities to practice the counseling skills described as OARS. Each skill is explained and then demonstrated. It is helpful to demonstrate the application of these skills in an unscripted, live role-play. It is difficult to find video demonstrating MI with an adolescent client. Vignettes found on MI training videos (for example, Miller et al. 1998) are *counseling* sessions. It is the experience of the authors that direct care staff does not relate to vignettes and role-plays that sound like a counseling session. Additionally, counseling staff participating in facility-based training may not relate to vignettes in which the client does not act like the juveniles found in their facility.

Open-ended questions. When teaching open-ended questioning, it is helpful to ask trainees to create open-ended questions from sample closed-ended questions relevant to their work environment (see Fig. 16.2). For example, “Do you like being here?” Participants can create several

Fig. 16.2 Open-ended questions**Open - Ended Question Activity**

Closed - Ended Question	Open - Ended Question
Do you get along with your mother?	
Do you like the program here?	
Did your talk with the group go well?	
Where were you in your 4 th hour class?	
Do you like being here?	
Do you want to finish school?	
Do you want to tell me about your phone call?	

different options to form this question open-ended, such as “What do you think of it here?” “How do you like being here?” and “Tell me your thoughts about being here.” While this may seem basic, line staff may not have any previous training in communication techniques and find it challenging to learn to distinguish the difference between closed- and open-ended questions as well as understand the therapeutic value. Staff who demonstrate competency in forming open-ended questions can assist fellow trainees during classroom activities.

Affirmations. Troubled youth often hear what they are doing wrong and how they should behave differently. Research shows that positive reinforcement is more reinforcing than punishment (Bandura 1969). Affirmations, or positive judgments, are an important part of building self-efficacy in our youth. One simple activity to practice affirmations is having the training class share an affirmation about each other. The participants can either pair up and share an affirmation with each other, or participants can simply volunteer an affirmation about their training class. The trainer can also use a “card sorting” exercise (Downey 2008). First, develop a list of positive attributes and create enough sets of these attributes using index cards sufficient for class size. Each class member should select several cards that represent qualities descriptive of him or her. Discuss why he or she selected particular qualities, how they are important to him/her and

how they may be used in reaching one’s goal for change. Another option is to have participants choose cards randomly, categorize the cards and discuss (1) which qualities are true for you now, (2) select one quality and talk about a time you best upheld that characteristic, and (3) select qualities that you would like to work on or further develop (Downey 2008).

Reflective listening. Teaching reflections can be the most challenging aspect for nonclinical staff learning MI. MI is often described as simple, but not easy to learn (Miller and Rollnick 2009). The authors often take a little more time walking through this skill. We find that reflections are most unlike a person’s natural communication style, and line staff may perceive this skill as “psychologist talk.” Most MI trainers will teach various levels of reflection (e.g., simple, double-sided, and exaggerated). The authors, however, suggest that when direct care staff are less likely to have previous education and training in basic counseling skills, the training should focus on making simple reflections, such as restating, rephrasing, and guessing emotions to express empathy. Start with sample statements the juveniles may express. For example, the youth states, “The dorm supervisor is always on me, asking ‘Where you supposed to be?’ She’s picking on me.” The trainer asks participants to create a reflective statement. Multiple responses should be collected and processed to identify whether the responses represent reflective listening skills.

For additional practice, a “reflections-only round robin” can be used (MINT 2004). The trainer role-plays a client by stating something they are ambivalent or unsure about changing. Going around the room, the first trainee will respond with a reflection to the trainer’s statement. The trainer will then respond to the reflection. The next trainee will respond to the trainer’s last statement, and so forth. Skip any trainee who becomes stuck and come back to him/her. Trainees may require some coaching in developing appropriate responses.

Another reflection activity similar to the “round robin” is “batting practice” (MINT 2004). In this activity, the training class is lined up in a single row, and divided in half with the line leaders facing one another. The trainer instructs which line will portray the client and which line portrays the staff person. The first “client” (or line leader A) pitches a resistant comment to the staff person he/she faces. The staff person (line leader B) responds using a reflective statement. For example, the “juvenile” may say, “I’ve asked for a new pair of tennis shoes for 3 days and no one seems to have time to get them.” The “staff” may then reply, “You sound frustrated because it seems staff aren’t listening to what you say you need.” The first set of line leaders then step to the back of the opposite line and the next set of “juvenile” and “staff” role-play a resistant comment and a reflective response. Thus, the activity continues until all participants have had the opportunity to provide a staff response. Trainers can provide coaching or discussion about each reflection, and can provide support to those staff who are struggling.

Summarization. Summarization draws together the person’s own perspectives on change. Summarization is a special form of reflection that helps to recall the conversation, think of new ideas, plan next steps, and feel more confident about moving forward (Miller and Rollnick 2002). Presenting several samples of summarization may be helpful. Practicing summarization requires that trainees form groups, typically triads in which members take turns role-playing client and staff along with one member acting as

observer to record the number and type of MI-consistent and nonconsistent skills (see Fig. 16.3). Since many trainees may be new to the care of juveniles, index cards with brief scenarios are provided (see Fig. 16.4 for examples). The triads conduct the role-play for approximately 3 min. When the trainer calls “time to summarize” the trainee role-playing the staff should summarize the session to that point. The observer then shares his/her observations of the use of OARS and any responses that were inconsistent with MI.

Traps. Miller and Rollnick (2002) present several “traps” that inhibit motivation and can lead to increased resistance to change. These traps are *question–answer*, *taking sides*, *premature focus*, *blaming*, *expert*, and *labeling*. In the *question–answer trap*, the counselor asks a series of questions to which the client provides only short answers. This may result in the client feeling interrogated. Staff members who argue for a particular change or side with another individual are falling into the *taking sides trap*. In this trap, the client will perceive the counselor as an adversary. For youth in juvenile justice, the client has lost his advocate. In the *premature focus trap*, the counselor focuses too quickly on a specific problem or aspect of a problem. This could result in an increase in client resistance or focusing on an unnecessary or secondary issue. The *blaming trap* can occur in juvenile justice settings; particularly, when blaming is confused with accountability. Juveniles will likely blame others for their problems. Additionally, a counselor may wish to show the client how he or she is at fault. This is not helpful to enhance engagement and does not promote accountability with the youth. The counselor in the *expert trap* conveys the impression of having all the answers (Miller and Rollnick 2002). While there is a time for the counselor to give an opinion or advice, the client is viewed as the expert. The authors created a trap titled the “Fixing Trap” (as seen in the vignette at the introduction of this chapter) to bring attention to the tendency of nonclinical staff to placate juveniles in an attempt to “fix” the juvenile’s feelings, or to “fix” the problem by offering solutions without

Name of participant in "staff" role: _____

Name of observer: _____

<i>Technique</i>	How many times technique used?	Comments
Open-ended questions		
Affirmations		
Reflections		
Gave advice/suggestions		
Asked closed-ended questions		
Tried to make him feel better: "It'll be all right"		
Argues his/her side: "Yes, but...."		
Lecture/Explains to the youth rather than elicit from him		

Fig. 16.3 Triad exercise

<p>SCENARIO</p> <p>The youth is having problems with another youth on the dorm. The youth, who was his best friend on the "outside," is also his co-defendant, and was responsible for the drug deal which put them in the facility.</p>	<p>SCENARIO</p> <p>The youth gets a phone call from his mother telling him she was evicted and has to move out of their apartment. She has no money.</p>
<p>SCENARIO</p> <p>The youth was trying to help another youth through a problem. They continued their discussion in the classroom, and as a result, got in trouble with the teacher. When trying to explain the situation, a security staff intervened and the youth was written up for disobedience.</p>	<p>SCENARIO</p> <p>The youth has several medication refusals and tells you he doesn't like the side effects of the medication he's taking.</p>

Fig. 16.4 Sample scenarios

Table 16.4 DARN-C: Types of change talk

Type	Example statement
Desire	“I don’t want my anger to get out of control like that anymore.”
Ability	“Once I make up my mind to change, I know I can do it.”
Reason	“I need to do this for my baby. I need to stay out of jail for her sake.”
Need	“If I don’t change my ways, I’m going to end up here again.”
Commitment	“I can do this. I am going to make this change.”

first hearing the youth and enhancing his ability to solve his problem. This trap, however, can fit with Miller and Rollnick’s (2002) *expert trap*. Lastly, the addictions field tends to fall into the *labeling trap*: trying to convince the client that he or she is an alcoholic or an addict. In juvenile justice, labels such as “thug,” “no good,” “stupid,” and “little criminal” are equally as unhelpful.

The authors created scripts for each trap to demonstrate these communication barriers as they might be seen in a residential setting with juvenile offenders. These scripts were created based on the experiences of the authors working in the setting as well as observations of staff who have engaged in these traps while communicating with the juveniles in their care.

Follow-up. It is important to remember that a workshop alone is insufficient to learn and apply MI techniques. Support and coaching in the workplace should follow training (Miller et al. 2006). Future in-service training can provide “boosters” to refresh line staff on the concepts and techniques of MI as well as gradually introduce more complex skills depending upon the development of the line staff. For example, in-service trainers may focus on stage 3, “Recognizing and Reinforcing Change Talk” (Miller and Moyers 2006). As with the scripted “traps,” similar role-plays can be created to demonstrate types of “change talk” (characterized by desire, ability, reason, need, and commitment; see Table 16.4) followed by group triads for role-play practice. The observer can use a recording sheet similar to Fig. 16.3 except with the five kinds of change talk listed.

A model of supervision should be considered when implementing MI with line staff. Traditionally,

clinical staff receives clinical supervision, and line staff receives “training” through preservice and in-service training events, administrative supervision, and possibly mentoring. Supervision can help staff build their MI “muscles.” The development of a model for clinical supervision of line staff is of interest to the authors. From the literature on clinical supervision, we can consider key methods for supervision and determine what will work best for the agency’s needs and available resources. Relevant methods for line staff include direct observation, case consultation (structured presentation of a situation) or verbal self-reports the line staff brings to the supervision session. Additionally, co-facilitation and modeling in the general milieu may be helpful, as well as role-playing during supervision sessions. Similar to videotaping of counseling sessions, some settings may have surveillance video that may be useful to process certain incidents that occur between staff and juveniles. Methods such as written reports may be less useful, although may provide a starting point for the supervision sessions. Resources are often limited when large numbers of line staff are required for 24-h care, therefore establishing a group supervision schedule is likely the most practical use of resources. It is the belief of the authors that investment in weekly, biweekly or monthly supervision will ultimately pay off in terms of staff development and retention.

Limitations

MI is increasingly popular for counselors and probation/parole officers due to the resistance to change faced when working with criminal justice populations. This popularity, however, does not mean that it is a comprehensive approach to treatment. MI is a “particular tool for addressing a specific problem: when a person may need to make a behavior or lifestyle change and is reluctant or ambivalent about doing so” (Miller and Rollnick 2009, p. 136). Additionally, when working with difficult youth, other “tools in the toolbox” are needed. Communication styles can be broken into three styles (1) instruction, (2) listen, and (3) guide. The usefulness of each depends

upon the situation. Role-plays can be useful to help staff learn when (and how) to use MI skills, yet working with the juveniles in the milieu presents its own challenges as situations are not so neat as they are in the training classroom. Each youth brings his/her own traits, characteristics, and issues to the interaction as well as the staff person's characteristics and personal communication style. The agency's training program should consider how these communication styles will be addressed in the curricula.

Summary

The application of MI in criminal justice settings is well-documented. William Miller stated, "I am, on reflection, particularly thankful that there seems to be interest and openness to a personally respectful MI approach within criminal justice settings" (Walters et al. 2007, p. xiii). There is growing empirical evidence of the application of MI by counselors and probation/parole officers in the criminal justice setting and by paraprofessionals and trained peer counselors in health settings. Wood et al. (2011) found many agencies in Southeast Louisiana training line staff in MI techniques to work with adult and adolescent substance-involved clients. The empirical evidence supporting the training and implementation of MI by line staff is lacking; however, the literature supporting the efficacy of MI in general is quite positive. This chapter discussed how MI techniques may be applied by line staff as a communication style in the general milieu as well as implications for training in MI. More research is needed to test the efficacy of training line staff as well as demonstrate the clinical impact of implementing MI in juvenile justice settings.

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At the Junction of Personality Theories: Working with Juvenile Offenders

17

Elena L. Grigorenko

Rule breaking (Tremblay 2010), impulsivity, need for stimulation, social immaturity (Forth and Burke 1998; Skeem and Cauffman 2003), and oppositional behavior within the context of autonomy seeking (Chen 2010) and identity development (Josselson 1989) are considered by many developmentalists to be important components of normative adolescence. In general, familial and societal sensitivity to these behaviors is rather high and societal structures tend to exercise a considerable amount of tolerance and forgiveness toward such developmental events when they occur during adolescence (Wästerfors 2009). Yet, the majority (if not all) of the developed and many developing countries (Feld 1999) have a juvenile justice system (United Nations 1985, 1990a, b), according to which certain acts committed by juveniles—typically defined as individuals up to 17 years of age (United Nations 1989)—are singled out because of the severity or repeated nature of their acts against societal rules, and these acts are dealt with legally. There are multiple points of entry into the juvenile justice system; the individuals within this system are referred to as juvenile offenders, meaning that they have offended societal rules and these offenses were serious (or frequent) enough not to

be forgiven by the society. Yet, the fact of committing such serious or frequent offenses is, perhaps, one of the very few common denominators of this relatively small group of children and youth. Juvenile offenders vary tremendously in the offenses they commit and the trajectories that bring them to and follow from these offenses (Le Blanc 1998); correspondingly, understanding and characterizing their trajectories might enhance attempts at prevention and rehabilitation.

This relatively small portion of children and youth (again, typically ranging between 10 and 17 years of age, but with variations between states even within a single country, such as the USA) attracts a considerable amount of interest and consumes a considerable amount of resources in modern societies. This is explained by a number of factors, among which are the propensity of developed countries to rehabilitate rather than punish their children and youth (with rehabilitation being much more expensive than punishment), and to attempt to prevent future crimes, given that a substantial portion of adult criminals have had encounters with juvenile courts. This interest is also driven by the accumulating evidence, derived mostly from large-scale longitudinal birth cohort studies (e.g., Wolfgang et al. 1972, 1987) as well as research on repeat offenders (DeLisi 2001, 2005; Loeber and Farrington 1998) that the majority of all crimes and, in particular serious crimes, are committed by a relatively small set of juvenile offenders (Moffitt 1993), both when they are juveniles and then later in their lives as adults. To emphasize what

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appears to be a life-long trajectory of crime, these individuals are referred to in the literature as career criminals (DeLisi 2005). They are often characterized by a set of academic problems (e.g., truancy, underachievement, suspension, and dropout) as well as mental health problems (e.g., substance use problems and a variety of developmental and personality disorders), and are disproportionately victims of violence themselves.

Due to the accumulation of data substantiating the observations above, the science of criminology has started paying much more attention to sources of individual differences in all juvenile offenders and, more particularly, in serious offenders and career criminals. The field, previously dominated primarily by sociological theories of crime, is now much more balanced; today, there are numerous theories of juvenile antisocial behavior that both originate from and contribute to the field of personality (Caspi et al. 1994; Miller and Lynam 2001; Raine 2002). These theories have emerged from a substantial literature reporting on studies carried out within particular major personality theories (e.g., dispositional (trait) perspective, psychodynamic, social cognitive) and their crossroads. These studies unfold at the junction of various traditions of personality psychology, capitalizing on the multitude of approaches developed within Allport's (1937) classical subdivision of nomothetic and idiographic approaches to personality.

The goal of this essay is to provide an abbreviated overview, a snapshot, of applications, both current and potential, of various theories of personality to the field of juvenile forensic psychology, specifically, in the field's attempt to understand sources of individual differences in juvenile offenders. The essay does not intend to carry out a critical comparative analysis or to arrive to a particular recommendation. It is meant to provide a description of the current "state of affairs" with regard to the junctions of various theories of personality and both psychological research and practice with juvenile offenders. It is also intended to contextualize specific constructs, theories, and assessments, particularly the latter, since these are often used in forensic practice in a decontextualized way, without

recognition or acknowledgment of the particular theoretical framework in which and for which these assessments were developed.

Correspondingly, the essay is structured as a sequential overview of various personality-oriented approaches to understanding heterogeneity among juvenile offenders. It is important to clarify here that behaviors that are classified as offenses (either criminal offenses, i.e., violations of the law, or status offenses, i.e., demonstrations of behaviors that violate the status of the minor—an individual under a particular age that is considered to be the age of majority) vary in different societies. Moreover, once again, juvenile offenders constitute a small portion of all juveniles,¹ although many juveniles, in lieu of developmental transitions into adulthood, break norms. The notion promoted in this essay is that juvenile offenses arise, as it were atop an iceberg, where societal, communal, family, and individual factors operate. It has been assumed that, among individual factors predisposing for committing an offense as a juvenile, personality factors play a substantial role. Thus, juvenile offenders possess the trait of juvenile delinquency, but possess particular personality traits that, perhaps, form or contribute to the propensity for such offenses.

The essay starts with personality-trait-based approaches, continues with typologies of juvenile offenders, reflects on the influences of psychodynamic ideas, continues with a discussion of the impact of social cognitive theories, and comments on the potential of life-narrative-oriented approaches to juvenile delinquency. The key observation that crystallizes at the end of this essay is that there are multiple applications of personality-oriented approaches in working with juvenile offenders. No single theory or approach has been instrumental in solving the many

¹To illustrate, the state of Connecticut had 841,688 children under the age of 18 in the year 2000; there were 1,600 unique admissions to detention centers that year. Thus, only ~0.002% of children under the age of 18 were detained. This is a rough estimate (not corrected for age bands), but it provides the reader with an idea of "prevalence" of juvenile offenders in the general population of children and adolescents.

complex tasks faced by the field, but, collectively, they provide an integrated framework for the everyday operations of the field of forensic juvenile psychology. In fact, what many researchers and practitioners in the field are finding is that their operations unfold at the junction of personality theories, utilizing ideas, approaches, and instruments from the field of personality at large.

Personality Traits

There is a large body of the literature investigating the connections between personality traits and delinquent and antisocial behavior, both in juveniles and adults. Traits are viewed as habitual patterns of behaving, thinking, and feeling (Kassin 2003). Personality traits (unlike personality states) are viewed as stable within an individual across the lifespan, but variable across individuals at any given moment. The fundamental assumption of the trait theories of personality is that traits are latent indicators of humans that can be relatively accurately assessed by a set of statements judged by a person him/herself as characteristic (or not) of his personality and that these latent indicators are predictive of observed indicators such as behavior, feelings and emotions, and relationships. As there is an endless number of statements that can be generated about habitual patterns of human lives, the dominant approach to reducing the dimensionality of the resulting collections of statements has been factor analysis. The assumption here is that these statements cluster together providing, collectively, an indicator of a particularly empirically derived trait of personality. Having early ideas introduced by Allport (1937), today's scientists differentiate primary (typically referred to as traits or higher-order traits) and secondary (typically referred to as facets of lower-order traits) personality traits. It has been suggested that three (Eysenck 1967, 1991) to five (Costa and McCrae 1992; McCrae and Costa 1987) primary personality traits are sufficient to describe the major dimensions of an individual's personality; yet, these suggestions are not universally accepted (Saucier and Goldberg 1998). It is

important to note that pretty much every trait theory of personality has an assessment device based on it; in addition, there are many atheoretical (i.e., not linked to any particular personality theory) personality inventories.

Numerous personality inventories (and, correspondingly numerous trait theories) have been utilized in forensic settings. An important difference between these inventories and theories, however, is whether they focus on typical (i.e., those that are present and distributed in the general population) or atypical (i.e., those that are derived in the context of studying specific subpopulations and are present in the general population at a very low frequency) traits.

Typical Personality Traits and Their Associations with Delinquent and Antisocial Behavior

Theories of normal personality (John et al. 2008; McCrae and Cost 2008), and thus, assessment devices that capture typical personality characteristics, have been applied in forensic settings. For examples, using the data generated by Tellegen's assessment of the Big Three—the Multidimensional Personality Questionnaire, MPQ (Tellegen 1985)—and numerous assessments of the Big Five (Heaven 1996; Krueger et al. 1994; Miller and Lynam 2003), Miller and Lynam (2001) carried out a meta-analysis and reported that, across different personality inventories, there are similar personality traits that exhibit robust associations (either negative or positive, depending on the texture of the trait) with delinquent and antisocial behavior, namely agreeableness ($d=0.37$), conscientiousness ($d=0.25$), and to a lesser degree, neuroticism ($d=0.09$). Similarly, yet another meta-analysis (Malouff et al. 2005), also highlighted these traits with the behaviors in question, with large effect sizes ($d=0.80$ for agreeableness and $d=0.64$ for conscientiousness). In addition, there have been investigations of lower-order facets of broad personality traits; these facets have been reported to be more sensitive and differentiating clinically (De Clercq and De Fruyt 2003; Paunonen and

Ashton 2001). The lower-order facets that have been shown to be associated, also with a relatively impressive effect size (~20–25% variance explained), with delinquent and antisocial behavior were trust—agreeableness, excitement-seeking—extroversion, self-discipline—conscientiousness (Heaven 1996) and straightforwardness and compliance—agreeableness and deliberation—conscientiousness (Miller et al. 2003). The apparent nonoverlap in facets, although there is a consistent overlap in traits, can be explained, at least in part, by the fact that in both studies the decision was made to examine only a subset of the 30 facets. Of note also is the observation (Trull et al. 2001) that a lower-order facet may be associated with the behavior in question even though the higher-level trait might not (e.g., extroversion, Heaven 1996). This general pattern of findings indicating the presence of the link between personality traits and delinquent and antisocial behavior, obtained in college (Heaven 1996) and community (Miller et al. 2003) samples, has been observed, with certain specific discrepancies, in a comparative study of juvenile delinquents and normative peers (Corff and Toupin 2009). Specifically, the two groups varied significantly, with observed effect sizes from medium ($d=0.40$) to large ($d=0.93$) on two traits, agreeableness ($d=0.78$) and neuroticism ($d=0.65$), and 12 facets (angry hostility—neuroticism, depression—neuroticism, impulsiveness—neuroticism, vulnerability—neuroticism, warmth—extroversion, excitement-seeking—extroversion, values—openness, trust—agreeableness, straightforwardness—agreeableness, compliance—agreeableness, tender-mindedness—agreeableness, competence—conscientiousness). One notable specific group discrepancy was the lack of differences between the two groups on the trait of conscientiousness. Interestingly, in another study, the conscientiousness—delinquent/antisocial behavior connection was missing (Van Dam et al. 2005). Another group discrepancy, mentioned in the literature before, but to a lesser degree (e.g., Ferrer et al. 2010), concerned the trait of neuroticism. Interpreting these differences in findings, researchers (Corff and Toupin 2009) have pointed out the most obvious causes of the discrepancy—the

differences in the natures (college, community, and youths with delinquent records), constellations (both or only one gender) and sizes of the samples. Thus, although there appears to be a robust general connection between particular typical personality traits and facets, and delinquent and antisocial behavior, specifics of this connection might vary depending on demographic and other factors. It has also been observed that, although these traits appear to differentiate samples with and without records of delinquency, they do not appear to differentiate incarcerated male juveniles by offense type or severity, while other factors (e.g., trajectory of criminal development and a possible neuro-maturational gap) do appear to do so (Nederlof et al. 2010). Similarly, typical personality traits have not been found to be powerful predictors of recidivism; once again, other factors, such as demographic characteristics and previous interactions with the court seem to be more powerful predictors of reoffending (Trulson et al. 2005; van der Geest and Bijleveld 2008; van der Geest et al. 2009). Yet, it is important to note that typical personality traits demonstrate associations with a broad range of other delinquent behaviors, such as illicit drug use (Hundley 1986), nicotine and alcohol use (Elkins et al. 2006), substance abuse (Martins et al. 2008), delinquent sexual behaviors and maladaptive sexual attitudes (Bogaert 1993).

Atypical Personality Traits and Their Associations with Delinquent and Antisocial Behavior

Atypical personality traits are those that, although present in the general population, appear to be either rare or not normally distributed. Their appearance in the literature is typically associated with studies of a particular group or groups of individuals that are distinct from the general population (e.g., individuals with schizophrenia or individuals with criminal records). In an attempt to characterize these differences, psychologists and psychiatrists have developed constructs capturing these atypical traits and generated corresponding theories.

Although applicable in specific inquiries with the general population, the Minnesota Multiphasic Personality Inventory (MMPI) was designed, in part, to be used with a forensic population and is the most frequently used self-report instrument utilized in forensic settings (Pope et al. 2000) due, largely, to the availability of corresponding validated scales to assess response validity (Strong et al. 2006). There are volumes of research on the MMPI, making it one of the most empirically grounded personality assessment devices. Although researched less than the MMPI, the Minnesota Multiphasic Personality Inventory—Adolescent, MMPI-A (Butcher et al. 1992), is also supported by hundreds of empirical publications (Baum et al. 2009). When these publications are considered collectively (Baum et al. 2009), it appears that group indicators for samples of juvenile offenders are subclinically elevated (i.e., elevated right up to below the clinical threshold) on basic (psychopathic deviate, *Pd*; paranoia, *Pa*; and hypomania, *Ma*) and content scales (conduct disorders, *A-con*; school problems, *A-sch*; and negative treatment indicators, *A-trt*). In addition, the MMPI-A has been stated to be externally valid, with the most powerful predictor variables exerting medium to large effect sizes (Baum et al. 2009). Overall, it seems to function well with juvenile offenders (Hand et al. 2007; Hays and McCallum 2005; Pineseault 2005). To illustrate, juvenile male offenders were reported to be distinguished, as a group, from juvenile male psychiatric patients by multiple scale scores, including infrequency (i.e., the testee “faking bad”) 2 (*F2*), social avoidance (*Si2*), repression (*R*), and alcoholism (MacAndrews Alcoholism Scale Revised, *MAC-R*) (Archer et al. 2003). There is also evidence that numerous MMPI-A validity and clinical scales can be instrumental in distinguishing male and female adolescents in a correctional sample from non-correctional adolescents, and adolescents in correctional facilities faking good (Stein and Graham 1999). The same researchers investigated the capacity of the lie scale (*L*) to differentiate, among incarcerated teens, substance abusing and non-substance abusing youth, when they filled out the MMPI-A under two instructions, the stan-

dard and the instructions to fake good (Stein and Graham 2005). It has also been reported that the *F*, *F1*, and *F2* scales and the *F-K* index (i.e., infrequency-defensiveness) discriminated adequately between groups of nonclinical adolescents instructed to fake bad and both the clinical and nonclinical adolescents who received standard instructions (Lucio et al. 2002). There are also data on the prediction of recidivism, with both basic (*Pd*) and content (*A-con*) scales accounting for 32% of the variance in recidivism (Peterson and Robbins 2008).

A fertile construct in research on individuals with criminal careers (i.e., individuals who first offend as juveniles and then remain on the criminal path through the majority of their lifespan) has been the construct of psychopathy. It has long been present in the literature, but its penetration into mainstream psychological research has not been without controversy (Vaughn and Howard 2005). There are many definitions of psychopathy (Cleckley 1976; Hare 1996a, b; Lynam 2002; McCord and McCord 1964), which differ on many points, but they agree, in general, that this construct may be conceived as a condition (psychopathy), personality type (psychopathic personality) or personality trait of individuals, primarily but not only (and more so recently) males, who appear “aggressive, self-centered, callous, guiltless, impulsive, sensation-seeking, interpersonally exploitive, deceptive, low in fear and anxiety, unable to learn socially approved ways of satisfying immediate needs, and unable to develop warm affective bonds with other persons” (Vaughn et al. 2008, p. 408). Recently, there has been a true explosion of research on psychopathy in childhood and adolescence. Here, only major highlights of this research are presented.

Most researchers of criminal behavior and psychopathy in adulthood agree that adult psychopathy is one of the key indicators of repeated violent offending (Patrick et al. 1996), and that adult psychopathy appears to originate from delinquent behaviors and other conduct problems present at earlier developmental stages (Saltaris 2002). It has also been observed that the development of psychopathy seems to be closely related to experiences of trauma in childhood (Campbell

et al. 2004; Krischer and Sevecke 2008; Lang et al. 2002). Yet, the literature is replete with debates on whether psychopathy (or psychopathic traits) in adulthood and childhood are the same (Lindberg et al. 2009) and whether childhood psychopathy can be reliably assessed and utilized as a prognosis indicator (Edens et al. 2001; Seagrave and Grisso 2002; Steinberg and Scott 2003).

Depending on the specifics of the assessment device used to assess psychopathy in children and adolescents, it has been reported that 9–59% of juvenile offenders demonstrate psychopathy-like personality characteristics (Campbell et al. 2004). When characterized as a group compared to other juvenile offenders, individuals with psychopathic traits tend to commit violent acts, higher in both number (Dembo et al. 2007; Derefinko and Lynam 2007; Frick et al. 2003a) and degree of seriousness (Caputo et al. 1999; Kotler and McMahon 2005; Loper et al. 2001). Juvenile offenders with (or with more) psychopathic traits tend to demonstrate more institutional violence while being detained or incarcerated (Forth et al. 1990). A recent analysis has pointed out the presence of consistent correlations (between 0.20 and 0.40) between measures of violence and psychopathy in 11 studies of juvenile offenders (Edens et al. 2001). Thus, juvenile offenders with psychopathy or with higher scores on psychopathic traits tend to be both more prominent (i.e., committing more and more serious crimes) and noncompliant with the juvenile criminal justice systems (DeLisi and Vaughn 2008; Harpur and Hare 1994; Harris et al. 1991; Porter et al. 2001; Vaughn and DeLisi 2008; Vaughn et al. 2007). Hence, at least concurrently, the characteristics of juvenile psychopathy resemble that of adult psychopathy (Lynam and Gudonis 2005). There is also evidence that adolescent psychopathic features are quite stable (Loney et al. 2007). Juvenile offenders possessing these features tend to recidivate more quickly (Långström and Grann 2002). It has also been noted that these juveniles tend to be characterized by shorter periods between offending (Brandt et al. 1997). Correspondingly, it has been argued that psychopathy may be the single best predictor

of future violence and recidivism (Harris et al. 1991; Myers et al. 2010; Salekin et al. 1996; Serin and Amos 1995), predicting multiple dimensions of the delinquent career and overpowering the effects of demographic and available risk factors (Vaughn et al. 2008).

Of note also is that the psychopathy trait appears to be associated with important indicators that, in turn, are often either characteristic or predictive of delinquency and antisocial behavior. Thus, youths possessing high levels of psychopathic traits tend to be fearless, impulsive, self-centered, and involved in multiple problem behaviors (Vaughn et al. 2008). Moreover, juveniles with higher scores on the psychopathy trait have been shown to exhibit worse performance on neurological, attentional, and sometimes intelligence testing (Hiatt et al. 2004). They also appear to differ in the ways they process emotional stimuli (Kimonis et al. 2008), which is thought to be related to weaknesses in the development of the affective components of conscience, a characteristic of psychopaths (Frick and Morris 2004). Interestingly, when the concept of psychopathy was just emerging in the literature, it was argued (Cleckley 1976) that psychopaths were characterized by higher IQ compared to their nonpsychopathic antisocial peers. It appears, however, that this difference is not substantiated; the literature reports either no differences in IQ among psychopathic and nonpsychopathic youths (Loney et al. 1998), or that psychopathic youths have lower IQs (Hecht and Jurkovic 1978). Also, it has been reported that psychopathic youths are more likely to report being subjected to harsh or maladaptive parenting strategies (Farrington 2006). In addition, there is also evidence that juveniles with the elevated trait of psychopathy demonstrate higher levels of substance use and abuse (Dembo et al. 2007; Derefinko and Lynam 2007; Taylor and Lang 2006) and other mental health problems.

Also of interest is an observation that psychopathy, as a trait, is a complex construct itself. Of its multiple factors and facets, whether empirically or theoretically derived, it appears that the callous and unemotional aspect of psychopathy has a particular association with delinquent and antisocial

behavior. For example, it has been reported that juvenile sex offenders who earn high scores on callousness and unemotionality had a greater number of sexual offense victims, used more violence with their victims, and engaged in more sexual offense planning than those low on these traits (Lawing et al. 2010). Similarly, the importance of this facet of psychopathy has been demonstrated longitudinally. Specifically, the degrees of callousness and unemotionality measured in seventh grade were highly predictive of five of the six antisocial outcomes—general delinquency, juvenile and adult arrests, and early adult antisocial personality disorder criterion count and diagnosis (McMahon et al. 2010). Callousness and unemotionality, along with impulsivity and irresponsiveness, have been reported to be good concurrent predictors of violent and nonviolent delinquency, delinquency versatility, and risky sexual behavior in a Croatian sample of nonreferred children and adolescents (Ručević 2010). Of interest is that impulsivity and irresponsiveness were reported to manifest themselves differentially for boys and girls: for boys, they had stronger associations with nonviolent delinquency and delinquency versatility, but for girls—with risky sexual behavior (Ručević 2010).

Yet, as mentioned above, there is considerable debate pertaining to both the validity and reliability of the assessment of psychopathy in children and adolescents due to concerns about the stability of this trait. Substantial general developmental literature suggests that personality traits in general tend to manifest and coalesce in middle childhood but do not crystallize and become stable until late adolescence or early adulthood (Seagrave and Grisso 2002). Correspondingly, there are concerns that the predictive power of various measures of psychopathy in children and adolescents might be limited to concurrent associations (Edens and Cahill 2007). The empirical literature committed to this issue, at this point, cannot be interpreted unequivocally. For example, researchers (Cauffman et al. 2009) used three distinct approaches [a clinical interview method—the Psychopathy Checklist: Youth Version, PCL:YV (Forth et al. 2003), a self-report measure—the Youth Psychopathic Traits Inventory (Andershed

et al. 2002), and a personality-based approach—the NEO Psychopathy Resemblance Index (Lynam and Widiger 2007)] to quantify juvenile psychopathy in a large-n study of short- and long-term recidivism. Quantitatively, the data showed a rather limited overlap between the three indicators (the correlations ranged from 0.26 to 0.36) and, qualitatively, there were substantial measure-based discrepancies between labeling individuals as psychopathic or not. Moreover, the long-term predictive power was reported to be low. The researchers interpreted these findings as raising serious concerns about the use of these measures for legal or clinical treatment decisions (Cauffman et al. 2009). Other studies indicate that psychopathy can be reliably assessed in childhood and adolescence, and that psychopathic traits are relatively durable (Frick et al. 2003b; Lynam 2002; Moffitt et al. 2002). For example, some researchers (Lee et al. 2009) indicate moderate to high stability of psychopathic traits, as indexed by total scores, and low to moderate stability of psychopathic traits at the factor (and facet) level. Of note also is that, when homicidal juveniles and adults were compared, both samples had distinct psychopathic subgroups, but there were age-related differences in the manifestations of factors and facets (Lindberg, et al. 2009). Finally, it is important to state that psychopathy is not the only “rare” trait that has been investigated as a predictor of delinquency. Although substantially lower in numbers, there are publications on other traits, such as Machiavellian and sadistic traits, which, along with narcissism have been described as the “Dark Triad” of personality (Jakobwitz and Egan 2006; Lee and Ashton 2005; Paulhus and Williams 2002). For example, results from one study (Chabrol et al. 2009) indicated the promise of considering sadistic traits as predictors of juvenile delinquency (i.e., committing offenses as a minor). Yet another study stressed the importance of considering the role of early manifested malevolent aggression (Clarbour et al. 2009).

In summary, there is a vibrant and productive subfield of research and practice in forensic juvenile psychology that engages trait approaches to personality. This field utilizes multiple theories

(and, correspondingly, multiple inventories) of personality, but the general premise of this utilization is shared by all professionals in the field, which is to characterize, descriptively, personality traits of juvenile offenders, and attempt to use these descriptives (i.e., specific traits individually) or profiles (i.e., specific traits collectively) to predict behavior concurrently (i.e., institutional violence while being detained or incarcerated) or prospectively (i.e., recidivism). The consensus in the field is that the tremendous heterogeneity within juvenile offenders prohibits the possibility of a particular personality trait (or a specific constellation of traits) being referred to as “descriptive” or “prescriptive” of juvenile offenders. Yet, it looks like, as a group, juvenile offenders tend to be marked by elevations of a number of specific traits that, perhaps, as a constellation of risk factors, elevate the propensity for committing an offense. Correspondingly, when specific personality trait assessments are used in clinical or research work with juvenile offenders, the most common denominator of this usage is in providing specific insights into the propensity to recidivate, rather than to marking a particular trait as the basis of juvenile offense.

Taxonomies and Typologies

The realization that juvenile offenders are an extremely heterogeneous population is far from new (Ewing 1990). Yet, there is still no clear understanding of how this population can be subdivided into more homogeneous subgroups (Greco and Cornell 1992; Megargee 1970), either concurrently or prospectively (Frick 2004; Loeber 1996; Loeber et al. 1997), and whether such subdivisions can lead to treatment and prevention (Vaughn et al. 2008; Zagar et al. 2009). Influenced in part by early personality theories (Allport 1937) and in part by typological approaches from the hard sciences (Bryant 2000), the field of criminology has also developed a number of taxonomies and typologies to capture the heterogeneity of life trajectories and personalities among juvenile delinquents. The main premise of this research is that the complexity

and heterogeneity of delinquent and antisocial behavior cannot be captured by a single set of descriptors or a single etiological mechanism. In fact, coherent, internally consistent and distinct categories are needed to overcome and systematize the heterogeneity of the presentations and etiologies of delinquent and antisocial behavior (Gibbons 1975; Huizinga et al. 1991; Jones and Harris 1999; Lykken 1995; Moffitt 1993; Paternoster and Brame 1997; Van Voorhis 1994; Zhang et al. 2002).

Roughly speaking, taxonomic research in criminology can be subdivided into two large categories, although both the categories and their underlying foundation have been questioned in the literature (Britt 1994; Hirschi and Gottfredson 1994; Thagard 1992). One category is oriented toward behavior and unifies life and crime pathways that are assumed to differentiate distinct criminal careers (Nagin and Land 1993). The other category is oriented toward individual characteristics of offenders and is based on psychosocial, biological, personality, and other explanatory factors (Harris and Jones 1999; Lykken 1995; Mealey 1995; Moffitt 1993; Van Voorhis 1988). Of note, however, is that the creators of the first type of taxonomy (Lykken 1995; Mealey 1995; Moffitt 1993) often construct their classifications based on their analyses of the literature. Empirical evidence is not available to substantiate these typologies; they are essentially theoretical prototypes (Moffitt 2003) or armchair taxonomies (Lykken 1995) rather than empirically derived systems of offender classification. The contributors to the second category of taxonomies exercise dimensional approaches and are interested in developing general theories of delinquency and antisocial behavior (Osgood 2005; Sampson and Laub 2005). There are ongoing efforts to collect empirical data to falsify existing taxonomies, although the results of these studies are contradictory (Aalsma and Lapsley 2001; Harris and Jones 1999; Huizinga et al. 1991; Jefferson and Johnson 1991; Jones and Harris 1999; Mezzich et al. 1991; Nagin and Paternoster 2000; Potter and Jensen 2003; Skilling et al. 2001; Sorensen and Johnson 1996).

Recently, Brennan and colleagues (2008) summarized the literature and presented the following

typologies and taxonomies as the most prevalent in the literature. The first type is referred to as *normal or situational offenders*. Individuals constituting this type are viewed as typical young people who engage in minor accidental delinquent behavior, which is thought to arise in stressful and difficult situations when normal coping strategies do not function (Aalsma and Lapsley 2001; Huizinga et al. 1991; Lykken 1995; Van Voorhis 1994). The second type, according to Brennan and colleagues (2008), is referred to as *socialized delinquents, common sociopaths, and/or subcultural offenders*. Individuals in this category, referred to as common sociopaths (Lykken 1995), subcultural identifiers (Warren 1971), socialized conformists (Jesness 1988), secondary sociopaths (Mealey 1995), and lower class gang delinquents (Miller 1958), exemplify delinquent and antisocial behavior that echoes social deprivation or reflects atypical socialization. Social deprivation and poor socialization, in turn, are thought to arise in families with incompetent or delinquent parents, in the context of a delinquent peer group, and/or while submerged in oppositional criminal subcultures. The next category includes individuals who are mostly adequately socialized, but, during their adolescent years, temporarily (Moffitt et al. 2001) identify with, mimic, or are associated with their delinquent peers while forming autonomy, searching for meaning, or solving other developmental tasks. This type is referred to as *adolescence-limited offenders* (Lykken 1995; Moffitt 1993). Brennan and colleagues' fourth type is referred to as *neurotic or internalizing delinquents*. Social withdrawal, depression, social anxiety, hostility and mental health problems are common in these individuals. Moreover, these lives are often characterized by severe parental abuse, interpersonal rejection and neglect. Brennan and colleagues draw parallels between individuals in this group and in the group of the internalizing pattern of delinquency (Moffitt 2003). Finally, the fifth category includes *undercontrolled serious delinquents—impulsive and unsocialized*. This is, clearly, the most serious category, including individuals with early onset of problem behaviors, serious versatile crimes and such personality traits as impulsivity, risk-taking,

aggression, callousness, and superficial charm. Other theorists refer to similar categories as life-course persistent offenders (Moffitt 1993), primary psychopaths (Lykken 1995), primary sociopaths (Mealey 1995), unsocialized psychopaths (Quay 1990), immature aggressive offenders (Jesness 1988), and psychopaths (Frick 2004; Hare 1996a, b; Skilling et al. 2001). In an attempt to examine selected theoretical taxonomies (Lykken 1995; Mealey 1995; Moffitt 1993), Brennan and colleagues worked with two large samples of delinquent youth (~1,500 individuals each). It was reported that seven clusters recurrently emerged across replications, two of which were analogous to Moffitt's two main categories, and three—to Lykken's sociopathic, neurotic-internalizing and normal types. Yet, the authors remarked that both the statistical and content properties of the classifications were not perfect and further efforts were needed to clarify the findings (Brennan et al. 2008).

The conclusion of Brennan and colleagues, in general, illustrates the situation of the field, where there are many only partially empirically supported and often contradictory typologies. There are many reasons for such a state of affairs, ranging from a principal question of applicability of typological approaches to people whose behavior and motivation are dynamic and unstable rather than, let us say chemical elements whose properties are stable (Bryant 2000), to applied methodology issues (Lenzenweger 2004; Milligan 1996; Wishart 2003). Most importantly, however, delinquent and antisocial behavior is marked by multiple complexities across multiple interacting domains (Walsh 2002); with neither understood, typologies might not be possible, at least at the current stage of knowledge.

In summary, it is unclear, at least at this point, whether typological approaches to juvenile offenders, as developed with regard to both delinquent and antisocial behaviors and personality typologies, are useful and, if yes, how productive they are. So far, the most informative feature of typologies is their inclusion in the recidivism factor (i.e., whether a person, after committing a crime, recidivates or not). Yet, when defined on the basis of recidivism, a typology can have only

historical value; in other words, a person can be categorized only after criminal behavior has been repeated (i.e., after the person has recidivated) or after the person's life is over, or virtually over (i.e., while there is no "upper" limit for committing a crime, the likelihood of recidivating decreases among aging individuals).

Psychodynamic Influences

Juvenile forensic psychology and psychiatry has been heavily influenced by psychodynamic approaches to personality, with their capacity to utilize the depth of information and the breadth of observation pertaining to a single person (Westen et al. 2008). The heterogeneity of criminality, referred to above, also applies to every single individual within the juvenile justice system; these individuals are more different from each other than alike. Moreover, the last 20 years of developmental literature have convincingly shown that there is a tremendous amount of connectedness between victimization and perpetration; quite often, a child who is a victim of abuse is later an abuser him/herself. Clearly, psychodynamic theories of personality, with their rich texture of reliance on early developmental stages, have much to contribute to research and practice with troubled juveniles. This contribution is present at multiple levels. First, there are multiple intrinsic and yet delicate connections between psychoanalysis in its many shapes and forms and the attachment theory (Steele 2010). Second, there are psychodynamic typologies of criminal behavior which are idiographic in nature. These typologies are biographical and case-oriented; psychodynamic literature is replete with case analyses of court-involved individuals at different stages of their involvement with the system, and there are multiple insightful interpretations of the life stories of these individuals that have resulted in the generation of interesting typologies—Delinquency as Absence: Making the Absent Present; Delinquency as "Hole-in-the-mind": Evoking the Development of "Whole-of-mind"; Delinquency as "Concrete Symbol": Playing with the Concrete (Fairall and Gleeson 2007).

Third, there is an ongoing struggle for the preservation of the art of psychoanalysis in the face of the demand for evidence-based treatment (EBT) approaches. In fact, the advocacy for EBT in the field of juvenile justice is so strong that it has been referred to as "the latest attack upon psychoanalysis of any praxis other than reductionistic behaviorism" (Lewis 2009, p. 107). Yet, the most pronounced impact of psychodynamic theories of personality on the juvenile justice system has been through its assessment devices, namely projective techniques. These techniques are widely used in the juvenile justice system, individually and in combination with other assessments (Silver 1963), both for various purposes within the system (Heilbrun et al. 2005) and for research purposes (Janson and Stattin 2003). Especially popular are projective assessment techniques, such as the thematic apperception test, TAT (Haynes and Peltier 1985) and the Rorschach inkblot test (Dean et al. 2007; Gibbs 1982; McCraw and Pegg-McNab 1989). However, although both tests are prominent in the work of practitioners in the system, the number of peer-reviewed publications on them is rather small.

Psychodynamic theories of personality are directly related to psychoanalysis as originally introduced by Joseph Breuer and Sigmund Freud, specifically its key concepts concerning the importance of internal psychological processes and childhood experience, the centrality of psychosexual development, the prominence of the conflict between the id (basic essence of existence), ego (rationality) and superego (morality), defense mechanisms, methods of elucidating (e.g., free associations) and resolving (e.g., interpretation including transference, defenses, and dreams) conflict-triggering experiences, and its key premise that human behavior and relationships are determined by both conscious and unconscious influences. Early ideas of psychodynamic theorists have been transformed by numerous scientists and practitioners working in this tradition (e.g., Anna Freud, Karen Horney, Melanie Klein, Donald Winnicott, John Bowlby, Erich Fromm, Erik Erikson, and numerous contemporary thinkers). There is no cohesive theoretical

interpretation of juvenile offending within this approach, although there are multiple specific applications of various constructs developed within psychodynamic ideas about personality to the work with juvenile offenders (e.g., Brodie 2007; Mizen 2003).

In general terms, crime is a product of a deviant structure of personality that is in itself a result of deep unresolved early conflicts that arose early in life (Brodie 2007). It is these conflicts that, through the power and energy of unconscious psychic pain, drive people to violence and aggression. Thus, serial violence involving abducting and torturing multiple victims has been explained as repeated attempts to resolve early conflicts of disrespect, punishment, and isolation. Similarly, in his writing, Erik Erikson (Erikson 1979) capitalized on the idea of finding resolutions to internal conflict as characteristic of adolescence and the driving force of its identity crisis. In this context, juvenile offending reflects a facet of this process of identity formation, reflecting the cognitive and social-emotional immaturity of juveniles, their inability to ascertain proper social channels for manifesting their identity, and their dependency on others in figuring out “the right way.”

This “normalization” of juvenile offending has been challenged by August Aichorn (1935), who argued that social demands by themselves did not and could not produce juvenile offending. Reflecting on the heterogeneity of the outcomes of the process of identity formation, he introduced the concept of latent delinquents that is those juveniles who seek immediate gratification for themselves without considering the effect of this on others. In the spirit of psychodynamic approaches, Aichorn referred to, as the source of individual differences between latent delinquents and other youths, troubled family life and early child development conflicts (Freud 1951; Schowalter 2000). But the impact of this work on the field was much broader than that, suggesting that the pressure of situations, no matter how charged those situations are, is always differentiated by other characteristics, those that are both inherited and interiorized by the person (Federn 1962).

The reference of Aichorn and others to early experience, especially to those of poor family life

resulting in abuse and maltreatment, generated a large amount of work, both within and outside psychodynamic approaches, focused on the connection between these traumatic experiences and juvenile offending. Within the psychodynamic approach, the family is conceptualized as, among other functions, the medium through which the child develops the personal tools that enable him or her to balance id, ego, and superego demands and cope with the pressure from the social world. The id-ego-superego dynamics are complex, and different byproducts of these dynamics going awry (e.g., the urge to be punished, feelings of being unloved, feelings of inadequacy and deserving of punishment, lack of compassion) are considered to be unconscious triggers of violence and aggression or specific mental states (e.g., psychosis), that lead to violence and aggression.

Psychodynamic ideas have been implemented in the psychology and psychiatry of juvenile offenders both in treatment and assessment, although the assessment applications are much more widespread. To illustrate, the literature on the application of the Rorschach with delinquent juveniles, although limited in size, is in general supportive of the instrument’s concurrent utility, reliability, and validity in this population (Liebman et al. 2005). For example, it has been shown, in a sample of adjudicated adolescents, that the Rorschach aggression variables of AG (Exner 1993), A1 and A2 (Holt 1977), and AgC and AgPast (Gacono and Meloy 1994), can be reliably scored and related to each other in a theoretically meaningful way. Yet, an examination of the reliability of Rorschach variables between the ages of 8 and 16 finds that most of the indicators are not stable (Exner et al. 1985). Correspondingly, it has been argued that Rorschach variables should not be viewed as reliable long-term diagnostic indices. A rather unique application of the Rorschach comes from the Solna study, an ongoing birth-to-maturity investigation of a birth cohort of 212 children in an urban Swedish community. They were recruited through their mothers before their birth, during the mothers’ visits to a prenatal clinic; every fourth woman was asked to participate and the refusal rate was ~3%. The recruitment unfolded

over a period of 3 years; all children were born between 1955 and 1958. The demographic characteristics of the sample indicate that it is representative of Swedish urban communities. The researchers collected multiple indicators of various aspects of child development from infancy through age 18 annually, and then three more times at the ages of 21, 25, and 36. The administration of the Rorschach occurred ten times, when the participants were 3, 4, 5, 6, 7, 8, 10, 14, 18, and 36 years of age. The results indicated that the Rorschach-based measures (maturity—ego differentiation and integration; aptitude, functioning intelligence; mood—glad, optimistic; self-esteem—secure, sure of own value; contact ability—good emotional contact ability; activity—enterprising, busy; ability to concentrate—to be able to apply oneself to one task, persistency; and ambition—to strive to do one’s best) predicted delinquent outcomes over and above other measures (i.e., maternal reports of delinquency); lower Rorschach scores indicated a higher risk of delinquency in adolescence and adulthood (Janson and Stattin 2003).

Research on the TAT is even more limited in number, especially in the juvenile setting. Yet, the instrument is widely used. For example, a Canadian survey (Haynes and Peltier 1985) on the usage of the TAT in juvenile forensic settings indicated that the majority of practitioners use the instrument as part of their assessment battery (with 6–10 cards, mostly). A substantial portion of practitioners, however, do not use the TAT because of time constraints and lack of guidance in the literature on standards of care and preferential significance and the interpretability of specific cards in working with juvenile offenders. Yet, this “research-needed” call has not elicited a response in the literature as yet.

In summary, historically among the first theories of personality to address delinquent and antisocial behaviors, psychodynamic theories and their related assessments remain central to the field of juvenile psychology and psychiatry. Although not necessarily well researched in the population of juvenile delinquents, projective personality techniques are widely used in the everyday work with court-involved children and

adolescents, generating information that, arguably, provides an insight into personality’s deep structures and allows us to appreciate the layers of developmental complexity that typically mark the road to crime, especially early crime.

The Influence of Social Cognitive Theories

A defining feature of social cognitive theories of personality is their attempt to understand the individual by adapting the person-in-context approach (Higgins and Scholer 2008; Mischel and Shoda 2008; Ryan and Deci 2008). In this approach, rooted in social learning theory (Miller and Dollard 1941), broadly speaking, personality is a product of the interactions among the cognitive and affective processes triggered by and embedded in the social context. These theories have impacted juvenile psychology and psychiatry both directly, through the development of applications of certain theories to juvenile antisocial behavior (Bandura 1999; Bandura et al. 1996; Caprara et al. 1998), and indirectly, through the emergence of new theories (e.g., Agnew 1992; Gottfredson and Hirschi 1990) specific to criminology, that have been conceived within the general framework of social cognitive theories of personality.

The central premise of social cognitive theories of personality posits that personality, in part, emerges from observing others while engaged in social interactions and experiences. One of the major general assumptions of these theories is that children model their behavior based on positive or negative feedback and in response to reactions they trigger from others. These “others” are typically referred to as adults the children are in contact with, whether real (e.g., parents, teachers, coaches, and so forth) or virtual (e.g., adults in mass media—TV, movies, radio, videogames). Among “others,” there are also peers. In other words, children learn from and follow examples of behaviors demonstrated by their real and virtual role models, observing rewards and punishment for these types of behaviors. Thus, if violence is demonstrated by many role models in

the child's life, the child can grow up believing that violent and aggressive behaviors are acceptable and rewarding. In fact, often, the child starts practicing violent and aggressive behaviors at home first, directing them at siblings and other family members and soliciting a reaction from parents. Thus, another major general assumption of social learning theory is in the role of vicarious learning—i.e., learning from other people's behavior and attempting to refrain from making mistakes in imitating the modeled behavior. In other words, children observe the behaviors of others and imitate them (Bandura 1989); the degree of success of imitation and, consequently, acquisition of a behavior is modulated by the extent of the child's self-efficacy—i.e., the child's own appraisal of his/her abilities to observe and imitate (Bandura 1988). Vicarious learning is a facet of social modeling, which includes not only observing and imitating, but also receiving instructions and guidance from others, mastering experiences, self-modulating physical and emotional states so that learning can occur more effectively, and soliciting from and providing to others verbal encouragement (McAlister et al. 2008).

To illustrate, Bandura's reasoning on delinquency and antisocial conduct engages his theory (Bandura 1986) through the concept of the moral self—an agent who is embedded in a broader social context, which both influences and is influenced by the self. Both moral (and immoral, or delinquent) actions can arise only through self-regulatory mechanisms that are rooted within individuals (i.e., his/her moral standards) and are exercised in response to an external stimulus. Early in development, conduct is regulated primarily through external leads (i.e., those of parents or social institutions) and social sanctions. Yet, as development unfolds, the regulatory focus moves from external to internal leads. A person should exercise his/her moral agency to both inhibit immoral behaviors and enhance moral behaviors. Tools and skills for doing so need to be acquired developmentally, through interactions with others in social situations (e.g., family, peers, and larger social settings). It is important to point out (Santrock 2008) the difference between the ability of an individual to be morally

competent (i.e., possessing the ability to perform a moral behavior) and his/her moral performance (i.e., actually performing morally in a specific situation). Moral competence is a multicomponential structure that refers to an individual's knowledge, capacities, skills, awareness of rules and regulations, and level of general cognitive functioning. Moral performance, however, is an application of moral competence in a specific situation, where rewards and incentives are in place and counterbalanced with punishment and losses. Thus, moral competence can dictate a realization of what is right and wrong (e.g., breaking into someone else's property), but a reward for a particular behavior can override this realization, so immoral (e.g., breaking into someone else's property and stealing valuables), rather than moral performance take place.

The literature on juvenile forensic psychology and psychiatry provides many relevant observations, obtained both through longitudinal research (e.g., Renschmidt and Walter 2010; van der Laan et al. 2010) and cross-sectional investigations (Barriga et al. 2009) on the contextual factors of delinquency. The general trajectory of this research first identifies a general source of contextual influences, then attempts to zoom in on a specific facet within this general source. For example, negative parenting styles and poor parental monitoring [i.e., tracking and surveillance of their children have been linked to various forms of delinquency (Biglan et al. 1995; Dishion et al. 1995; Metzler et al. 1994)]; positive parenting, on the contrary, is considered to be one of the most important protective factors (de Haan et al. 2010; Kerr et al. 2009). Recent investigations into the constructs of parenting styles and parent monitoring, however, have attempted to refine them and have pointed out the specific aspect of their multidimensionality that appears to be most relevant to delinquency, with a particular emphasis on child disclosure—i.e., children's spontaneous reporting of their behaviors (Fletcher et al. 2004; Lahey et al. 2008; Stattin and Kerr 2000). It has been observed that child disclosure appears to be triggered and aided by certain parenting behaviors, clarifying the translational dynamics of the role of parent monitoring in

delinquency and antisocial behavior (Soenens et al. 2006). Of note also is that child disclosure appears to be related to child temperament (Stattin and Kerr 2000) and adolescent personality (Eaton et al. 2009). In other words, the fact that a child discloses his/her behavior to parents seems to be one of the best protective factor against juvenile offending, but whether the child discloses or not depends on many other factors, both internal (i.e., his/her temperament and personality) and external (e.g., the degree of parental solicitation and control) to the child, once again stressing the complex relationships between the self, context, and action (Stattin and Kerr 2000).

Similarly, research into the peer-related social context has been central to the literature on juvenile delinquency. Yet, the specifics of these influences are not well understood. To illustrate, researchers have attempted to hypothesize about the dynamics of peer relationships in a small group of adolescents who refrain completely from delinquent behavior (Moffitt 1993). It has been suggested that these adolescents are protected from the influence of negative peer influence because they are unpopular and socially isolated due to some unappealing physical/personality characteristics. Thus, such teens are thought to refrain completely from delinquent behavior because they are social introverts who are excluded from normative peer activities, which are often led by peer role models who demonstrate delinquent behavior (Moffitt 1993). This theoretical assertion, however, has been recently challenged with an empirical analysis of the friendship network data from the National Longitudinal Study of Adolescent Health (Chen and Adams 2010). This analysis has revealed a rather complex set of associations between the adolescent friendship network characteristics and delinquency abstention, stressing, once again, the importance of identifying specific facets of social influences as they determine the development and manifestation of the self. Another recent finding in the literature specifying the particulars of the impact of peer relationships indicates the differential role of romantic engagement. It has been reported, based on the results of a large-scale longitudinal study among Swedish seventh and eighth grade students

who were assessed over a period of 3 years, that romantic relationships amplified girls' and boys' existing delinquency propensities, and that this amplification is stronger for girls than boys (Eklund et al. 2010). These studies illustrate probable points for the application of social cognitive theory by suggesting the kinds of behaviors that might be endorsed to certain subgroups of youth who are marked by specific demographic profiles. These endorsements might be made by youth celebrities through specially framed positive messages, whether regarding the prevention of juvenile offending or the promotion of moral behavior (Smith and Petty 1996).

As mentioned above, the field of criminology has generated a number of theories that are focused on juvenile delinquency, but, broadly speaking, may be viewed as representative of the cluster of social cognitive theories of personality.

The general strain theory postulates that social strains can impact children and youth and result in the generation of negative emotions, notably anger and depression, which can in turn result in delinquency and antisocial behavior. The sources of strain are typically grouped into three categories: the failure to achieve positively valued goals, the possible or actual loss of positively valued stimuli, and the presentation of stimuli noxious to individuals (Agnew 1992). A set of "other" factors that can modulate the connection between social strains and delinquency are contextual factors of family and peers and the coping skills of children and adults. There is a body of empirical evidence that supports key propositions of the general strain theory (Agnew and Brezina 1997; Agnew et al. 2002; Aseltine et al. 2000; Baron 2004; Broidy 2001; Mazerolle et al. 2003; Piquero and Sealock 2004). In addition, as research progresses, there are additional clusters of strain. For example, using a longitudinal design, researchers (Moon et al. 2009) focused on the relationships among key strains (now eight: family conflict, emotional and physical punishment by parents, emotional and physical punishment by teachers, financial stress, examination-related stress, being bullied, gender discrimination, and criminal victimization), situational- and trait-based negative emotions, conditioning factors, and delinquency.

While, in general, the results of this study supported the theory, they generated some questions about the correlation between situational- and trait-based negative emotions and their differential role in delinquent outcomes.

One more theory briefly mentioned here is the theory of self-control (Gottfredson and Hirschi 1990). In the context of this theory, an individual's level of self-control results from the process of parental socialization during the first ten (\pm) years of life. Responsible and responsive parents are able to recognize, divert, or prevent deviant behavior early on and are likely to instill, by rewarding, correcting, and punishing self-control. Irresponsible and unresponsive parents, on the contrary, fail to inculcate self-control. Individuals with low self-control manifest a set of attitudes and behaviors. Specifically, they (1) exhibit here-and-now orientation; (2) prefer easy and simple tasks; (3) seek excitement and engage in risky behaviors; (4) do not believe in social institutions and long-term investment in them; (5) do not plan and do not like to plan; and (6) are self-centered, insensitive, impulsive, and nonempathetic. Although some, if not all, of these characteristics resemble specific personality traits (DeLisi et al. 2010), the authors of the theory state that self-control is not a personality construct (Gottfredson and Hirschi 1990), and that personality traits that are related to crime are, in fact, derivatives of self-control (Hirschi and Gottfredson 1993). These statements, inevitably, have been empirically researched. Thus, the literature contains reports that a self-reported measure of self-control substantially correlated with conscientiousness (O'Gorman and Baxter 2002) and agreeableness (Miller et al. 2008), and with many other indicators of personality (Marcus 2003, 2004) assessed by a variety of inventories, such as the retrospective behavioral self-control scale (Grasmick et al. 1993), the self-control scale from the California Psychological Inventory, CPI-Sc (Gough 1975), the Sixteen-Personality-Factor-Questionnaire, 16PF-Q3 (Cattell et al. 1970), and the NEO-FFI (Costa and McCrae 1989). Researchers have also pointed out the connection between self-control and narcissism (Vaughn et al. 2007). Correspondingly, the jury is

still out on whether the theory of self-control adds something new to the field of criminology.

In summary, the central and most powerful action of social cognitive theories of personality, as they are applied to juvenile offending, is the way they merge together individuals and their contexts. This permits a broad approach to personality, in which not only juveniles (i.e., their personality traits, types of criminal pathways, and deep structures) are considered, but also their social contexts and, most importantly, their cognitive-affective representations of themselves and their contexts. These broad considerations are especially imperative in court, when decisions are being made about the futures of juveniles. Judges should be informed, in detail, not only about the personality traits of the juveniles, but also of the contextual characteristics of their lives and crimes, since, according to social cognitive theories, understanding the interactive nature of past behavior and taking into account both the person and the situation are crucial for predicting future behavior. In turn, as decisions (whether legal or policy) are made, to be most effective, they should be delivered to youth with an understanding of both the opportunities and constraints of social learning as depicted by social cognitive theory.

Personal Narratives and Life Story

Although not new by any means (Adler 1927; Bakhtin 1981; Tomkins 1987, 1992, 2008), the narrative approach to personality (Josselson et al. 2007; McAdams 2008; McAdams and Adler 2010) has recently gained much attention, moving into the center of the psychology of personality. The focus of this approach is personal narrative. Although there are now quite a few publications on this approach, it is fair to say it is a developing subfield of the field of personality. It is discussed here, however, because it appears to bring a particularly powerful angle to the analysis of juvenile delinquency, as exemplified by the analyses of normative adolescent development (McLean et al. 2007), although to my knowledge and through my survey of the literature, there are

no publications that ground this approach in juvenile forensic psychiatry and psychology. The principle assumption here is that a self-narrative is a representation of autobiographical memory which, in turn, is a process of reconstructing the self (Josselson 2009). This process is said to be guided by six common principles (McAdams 2008) (1) having a life story that connects the reconstructed past and looks into the imagined future is a natural feature of any person; correspondingly, these stories are important sources of information about individual differences between people; (2) a life story integrates personal traits and actions in time; in other words, they provide continuity to the texture of life as it unfolds allowing for transformation and change; (3) life stories are meant to be shared; they are told to others with the purpose of being connected to them, with different goals and for different reasons; (4) life stories are temporally unstable and reflect the flow of life; their content changes depending on the context of the person's life; (5) life stories are not culture free; they are replete with values of the group, family, religion, culture, and society the person belongs to and these values determine what stories are tellable (versus untellable); and (6) as life stories are products of the autobiographical memory, they, as any product, can be evaluated on a number of dimensions, such as coherence, complexity, and emotional charge.

Clearly, for a life story to be analyzed, it first needs to be produced. I would like to finish this section by referencing a number of life narratives that were produced by current inmates of Rikers Island and collected through the Student Press Initiative, SPI, supported by Columbia University (<http://publishspi.org/>). SPI is a psycho-educational intervention designed for incarcerated young adults to improve their literacy skills and to remediate their sense of attachment. For the past 7 years, SPI has partnered with the New York City Department of Education on Rikers Island to combine oral histories and narrative therapy methodologies to help participants write and process their life stories.

Analyses performed on the SPI narratives demonstrates that over 90% of participants are people of color who come from disadvantaged

inner-city neighborhoods filled with drugs, violence, and other risk factors for juvenile offending and failing schools. SPI staff teams visit Rikers weekly and their work involves helping students become familiar with the SPI process, interviewing students and transcribing the audio recordings, and then working with students on editing their transcripts to become complete narratives. Throughout this process, SPI staff also serve as mentors to students, asking questions about how the students have processed and continue to process their life events (Chen 2011). I have selected excerpts that constitute autobiographical comments of these young adult inmates on their maturational years. Again, these quotes are intended to illustrate the potential of the narrative approach in helping court-involved individuals develop their own understanding of who they are and why they committed the acts they committed.

Yenny F.

Where I grew up, it was crazy; there was a lot of violence. I tried to get away from it, but it always used to pull me in. Now, I can't really regret that. Because I am already going to say it in the get go that I ain't going to regret anything I've done or anything I say. But I forgive myself for doing that. There was no need for that, because something could have ended up happening to me. Thank God it didn't. I used to live right across the street from these projects in Manhattan. I was a bad little boy. I used to live right next to this store. I used to go in, grab me a couple chips, and get up out of there without having to pay for it. Yeah. I used to beat people up for a couple nice things that they used to have that wasn't mine. I was a gang member so I used to beat people up on the random. I used to have a lot of problems because of beef under the gang situation; they used to have beef with the other projects across the street. I used to go to the junior high school was right there on the block. So we used to run from there to the eastside. Any little kids, we used to knock them. Any little tough dudes we used to see. Everybody. We used to whip them; we used to catch them. Word? Boop, boop, boop, boop. Keep walking. Those were the days. I started being a gang member when I was 14. At the time, I was jumped by the rival gang of the gang that I was in, but I wasn't part of that gang at the time. I used to know a couple of the people from the gang that I joined, and they saw me almost get jumped. They came and they defended me, "Yo, if you all going to jump him, you all going to have to fight us, too." So they stopped. They ain't

want to fight. We got up out of there. Then I started chilling with them.

They asked me, "Yo, you want to join?" I was like, "Let me think about it." I went. Got in. Boom. Ended up doing what I had to do. Then I was official, nobody could say nothing to me. I knew my stuff. Everybody knew who I was. I felt happy. I felt good. And then more rival gang members started going to our school. We beat them up. Boom. Then they would leave the school. Then we'd wait again until more of them came. They ain't know. Boom. And when they used to go to another school, we used to go to that school to beat them up. I used to be bad. One time I went to the other school, I ended up seeing three of them, and we asked them. They like, "Nah, we not." But they started running. I'm like, if you all not, why you all started running? So we started chasing them and we beat them up. When I think about that now, I don't really feel no way. They should have never ran. That's I learned when I was in that gang. That's how we are. We was. Because a lot of us ain't with it no more. Yeah, you can say I'm a bad kid, but I don't really think I'm a bad kid. Everybody says I'm a good person. I'm a good person. I have no problems. I don't start no problems. If you start problems with me, we're going to get into something. I got my butt whipped a couple nice times, but then I moved to the Bronx. We moved because the apartment that we lived in Manhattan wasn't under my parent's name. It was under somebody else's name and something happened to that person. So we couldn't renew the lease.

Kenny H.

My name is Kenny, but you can call me "Mr. H." I'm from the Bronx, the projects. I'm about to be an older man. I'm about to be 20 and have a family, so I have to make choices for three people now. My wife is pregnant; she's three months along. So far, my life hasn't been that good. It was once a calm, nice, and decent life to live, but it's just hard; it really is. I've realized that you have to learn from your own mistakes and then make choices in a different way because of them. [...]

My birthdays have always been fun. My mom always brought her nice cakes, little apple cakes. I always celebrated my birthdays the way I wanted to. I lost my virginity on my fifteenth birthday, for example. That was the first time I ever felt happy. I felt like, "Yeah, I got girls that's getting mad over me, and I'm only fifteen." From that point on, I just started doing my own thing, you know, every birthday. I always needed to have a girl, but that was the first time I was ever really happy. I've been happy because my mom took me places, you know, because my mom did something for me, but for that birthday, I finally did something for myself. I didn't ask anybody to do anything for me that day, so that's why I felt so happy. For my 20th birthday,

I was going to try to get an outfit and go to the 40/40 Club. That's Jay-Z's club in Brooklyn. I was trying to go there because Jay-Z's birthday is the same day as mine. I wanted to celebrate with him, so I could feel that I accomplished something, that I did something for me. Now I can't even do that, but hopefully in time I can.

Claire C.

Between the ages 9 and 10, fourth and fifth grade, I started doing things badly. I started acting out because I wanted to know what it was like. I was raised to not do anything the world did, which was nothing bad, so I wanted to see what it was like. And my mother wasn't in the picture, or father, so I had a lot of anger and I never expressed myself. I would steal from my grandma, go hide out at my best friend house, smoke cigarettes. My grandma used to work all hours and I was a very mature, intelligent young lady, so my grandma gave me a key. I remember I had got suspended from school for starting a fire in the girls' bathroom. When I got home, I thought she would be there waiting, but she wasn't. I know I was going to get the whoopin' of my life, so I put newspaper in my jeans to be prepared. She came home and didn't say a word. For two whole days, I was scared and that right there was the worst whoopin' I've ever had: Silence. I felt so bad. My grandma was getting tired, raised eight children plus two more, her grandkids, and one's acting out. Damn! My grandmother would call my mother and tell her the news about how I was acting out around that time. I was 11 going on 12 years old. So we sat in the living room when my mother arrived. We knew that our mother was coming to get us for good. My grandmother thought my mother was only coming to get us for welfare checks. After they discussed the arrangement, we left with our mother.

Jane T.

My name is Jane T., but people call me Slim. I am from the South Bronx. Things were a little rough. My mother was a single parent. There was five of us, three girls, two boys. And my mother used to struggle to buy us what we needed. It was rough on her. My mother used to go out and sell fried foods, Spanish fried foods, to provide us with what we needed. And we had to help her, go out with her. I didn't used to want to go because I used to be embarrassed that the people from school would see me. But if I wanted a pair of sneakers, I had to go. If I wanted something, I had to go with her. I don't remember my father bein' with us half the time. My father used to have a lot of women.

My father came back when I was like 9 years old, and he used to verbally abuse us. My mother was real scared of him. We moved from the South Bronx to somewhere in the Bronx. My mother used to make us do whatever my father wanted to do regardless of what it was. We never got sexually

abused or any of the above, but he was real strict and we would have to go to the room, not come out. They used to lock us in the room. My mother was not that loving type, only with my father. I have three sisters and two brothers. I am like the fourth one in the family. My siblings now, they all are very well educated. They have houses, they have homes, they have everything. The only one that has nothing is Jane, but that's because I chose that. They chose the right way, I chose the wrong way. And I guess that's what happened to me because at the age of 13 1/2, I went and I lost my virginity, and my mother threw me out to the streets. My father told her if I wouldn't leave, he would leave. And since the age of 13, I've been on my own, so it's been rough. I went from a little girl to a mother to a woman. I had to learn how to do everything by myself. The father of my kids, the guy that I met that I lost my virginity to, took me to his house; my parents married me at the age of 14. They married us because they told him if he wouldn't marry me that he was going to go to jail. I was 14; he was 16. I'm still legally married to that man. It was rough growing up. I learned how to cook. I learned how to do everything by myself. I had to learn the hard way, and I was doin' real good in school. I was in high school already, but I had to stop goin' to school because I was havin' a baby. And by the last month of my pregnancy, I didn't want to go to school. I was getting lazy and stuff like that, so I stopped goin'. The father of my child, he was young, he couldn't work, so my husband went to work with my family in order to provide for us, that's how he used to make his living. I started using.

But then as time went along, my husband started getting into bigger business, my family started making different moves, doing different things, and that's when my addiction escalated, but I still took care of my kids. I did everything for my kids. My husband always took care of me. I told him, "Listen, this is not working, you know. You're going to end up in jail, I'm going to end up being by myself with my daughter." My daughter was like 2 years old. So he went and he got a job for this company, Disclosure. He worked for that company, like, for sixteen years, but my husband was an alcoholic. He used to drink all the time. And after my husband stopped working with my family, I kind of like stopped everything because there was no money to come in for me to do anything, and I was young, I didn't know the streets or anything. So my husband got a job. After sixteen years, because of his alcohol addiction, he got fired. They caught him drinking on the job a couple times, and they warned him, they put him on probation. And I used to tell him, "Listen, you're going to end up losin' your job." And he didn't care, he used to still drink. One time he got arrested on the train drinking; they called his job. He had went to do an

errand for somebody at work, they had sent him to do something. He used to work with the computers and stuff like that. While he went out to go do that errand, he went and bought some liquor and got caught on the train with it, so he got arrested and they called his job. When he came back, he got fired. They fired him without no benefits, without nothing. I broke up with my husband. After fourteen years of living with my husband, I broke up with him and I went on my own.

Each of these narratives and all of them collectively substantiate some of the themes extrapolated in the various theories of personality discussed above. Reading the excerpt from Henry's narrative, one can map out the dissociation of moral competence and moral performance (he knew that stealing was bad, he knew he was bad, and he still did it), the essential negativity of peer influences through his gang membership and the satisfaction of knowing his identity, one recognizable by both himself and others and the feeling of belonging this recognition gave him. Kenny's story stresses the importance of sexual activities and romantic relationships in adolescence and young adulthood and underlies, once again, how important it is for these types of relationships to unfold to the satisfaction, within a societally appropriate context, of all of the involved. Claire's account provides a classic illustration of the urge to find out who one is and the striving for love and acceptance, within the psychodynamic context of her mother and grandmother. Finally, Jane's narrative shares the developmental trauma of being rejected by one's parents and forced into a marriage, having a baby but no future.

It is quite remarkable how different and yet similar these narratives are. They are different in terms of their general essences and their specific life events. They are similar because they are told by people residing in a correctional facility, Rikers Island, and these people are there for a reason: they have violated the law. Moreover, they violated the law more than once, previously as juveniles and now again as adults. This circumstance is important because, by definition, this makes them what was referred to above as "career criminals." The field has been trying to understand them, engaging a variety of theories, methods,

and assessment, resulting in a huge amount of knowledge and yet little understanding of how to effectively divert these individuals' lives into socially positive and productive careers.

A detailed analysis of these narratives is outside the scope of this essay. It is important to know, however, that, although the very idea of bringing these narratives to the light of the day (i.e., soliciting them, transcribing them, and analyzing them) should be credited to the rapidly developing field of the analyses of autobiographical accounts of personality, they can be processed by professionals working with juvenile delinquents in multiple ways. First, creating them and sharing them with a listener is often a therapeutic act of self-formulation for an individual. Second, these narratives present a great deal of information about the deep structures of the offenders' personalities, and, similar to projective techniques, may unveil information that is not typically shared. Third, there is much room for the quantitative analyses of the content of these stories and the elucidation of common themes related to the narratives themselves (e.g., 1–6 above, McAdams 2008) as well as to the shared and specific features of the lives of court-involved individuals. Thus, such narratives, potentially, might provide many insights into the field of juvenile justice, but, as it stands now, there is virtually no empirical evidence to substantiate this potential. The field needs to develop ways of collecting and processing them, as they generate tremendously rich insights into life journeys of juvenile offenders.

Conclusion

As indicated above, this essay was conceived to capture the general picture of the utilization of various selected theories of personality and the assessment devices each of these theories utilizes in the field of forensic juvenile psychology and psychiatry. The list of approaches exemplified here is far from exhaustive; so are the illustrations of ideas and empirical work within each approach. Yet, the essay provides a general picture of the lay of the land, that is, the jumble of ideas,

assessments, and findings, that underscore, once again, the complexity of human behavior in general, and law-offending behavior in particular. The evidence presented here crystallizes the observation that there are multiple and important applications of personality-oriented approaches in working with juvenile offenders. The most powerful point is that both concurrent and prospective predictions can arise at the junction of multiple theories and, correspondingly, multiple assessments, rather than from the specific angle of any one of them.

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Nearly 4% of all youth 8–18 years old are involved in the justice system (Taxman et al. 2007a). In 2008, 2.11 million juveniles were arrested (Puzzanchera 2009). However, over 101,000 youth are detained in a myriad of facilities: detention (26,590 youth), correctional facilities (32,260 youth), camps (9,770 youth), community-based (18,360 youth), and residential treatment (14,070 youth) (Sedlak and McPherson 2010). Detained youth in closed settings rely upon the facility for their basic needs. Youth detained in facilities tend to have a compilation of biosocial needs including higher rates of substance use disorders, mental health issues, physical disorders, and educational needs (see Sedlak and McPherson 2010). The challenge is to address these needs to better prepare the youth to be part of the community. In this chapter, we provide a brief overview of the juvenile justice system and juvenile offender populations, we describe the residential facilities, we examine the unique needs of detained youth, and we identify the services provided in these facilities, including (a) health, (b) mental health, (c) substance abuse, and (d) education. The final section is devoted to a discussion of the adoption of evidence-based practices (EBP) as it relates to juvenile justice facilities.

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Basic Terms and Concepts: Understanding the Justice Population

In most states, individuals under the age of 18 are considered juveniles and therefore are handled through a special process. Increasingly, states are pursuing policies to waive the youth to adult court, with over 8,500 youth currently detained in adult facilities (Adams and Addie 2010). In the juvenile system, youth are detained in a myriad of facilities, for delinquent offenses or for status offenses (behavioral issues that are not considered criminal behavior for adults). The terms “confinement” and “residential placement” are often used interchangeably.

The Nature of the Juvenile Justice System

Figure 18.1 illustrates the overall juvenile justice system, recognizing that each local community has some variation in the system processes. The process overall consists of the following components: possible delinquent act; diversion to delinquency prevention programs by the police, prosecutor, or juvenile justice intake processes (discretionary decision), formalized adjudication (conviction), probation or placement in a residential facility, and then aftercare from a residential facility (parole). These basic processes exist in most systems, with variations in the number and type of diversion programs, residential treatment

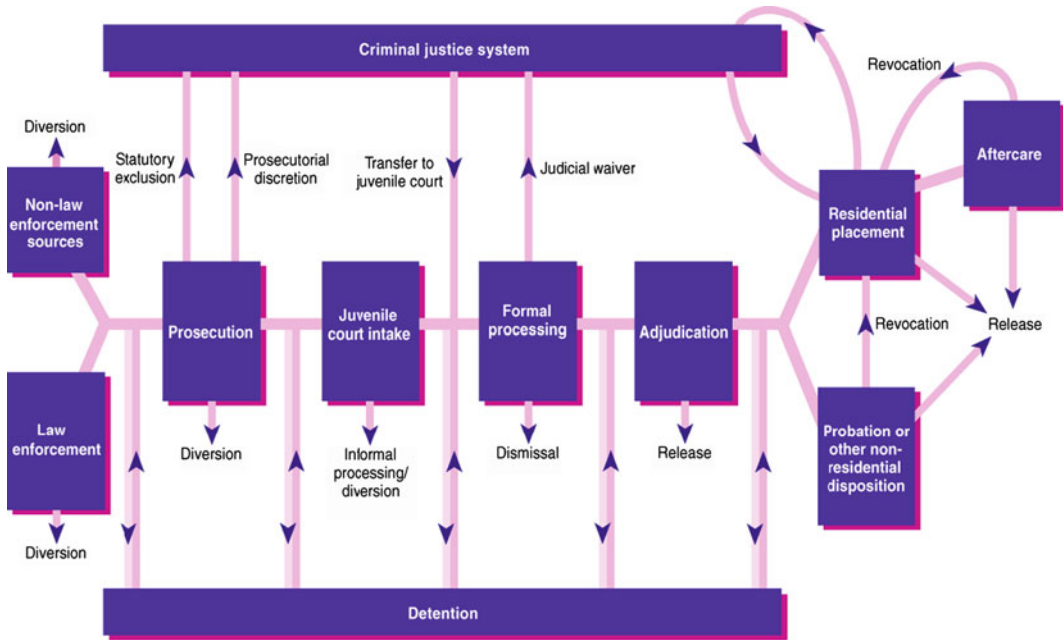


Fig. 18.1 Diagram of the juvenile justice system. *Source:* Snyder and Sickmund (2006) Juvenile offenders and victims: 2006 National report

facilities, and probation programs. That is, each jurisdiction is unique in terms of the nature and type of programming/services available.

Unless a youth is diverted from the formal system, the typical pathway after an arrest is similar to that in the adult criminal justice system. The police make an arrest, the prosecutors determine whether there is prima facie evidence for the charges, the court handles the charges, an adjudication decision is made, and sentencing decisions are made by the judiciary. Like adult courts, plea bargaining is common. Most offenders are offered probation supervision (nearly 650,000 youth), with a smaller number of offenders (80,000) placed in some type of closed setting. Unlike the adult system, the juvenile justice system has several diversion type programs (e.g., warn-and-release prior to official arrest, diversion to a special delinquency prevention program for juvenile offenders by prosecutors or juvenile justice intake). For youth charged with serious offenses, the juvenile can be “transferred” or “waived” to adult court through various mechanisms depending on the jurisdiction (a) concurrent jurisdiction where prosecutors have discretion

over whether to file the case in adult or juvenile court, (b) statutory exclusion where laws determine what offense types are eligible for adult court regardless of juvenile status, or (c) judicial discretion where judges have discretion on whether a case will be processed in adult or juvenile court (Adams and Addie 2010).¹ Juveniles incarcerated in adult facilities must be separated from adult offenders by “sight and sound” in accordance with the Juvenile Justice and Delinquency Prevention Act of 1974 (P.L. 93-415, 88 Stat. 1109).

Unlike the adult system, the juvenile justice system handles unique cases. Juveniles can be arrested for “status offenses,” particular behaviors or actions that are legal for adults but illegal for minors (e.g., underage tobacco or alcohol use, truancy, running away from home). Once arrested, juveniles can be involuntarily held without charges. Juvenile case dispositions also are not as structured as adult sentences given that many

¹ Some states have minimum ages of criminal responsibility where an individual cannot qualify for adult court if they are under a certain age.

juveniles receive indeterminate sentences, have their original sentences extended, or have the length of stay determined by the facility instead of the judge (Griffin and King 2006). Juvenile justice records are not publicly available. As of 2010, 13 states and the District of Columbia had closed juvenile court sessions, 18 states had open sessions, and 20 states had offense and age restrictions to determine whether the session would be open or closed (Szymanski 2010a). Many of the states allow for judge discretion on whether to override the state's general rule. All states except for Rhode Island also have procedures for sealing or expunging certain eligible juvenile records once an individual legally becomes an adult (although at least 31 states also have methods for "unsealing" records) (Szymanski 2010b).

Given that juveniles are under the care and responsibility of an adult (parent or guardian), family members play an active role in juvenile cases. Juvenile courts may place legal requirements on parents or guardians (as well as the youth), such as parent training classes or participation in the juvenile's treatment. Parental responsibility laws in some states may even result in civil liability or criminal charges for parents of juvenile offenders (Office of Juvenile Justice and Delinquency Prevention 2004). If a court determines that a parent or guardian is incapable of managing the youth's behavior (sometimes deemed a "person or child in need of supervision" [PINS/CHINS]) or addressing their needs, the State may take custody of the juvenile, and the youth will become a "ward" of the state. In some states, a juvenile placed in a state facility automatically has the state as the legal guardian. If parents maintain custody of an incarcerated juvenile, the facility may need to obtain parental consent for use of certain services (e.g., treatment programs, health procedures).

Needs of Confined Youth

In 2008, the Office of Juvenile Justice and Delinquency Prevention (OJJDP) sponsored a survey of a nationally represented sample of

youth incarcerated in a variety of facilities ($n=7,073$). Based on these findings, we have a better sense of the diverse set of needs of the youth (Sedlak and McPherson 2010) and individual studies on juvenile justice populations.

Health needs. Placed and incarcerated youth report significant health needs with over two-thirds (69%) requiring basic healthcare, such as dental, vision, and hearing issues, are the most common needs (37%), followed by nearly equal shares of treatment needs for illness (28%), injury (25%), or other health needs (29%) (Sedlak and McPherson 2010). A retrospective review of dental screening records from a county youth detention facility found that more than half of the juvenile detainees had untreated tooth decay, compared to 20% of the general youth population (Bolin and Jones 2006). Chlamydia is 8–13 times higher in juvenile justice inmates compared to the general population, and rates of gonorrhea are 5–9 times higher among juvenile inmates than the general population. Approximately 3.7% of male and 5.2% of female inmates test positive for Syphilis compared to less than 0.001% of adults in the general population (Centers for Disease Control and Prevention 2006, 2007). STI rates vary significantly by gender, including Chlamydia (6–14% for incarcerated males and 10–33% for incarcerated females) and gonorrhea (0.6–7% for males and 5–23% for females) (see Belenko et al. 2009; Lederman et al. 2004; Morris et al. 1998; Teplin et al. 2003). Female offenders appear to have higher prevalence rates of STIs (Belenko et al. 2009; Canterbury et al. 1995); moreover, studies have also shown high rates of current or past pregnancies among incarcerated female youth. For instance, 10% of female detainees in an Alabama detention center were pregnant upon admission (Feinstein et al. 1998, as cited in Golzari et al. 2006), and 37% of Georgia female detainees were currently pregnant or had been pregnant in the past (Williams and Hollis 1999, as cited in Golzari et al. 2006).

Mental health. Youth in closed settings report higher rates of mental health issues than the general population. Externalizing disorders

(i.e., substance use and disruptive behavior disorders) are the most prevalent in these populations, but internalizing disorders (i.e., affective and anxiety disorders) are also common, especially among girls (Teplin et al. 2002; Wasserman et al. 2005, 2010). The majority (60%) of youth report anger issues, around half (48–52%) report anxiety or depression symptoms, one-third (30%) report a history of sexual or psychological abuse, and over 20% report attempted suicide in the past (Sedlak and McPherson 2010).² Female youth report around two times more past suicide attempts and past physical abuse and four times more past sexual abuse than male youth. This nationally representative sample of youth exhibits slightly less than the higher rates of mental health problems/diagnoses among various juvenile offender populations in other studies. High rates of psychiatric diagnoses are also found when juveniles are administered the DISC, a structured clinical assessment instrument developed by Columbia University. For instance, 72% of youth (95% male) incarcerated in a South Carolina detention facility and 66% of males and 74% of females in a Chicago detention center met criteria for at least one psychiatric disorder (Atkins et al. 1999; Teplin et al. 2002). Incarcerated youth are similar to delinquent involved youth in the community, where two-thirds (67%) of juvenile offenders from Illinois and New Jersey who were referred to assessment centers reported symptoms consistent with a psychiatric diagnosis (Wasserman et al. 2004). Texas youth referred to probation intake had a high rate (46%) of diagnosable mental illness, with female referrals exhibiting higher rates of anxiety disorders, affective disorders, and oppositional defiant disorder (Wasserman et al. 2005).

Mental health disorders are linked to further delinquent behavior. Among juvenile justice populations, those with externalizing psychiatric disorders (especially disruptive behavior disorders) were significantly more likely to reoffend than those without (McReynolds et al. 2010; McReynolds and Wasserman 2008; Wasserman

et al. 2004). Evans Cuellar and colleagues found that among justice-involved youth with mental health problems, 57% were rearrested and 10% were for felonies (Evans Cuellar et al. 2006). Conversely, internalizing disorders (e.g., depression, anxiety) tend to reduce the likelihood of reoffense or disciplinary infraction, even when combined with disruptive behavior disorders (McReynolds and Wasserman 2008; McReynolds et al. 2010).

Substance use disorders. Incarcerated youth also have greater substance abuse needs than the general population. Rates of use for alcohol, marijuana, and other illegal drugs are 1.3–2.8 times greater for youth in residential placement (Sedlak and McPherson 2010). Most surveyed youth (87% of males and 91% of females) had tried at least one illegal drug during their lifetime. The majority reported getting drunk or high multiple times per week prior to arrest (59%) and 68% report experiencing problems (e.g., getting in trouble, blacking out) (Sedlak and McPherson 2010).

Educational needs. Many youth in residential facilities experienced problems in schools prior to the incarceration period. About 21% of the incarcerated youth have dropped out of school, 61% had an expulsion or suspension during the year prior to incarceration, and 48% function below their expected grade-level (Sedlak and McPherson 2010). A national survey of state departments of juvenile corrections also reported that 39% of confined youth have learning disabilities while 10% are diagnosed with mental retardation (Quinn et al. 2005).

Types of Juvenile Justice Facilities

In 2002, 23% of adjudicated cases resulted in residential placement (Snyder and Sickmund 2006). The OJJDP identifies that incarceration or residential placement can occur in a variety of settings (a) detention center, (b) shelter, (c) reception/diagnostic center, (d) group home, (e) ranch/wilderness camp, (f) training school, and (g) residential treatment center. (Note: youth waived to

²Symptoms are self-reported by youth and are not necessarily indicative of a diagnosis.

adult court are not counted in these figures.) Residential treatment centers (35% of youth), group homes (28%), and detention centers (27%) are the most common types of residential facilities holding juvenile offenders (Hockenberry et al. 2009).³ Group homes, shelters, ranches, and training schools do not only maintain youth involved in the justice system, but oftentimes mix youth with various behavioral problems or youth that are in foster care (Sedlak and McPherson 2010).

Juvenile justice facilities can vary in significant ways. The OJJDP Census of Juvenile Residential Facilities describes the characteristics of different types of facilities holding juvenile offenders (Hockenberry et al. 2009). Less than half (44%) of facilities are publicly operated, although publicly operated facilities hold the majority (69%) of juvenile offenders. Shelters, group homes, and residential treatment centers are more likely to be privately run, whereas detention centers, reception/diagnostic centers, and training schools are more likely to be publicly run. Facilities also differ drastically by size. Over half (54%) of facilities hold 20 or fewer residents while only 3% of facilities hold over 200 residents. However, the larger facilities account for a much larger proportion of juvenile offenders. Although group homes are the second most common facility type, they hold less than 10% of juvenile offenders. In contrast, facilities with more than 100 residents hold nearly half (47%) of juvenile offenders (3% of facilities with over 200 residents hold one-quarter of juvenile offenders). Around one in ten (11%) juvenile offenders live in overcrowded facilities, mainly detention centers or training schools. The level of security also varies by facility type. While about two-thirds (68%) of public facilities lock youth into their rooms, only 8% of private facilities do so. Half of facilities report additional security measures, and a smaller number of facilities (19%) use razor wire to confine youth, a feature

³Facilities could endorse multiple facility type options. The survey of juvenile facilities did not define these terms but merely indicated that there were different types of facilities.

more common with training schools, detention centers, and reception/diagnostic centers.

Differences occur in the placement of youth to various different types of facilities. African-American youth are more likely to be placed in “correctional” placements (42% compared to 31% Caucasian), Hispanic youth are more likely to be placed in “camp” programs (17% compared to 7% Caucasian), and Caucasian youth are more likely to be placed in residential treatment programs (Sedlak and McPherson 2010). Female juvenile offenders are more likely than males to be located in detention centers (45% vs. 35% males), and are less likely to be placed in long-term secure facilities (24% vs. 37% males) (Snyder and Sickmund 2006).

What Types of Services Are Offered in Youth Incarceration Facilities?

The National Criminal Justice Treatment Practices (NCJTP) survey (see Taxman et al. 2007a for a description of the sampling frame⁴) provides information on the types of services available in juvenile incarceration facilities, both in community settings and in closed settings. The average daily population in the residential facilities was 180.8 (median=98) youth, as compared to 34.7 (median=48) in the juvenile jails. In residential facilities, 30.3% of the staff are classified as clinical, where the ratio of clinical staff to youth was 2–10 in residential facilities.

Table 18.1 shows the five most prevalent programs in incarceration facilities and jails for youth.

⁴The survey of juvenile facility directors was part of the NCJTP survey conducted in 2004–2005 (see Taxman et al. 2007a). Residential facilities were selected from a sampling frame of the 772 juvenile institutions listed in the 2003 American Correctional Association (ACA) national directory. After applying exclusionary criteria (facilities with capacities of less than 25, shelters, and group and foster homes were eliminated), 67 facilities were identified using a stratified sample (based on region of the country and size of the population). In the second stage, 165 local juvenile corrections facilities and offices in these counties were identified using the ACA Directory, municipal agency Web sites and directories, and direct telephone inquiries.

Table 18.1 Prevalence of correctional services and programs

Type of program/service	Incarceration/residential facilities (<i>N</i> =317)	Jails (<i>N</i> =1,395)	Community corrections (<i>N</i> =2,207)	All facilities (<i>N</i> =3,918)
Education/GED program				
% with program	97.1	65.9	78.5	73
# in program	29,890	39,752	45,808	115,450
% of ADP (median)	100	96.5	8.3	8.3
Vocational training				
% with program	67.7	14.7	47.5	37.5
# in program	13,246	4,641	9,471	27,359
% of ADP (median)	40	100	0.6	0.5
Sex offender therapy				
% with program	50.3	7.2	67	44.3
# in program	4,450	700	13,428	18,578
% of ADP (median)	12.6	16.7	0.5	1.7
Intensive supervision				
% with program	17.9	6.1	78.3	47.7
# in program	3,117	2,945	25,005	31,066
% of ADP (median)	100	10	1.8	5.8
Transitional housing				
% with program	7.7	0.1	31.4	18.3
# in program	1,776	–	3,865	5,656
% of ADP (median)	12.5	–	0.3	0.4

Note: Weighted data presented in all tables. “% in program” refers to the percentage of facilities that provide the specified program or service. “# in program” refers to the number of youth attending the program on a typical day in all reporting facilities. “% of ADP” refers to the median percentage of the average daily population in the facilities that attend the program on a typical day

Source: Young et al. (2007)

The survey found that the facilities reported to include boot camps (8.1% of the facilities) and day reporting and work release programs (less than 2% of the facilities). Vocational services and therapeutic programs for sex offenders were fairly common (in 37.5 and 44.3% of the facilities, respectively), but the programs could only provide services to a small percentage of the youth.

As shown in Table 18.1, the pattern of services follows expectations. Because minor youth are mandated to attend school, nearly all the residential facilities and two-thirds of the jails provided education programs. The capacity was sufficient for all youth to be involved in these programs. The relatively high “percent of ADP” figure for some programs in jails (vocational and educational) and residential facilities (educational and intensive supervision) is due to the fact that these are only for facilities that offer the services.

For example, while all the youth in half of the jail facilities that provide vocational services attend such programs, only 14.7% of all the jails provide this well-attended service. Two-thirds of the residential facilities provide a vocational program, and in half of these facilities, the program is attended by 40% of the daily facility census (i.e., in half of the facilities more than 40% attend, and in the other half less than 40% attend).

NCJTP survey was devoted to understanding the range of substance abuse services and treatment programs offered (see Table 18.2). The least intensive service models were widely reported by respondents, with over three-quarters of all facilities providing drug and alcohol education. Fewer than expected residential and jail facilities provide case management services to link youth to services in the community. The most common treatment modality for juvenile offenders was brief (1–4 h) weekly substance abuse group counseling.

Table 18.2 Prevalence of substance abuse services

Type of program/ service	Incarceration/residential facilities (N=317)	Jails (N=1,395)	Community corrections (N=2,207)	All facilities (N=3,918)
Drug/alcohol education				
% with program	88.1	66.4	81.8	76.8
# in program	18,759	18,251	40,896	77,907
% of ADP (median)	30	41.7	8.2	21.3
% pgms ≥ 90 days	43.7	7.8	14.2	15.7
SA group 1–4 h/week				
% with program	50.7	10.7	57.7	40.4
# in program	8,484	4,360	11,124	23,968
% of ADP (median)	30	30	2.5	4.2
% pgms ≥ 90 days	63.7	18.3	31.7	33.6
SA group 5–25 h/week				
% with program	42.2	6.7	31.9	23.8
# in program	4,339	1,600	5,739	11,677
% of ADP (median)	13	70	0.9	0.9
% pgms ≥ 90 days	67.2	4.3	98.9	85.8
TC—Segregated				
% with program	23.5	50	2	20.8
# in program	5,887	7,539	7,087	20,513
% of ADP (median)	18	20.8	100	20.8
% pgms ≥ 90 days	82.8	91	24.2	86.4
TC—Nonsegregated				
% with program	10	4.6	5.2	5.4
# in program	3,482	257	1,548	5,288
% of ADP (median)	100	30	0.4	11.6
% pgms ≥ 90 days	95.3	4.9	90.9	65.3
Case management				
% with program	35.2	5.8	33.3	23.7
# in program	10,090	2,164	42,364	54,618
% of ADP (median)	66.3	66.7	10.9	10.9
% pgms ≥ 90 days	67.2	21.1	95.7	86.8

Source: Young et al. (2007)

Forty percent of all facilities provided this standard weekly “outpatient” treatment and 23.8% provided the equivalent of intensive outpatient treatment (5–25 h weekly). The access data showed that both of these modalities were available only to small numbers of juveniles, serving an average of less than 5% of youth in these facilities.

As discussed in Young et al. (2007), 66.4% of the residential facilities offered at least one of the three primary treatment modalities (1–4 h/week counseling, 5–25 h/week counseling, or TC treatment), compared to 16.7% of the jails. Approximately two-thirds of the treatment

provided in these facilities had treatment durations of at least 90 days or more while less than 20% of the jail programs had programs of this length.

The NCJTP Facility Directors survey included a series of questions about the extent to which various screening, assessment, and other specialized services were offered. Slightly over half (52.3%) of the facilities reported using a standardized substance abuse tool, and the Substance Abuse Subtle Screening Inventory (SASSI-A or SASSI-A2) was the most common tool, used in about half of the residential facilities (50.5%) and jails (50.7%). Use of standardized mental health assessments was reported by 36% of the residential

Table 18.3 Percent of youth provided various services

Service	Incarceration/ residential facilities (%)	Jails (%)	Community corrections (%)	All facilities (%)
HIV/AIDS testing	64.3	24.6	20.3	26.4
HIV/AIDS counsel and treatment	55.9	25.2	19.9	25.7
TB screening	93.7	89.5	25.0	58.9
Hepatitis C screening	73.5	16.0	18.8	22.9
Physical health services	97.0	96.3	30.4	59.3
Assessment for mental health	96.2	75.4	51.1	63.4
Mental health counseling	72.2	61.4	43.6	52.2
Assessment for co-occurring disorders	77.2	53.6	36.1	45.6
Counseling for co-occurring disorders	64.4	48.8	28.7	38.7
Family therapy/counseling	46.0	33.2	42.5	39.5
Communication or social skills development	90.4	69.4	33.3	50.8
Life skills management	81.5	73.5	30.5	50.3
Anger or stress management	87.1	65.3	31.1	47.8
Cognitive skills development	90.8	56.3	31.7	45.2
Job placement/voc counseling	48.7	28.1	26.4	28.9
Religious/spiritual sessions	87.8	68.6	16.3	41.2

Source: Young et al. (2007)

Table 18.4 Percent of youth provided offender reentry services

Reentry service	Incarceration/ residential facilities (%)	Jails (%)	Community corrections (%)	All facilities (%)
Community-based (CB) treatment referral	51.5	52.6	56.4	54.9
CB treatment appointment	55.9	25.2	19.9	25.7
CB treatment prerelease contact	93.7	89.5	25.0	58.9
12-step contact	73.5	16.0	18.8	22.9
Parole/probation pre-release contact	97.0	96.3	30.4	59.3

Source: Young et al. (2007)

facilities and 7% of jails. Risk assessment tools, common in justice settings to examine probability of further justice involvement, were infrequently used in residential (15.1%) or jail (6.8%) facilities.

Other than TB screening, which was provided to 58.9% of youth in all facilities, general services, such as physical health services (59.3%), mental health assessment (63.4%), and mental health counseling (52.2%), were most frequently reported. Life skills, communication skills, and social skills were the next most common service type, provided to approximately one-half of the juvenile offenders in all facilities (Table 18.3).

The final part of the survey examined the degree to which reentry services are provided to offenders after release from incarceration. The NCJTP survey assessed the frequency with which facilities provided reentry services to youth with substance abuse problems. As shown in Table 18.4, a little over half of substance abusing youth were provided with a referral to a community-based treatment provider at discharge. The residential facilities further reported that they also arranged for a post-release appointment with a community-based program with over half of their residents (55.9%) while appointments were made for just 25.2% of those leaving jails.

What Is the Quality of the Services Provided to Youth in Incarceration Facilities?

The last two decades have seen an emphasis on juvenile justice (as well as adult corrections), focusing on adoption of EBP, or those treatments or practices that are tied to improved outcomes of the youth. The question raised by the EBP movement is not only what practices occur in the justice facility, but also what organizational or environmental characteristics affect the adoption and implementation of EBPs into the correctional environment. As recently noted, “a presupposition of the evidence base is that its development has taken into account the fit between the treatment and the context of delivery. In fact, this fit has been attended to only rarely” (Hoagwood et al. 2001: 1185). Most of the literature on EBPs for juvenile offenders has focused on community-based treatment agencies, with much less emphasis on residential correctional settings (Belenko 2000). Henderson et al. (2007), using the NCJTP survey data, analyzed the factors that affect the adoption of EBPs in juvenile justice settings. The research team defined EBPs based on the *Bridging the Gap: A Guide to Treatment in the Juvenile Justice System* (Drug Strategies 2005), a report that highlights the key elements of effective substance abuse treatment practices for juvenile offenders. This report reflects a consensus of researchers, practitioners, policy makers, and criminal justice administrators specializing in substance abuse treatment for justice involved youth.

The factors that affect the adoption of effective treatment practices, as highlighted by Henderson et al. (2007) include (a) organizational structure (Backer et al. 1986; Knudsen et al. 2006; Roman and Johnson 2002), (b) organizational climate (Aarons and Sawitzky 2006; Glisson 2002; Glisson and Hemmelgarn 1998; Lehman et al. 2002), (c) training opportunities (Brown and Flynn 2002; Knudsen et al. 2005), (d) resource adequacy (Lehman et al. 2002; Simpson 2002; Stirman et al. 2004), (e) network connectiveness (Knudsen and Roman 2004), and (f) administrator and staff attitudes (Knudsen et al. 2005; Liddle et al. 2002; Schmidt and Taylor

2002). The dependent variable in the current study—extensiveness of use of effective treatment practices—indicates the number of key elements identified in the Drug Strategies (2005) report currently used at the facility. The key variables used in the study were:

1. Systems integration was measured by a list of activities in which the respondents participated with judiciary, community corrections, and community-based treatment (Fletcher et al. 2009). Analyses conducted by Lehman et al. (2009) indicated that a threshold of eight joint activities was indicative of more extensive levels of networking.
2. Screening and treatment matching drew on work by Taxman et al. (2007b) which categorized assessment practices according to the use of standardized screening tools, use of tools developed by the organization, and no use of assessment tools. Programs using standardized assessment tools met the criterion for this effective practice.
3. Concerning treatment services, recognizing the importance of comorbid disorders, developmental appropriateness, and family involvement were operationalized by items in which respondents indicated whether they had specific programming for participants with co-occurring disorders and adolescent clients and provided family therapy.
4. Determination of qualified staff was made from an item that indicated the proportion of staff that had specialized training or specific credentials in substance abuse treatment. Programs were considered to meet this criterion if 75% or more of their staff had either specialized training or credentials in substance abuse treatment.
5. Comprehensive treatment was calculated from an inventory of medical, mental health/substance abuse, and case management services provided by the facilities. Respondents met the criterion for comprehensive treatment services when they provided medical, mental health/substance abuse, and case management services.
6. Engagement in treatment was assessed by an item that queried the extent to which the

programs used specific engagement techniques, such as motivational interviewing, with the criterion being using those techniques “often” or “always.”

7. Two items served as the basis for quantifying continuing care, one assessing the number of offenders that are provided a referral to a substance abuse treatment program and another assessing the number of offenders that had a prearranged appointment with a treatment program.
8. Respondents working in institutions reported on the number of offenders that received the services when they were released; respondents working in treatment programs reported on the number of offenders that appeared to have received the services prior to their admission to the community-based facility. Programs meeting this criterion reported that all of the offenders received referrals and most or all of them had prearranged appointments.
9. Assessment of treatment outcomes was operationalized by an item that assessed the extent to which the respondents were regularly kept informed about the effectiveness of their substance abuse treatment programs.
10. Five sets of independent variables (1) organizational structure, (2) organizational climate, (3) training and resources (funding, staff, physical plant, etc.), (4) network connectedness, and (5) administrator attitudes. Organizational structure measures included a dichotomous item indicating whether or not the facility is a substance abuse treatment facility and an item indicating whether the facility served offenders exclusively or offenders and general population clients. Subscales assessed perceptions of management emphasis on treatment quality and improvement and correctional staff support for treatment.
11. Training and facility resources were operationalized by scales adapted from the resources and staff attributes subscales of the Survey of Organizational Functioning for correctional institutions (Lehman et al. 2002). Scales assessed respondents’ views

about the adequacy of funding, the physical plant, staffing, resources for training and development, and internal support for new programming.

12. Subscales that assessed beliefs about the value of different responses to crime and drug crime (rehabilitation, punishment, deterrence) were adapted from previous similar surveys of public opinion and justice system stakeholders (Cullen et al. 2000).

Table 18.5 provides an overview of each variable to assess the adoption of EBP. Henderson et al. (2007) collapsed the data to examine the trends for incarceration (i.e., residential treatment, jails, detention facilities) and community-based programs. On average, facilities reported that they were using 5.5 (SD=1.9) of the effective treatment practices, with community settings using significantly more ($M=5.8$, $SD=1.8$) than institutions ($M=4.9$, $SD=2.1$; $t(120)=-2.33$, $p=0.022$). Institutional programs were more likely to provide comprehensive services ($\chi^2[1]=3.84$, $p=0.050$) than community-based programs.

Table 18.6 shows the results of the number of specific treatment practices used, with the first column showing the results for the combined sample (adjusted for region of the country) and the second column also adjusting for setting (institution vs. community). Henderson and colleagues (2007) adjusted for region to control for potential sample selection effect and adjusted for setting due to the differences in types and numbers of effective practices the programs were using as detailed above. As shown in Table 18.6, a number of variables affected the extent to which EBPs were in use by the facilities. These include organizational structure variables ($F[4, 116]=3.20$, $p=0.016$, $R^2=0.10$, $Adj. R^2=0.07$, $\Delta R^2=0.08$), treatment climate variables ($F[4, 98]=5.03$, $p=0.001$, $R^2=0.17$, $Adj. R^2=0.13$, $\Delta R^2=0.09$), management emphasis on the quality of treatment ($\beta=0.31$, $t=3.15$, $p=0.002$), training and resources variables ($F[7, 112]=3.76$, $p=0.001$, $R^2=0.13$, $Adj. R^2=0.09$, $\Delta R^2=0.12$), network connectedness as a

Table 18.5 Use of evidence-based practices by youth facilities (NCJTP survey results)

Variable	Institution/ Residential/Jail		Community		Overall	
	%	<i>M</i> (<i>SD</i>)	%	<i>M</i> (<i>SD</i>)	%	<i>M</i> (<i>SD</i>)
Evidence-based practice						
Systems integration	45.8		42.3		77.9	
Developmentally appropriate treatment	2.9		13.6		10.7	
Qualified staff	52.9		76.1		69.7	
Use of standardized assessment	70.6		84.1		80.3	
Comprehensive services	55.9		36.4		41.8	
Family involvement in treatment	70.6		95.5		88.5	
Addressing co-occurring disorders	73.5		70.5		71.3	
Use of engagement techniques	64.7		75.0		72.1	
Continuing care	26.5		25.0		25.4	
Assessment of treatment outcomes	38.2		67.0		59.0	
Average of number of key elements used		4.88 (2.07)		5.77 (1.82)		5.5 (1.93)
Organizational structure						
Substance abuse treatment facility	35.3		60.2		53.3	
Offenders vs. offenders and non-offenders	17.6		95.5		73.8	
Organizational climate						
Management emphasis on quality treatment		3.60 (0.80)		4.08 (0.46)		3.95 (0.61)
Correctional staff support for treatment		3.52 (0.64)		3.42 (0.72)		3.45 (0.70)
Training and resources						
Funding		2.56 (0.78)		2.36 (0.73)		2.41 (0.74)
Physical plant		3.16 (0.79)		3.61 (0.85)		3.48 (0.85)
Staffing		2.66 (0.90)		2.93 (0.77)		2.86 (0.82)
Internal support		3.62 (0.53)		3.38 (0.97)		3.45 (0.88)
Network connectedness						
Noncriminal justice facilities		2.05 (0.74)		2.44 (0.73)		2.32 (0.75)
Criminal justice facilities		2.23 (0.81)		3.15 (0.88)		2.88 (0.95)
Administrator attitudes						
Punishment/deterrence		2.32 (0.61)		2.10 (0.64)		2.16 (0.64)
Rehabilitation		4.51 (0.54)		4.56 (0.51)		4.55 (0.51)
Organizational commitment		3.94 (0.75)		4.31 (0.50)		4.20 (0.60)
Cynicism for change		2.29 (0.83)		1.73 (0.53)		1.90 (0.68)

Source: Henderson et al. (2007)

M=mean, *SD*=standard deviation

group showed the strongest relationship with the use of effective practices ($F [4, 113]=8.23$, $p<0.001$, $R^2=0.21$, $\text{Adj. } R^2=0.19$, $\Delta R^2=0.20$), and administrator attitudes as a group was significantly associated with the use of effective practices ($F [6, 108]=2.68$, $p=0.018$, $R^2=0.11$, $\text{Adj. } R^2=0.06$, $\Delta R^2=0.09$). The multivariate model found that the use of EBPs was the result

of network connectedness, training, internal support for new programs, management emphasis on the quality of treatment, administrator commitment to the organization, and whether the facility was a substance abuse treatment agency ($R^2=0.28$, $\text{Adj. } R^2=0.24$, $\Delta R^2=0.20$); the only significant individual predictor was network connectedness ($\beta=0.23$, $t=2.86$, $p=0.005$).

Table 18.6 Impact of organizational variables (IVs) on the use of evidence-based practices (DV)

Variable	Unadjusted coefficient			Adjusted coefficient for setting		
	<i>B</i>	SE <i>B</i>	β	<i>B</i>	SE <i>B</i>	β
Organizational structure						
Institution vs. community setting	1.23	0.65	0.29	N/A	N/A	N/A
Substance abuse treatment facility	0.69	0.35	0.18*	0.69	0.35	0.18*
Offenders vs. offenders and non-offenders	-0.59	0.67	-0.13	-0.59	0.67	-0.13
Organizational climate						
Management emphasis on quality treatment	1.06	0.27	0.36***	0.91	0.29	0.31**
Correctional staff respect for treatment	0.12	0.25	0.05	0.16	0.25	0.06
Training and resources						
Funding	-0.46	0.23	-0.18*	-0.37	0.22	-0.15
Physical plant	0.10	0.21	0.05	-0.05	0.21	-0.02
Staffing	0.02	0.22	0.01	-0.08	0.21	-0.04
Training development	0.61	0.30	0.20	0.60	0.29	0.20*
Internal support	0.45	0.21	0.20*	0.56	0.21	0.25**
Network connectedness						
Noncriminal justice facilities	0.82	0.27	0.33**	0.84	0.27	0.33**
Criminal justice facilities	0.33	0.21	0.17	0.21	0.23	0.11
Administrator attitudes						
Punishment/deterrence	-0.35	0.28	-0.12	-0.26	0.28	-0.09
Rehabilitation	0.23	0.36	0.06	0.26	0.35	0.07
Organizational commitment	0.82	0.39	0.27*	0.81	0.38	0.26*
Cynicism for change	0.14	0.35	0.05	0.35	0.36	0.13

Source: Henderson et al. (2007)

B=Unstandardized regression coefficient, SE *B*=Standard error, β =Standardized regression coefficient

* $p < 0.05$, ** $p < 0.01$

Discussion and Conclusion

Approximately 4% of the juvenile population involved in the formal part of the justice system, with an undisclosed number of youth involved in diversion programs in the community. Youth that interact with the juvenile justice system, and probably those in diversion programs, have a higher burden of need for services along all dimensions—medical, psychological, educational, and vocational—than the general population of youth. This high burden of need places the youth at risk for poor prognosis for being productive adults, including future mental health and substance abuse problems. Poor educational attainment also limits future employment prospects.

Existing survey data illustrates that the juvenile justice system fails to deliver EBP or treatments that are likely to improve the life prospects

of youth. This paper is devoted to youth that are detained in facilities and not in community-based settings, such as probation. As shown by the data provided by the NCJTP (Henderson et al. 2007; Young et al. 2007) as well as the recent Survey of Youth in Residential Treatment (Sedlak and McPherson 2010), residential treatment and incarceration facilities are equipped to provide legally mandated services for educational and basic medical care. But much needed psychological services such as mental health counseling and substance abuse treatments are infrequently provided, and the existing services are insufficient to meet the needs of the youth. More importantly, the services that are available do not map to the EBP literature. Most neglected are family-related treatments, such as multisystemic family therapy. Few institutional programs provide family therapy while the youth is in the facility or in community-based programming. The NCJTP survey provides

Table 18.7 Core components of recent national initiatives

Juvenile detention alternatives initiative (<i>Annie E. Casey Foundation</i>)	Models for change (<i>MacArthur Foundation</i>)	Reclaiming futures (<i>Robert Wood Johnson Foundation</i>)
Collaboration between juvenile justice agencies, community organizations, and other governmental entities	Fundamental fairness	Initial screening
Collection and utilization of data to identify problems and assess impacts of changes	Recognition of juvenile–adult differences	Initial assessment
Development of objective admissions criteria	Recognition of individual differences	Service coordination
Nonsecure alternatives to detention	Recognition of potential	Service initiation
Case-processing reforms	Safety	Service engagement
Flexible policies and practices to address special detention cases	Personal responsibility	Service completion
Reduction of racial disparities in the use of detention	Community responsibility	
Improvement of confinement conditions through routine inspections and raised standards	System responsibility	

the most extensive information on available services in both institutional and community setting (for formal programs); NCJTP reveals that few juvenile justice facilities—either institutional or community based—provide adequate services. The potential for addressing psychological and physical needs during the period of confinement exists but the current system does not use this opportunity. Instead, the services that are provided are poorly matched to the needs of the youth and do not lay a solid foundation to assist the youth in having productive lives.

Much pressure has been placed on the juvenile justice system over the last few decades to improve the quality of services provided and to improve the life prospects of troubled youth. But at the same time, the increasing focus on punishment in the juvenile justice system has resulted in more youth being waived to the adult system, more youth being placed in “correctional” (not treatment) facilities, and fewer services being provided in the facilities to address psychological needs. The Survey of Youth in Residential Facilities (SYRF) reveals that over one-third of youth report that their medical needs are unattended to. And, recent troubles in juvenile justice residential facilities where correctional staff use force to deal with behavioral problems reveal that safety and security within the facilities are a major challenge. In fact, in the SYRF more than

one-third of the youth (38%) indicated that they fear for their personal safety with 25% reporting concerns about another resident, 22% report concerns about staff, and 15% report concerns about someone coming into the facility from the outside (Sedlak and McPherson 2010).

The population of incarcerated youth has been steadily decreasing since 2000, when nearly 109,000 juvenile offenders were in residential placement (Sickmund 2010). During this same time, juvenile arrest rates were also declining, but at more aggressive rates (33% vs. 26% decrease between 2000 and 2008). Over the last decade, three national initiatives have drawn attention to juvenile justice issues and supported programs intended to decrease the number of juveniles in confinement facilities. These initiatives are summarized in Table 18.7 and include

1. The Annie E. Casey Foundation’s Juvenile Detention Alternatives Initiative (JDAI) targeted the increasing rates of detention and overcrowded conditions at these facilities. JDAI relies on eight core strategies for reducing the use of juvenile detention (see Table 18.7) (Mendel 2009). Jurisdictions undertaking the goals of JDAI have had success in reducing detention populations; the overall population across 78 JDAI sites decreased 35% due to reducing the number of admissions and the overall length of stay.

2. The MacArthur Foundation's Models for Change initiative began in 1996 with grants for both research and the development of new laws, policies, and practices (Models for Change 2009). The Models for Change initiative attempts to protect and rehabilitate juvenile offenders while still emphasizing accountability and community safety through eight principles (see Table 18.7). Models for Change efforts are in 16 states to advance the identification and dissemination of promising state-level strategies for reform intended to promote more fair decision making, increase prosocial development, and reduce recidivism, the use of incarceration, and transfers of juveniles to the adult system.
3. The Robert Wood Johnson Foundation's Reclaiming Futures is focused on substance-abusing youth in the community with a goal of prevention incarceration or confinement in juvenile facilities. Reclaiming Futures began in 2002 (Nissen et al. 2006). Reclaiming Futures encourages multidisciplinary community collaboration, greater involvement with families, and stronger coordination of services for offending youth in local jurisdictions. An evaluation of ten demonstration sites (Butts and Roman 2007) found that local juvenile justice and substance abuse experts reported improvements in 12 of 13 indicator areas across a 6-year period when the Reclaiming Futures model was implemented within their jurisdiction.

The challenge is that youth that interact with the justice system are more likely to have psychological and physical needs that require a service delivery system. The juvenile justice system, which once operated on a "child saving" philosophy, yields to the pressures to have a punishment focus. Mirroring the adult correctional system, the focus is on punishment and accountability, with few services to address the unmet psychological or physical needs. This has resulted in incarceration facilities that offer few services and that do not adequately prepare the youth to be part of society. The EBP and treatment movement has provided a new impetus to resume practices and services that will improve the outcomes of

youth—but in a diminishing service environment it is unclear whether society is willing to assist delinquent youth. But the consequences of not improving the life prospects of these youth is these youth are more likely to be involved in the adult correctional system and continue to be a burden on society. It would appear that "an ounce of prevention" through quality medical and psychological services would be worth the 2.2 million lives that pass through the juvenile justice system each year.

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Implementing Evidence-Based Practices for Juvenile Justice Prevention and Treatment in Communities

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Implementing Evidence-Based Practices for Juvenile Justice Prevention and Treatment in Communities

The growing trend to treat juveniles in community settings coupled with an increased focus on the use of evidence-based practices (EBPs) raises an important question: What practices are most effective for community-based prevention and treatment? However, answering this question is not a simple task. At the outset, it is important to be clear about what the term “evidence-based practices” actually means with regard to juvenile justice prevention and treatment. Does practice refer to a name-brand program certified by an official group tasked with vetting the scientific rigor and outcomes of empirical evaluations? Or does it refer to a general strategy for prevention and treatment, derived from scientific evidence, and including optimal conditions for implementation?

As we illustrate in this chapter, we believe it includes both components. This is consistent with a recent definition provided by with EBPs

considered to be a “program or strategy that has been evaluated through rigorous scientific study using experimental or quasi-experimental methods” (p. 1). This includes two types of EBPs. On the one hand, there are brand-name programs that have been developed and validated through controlled research. These programs are offered in manualized versions for broader implementation, often with training and technical assistance from dedicated organizations. On the other hand, EBPs as defined here also include strategies (sometimes called “principles” or “practices”) such as group counseling, cross-age tutoring, mentoring, or cognitive-behavioral therapy. These strategies also are components of programs and consequently have been subjected to empirical test.

Beyond clarifying the meaning of the term, the task of listing EBPs for juvenile justice is complicated by the relatively scant evidence for model programs as well as a lack of detailed information on key elements of effective strategies. Indeed, there are relatively few “model programs” in juvenile justice that have been rigorously evaluated with consistently positive findings (Guerra et al. 2008). Although some programs have been evaluated with diverse populations, in general, there is less evidence for program effectiveness for males versus females, across multiple ethnic groups, and in distinct community settings. There also is relatively little evidence regarding approved “adaptations” for model programs, that is, what can be varied while still maintaining positive outcomes. And designation as a model program in the most

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comprehensive reviews typically only requires one controlled study and one replication (e.g., Mihalic and Irwin 2003; Greenwood 2010). Further, there is a growing recognition that even the best programs will not improve outcomes unless implemented with high quality and fidelity to the original model (Backer 2005; Spoth et al. 2004).

Given the dearth of model programs, an alternate approach that is gaining momentum within juvenile justice is to extract from evaluation research reviews and meta-analyses a core set of strategies for effective intervention based on features that statistically distinguish effective programs from ineffective ones. Again, a “strategy” is a general approach to reducing delinquency that allows for flexibility and adaptation across settings. As Lipsey et al. (2007, p. 1) note: “The key assumption of this approach is that incorporation of a suitable selection of those features into the practice of routine programs will ensure their effectiveness.” In other words, this approach does not require exact replication of model programs with consistently high fidelity, but rather the inclusion in these programs of key elements associated with effectiveness vis-a-vis reducing delinquency, recidivism, and related outcomes. These strategies address both the *content* of the programming as well as the *conditions* for optimal implementation.

In the present chapter, we review the current state of knowledge regarding EBPs for juvenile justice prevention, and treatment. We include in this review both model programs and evidence-based strategies. As we note, evidence-based strategies can be used by practitioners to assess whether characteristics of current or planned interventions are consistent with available evidence on effectiveness (or potential for effectiveness based on risk prediction) absent an appropriate model program. We also describe a rating system for program characteristics linked to reductions in recidivism, the Standardized Program Evaluation Protocol (SPEP), developed and evaluated by Lipsey and associates, and piloted with state juvenile justice systems in Arizona and North Carolina.

We conclude with a discussion of next steps for developing a more in-depth rating system that incorporates detailed descriptions of program elements and optimal conditions of implementation. We illustrate the need for greater elaboration of effective program elements by drawing on intervention research in cognitive-behavioral therapy and etiologic studies examining social-cognitive predictors of risk for delinquency. Although cognitive-behavioral interventions routinely emerge as the most effective interventions, specific components linked to risk reduction have not been clearly articulated in intervention research but can be gleaned from the risk prediction literature.

Under difficult fiscal conditions and with the increasing role of local communities in offender treatment and rehabilitation, it is critical that limited resources be utilized for programs and strategies likely to have the greatest effect on positive juvenile justice outcomes. Model programs can provide clear direction for these efforts when the client population, intervention needs, and quality of implementation closely approximate those in the research (e.g., model programs typically are implemented with high levels of resources, careful monitoring, and ongoing training). When local conditions differ significantly, it may be necessary to evaluate further a model program under these new conditions. However, with some exceptions, juvenile justice agencies are overtaxed with service delivery and case management, and do not have the resources and/or infrastructure in place to manage this type of research. Accordingly, a rating system to assess the potential effectiveness of available programs based on evidence-based strategies can provide a useful tool for optimizing positive effects.

It is our position that these approaches are not mutually exclusive but rather complementary. Ideally, communities would adopt relevant model programs, continue to evaluate them under novel conditions or as adapted, use a rating system to judge the potential for effectiveness of ongoing or new programs based on their alignment with evidence-based strategies and risk factors for delinquency, and conduct ongoing evaluations of these new programs to augment the evidence base.

Model Programs for Community-Based Juvenile Justice Prevention and Treatment

Although there have been numerous efforts to establish listings of model programs for juvenile justice intervention, guidelines for certification of programs as evidence-based vary greatly, leading to different lists from different sources. As Greenwood (2010, p. 1) notes in a recent review of EBPs for juvenile justice, “Although the developers of the lists all claim they are *evidence-based*, they differ significantly in the processes and care with which they were developed, the number of programs and strategies they recommend and the reliability of their recommendations . . . not all lists are created equal.” Among the listings considered most rigorous are the Blueprints project at the University of Colorado (<http://www.Colorado.edu/cspv/blueprints/>), the Coalition for Evidence-Based Policy at Vanderbilt University (<http://www.coalition4evidence.org/wordpress/>), the Top Tier project at Vanderbilt University (<http://www.toptierevidence.org/wordpress/>), and the Washington State Institute for Public Policy (WSIPP; <http://www.wsipp.wa.gov>).

Considering “proven programs,” there are relatively few brand name programs available for young offenders that have consistently demonstrated significant positive effects on reducing offending and related behaviors (Guerra et al. 2008). Some proven programs to prevent delinquency target younger populations from infancy through childhood. For adolescents, the only proven programs deemed as evidence-based in at least two rigorous trials and vetted by at least two of the four groups listed above are Multi-systemic Therapy (MST), Functional Family Therapy (FFT), and Multidimensional Treatment Foster Care (MTFC). An additional program, Aggression Replacement Training (ART), frequently is used in juvenile justice practice and is considered evidence-based according to the Washington State Institute of Public Policy only.

Brand Name Model Programs for Juvenile Justice

Multi-systemic Therapy

MST is perhaps the most well known and widely used family-based intervention for juvenile offenders, with a large national organization available to support training and implementation. The emphasis of this intervention is on helping families deal more effectively with their adolescent’s behavioral problems and other risk factors contributing to delinquency. MST also addresses barriers to family utilization of resources and empowerment. Trained teams of MST therapists with low caseloads (four to six families) provide approximately 50 h of face-to-face contact over a 3–6 month period. Controlled studies have found reductions in recidivism for treatment youth of approximately 8% compared to controls. Based on a cost per youth of \$4,364, cost–benefit estimates project a savings (benefits minus costs) of \$17,694 for participants (Greenwood 2010). Still, some effectiveness trials within juvenile justice systems have raised concerns about outcomes, particularly in light of implementation difficulties in real-world settings. For example, a recent study by WSIPP (2004) reported increased recidivism rates for MST when implementation is poor. This raises an important issue regarding whether agencies can adhere to the standards and guidelines set out by program developers when implementing programs in real-world settings.

Functional Family Therapy

Designed several decades ago, FFT is a structured family behavioral intervention designed to improve family functioning through increased family problem-solving skills, enhanced emotional cohesion, and improved ability of parents to provide structure and guidance for their teenage children. The program is relatively brief, delivered in home settings by individual therapists, and is less intensive and expensive than MST. Studies have demonstrated approximately 18% reductions in recidivism for intervention youth in FFT. Based on a cost per youth of \$2,380, cost–benefit estimates project a savings

of \$49,776 (Greenwood 2010). However, the program was designed to work with less serious and generally younger youth than MST, which must be considered in comparing the two programs.

Multidimensional Treatment Foster Care

This program differs from MST and FFT because participants are in foster care or similar therapeutic environments, rather than living at home with their families. It has been used as an alternative to group residential treatment for more seriously delinquent youth in need of out-of-home placement. The program emphasizes behavior management techniques for foster families and includes family therapy for the youth's biological parents. Randomized trials of MFTC have found reductions in recidivism of approximately 18% for participants. Based on comparisons with residential treatment facilities and a cost per youth of \$6,926, cost-benefit analyses predict a savings of \$88,953 for this program (Greenwood 2010).

Aggression Replacement Training

Although only designated a model program by WSIPP, this program is widely utilized in juvenile training and rehabilitation settings. It is a 30-h program, typically administered three times per week for 10 weeks. The emphasis of the program is on social skill acquisition, impulse, and anger control, and improving moral reasoning. It is the only brand name program with some evidence for effectiveness that does not involve families. This is important in settings and under conditions where family involvement is not practical. Reductions in recidivism of approximately 8% for treatment youth have been found. Based on a cost per youth of \$918, cost-benefit estimates project a savings of \$23,015 for ART (Greenwood 2010).

Implementing Model Programs: Cautions and Concerns

A major concern for implementation of evidence-based model programs is the dearth of programs available. Further, because model programs are

tested under "ideal" conditions, these programs may not produce similar outcomes when implemented in less controlled, real-world juvenile justice settings (WSIPP 2004). Even less is known about the appropriateness and effectiveness of these programs across a range of socioeconomic, community, ethnic, and cultural conditions. Under these different conditions it may be necessary, at the very least, to evaluate further the effectiveness of these model programs. And beyond family interventions, the evidence base is particularly weak.

On the other hand, there is also evidence for standardized programs that have been found to be ineffective or even harmful. In general, programs that try to scare youth get "tough" on youth, and group delinquent youth together for unstructured programming have been ineffective or harmful. For example, according to evidence gathered by WSIPP, residential boot camps and Guided Group Interaction (using the antisocial peer group to promote prosocial behavior) have not been linked to reductions in recidivism. Of more concern, the Scared Straight approach, where prison inmates confront first-time offenders about the negative consequences of a criminal lifestyle, has been found to lead to increases in recidivism for participants compared to controls.

Of course, positive, neutral, and negative findings must also be interpreted with caution. As noted above, in the case of programs with positive effects, it is possible that these effects will not maintain for different populations, with certain adaptations, and/or under different conditions of implementation. It is also possible that evaluations that did not produce significant findings have not been published, the infamous "file drawer" problem noted in research reviews and meta-analyses. For programs without demonstrated effectiveness, it may be that the program was necessary but not sufficient to impact the outcomes of concern. There have been instances where programs without initial demonstrated effectiveness have been revised and subsequently found to be effective (e.g., Project G.R.E.A.T. for early gang prevention; Esbensen 2008). Finally, there are also many programs implemented in the field that simply have not been rigorously

evaluated—leaving open the possibility that ongoing programs actually are effective in preventing and reducing violence and delinquency, but need to be evaluated. In short, model programs that have been rigorously evaluated may be only the tip of the iceberg, with the vast portion of that iceberg (effective programs that have not been evaluated) remaining submerged in the unknown.

Given these cautions and concerns, an alternate approach that has received support is to designate elements of effective programs or “evidence-based strategies” for juvenile justice intervention. These have been gleaned from comprehensive reviews and meta-analyses that disentangle features of effective programs across multiple studies. These practices include both desired program content and optimal conditions for effective implementation.

Evidence-Based Strategies for Juvenile Justice

Juvenile justice agencies are tasked with providing a variety of services for offenders at different stages of justice system involvement including diversion, court supervision, and residential treatment. Across the U.S., communities typically provide a wide range of services through contracts with non-profit agencies as well as programs run by probation, law enforcement, and other service providers. Most typically, the specific programs used depend on availability, funding, community perceptions of need, and other factors that are not necessarily related to evidence-based practice. Providing lists of these strategies allows for more careful scrutiny of programs to ensure they are consistent with empirically-validated guidelines.

Much of the work on evidence-based strategies for juvenile justice has been done by Lipsey and colleagues at Vanderbilt (<http://www.coalition4evidence.org/wordpress/>) and (<http://www.toptierevidence.org/wordpress/>). Based on meta-analysis of research studies of programs for juvenile offenders drawn from an archive of

nearly 600 controlled studies looking at program effects on recidivism, this group has developed a list of general program strategies (vs. specific model programs) that have been found to reduce recidivism among juvenile offenders.

Among common strategies associated with the reductions in antisocial behavior and/or recidivism are (percentage reduction in parentheses): cognitive-behavioral therapy (26%), behavioral interventions (22%), group counseling (22%), mentoring (21%), intensive case management (20%), mixed group/family counseling (16%), family counseling (13%), social skills training (13%), challenge programs (12%), mediation (12%), coordinated wrap-around services (12%), remedial education (10%), vocational training (6%), and diversion with services (3%). Optimal conditions for effective implementation include a focus on high-risk youth, longer duration of treatment, and regular monitoring and supervision to ensure high-quality implementation.

The Standardized Program Evaluation Protocol: Preliminary Findings

In order to determine whether existing programs could be rated based on utilization of EBPs drawn from meta-analysis of previous studies, and whether these ratings predicted recidivism outcomes, Lipsey and colleagues developed the SPEP. This system was then evaluated in North Carolina and Arizona. In part, this system was developed to address state mandates that all juvenile justice programs be evaluated as a condition of continued funding, without allocation of funding for conducting these evaluations. The SPEP score rates how closely each program includes characteristics shown by research to be the strongest predictors of recidivism—in essence, representing an evaluation of the program’s “expected effectiveness” for reducing recidivism. Programs are rated based on the primary service as well as any supplemental services, treatment duration, and contact hours.

The SPEP rating process involves gathering information on available services in a given geographic area (e.g., county, state) and assigning

points based on program characteristics linked to recidivism outcomes from the available research. A SPEP score reflects the degree of similarity of the specific program to what the research literature shows to be best practices for juvenile offenders. To validate this rating scheme empirically, the relation between SPEP scores 6- and 12-month recidivism was statistically analyzed using logistic regression, adjusting for initial risk level.

In both the North Carolina and Arizona study, higher SPEP scores were significantly associated with lower than predicted recidivism. Among service types that were rated as “more effective” or “much more effective” than average were community-based and residential cognitive-behavioral services, community-based and residential substance abuse services, residential sex offender services, and mentoring. Interestingly, although family interventions dominate “model programs” in juvenile justice practice, both family therapy and individual counseling were rated as average in effectiveness, that is, recidivism was about the same as predicted. Group counseling and life skills programs were rated as less effective than predicted. In terms of optimal conditions for implementation, programs with a longer duration (16 weeks or more of treatment) and more contact hours (24 h or more) also were more positively related to reductions in recidivism.

The SPEP protocol represents an important first step in quantifying critical components of effective programs that can be mapped on to existing services and can inform the development of new interventions. It can also be used to drive program improvement and refocus efforts to be more consistent with evidence-based strategies. Still, several issues remain to be addressed. First, although the developers of the instrument considered the need to rate the *quality of implementation*, this was minimally assessed in the North Carolina and Arizona studies. Although quality ratings have become a staple in fields such as early childcare, to date, there has been relatively little effort directed at developing a rating scheme to measure the quality of implementation for juvenile justice interventions. For example,

characteristics such as client/staff ratios, staff training and certification, supervisory role of staff (e.g., probation officer vs. counselor), and the physical structure where services are provided may influence program outcomes.

In addition, more detail is needed within broad program categories. Delineating proven strategies with a broad sweep is a first step in focusing interventions in specific areas. However, this approach does not provide clear direction for a more fine-grained evaluation of effective components of programs within these areas. For example, a recent report commissioned by the State of California (Greenberg 2010) provides a listing of 25 broad strategies with some evidence of effectiveness for reducing substance use and/or anti-social behavior. These include cognitive-behavioral therapy, group counseling, social skills training, challenge programs, behavioral programs, and counseling/psychotherapy.

However, within each of these categories there can be a broad array of programs, some of which may actually be ineffective or counter-indicated. For example, “group counseling” would include programs such as Guided Group Interaction, an intervention that tries to build prosocial norms within a group counseling format, and that has been shown to be ineffective, whereas group counseling in general is listed as effective (albeit less effective than other strategies) from the analyses. This creates some confusion about the benefits of group counseling. Because this is a broad term, it may be that this mechanism can work, but not when used to try to alter group norms, as is done in GGI. As this demonstrates, an important next step is to specify details of programs within each area that should increase the likelihood that a particular program will yield reductions in problem behavior, based on available research evidence from relevant empirical studies.

However, this task is hampered by a general lack of detail regarding key components of effective programs. Looking at cognitive-behavioral programs as an example of an effective strategy, a generic framework still does not provide guidance for specific types of cognition that should be included in interventions. For example, although

considered a cognitive–behavioral program, an intervention designed to decrease an individual’s learned helplessness associated with internal and stable cognitive attributions for failure (i.e., “failure is my fault and there is nothing I can do”) is more likely to impact depression than delinquency. Further, even when cognitions are directly linked to aggression and delinquency, cognitive–behavioral interventions typically address a range of related cognitions that may vary from intervention to intervention. Some programs may promote social information-processing skills whereas others may emphasize distortions in thinking. Although the relative contribution of different aspects of cognition could be analyzed using statistical tests of mediation, this rarely is reported. Rather we are left to distill the most critical elements of program design from the descriptions provided.

An alternate approach is to rely on etiological studies of risk for delinquent and antisocial behavior to identify the strongest predictors of risk that should be targeted by preventive interventions. We illustrate this approach by reviewing specific elements of social cognition gleaned from related empirical studies of cognition and delinquency that can provide additional guidance for developing interventions for offenders.

Social–Cognitive Foundations of Delinquency

There is a long history of research on the cognitive underpinnings of delinquent and antisocial behavior (for a review, see. In our own recent work (Guerra and Bradshaw 2008; Kim et al. 2008), we have identified five “core competencies” that include specific components of social cognition linked to a range of youth delinquent and problem behaviors (including violence, substance abuse, high-risk sexual behavior, and early school leaving). Many cognitive–behavioral interventions for delinquency and violence prevention incorporate some or all of these competencies as well.

Core Competencies for Cognitive–Behavioral Interventions in Juvenile Justice

Multiple lists of important competencies and/or social–cognitive skills linked to adjustment and prevention of problem behaviors have been developed over the years. However, no universally agreed upon list of specific aspects of social cognition or competence that should be included in cognitive–behavioral interventions for juvenile offenders has been established. That said, some areas have received considerable empirical support from longitudinal studies of risk and most frequently are included in cognitive–behavioral programs: positive sense of self, cognitive self-control, decision-making skills, moral system of belief, and prosocial connectedness.

Positive Sense of Self

In order for adolescents and young adults to integrate and utilize specific standards for behavior and related skills, they must be consistent with their own cognitive self-views. A teenage boy who defines himself as a “tough guy” or “bad ass” is unlikely to adopt behavioral strategies that involve asking politely or waiting one’s turn. A positive sense of self includes self-awareness of one’s “good side” including assets and strengths. This awareness can provide motivation for prosocial behavior as well as lay the foundation for one’s future life course, providing hopefulness and a sense of purpose based on positive “possible selves” rather than negative self-images.

Another cognitive component of positive sense of self involves personal agency, also labeled self-efficacy. This refers to individuals’ beliefs about their capacity to produce designated levels of performance and influence relevant events in their lives. A positive and strong sense of agency or self-efficacy helps youth set challenging goals, sustain efforts, and recover in the face of failure (Bandura 1994). Without this, youth may build self-confidence by developing beliefs in their capacity for negative events, such as the ability to command respect through violence.

Self-esteem is a widely cited but controversial marker of adjustment. We include it in the

cognitive domain because it reflects judgments individuals make about their general and specific self-worth. Although both low and high self-esteem have been associated with violence, in general, high self-esteem has been linked to multiple measures of positive affect and life satisfaction (Diener 1984). Thus, it is important for cognitive-behavioral interventions to encourage high self-esteem (self evaluations) based on competence and performance in socially meaningful domains—school, sports, work, and community engagement—rather than based on power and aggression.

Self-Control

Self-control is defined as the ability to regulate and manage emotions and behaviors in a controlled rather than automatic fashion and in line with situational constraints. A number of studies have found a relation between low self-control and risk behaviors such as aggression and criminality (Caspi et al. 1995; Gottfredson and Hirschi 1990). Recent advances in neuroscience have highlighted the fact that frontal lobe activation, a determinant of behavioral inhibition, continues to develop beyond adolescence and into adulthood (Steinberg 2008).

Most cognitive-behavioral interventions for juvenile offenders include a focus on cognitive self-control techniques, particularly as related to anger management. For example, lessons on self-statements for impulse control (“I can calm down” or “Count to ten and take a deep breath”) fall within this domain. In ART, one of three components is focused on self-control and anger management. To the extent that delinquency and violence are linked to reactive and angry responding, this represents an important area for cognitive-behavioral interventions.

However, self-control also involves resistance to temptation and inhibition of one’s desire for immediate gratification. For example, in a classic experimental study comparing 4-year-old children who took a small prize on the spot (a marshmallow) or waited for a more valued reward, children who took the small prize on the spot were more likely than the children who waited to have poor grades and get in trouble 14 years later

when they graduated from high school (Mischel et al. 1989). This suggests that cognitive-behavioral interventions designed to impact delinquent behavior and improve outcomes should focus on cognitive techniques for delayed gratification as well as for anger management.

Decision-Making Skills

Decision making related to social behavior involves a variety of cognitive information-processing skills. These include the ability to interpret social situations accurately, plan for and anticipate the future, set goals, generate alternative solutions, generate consequences, and learn from the negative consequences of past decisions. Numerous empirical studies have found that children and youth who are more aggressive, delinquent, and involved in substance use tend to be less adept at some or all of these decision-making skills (Crick and Dodge 1994).

Although researchers have used many different approaches to studying decision making for teenagers and young adults, most cognitive-behavioral interventions for aggressive and delinquent youth have emphasized the importance of learning discrete social-information processing skills. These skills are seen as sequential; that is, first individuals must attend to and interpret cues, followed by generation of goals, solutions, and consequences, leading to a decision to follow a specific course of action. Based on the finding that aggressive and delinquent youth are particularly susceptible to *hostile attribution bias*, that is, the tendency to attribute hostile intent to others under ambiguous circumstances when interpreting cues, many cognitive-behavioral interventions for offenders also direct considerable attention to reducing this hostile bias.

For example, the *Viewpoints* program is a cognitive-behavioral intervention for high-risk youth and juvenile offenders emphasizing reducing hostile bias and sequential decision making in problematic situations linked to possible delinquent and antisocial behavior. The program includes lessons on self-control, particularly because controlled information processing requires individuals to “stop and think.” In evaluation studies with incarcerated youth, the

Viewpoints program resulted in reductions in aggressive behavior for participants compared with the control group (Guerra and Slaby 1990). More recently, an expanded version of this cognitive-behavioral intervention, *Positive Life Changes*, was developed to address multiple aspects of social cognition related to delinquency, with a particular emphasis on social problem solving and decision making (Guerra 2009).

Moral System of Belief

This involves internalized beliefs about how people in a society should behave in relation to each other. It includes issues such as harm, fairness, integrity, and responsibility, and engages cognitive and psychological processes such as perspective taking and empathy. Although early work on moral development emphasized promoting moral growth through dilemma discussions, this work was plagued by the lack of a relation between stages of moral reasoning and moral action. More recently, the notion of “moral identity” has been suggested as a mechanism linking moral thinking to moral action. In other words, individuals who score high on moral identity, defined as the centrality of moral beliefs to their sense of self, should also be more likely to act in a moral fashion (Damon 2004).

Previous work on a moral system of belief suggests that the focus of cognitive-behavioral interventions in the domain of moral thinking should be to (a) promote the development of moral beliefs based on justice and fairness, and (b) increase an individual’s moral identity. Social psychological research also suggests that an effective strategy to change and/or encourage specific attitudes and beliefs is to have participants develop and present persuasive messages for the new beliefs (e.g., ask them to write an advertisement promoting caring and compassion for one’s neighbors). Rather than engaging in dilemma discussions, these strategies are more likely to strengthen prosocial moral beliefs and actions.

Prosocial Connectedness

In spite of a large sociological literature linking low levels of attachment and bonding to conventional social institutions, cognitive-behavioral

interventions typically have not addressed this dimension of adjustment. We argue that this is an important component of social cognition linked to delinquency. Individuals who perceive (think) they are cared for, empowered, trusted, and acknowledged within a given context are more likely to be well adjusted and less likely to engage in risk behaviors, including violence, and delinquency (Commission on Children at Risk 2003).

In part, this perception depends on an individual’s social ecology. Social contexts carry with them multiple opportunities for participation and connectedness, just as they can bring about alienation and withdrawal. Given that cognitive-behavioral interventions are oriented to how individuals’ understand and make sense of their social world (rather than changing dimensions of social contexts), a cognitive-behavioral intervention should help youth identify and solidify these prosocial connections where possible.

Summary and Future Directions

Using the general category of cognitive-behavioral interventions (a promising intervention strategy) we have illustrated the need for further detail linked to risk for delinquency in guiding specific programs and for developing a comprehensive rating system. Based on this brief review, we suggest several key features from the risk and prevention literature that should be included in cognitive-behavioral interventions in juvenile justice settings. These include an emphasis on: (a) building a positive and moral identity, (b) promoting self-control, including both anger management and delayed gratification, (c) providing opportunities to learn and practice sequential decision-making skills for solving social problems, including examining errors in thinking, (d) facilitating development of a prosocial and moral system of belief using social psychological techniques, and (e) increasing participants’ access to, utilization, and awareness of opportunities for prosocial connectedness in their environment. Of course, these strategies will be enhanced by multi-method interventions that also provide

opportunities and build supportive contexts. For example, mentoring programs offer a venue for increasing prosocial connectedness, and cognitive-behavioral interventions can provide individuals with an understanding of why these are important.

Looking forward, the push toward evidence-based programs and strategies in juvenile justice must be accompanied by greater specificity. In considering model programs, it is important to examine whether programs as developed (and even when implemented with high fidelity) are relevant with different populations and in different settings. More research is needed to determine adaptations that do not weaken program outcomes (or perhaps strengthen them in some settings).

In building new programs based on evidence-based strategies, it is important to examine further specific characteristics of effective programs within general domains (such as cognitive-behavioral interventions) and to develop rating systems that allow for a more nuanced evaluation of critical program elements. In addition, as we have pointed out, it also is important to develop guidelines for assessing quality of program implementation. In some cases, the importance of quality indicators has been evaluated empirically in juvenile justice and related interventions; in other cases, it may be necessary to draw more broadly on characteristics of high quality program implementation from the broader prevention and intervention literature.

A feasible goal would be to develop guidelines for program certification based on specific program content and principles of effective implementation, and to use these standards to evaluate and guide programming. Still, any type of rating system is only as good as the available evidence on which it is based. Rating systems are limited to gathering data from published studies that empirically estimate program effects on recidivism. It will also be useful to examine the most robust predictors of delinquency onset, escalation, and desistance to determine whether programs for distinct groups of youth (i.e., primary prevention to prevent onset or tertiary prevention to promote desistance) are directed toward reducing these risk factors (when malleable). In all cases, rigorous

evaluations must continue to be conducted and published to further illuminate what works, for whom, and under what conditions in reducing youth crime and violence.

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Christopher J. Trentacosta and Daniel S. Shaw

The annual cost of youth violence in the USA exceeds \$158 billion when accounting for direct and indirect effects of violence on areas such as medical burden, work productivity, and quality of life (Center for Disease Control and Prevention 2008). Therefore, preventing youth violence and antisocial behavior should be a high priority for researchers and policy makers. Research suggests that approximately 80–85% of young children desist from disobedience, temper tantrums, physical aggression, and other behaviors that are relatively normative during early childhood (Nagin and Tremblay 1999; Shaw et al. 2003). However, approximately 5–10% of children show persistently high levels of conduct problems that may lead to antisocial behavior and violence in adolescence (Moffitt et al. 2002; Shaw et al. 2003). Although a pattern of “late-starting” or “adolescence-limited” antisocial behavior initially emerging during adolescence has been shown to have more serious consequences for adult functioning than originally thought, a pattern of “early-starting” or “life-course-persistent” conduct problems is associated with an even

more persistent and serious course of antisocial behavior from middle childhood through adolescence and young adulthood (Moffitt 1993; Patterson et al. 1992). For example, young men who followed the “adolescence-limited” trajectory of antisocial behavior reported similar levels of psychiatric symptoms as men who followed the “life-course-persistent” trajectory (Moffitt et al. 2002). However, men who followed the “life-course-persistent” trajectory were still two to three times more likely to receive a criminal conviction as adults compared to men who followed the “adolescence-limited” trajectory. Therefore, identifying risk factors that are associated with early-starting patterns of conduct problems is essential for the health and well-being of youth and other members of society.

We begin by presenting a brief overview of risk factors for conduct problems and later antisocial behavior and delinquency. The discussion of risk factors will set the stage for our review of prevention programs because the programs’ emphases tend to vary based on the salience of specific risks during different periods of development (e.g., toddlerhood, adolescence). Our review concludes with a synthesis of findings and directions for future research. The conclusion emphasizes the importance of evaluating efficacious prevention programs that have been carried out in real-world community settings. We also describe emerging areas of developmental research on conduct problems that will undoubtedly lead to refinements in prevention programs targeting youth conduct problems.

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Risk Factors for Conduct Problems

In accord with an ecological theory of human development (Bronfenbrenner 1979), risk factors for childhood conduct problems and later antisocial behavior range from individual temperamental characteristics and other child factors (e.g., attributional biases), to family factors, and community-level factors, including such settings as schools and neighborhoods and the peers and adults children encounter in these extra-familial contexts. Much theory and empirical research has examined the key role of temperament traits and personality characteristics in the development of conduct problems. For example, well-established links exist between temperamental traits such as negative emotionality, fearlessness, or poor impulse control and conduct problems (e.g., Bates et al. 1985; Olson et al. 1999; Shaw et al. 2003), and longitudinal research supports low impulse control measured in early childhood as a predictor of antisocial behavior in adolescence (Caspi et al. 1995). Furthermore, Eisenberg et al. (2004) have provided empirical support for a temperament-based model that highlights low effortful control and high levels of impulsivity and negative emotionality in the development of externalizing problem behavior (e.g., Eisenberg et al. 2001). Other empirically supported models of the development of conduct problems and antisocial behavior emphasize similar personality traits including negative emotionality, daring or sensation-seeking behaviors, and low levels of prosociality (Lahey and Waldman 2003). Associations have also been established between dispositional characteristics and specific conduct problem dimensions such as the relation between callous-unemotional traits and covert conduct problems (see Frick and Morris 2004). Other individual characteristics with evidence as predictors of conduct problems and later antisocial behavior include delayed language development, low intellectual performance, and impaired visual-spatial abilities (Shaw and Gross 2008).

Although child characteristics are well-established predictors of conduct problems,

contextual risk factors are also central to the development of early conduct problems and later delinquency. Furthermore, there is little evidence that infant temperament or behavior assessed prior to age 2 have long-term ramifications for delinquency or antisocial behavior in adolescence (Shaw and Gross 2008). Instead, it appears that early environmental circumstances ranging from in utero exposure to high levels of tobacco or alcohol to attachment insecurity during infancy can set the stage for conduct problems and delinquency, particularly when children reside in at-risk family contexts. An at-risk family context is often characterized by the following risk factors: young parents, less educated parents, low family income, family mental health concerns such as maternal depression, and a history of antisocial behavior in the family (Shaw and Gross 2008). Furthermore, low quality parenting plays an important role in the emergence and persistence of conduct problems, and rejecting, nonnurturant parenting accounts for much of the association between the above-mentioned family risks and the development of conduct problems (Shaw et al. 2003; Trentacosta et al. 2008; Trentacosta and Shaw 2008). Rejecting parenting in a child's life may be an especially salient factor in the emergence of conduct problems, but parenting characteristics continue to be prominent predictors of more serious conduct problems in adolescence. For example, parental knowledge of their adolescent's whereabouts is a robust predictor of lower levels of engagement in antisocial behavior during adolescence (Laird et al. 2003).

Other salient ecological factors in the development of conduct problems include peers and the family's neighborhood environment. For example, rejection by peers in the elementary school years is a well-established correlate of aggression and later antisocial behavior (Dodge et al. 2006). During adolescence, youths' association with deviant peers frequently sets the stage for increased involvement in antisocial behavior (Dishion and Patterson 2006). Neighborhoods can be especially relevant contexts for the emergence of serious delinquency and antisocial behavior among adolescents with a history of conduct problems. Youth residing in high-crime,

impoverished communities typically have easier access to deviant peers and other negative influences. However, the neighborhood context is less likely to directly contribute to the emergence of conduct problems prior to formal school entry, except in the context of severely adverse neighborhoods (Ingoldsby and Shaw 2002).

The preceding summary indicates that both individual characteristics and environmental factors play important roles in the development of conduct problems. With the proliferation of longitudinal datasets and the refinement of methods to examine statistical mediation and moderation, researchers are now able to take a more sophisticated approach when examining the interplay of risk factors and their co-development over time. For example, a longitudinal investigation of low-income families showed that boys with a propensity for daring behaviors were most at risk for antisocial behavior when they lived in dangerous neighborhoods; boys with this propensity had little risk for antisocial behavior when they lived in low-risk neighborhoods (Trentacosta et al. 2009). Similarly, a landmark study of gene \times environment interaction showed that children possessing the low MAOA risk allele were at greater risk for antisocial behavior, but only when they had experienced maltreatment as a child (Caspi et al. 2002). Numerous studies have failed to replicate initial genotype \times environment findings (see Risch et al. 2009), including the low MAOA risk allele finding (Young et al. 2006); however, follow-up meta-analyses have confirmed the low activity MAOA genotype by maltreatment interaction as a predictor of antisocial behavior (Kim-Cohen et al. 2006; Taylor and Kim-Cohen 2007). Overall, it appears as though innovative approaches examining personality \times environment or genotype \times environment interactions will continue to increase understanding of the relative importance of risk factors at particular developmental stages and in specific contexts. Evidence from recent risk-related investigations may be especially useful as researchers refine prevention programs targeting conduct problems and delinquency to increase their efficacy and improve their cost–benefit ratio.

Preventing Conduct Problems Across Childhood and Adolescence

Below, we describe prevention programs that have either directly targeted emerging conduct problems or that have targeted other concerns (e.g., child maltreatment) and shown additional effects on reducing conduct problems and delinquent behavior. Our review highlights a developmental approach to prevention that takes into account the most salient risk factors as targets for prevention programs during childhood and adolescence. Although our summary is primarily focused on programs geared toward family and school contexts, we conclude with a brief discussion of prevention approaches targeting broader, systemic-level change. With a few exceptions, the review focuses on programs that have been evaluated in randomized controlled trials.

It is important to note that this review focuses on prevention programs rather than intervention approaches designed for clinic-referred cases of diagnosed disruptive behavior disorders or for youth who are already involved in the juvenile justice system. Eyberg et al.'s (2008) recent review in a special section of the *Journal of Clinical Child and Adolescent Psychology* provides an excellent overview of evidence-based treatments for disruptive behavior disorders. Like the prevention programs we describe below, treatment approaches with empirical support typically attend to risk factors for conduct problems (e.g., maladaptive parenting; Patterson et al. 1982) and/or address multiple aspects of the child's ecological context (e.g., multisystemic therapy; Henggeler et al. 1992). Furthermore, as we detail below, many of the efficacious treatment approaches targeting conduct problems have been adapted for use in prevention programs.

Infancy and Toddlerhood

In accord with evidence indicating that individual child-level factors are not robust predictors of conduct problems before age 2, prevention

programs during the prenatal and infant periods typically target the child's family context rather than working directly with the infant. Because adequate functioning within the family context is vital to healthy development early in life, it is not surprising that home visitation services are gaining traction as a prevention approach (Astuto and Allen 2009). The nurse-family partnership (NFP) is an especially promising home visitation program that has been evaluated in multiple randomized controlled trials (Olds 2006). The NFP was designed to address three goals: health during the prenatal period, sensitive care of the infant, and improvements of the parental life course. Mothers enrolled in the NFP were visited by nurses at their home throughout pregnancy and between the child's birth and their second birthday. There were three major functions of the home visits: (1) to promote mothers' health-related behavior, (2) to build supportive relationships between mothers and their families and friends, and (3) to link mothers and their families with health and human services in the community.

Based on data from three trials of the NFP in Elmira, NY, Memphis, TN, and Denver, CO, the program has been most successful in addressing goals related to increasing parental care of the child (e.g., less child injuries) and improving maternal outcomes (e.g., fewer subsequent pregnancies; Olds 2006). Furthermore, offspring of mothers enrolled in the original trial had fewer arrests, fewer convictions and violations of probation, and fewer instances of running away as adolescents than youth in the control condition (Olds et al. 1998). For example, the mean number of lifetime youth-reported arrests up to age 15 was 0.36 for youth whose mothers were enrolled in the control groups, whereas the mean number of youth-reported arrests was approximately 0.17 for youth whose mothers participated in the NFP program. The findings were especially robust for youth born to mothers who were unmarried and poor, and they provide important evidence that a home-visiting program implemented during the prenatal and infancy periods can reduce later youth delinquency. Based on the strength of the NFP findings from randomized controlled trials, a NFP national office was created and the program

has been disseminated to numerous communities across the USA and abroad with guidance from the national office (Olds 2006). Although other home visiting programs for infants have reduced problem behavior early in life (see Olds et al. 2007 for a review), no other home-visiting program initiated during the prenatal period has followed youth into adolescence and tracked their level of delinquency.

As infants become toddlers, temperament characteristics become more predictive of future behavioral maladjustment, and parents become more motivated to directly address behaviors associated with the "terrible twos." Therefore, it is not surprising that prevention programs focused on the toddler period begin to directly target child behavior (e.g., aggression, oppositional behavior) while maintaining an emphasis on parenting and the family context. A home visitation program for 2-year-old children and their families, the Family Check-Up (FCU; Shaw et al. 2006), capitalizes on parents' concerns about their child's behavior while concomitantly addressing concerns within the family context. The FCU for early childhood is an adaptation of a similar program for youth and their families during the transition to adolescence (Dishion and Kavanagh 2003). The FCU for early childhood involves at least three sessions in the family's home beginning at age 2. The first session involves a "get-to-know-you" visit from a parent consultant to establish rapport. The second session includes a thorough in-home assessment of the child's behavior, parenting, and the broader family context. The third session utilizes techniques from motivational interviewing (Miller and Rollnick 2002) to provide feedback on the findings from the assessment session and enhance parents' motivation to work toward changing problematic areas of functioning. At the conclusion of the feedback session, the parent is encouraged to set goals and discuss steps to meet the goals. Often although not always, the family may set up additional treatment visits with the parent consultant to address goals related to parenting and factors that compromise the quality of caregiving (e.g., parental depression, marital quality, social support). When addressing parenting in follow-up sessions, parent consultants utilize

training materials from the Parent Management Training Oregon Model program (Patterson et al. 1982), the only treatment for disruptive behavior with “well-established” evidence of efficacy (Eyberg et al. 2008). Because the FCU is based on a health-maintenance model of prevention, the program is designed to be repeated each year with similar procedures.

Results of the FCU in early childhood have been very encouraging, with evidence of positive outcomes from two randomized controlled trials. In both trials, income-eligible mothers and their toddlers were recruited from women, infants, and children (WIC) nutrition supplement programs. In the first trial conducted in Pittsburgh, PA and limited to boys, reductions in conduct problems and improvements in maternal involvement and positive parenting were documented following the first 2 years of the program (Gardner et al. 2007; Shaw et al. 2006). An ongoing multisite trial that included boys and girls in Pittsburgh, PA, Charlottesville, VA and Eugene, OR also has demonstrated reductions in multiple types of problem behavior, including conduct, emotional, and co-occurring problems, with a modest effect size for reductions in child problem behavior ($d=0.23$; Dishion et al. 2008). Furthermore, decreased maternal depression and increased positive parenting mediated program effects on reduced problem behavior (Dishion et al. 2008; Shaw et al. 2009). An investigation of moderators of treatment effects in the multisite trial showed that the program was equally effective for families facing many ecological risk factors (e.g., young parenthood), although the program was more effective for less educated parents and two-parent families (Gardner et al. 2009). Remarkably, the two trials have achieved reductions in conduct problems even though families assigned to the FCU condition have averaged fewer than four sessions per year.

The Preschool Years

With the transition to the preschool years, most children’s levels of physical aggression and non-compliance begin to decline, and deviations from

behavioral norms often become more apparent to parents and other care providers. Furthermore, expectations for rudimentary self-regulatory and social skills increase during this developmental period as preschoolers are expected to attend to preschool learning activities and engage in prosocial interactions with their peers. As a result, it is not surprising that prevention strategies focusing on the individual child become more prominent during the preschool period. Many of the newer prevention approaches build on the legacy of early preschool programs that were designed to promote the well-being of impoverished young children. For example, the High/Scope Perry Preschool project originated in the 1960s and has showed long-term reductions in delinquency-related outcomes in adulthood for preschool program participants. Over half (55%) of the nonprogram group had been arrested five or more times by age 40, but only slightly more than one-third (36%) of program participants had a comparable arrest record (Schweinhart et al. 2005). However, programs designed for this developmental period are not limited to the preschool classroom setting; parent training programs that are based on empirically supported treatment strategies for conduct problems are also an important element of the prevention strategy during the preschool years.

Webster-Stratton’s Incredible Years (IY; Webster-Stratton 2008) is the most thoroughly evaluated program that targets conduct problems during the preschool period, and the prevention programs are based on Webster-Stratton’s IY interventions for clinic-referred youth. The IY intervention includes separate child and parent programs, and both programs have received support as efficacious treatment approaches for disruptive behavior (Eyberg et al. 2008; Webster-Stratton and Hammond 1997). Based on social learning theory, the IY intervention pays special attention to cognitive, social, and emotional deficits associated with conduct problems. These highly interactive programs emphasize skills training within a group setting, and they include videotaped vignettes and role play activities.

Webster-Stratton and her colleagues have evaluated the IY prevention programs in multiple

trials conducted in collaboration with Head Start preschool programs. In the initial IY prevention program evaluation, parents of Head Start children were invited to participate in weekly 2 h group parent training sessions for a total of 8–9 weeks (Webster-Stratton 1998). The program also included limited teacher training on behavior management strategies. Children of mothers participating in the program had fewer conduct problems than children in control classrooms, and mothers demonstrated less harsh discipline and more positive parenting following the program. A subsequent evaluation involved more extensive teacher training on techniques for classroom management and parenting training groups that lasted for 12 weeks (Webster-Stratton et al. 2001). This implementation also led to improvements in parenting and conduct problems at school, with the strongest effects observed for the highest-risk children. A more recent evaluation of the IY program focused on an adaptation of the child program (Dinosaur School) that was implemented by Head Start and kindergarten teachers emphasizing small-group activities and lessons during circle time that were co-led by research staff (Webster-Stratton et al. 2008). The evaluation showed improvements in IY teachers' classroom management approaches when compared to teachers in control classrooms, with the largest improvements in conduct problems and school readiness skills for children in the highest-risk classrooms. The program was also most effective for children with the highest conduct problems scores at the pre-program evaluation. The intervention effect became statistically significant ($p < 0.05$) when scores were 1.42 standard deviations above the pre-program mean, with a medium to large effect size for this group (effect size = -0.70 ; Webster-Stratton et al. 2008).

In addition to Webster-Stratton's work in Seattle, prevention researchers have adapted the IY program for specific target populations (e.g., Hutchings et al. 2007). For example, the IY parent and teacher training program has been adapted for toddler-aged children. An evaluation of the toddler program in Chicago showed improved behavior among the toddlers with the highest-risk behaviors at the pre-program assessment (Gross et al. 2003).

Furthermore, a recent evaluation of an adaptation of the IY program targeted preschool-aged siblings of adjudicated youth (Brotman et al. 2005a, b). This program included IY parent groups, IY child groups, and several 90-min home visits. Initial results showed improvements in parenting and child social competence but no effect on child disruptive behavior. However, a longer-term follow-up showed improvements in the level of observed physical aggression relative to children in the control condition (Brotman et al. 2008). Adolescent siblings of the targeted preschoolers also showed improvements based on parent and teacher reports of the adolescents' antisocial behavior (Brotman et al. 2005a, b).

Other prevention research conducted during the preschool period has sought to reduce conduct problems and related concerns by promoting social skills and emotion regulation in the preschool setting. For example, the emotions course (EC) was designed as a program to promote emotion competence and prevent behavior problems among children enrolled in Head Start (Izard et al. 2008). Although a trial of EC conducted in an urban Head Start setting showed positive program effects on social competence but not on conduct problems, an evaluation of the program in a rural Head Start setting showed decreases in children's aggressive behavior. The positive effects on social competence but not conduct problems are not unique to the urban trial of EC; an evaluation of a preschool adaptation of the PATHS curriculum (see description below) showed positive effects on social competence but not conduct problems (Domitrovich et al. 2007). The pattern of findings from these studies and Brotman and colleagues' (2008) evaluation of the IY program suggest that in some situations longer-term follow-ups may be necessary to elucidate the effects of early prevention on reduced levels of conduct problems.

The School Transition

Many of the prevention programs with the longest-term outcomes began by targeting young school-aged children's aggressive behavior.

In addition to a similar emphasis on parent training as in the programs for preschoolers, many of the programs for school-age children have also included content related to child social skills and social-cognitive abilities. For example, the Montreal Prevention Research project provided parent training and child social skills training to high-risk boys who were randomized to the prevention program condition (Tremblay et al. 1995). Boys who were involved in the prevention program between ages 7 and 9 years had fewer disruptive behavior problems in adolescence. In other programs, the school setting itself plays a central role, with many programs emphasizing classroom management and the peer context. For example, the Seattle Social Development Project provided training to teachers on classroom management, cooperative learning, and interactive teaching methods in a nonrandomized evaluation with a control condition (Hawkins et al. 1999). Teachers also implemented the Interpersonal Cognitive Skills Program that provides training to children on problem-solving skills (Shure and Spivack 1982), and parent training classes were offered to caregivers. Participants who received the full intervention during the school-age years reported fewer violent acts and less problematic outcomes (e.g., lower levels of heavy drinking) by age 18 years. Another research group evaluated a classroom management approach, the Good Behavior Game, during first grade within randomized schools in Baltimore (Kellam et al. 1994). The research team has documented long-term reductions in antisocial personality disorder and violent crime among high-risk males who received the Good Behavior Game preventive intervention (Petras et al. 2008).

Building upon the successes of programs targeting conduct programs at school entry, the Fast Track project was perhaps the largest research evaluation of a program to reduce conduct problems. This multisite program targeted high-risk kindergarteners in four communities across the US, and included both universal classroom-level components and family- and individual-level components for high-risk children (Conduct Problems Prevention Research Group 1992). The child component focused on emotion regulation,

social cognitive skills, and academic skills, and the parent component focused on decreasing harsh parenting and increasing warmth, support, and involvement in the child's education. In addition, all children in schools that were randomized to the Fast Track program received the PATHS curriculum. The PATHS curriculum focuses on integrating emotional, behavioral, and cognitive understanding as a means to promote social-emotional competence, and it is based on the Affective-Behavioral-Cognitive-Dynamic (ABCD) model of development (Domitrovich et al. 2007). The PATHS curriculum includes teacher-implemented lessons on emotion regulation and social skills, and it provides opportunities to generalize skills in everyday contexts that are relevant to children (Greenberg et al. 1995).

Initial outcomes following the first year of the Fast Track program implementation showed improvements in parenting and multiple domains of child functioning (e.g., reading skills, emotional coping skills) for the selected, high-risk sample, with a median effect size of 0.33 for the significant effects (Conduct Problems Prevention Research Group 1999a). Although the initial outcomes for the high-risk group included reduced levels of observed aggression at school, group differences did not emerge for other conduct problem outcomes. An initial evaluation of the classroom-level component of the program showed positive effects based on peer ratings and behavioral observations, but not based on teacher reports (Conduct Problems Prevention Research Group 1999b). After 4 years of the program, positive effects were found for numerous outcomes including reduced parent-reported aggression, improved peer-rated social preference, reduced involvement with deviant peers, and improved teacher-rated academic and social competence. Moreover, there was some support for the direct targets of intervention as mediators of program effects on outcomes. For example, improvements in social cognitions about peers mediated relations between program involvement and reduced levels of deviant peer affiliation (Conduct Problems Prevention Research Group 2002). A more recent follow-up showed that involvement in Fast Track substantially reduced the risk

of receiving a diagnosis of conduct disorder or attention-deficit hyperactivity disorder by ninth grade, but only among the highest-risk members of the initial selected sample. Effect size estimates showed that diagnoses of conduct disorder were reduced by 16% points in the highest-risk group (Conduct Problems Prevention Research Group 2007).

The Transition to Adolescence

As children transition to adolescence, prevention programs must interrupt the progression from early-starting conduct problems to more serious delinquency and antisocial behavior. In addition, antisocial behavior may emerge in adolescence for those youth thought to follow an “adolescent-limited” course of antisocial behavior (Moffitt 1993). As such, prevention approaches at this developmental transition often target peer and family context factors. One such prevention approach, the Adolescent Transitions Program (ATP; Dishion and Kavanagh 2003), has been evaluated with multiple samples of youth entering adolescence and their families. An early version of the ATP included parenting groups focused on parenting monitoring and behavioral management and adolescent groups focused on self-regulation skills and prosocial behavior. An evaluation of the ATP compared parenting groups, adolescent groups, their combination, and a control group in a sample of at-risk 10–14-year-old males and females (Dishion and Andrews 1995). Both parent and adolescent groups resulted in reductions in coercive interactions between parents and their teens, and the parent groups resulted in short-term reductions in teacher-reported externalizing behavior. However, this study also documented iatrogenic effects of the adolescent groups such that adolescents in the groups endorsed attitudes toward substance use that were *more favorable* following the program, and 1 year later they had *higher* levels of teacher-rated behavior problems. These findings added to the literature indicating that aggregating problematic peers in groups can exacerbate

problems (Dishion et al. 1999). The results of the ATP study highlight an important issue for future prevention and intervention programs targeting adolescents; despite the centrality of peers during this developmental period, no preventive intervention directly targeting peer relationships has been successfully developed.

More recently, the ATP has evolved into a multilevel prevention program (Dishion et al. 2002). The first tier involves a universal intervention administered in the classroom by a parent consultant to promote adaptation during the adolescent transition. The second tier involves a selected intervention, the FCU (see earlier description), that includes an initial interview, an assessment session, and a feedback session. Finally, at the indicated level, families can choose among a menu of options such as parent groups, family therapy, or referrals to other services. Outcomes of an implementation of the tiered version of the ATP revealed that youth enrolled in ATP classrooms reported less substance use in ninth grade (Dishion et al. 2002). Follow-up analyses revealed that the highest-risk youth and their families were more likely to engage with the selected and indicated levels of the program than lower-risk families (Connell et al. 2007). Furthermore, youth from families who engaged in the program showed reduced risk for antisocial behavior and substance use by late adolescence.

Broader Systemic Approaches

Nearly all of the prevention research described thus far has examined parent training or other family-oriented strategies. A few prevention approaches have focused on the school context, but most of these approaches included behavioral or socio-cognitive skills training in the classroom. Because poverty and related ecological co-factors (e.g., neighborhood risk) are established risk factors for conduct problems and delinquency, it is worth considering whether approaches targeting broader aspects of the child’s ecology (i.e., the child’s exosystem and macrosystem; Bronfenbrenner 1979) might lead

to reductions in conduct problems. Unfortunately, randomized controlled trials generally have not targeted broader levels of the child's contextual ecology and assessed children's conduct problems as a long-term outcome. However, encouraging results from a natural experiment in the great smoky mountains study (GSMS) suggest that programs to transition families out of poverty may reduce risk for disruptive behavior disorders (Costello et al. 2003). American Indian youth comprised a large portion of the GSMS sample, and the opening of a casino on tribal land provided all tribal members on the reservation with substantial additional yearly income from the casino operators. Following the opening of the casino, youth from American Indian families who moved out of poverty showed a level of symptoms of conduct disorder and oppositional defiant disorder that was comparable to youth from families who were never poor. The researchers also examined non-American Indian families who moved out of poverty during the same period of time, and youth from these families also had reduced symptoms of conduct disorder and oppositional defiant disorder (Costello et al. 2003).

Unfortunately, results from randomized controlled trials that have targeted the broader contextual ecology have been less consistently positive than the findings from the GSMS natural experiment. Moving to opportunity (MTO) was a randomized controlled trial that targeted an important ecological risk factor for conduct problems, neighborhood poverty (Leventhal and Brooks-Gunn 2003). Families who were randomized to the MTO program were moved from public housing in impoverished neighborhoods to private housing in less impoverished neighborhoods. An evaluation of the Baltimore MTO site indicated that participation in the MTO program reduced rates of juvenile arrests by 30–50% (Ludwig et al. 2001). However, in an evaluation of the New York MTO site, program involvement did not predict reduced antisocial behavior, although it did predict improved mental health for parents and reduced anxiety and depressive symptoms for boys (Leventhal and Brooks-Gunn 2003). Furthermore, youth from low-income families who were involved in another relocation

program, the Yonkers Project, actually showed *more* problems in some domains following the family's move (Fauth et al. 2007). Although theory would suggest that moving to a middle-class neighborhood would reduce a youth's risk for problem behavior, the socioeconomic disadvantage that is apparent relative to the family's middle-class neighbors may increase feelings of discrimination and exacerbate problem behaviors. It is important to note that many of the initial negative effects of the family's move to a less impoverished neighborhood may dissipate over time (Fauth et al. 2007), and uncovering successful approaches to alter the neighborhood context remains a worthy goal for prevention research.

Synthesis and Future Directions for Prevention Research

The preceding overview of prevention approaches to reduce conduct problems indicates that several programs have empirical support. Furthermore, the empirically supported approaches target a number of risk factors, and the programs' foci are generally grounded in developmental psychopathology research on conduct problems. Some interesting conclusions can be drawn from the existing literature on the prevention of conduct problems. Firstly, although most programs to reduce conduct problems already target at-risk groups, it appears that programs tend to be the most effective for the highest-risk youth, regardless of the level of intensity of the program. Multiple research reports covering programs ranging from the Incredible Years to the Fast Track project indicate that the most at-risk members of the program group tended to receive the largest benefits relative to comparable members of the control group (Conduct Problems Prevention Research Group 2007; Webster-Stratton et al. 2001). Although this trend for stronger prevention effects for higher-risk groups is not universal across evaluation trials, the findings suggest that in some cases it may be most efficient to screen and target the highest-risk youth. On the other hand, it is not advisable to

bring together high-risk adolescents into group training as a means to reduce conduct problems; indeed, such an approach may exacerbate problems (Dishion et al. 1999). Instead, school-wide programs that target all youth may be a more appropriate mechanism to improve group norms and reduce at-risk youths' propensity to engage in delinquent behavior (Dishion and Andrews 1995). Therefore, even though high-risk children and youth may be the best group to target for selected or indicated levels of prevention, universal approaches that target all members of the community may still play an important role in reducing the prevalence of conduct problems.

It is also apparent that research evaluations of prevention programs can help advance our understanding of the developmental psychopathology of conduct problems. One way prevention research has confirmed findings from basic research on the development of conduct problems is by examining mediators of intervention effects. Tests of statistical mediation evaluate *how* a prevention program reduced problematic behavior by examining a sequence from program involvement to a mediating construct and from the mediating construct to decreased problem behavior (MacKinnon and Lockwood 2003). For example, evaluations of the Fast Track project showed that a number of proximal targets of the program, including parenting behavior and children's prosocial behavior, partially mediated the program's effects on conduct problems and other distal outcomes (Conduct Problems Prevention Research Group 2002). More specifically, participation in the Fast Track program improved parenting behavior and children's prosocial behavior, and these mediators partially accounted for the effects of program participation on reduced aggressive behavior and increased peer social preference, respectively. Mediation analyses have also been conducted for the FCU program for toddlers. Improved positive parenting and reduced maternal depression were found to mediate program effects on reductions in conduct problems (Dishion et al. 2008; Shaw et al. 2009). Thus, the mediation analyses of the Fast Track and FCU program outcomes provide encouraging

validation of basic longitudinal research on risk factors for conduct problems.

Future research can take developmentally informed evaluations of prevention programs in important new directions. For example, distinctions exist between facets of antisocial behavior, such as the distinction between aggressive and delinquent antisocial behavior (Tackett et al. 2005). Applied research could examine whether specific prevention approaches are more or less effective at reducing levels of distinct types of conduct problems. Furthermore, evidence suggests that the genetic and environmental etiology for conduct problems varies depending on contextual risk characteristics (e.g., neighborhood disadvantage; see Burt 2009). Therefore, it would be important to examine whether prevention approaches show differential effectiveness depending on the nature of the setting where the programs are implemented. For example, program outcomes and mechanisms could be compared when a program is implemented in a more disadvantaged versus a less disadvantaged community.

Prevention research should also consider whether child factors such as emotionality make children more susceptible to the positive effects of prevention program participation but also more susceptible to the negative effects of non-participation (Belsky and Pluess 2009). Evidence from a program to promote maternal sensitivity and attachment showed that highly reactive infants were more susceptible to the effects of the program (Velderman et al. 2006), and it is possible that a similar process is operating in prevention programs designed to reduce conduct problems. With the emergence of neuroscientific methods, it is likely that in the coming years, potential moderators of program effects will be extended to include profiles of brain activity (e.g., reward- and threat-related function; Blair 2007).

Lastly, it is important to consider the effectiveness of the prevention programs when implemented under "real-world" conditions. Prevention program evaluations tend to be less closely tied to University-based clinics and artificial screening procedures that can hamper the transportability of many treatment approaches to real-world settings. However, the majority of the prevention

evaluations described above were conducted with close supervision of the program's developers and other university researchers, and in many cases university-based research staff implemented the program even if it occurred in a community setting. The national office established following the success of the NFP evaluations may be a good model for other effective prevention programs. Nonetheless, effectiveness research is needed to determine how well programs function when support from the program's developers and university researchers is reduced to minimally feasible levels. Until real-world effectiveness has been established for these programs, it will be difficult to determine whether these prevention approaches can make a long-lasting impact on at-risk individuals and society.

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Treating Juvenile Offenders: Best Practices and Emerging Critical Issues

21

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Problems, Programs, and Principles in Treating Juvenile Offenders

According to the most recent report available from the US Office of Juvenile Justice and Delinquency Prevention (OJJDP), in 2008 juveniles accounted for about 16% of all arrests for violent crime and 26% of all arrests for property crime (Puzzanchera 2009). Although these rates represent an overall decline of 3% in juvenile arrests from the year prior, and a decline of 16% from 10 years prior, the absolute number of juvenile arrests is still daunting. In 2008, there were an estimated 2.11 million arrests of juveniles, and about 96,000 (5%) of those were for the index violent crimes of murder/nonnegligent manslaughter, forcible rape, robbery, and aggravated assault (Puzzanchera 2009).

Antisocial behavior is one of the easiest behaviors to predict (Borum and Verhaagen 2006; Hoge 2008) yet one of the most difficult behaviors to treat. Violent and nonviolent antisocial behaviors emerge as the result of multiple interacting risk

factors originating in the biology as well as proximal and distal social ecologies of the individual (Dodge and Pettit 2003; Guerra and Huesmann 2004; Guerra et al. 2008a). Recent studies and theoretical integrations demonstrate that the most severe and persistent youth offenders are likely to have lengthy histories of problem behavior beginning in very early childhood and marked throughout development by neurocognitive deficits, trait-like callousness, and emotional underreactivity (Frick 2006; Moffitt 2006). Further, juveniles in the justice system have been found to exhibit very high rates of co-occurring psychiatric disorders (Teplin et al. 2006), and antisocial behavior represents only one facet of a cluster of problem behaviors that commonly co-occur and include substance use, risky sexual behavior, and academic failure (Ary et al. 1999). Even the construct of antisocial behavior itself is complex, subsuming covert, nonviolent acts such as theft as well as overt, violent acts such as assault (Loeber 1985); in high-risk populations, researchers have observed developmental progressions from mild to more extreme expressions of antisocial activity (Tolan et al. 2000). Taken together, what these findings indicate is that the psychological, psychosocial, or psychiatric treatment of juvenile offenders often can be a challenging task with multiple intervention targets outside of the typical principal goal of reducing or preventing antisocial behavior (see Hoge et al. 2008).

There has been no shortage of efforts to develop, evaluate, and disseminate effective

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approaches. As of this writing, the online Model Programs Guide maintained by the OJJDP (see <http://www2.dsgonline.com/mpg/Default.aspx>) includes information on 215 different programs targeting a variety of youth outcomes relevant to the juvenile offender population, including violence and delinquency as well as substance abuse, gang involvement, risky sexual behavior, and truancy. The programs included cover a broad spectrum of points for or contexts of intervention, from prevention through reentry, and a number of different intervention settings such as schools, detention centers, communities, and therapists' offices. In terms of program value, OJJDP has assigned the highest rating of "exemplary" to 39 of these programs—that is, those demonstrating robust effects through high-quality experimental evaluation designs conducted within a recognized conceptual/theoretical framework. The rating of "effective" has been given to 80 programs, those producing adequate effects via quasi-experimental designs and a solid conceptual/theoretical framework. Finally, a rating of "promising" has been assigned to 96 programs, or those yielding inconsistent but encouraging findings through an acceptable conceptual/theoretical framework and nonexperimental evaluation methodology.

Other evaluation clearinghouse centers offer similar designations for youth intervention programs targeting delinquency and related outcomes—for example, the University of Colorado–Boulder's Center for the Study and Prevention of Violence maintains the Blueprints for Violence Prevention program (see <http://www.colorado.edu/cspv/blueprints/>), which has vetted over 800 different intervention approaches. The Blueprints program has identified 11 specific approaches as "model" programs, which show deterrent effects on youth problem behavior as evidenced through a strong research design (i.e., experimental or quasi-experimental evaluation), sustained effects to a minimum of 1 year post-program, and multisite replication of effects. Blueprints considers 20 other programs to be "promising" programs, which must also show deterrent effects through experimental or quasi-experimental evaluation, but are not required to demonstrate effects sustained over time or multisite replication.

Thus it seems clear that for the interested practitioner, policymaker, or researcher, there is abundant information available on specific programs for tackling a variety of problems exhibited by the juvenile offender; both the OJJDP and Blueprints websites even offer interactive menu-based widgets to facilitate program selection. The purpose of our chapter is not to offer an exhaustive review of available best-practice approaches, for a few reasons. First, while there are several viable best-practice packages, they share important features that are not, in fact, program specific (Boxer and Dubow 2002; Boxer et al. 2005a, b; Boxer and Frick 2008a; Frick 2001). For example, it has long been recognized that "cognitive-behavioral therapy," while a catch-all sort of term, actually represents a core technique in most best-practice programs targeting child and adolescent problem behavior even if not always explicated as such. The same can be said of multisystem intervention methods that link individual, family, and school-based approaches (Boxer and Butkus 2005; Guerra et al. 2005). Second, though best-practice approaches cover a broad spectrum of youth developmental levels, types and severity of problem behavior, and treatment modalities, they are not universally available to all practitioners and the offenders they serve, and they have not necessarily been validated empirically across all settings, types of offenders, or racial/ethnic subgroups. Despite these limitations, services must still be delivered when needed and thus policymakers and practitioners require some basis for providing services to offenders or in settings that might not conform well to the extant evidence base for best-practice approaches.

Finally, although the principles underlining the designation of best-practice approaches are meaningful to researchers and can inform the selection of one particular program or another via empirically generated evidence, these principles might not generalize to the "real world" of actual intervention practice and policy with juvenile offenders. As noted by Weisz et al. (1995, 2005), there are striking differences between "research therapies" developed and evaluated under optimized controlled conditions, and those actually

implemented in everyday intervention practice. The principles that resonate with researchers in evaluating the quality of evidence supporting a particular program might not translate well to practitioners in direct service, and in fact adopting a broader evidence-based orientation is only part of the bigger picture in formulating a sound treatment approach to juvenile offenders (Guerra et al. 2008b).

Through an integration of relevant theory and research, extensive past experience in juvenile justice practice and policy, and detailed interviews conducted with a selected group of incarcerated juveniles, Guerra et al. (2008b) derived four new principles for the treatment of youth offenders. Treatments for this population should be:

1. *Closer-to-home*: All intervention delivery for youth offenders should skew toward keeping the youth as close to home as possible, with the first line of intervention beginning in the home and/or community and institutionalization used only as a last resort. If in-home placement is not possible, interventions should be based in smaller-scale residential cottage-based treatment centers or treatment foster care. Interventions also should include emphasis on building positive support networks for youth in their home communities (i.e., neighborhoods and schools).
2. *Rehabilitative*: Although society might wish to see youth offenders punished and treated harshly for their crimes, and for some crimes (e.g., homicide, rape or serious aggravated assault) a punitive response might be unavoidable politically, treatment will be maximally effective when the juvenile justice system maintains a rehabilitative stance toward youth offenders. It is important—essential—to maintain a developmental perspective on youth offenders, recognizing that the plasticity of development and potential for growth and change into young adulthood requires the justice system to adopt the view that youth can and should be rehabilitated and supported in choosing and maintaining adaptive and constructive life paths (see also Steinberg and Cauffman 2001).
3. *Evidence based*: As we discussed briefly above, there is quite a large evidence base underpinning several different treatment approaches that have been designated as best practices by different evaluative authorities. Still, it is critical to recognize that even those programs with substantial literatures documenting robust treatment effects have not necessarily been validated for every subpopulation needing intervention services (see also Guerra and Smith 2005). Further, it also is important to bear in mind that, as we will discuss below, many best-practice approaches share key technical elements easily adaptable to everyday clinical practice with juvenile offenders (Boxer and Frick 2008a, b; Frick 2001; Guerra et al. 2005). Thus even in the absence of human and financial resources to support full implementation of established approaches, there are potentially many ways in which practitioners and policymakers can implement approaches that incorporate best-practice strategies (Boxer and Frick 2008a).
4. *Risk focused and strength based*: Evidence of program effectiveness or efficacy is not the only research evidence to which interventionists should attend. There also is a vast research literature that time and again has identified a key set of risk, protective, and promotive factors in the emergence and maintenance of youth problem behavior. Treatments for youth offenders thus should target those empirically identified factors that are dynamic, modifiable through intervention, and generalizable across situations and over time such as family interaction processes, social-cognitive skills, and behavioral coping strategies. Practitioners should target the reduction or influence of risk factors while engaging and/or strengthening promotive or protective factors. Assessment processes should identify those risk and resource factors in an individual youths' social ecosystem in order to identify more effectively an appropriate level or package of services (see also Hoge 2008).

Our goals in this chapter derive from this principled approach and are threefold, emanating from our interest in offering recommendations for policy, practice, and research that are theoretically sound, practically useful, and empirically

generative going forward. *First*, we will review relevant contemporary theory on the development of violent and nonviolent antisocial behavior and delinquency. The extant theory is deeply informative regarding why existing programs might or might not produce robust effects on reducing or preventing delinquency and problem behavior, and provides a basis for our assertions regarding the critical common factors across validated intervention packages. *Second*, we will review a few selected best-practice programs in order to provide exemplars for our recommendations concerning specific intervention techniques that are replicable in everyday practice with youth offenders. *Finally*, we elucidate some emerging and potentially vexing new problems in research and practice with youth offenders.

Contemporary Theory on the Development of Violent and Nonviolent Antisocial Behavior and Delinquency

Juvenile offenders might be expected to show a variety of problem behaviors and emotional difficulties (Hoge et al. 2008). Still, the overarching goal in treating this population should be to reduce and prevent their involvement in the antisocial behaviors that led them into the justice system. As emphasized by Boxer and colleagues, among others (Boxer and Dubow 2002; Boxer and Frick 2008a; Guerra et al. 2005; also see Hunter et al. 2001; Huesmann and Reynolds 2001; Tolan et al. 1995), and underscored by organizations such as the Centers for Disease Control (CDC) (Thornton et al. 2000), the National Institutes of Health (2004), and the University of Colorado's Center for the Study and Prevention of Violence (2006), programs targeting youth antisocial behavior will be most effective when based on a foundation of sound research on risk factors in the development of antisocial behavior. This follows the traditional model of prevention program design advocated by the Institute of Medicine in 1994 (IOM 1994) and subsuming treatment design as well (i.e., "indicated prevention" in the IOM framework).

Familiarity with risk factors for the target behavior is the first step in a process leading ultimately to effective program implementation. However, antisocial behavior clearly is multiply-determined (Eron 1994), and efforts to treat youth offenders must take into account a complex and interacting array of risk factors.

There are two relatively broad approaches to research on the development of antisocial behavior (Boxer and Frick 2008a; Boxer et al. 2008). First, a *cumulative risk* approach focuses on individually- and contextually based risk factors for their independent and additive influences on the emergence and persistence of antisocial behavior over time. In this approach, individual risk factors and their interactive effects are thought to be less important than accumulated impact of different risk factors over time and across various domains (e.g., home, school, community, media). Second, a *developmental pathways* approach involves recognition that within the general population, there are subgroups of youth who demonstrate atypical patterns of aggressive behavior (Frick 2006; Moffitt 2006). In this view, although risk factors are relevant, the focus is on understanding the variables that distinguish highly antisocial youth from their peers at an early age and are predictive of this distinction as the youth age. Individual and contextual risk factors are evaluated in terms of how well they account for empirically- or theoretically-derived groups representing various patterns of antisocial responding over time (e.g., Broidy et al. 2003).

Both of these perspectives are consistent with the idea that aggression is best conceptualized from a *developmental-ecological* or *social-ecological* framework (Coie and Dodge 1998; Conger and Simons 1997; Dodge and Pettit 2003; Patterson et al. 1989; Tolan et al. 1995, 2003). This view posits that aggression emerges and becomes habitual through the interaction of multiple individual/personal factors and contextual/environmental factors. In terms of individual/personal factors, risk for aggression is greater when the individual has the characteristics of thrill seeking, irritability, and emotional lability (e.g., Eisenberg et al. 2003; Frick and Morris

2004; Lemerise and Arsenio 2000; Rubin et al. 2003; Shaw et al. 2001). Other individual/person level factors that are important to consider are propensities toward cognitive biases in social situations (e.g., Musher-Eizenman et al. 2004) as well as low intelligence and learning problems (e.g., Huesmann et al. 1987). In terms of contextually based factors, family, peer, neighborhood, and school contexts are important individually and interactively. Aggression risk is higher when youth are exposed to aggressive models in the family (e.g., Dubow et al. 2003; Frick 1994; Mahoney et al. 2003; Patterson 1982), or when they experience aggressive behavior in peers, in neighborhoods, and in the media (e.g., Boxer et al. 2003, 2005b; Espelage et al. 2003; Guerra et al. 2003; Huesmann et al. 2003).

Highly relevant for understanding and treating juvenile offenders is the significant role of interactions between youth and their parents/guardians. Parent–adolescent relationship factors are very salient in determining youth problem behavior and the likelihood of youth seeking out risky peer contexts (e.g., Ary et al. 1999; Goldstein et al. 2005; Snyder et al. 1986). Adolescence is a time of transition for parent–child relationships; parental roles and expectations ideally are adjusting to meet the developmental needs of their child. Positive adolescent adjustment is facilitated by families that provide their adolescents with increased (but developmentally appropriate) levels of autonomy over time, while maintaining positive affective relationships (e.g., Eccles et al. 1996). This is especially critical in regard to parental monitoring of youth behavior: Lax monitoring is linked to increased delinquency, but the only reliable way for parents to obtain knowledge of their adolescents' activities is through adolescent disclosure and not direct parental solicitation (Kerr et al. 2010). During adolescence, if these shifts do not occur in such a manner that meets the adolescent's changing needs, then the adolescent might seek out these relational factors in other settings, such as the peer context (Eccles et al. 1997), and evidence increased susceptibility to negative peer influence (Fuligni and Eccles 1993; Goldstein et al. 2005). These findings underscore the central importance of family

dynamics in the treatment of youth offenders, as will be considered in detail in the section below on exemplary practices.

The developmental–ecological view can accurately predict population-level trends in the emergence and maintenance of aggressive behavior. However, it might be less effective in identifying pathways to more extreme manifestations of aggression such as violent and chronically delinquent behavior (Boxer 2007). Analytic procedures that identify and isolate atypical, very high-risk groups within population samples and/or more elaborated models that take interactions between risk factors into account have been necessary to understand pathways in these youth. For instance, trajectory analytic modeling of longitudinal data now is used increasingly to locate chronically aggressive youth within larger study samples; risk factor analyses then consider which risk variables predict membership in the extreme group (Broidy et al. 2003; Nagin and Tremblay 1999; NICHD Early Child Care Research Network 2004). There is quite clearly a subpopulation even in the relatively atypical general youth offender population that shows early-starting antisocial behavior, at more severe levels and accompanied by high levels of dispositional risk including neuropsychological deficits and psychopathic trait-like callousness and emotional underreactivity (Frick 2006). For example, studies of children exhibiting psychopathic traits have reported interactive effects, typically between parenting styles and psychopathic tendencies, in examining conduct problems and aggression in that group (e.g., Oxford et al. 2003; Wootton et al. 1997). Children with high levels of psychopathic traits are less sensitive to their parents' efforts—optimal or otherwise—to discipline them.

The integration of a more traditional cumulative risk view with the increasingly popular (and, to some extent, more quantitatively and conceptually elegant) pathways or trajectory modeling view is represented by the developmental life-course framework (Guerra et al. 2008a; Thornberry 2005). An essential notion in this framework is that throughout development, youth interact dynamically with a variety of risk factors as well as protective or promotive factors, and

that these interactions occur over time across different age-linked periods and situations. A broader life-course perspective recognizes that human development involves a number of normative transitions (e.g., from childhood to early adolescence, or from elementary school to middle school) as well as common but less predictable “turning points” (i.e., major life events not tied to specific developmental periods) that can have major proximal and enduring consequences for later behavior. Thus, to understand juvenile offenders in a manner that connects to preventive interventions as well as treatments for antisocial behavior it is important to recognize that risk and protective factors are not static and that trajectories might not be stable. Given the potential for great change in behavior over time, the essential question in regard to implementing effective treatment and related treatment research should be, as Guerra et al. (2008a, b, p. 46) suggest: “What individual factors, life experiences, and contextual supports are most likely to foster desistance from offending?” The intervention approaches that target those factors, set a platform for those experiences, and bolster those supports should have the greatest success in keeping youth offenders from reoffending.

Exemplary Techniques of Identified Best-Practice Programs

As discussed, though there are many unique treatment packages that have shown effectiveness in treating juvenile offenders (through, for example, measured reductions in antisocial behavior, substance use, or general recidivism), only a handful meet the most stringent criteria (i.e., per the Blueprints program) for best-practice designation in the youth offender population. These are Functional Family Therapy (FFT; Sexton and Alexander 2002), Multisystemic Therapy (MST; Henggeler et al. 2009), and Multidimensional Treatment Foster Care (MTFC; Chamberlain 2003). Below we describe these programs and discuss their evidence base.

However, beyond evaluations of specific program packages, it should be emphasized that

specific intervention approaches or techniques that cut across various programs also have been subjected to empirical evaluation. For example, meta-analytic work conducted by Lipsey and colleagues (Lipsey 1995; Lipsey et al. 2000) has highlighted a set of techniques and approaches in juvenile offender treatment that are most consistently linked to successful outcomes, divided by programs serving youth in or out of institutions. Approaches showing positive, consistent effects for institutionalized offenders were interpersonal skills training and teaching family home programs. Approaches showing positive, consistent effects for noninstitutionalized offenders were individual counseling, interpersonal skills training, and behavioral programming. It should be noted that the characterization of unique approaches from the myriad of evaluations included in the meta-analysis was of course somewhat subjective, but did permit meaningful differentiation in broad strokes across different classes of approaches.

But our point in noting validated program *packages* as well as program *approaches* is this: One the one hand, there are discrete treatment packages, developed through high-fidelity implementation and evaluation, with great potential for adaptability and portability. On the other hand, there are the theories, principles, and techniques for positive behavioral change underpinning these treatment packages, developed and refined through basic and applied research methods, and generalizable across settings and youth offender subgroups. With respect to deriving recommendations for the treatment of juvenile offenders, it would be most optimal for clinicians, juvenile justice officials, and policymakers to implement or support the implementation of recognized best-practice packages (see also Chap. 19). Yet, it might not be most feasible for a variety of reasons including financial restrictions, human capital limitations, or local political support. Thus we focus on those exemplary treatment techniques derived from broader established theory that might be amenable to integration into everyday juvenile offender treatment practice. In the sections below, we first describe one of the three best-practice programs listed earlier, and then discuss common, replicable techniques used in those programs.

Functional Family Therapy

Alexander and colleagues (e.g., Alexander and Parsons 1973; Morris et al. 1988; Sexton and Alexander 2002) have developed a well-supported model of family therapy aimed at reducing aggressive and antisocial behavior in adolescents (ages 11–18). The Blueprints program has recognized FFT as a Model intervention, and it has been designated effective by OJJDP, the Surgeon General, and the CDC, among others. FFT has been shown to be successful in a number of settings including clinics and clients' homes (see Alexander et al. 1998).

The basis of FFT is well-established behavioral principles, which are used with the goal of encouraging behavioral change. For example, parent–adolescent communication issues are addressed, and parental contingency management is emphasized. In addition, FFT aims to modify structural and systemic family processes that increase the likelihood of adolescent problem behaviors. FFT also addresses issues that may prevent the parent from implementing behavioral programs, such as inappropriate power hierarchies between parents and adolescents, or other concerns like family enmeshment. There are three general treatment phases in FFT, beginning with *engagement and motivation* (altering family dynamics and individual cognitive and emotional factors that prevent engaging in behavioral change). The next phase is *behavioral change* (training and supporting new parent–adolescent interactional styles and increasing positive parenting skills), and the final phase is *generalization* (supporting the transfer of new skills to other settings such as school or the legal system).

A key feature of FFT is that it is an office-based, single-therapist-mediated treatment strategy that essentially can be adapted quite well to typical clinical practice across a variety of settings. In addition, its first-phase emphasis on encouraging families to engage in and commit to behavior change is highly consistent with a wealth of clinical research findings indicating that the initial steps of family contact and engagement with the therapist are critical to positive treatment outcomes (see, e.g., Szapocznik et al. 1990).

Indeed, it is worth noting here that one program similar in general approach to FFT and designated as “promising” by Blueprints is *Brief Strategic Family Therapy* (Szapocznik and Williams 2000), which places great emphasis on the engagement phase of treatment with the families of antisocial and/or substance abusing youth in order to secure significant participation by all family members. In evaluating cost-effectiveness, the Washington State Institute on Public Policy (Aos et al. 1999) estimated the cost-per-youth of FFT at about \$2,000, with benefits (to taxpayers, the justice system, and victims) ranging from \$7 to \$11 for every dollar spent.

Multisystemic Therapy

MST is a community-based, individual/family-focused, multiple-component intervention strategy for adolescents (ages 12–17) designed by Henggeler and colleagues (e.g., Henggeler et al. 1992, 2009). It has been recognized as a “Model” program by the Blueprints organization, and CSAP, OJJDP, and the Surgeon General’s office have identified it as effective. MST is implemented as a multifaceted intervention that bridges together multiple individual practitioners from various community-based agencies in the service of treating individual youth clients. Research shows that MST results in substantial short-term (Henggeler et al. 1986) and long-term (up to 4 years; Borduin et al. 1995) reductions in conduct problems and recidivism (Borduin et al. 1995).

MST integrates multiple systems of a youth’s social ecology; youth and their families are the focus of home- and agency-based treatments from several different sources. These sources include individual and family therapists as well as interventionists from a range of other potential service providers such as youth development agencies and neighborhood centers, schools, probation offices and diversion programs, and psychiatric clinics. In fact, MST probably should be described as a set of evidence-based interventions integrated in a principled approach. Therapists and other service providers adhere to best-practice strategies in selecting treatments for various

issues, but also nine principles reflecting the ecological, strengths-oriented MST approach (see Henggeler et al. 2009). For example, MST providers are expected to focus explicitly on increasing or enhancing positive aspects of a youth's individual or family functioning (principle #2) and to promote generalization of new skills and interaction sequences across settings and over time (principle #9). Therapists may pick and choose from among existing best-practice, evidence-based strategies for various individual and family concerns. Therefore specific interventions within an MST case might include individual cognitive-behavioral therapy (CBT), behavioral parent training or family structural intervention (as in FFT), and (for comorbid psychopathologies such as ADHD) psychopharmacological therapy.

In MST, cases are managed by full-time therapists who maintain low caseloads (i.e., about three to five cases at a time) and receive frequent supervision. This permits the therapist to spend as much time as necessary on individual cases, and ongoing opportunities for expert consultation with respect to treatment selection and adherence to the MST model and principles. Therapists are expected to be available 24 h a day, 7 days a week. MST interventions are delivered *in vivo*—family homes, schools, and neighborhood centers. This reduces some of the typical barriers to successful treatment (e.g., transportation) while increasing ecological validity (generalizability). In the Washington State analysis (Aos et al. 1999), the cost-per-youth of MST was estimated at about \$4,500, with benefits ranging from \$8 to \$13 per dollar spent.

Multidimensional Treatment Foster Care

Chamberlain and colleagues (e.g., Chamberlain 2003; Chamberlain et al. 2002) have developed a community-based, multiple-component intervention strategy for children and adolescents (three discrete program models targeting the age groups of 3–5, 6–11, and 12–17) that shares a number of critical features with MST. The key difference between MTFC and MST, of course, is that

MTFC constitutes an out-of-home placement for the target youth whereas MST focuses on youth who are able to live with their parents or guardians. As noted, MTFC is a Blueprints “Model” program, and also has been recognized as effective by the US Department of Education, OJJDP, and Surgeon General's office. As with MST, MTFC is implemented as a multicomponent intervention that unites practitioners representing a number of different systems in the service of assisting individual youth. MTFC has been shown to exert both short- and long-term impacts on a variety of problem behaviors, including truancy from school and other community placements, substance use, and recidivism (Chamberlain and Mihalic 1998).

Youth referred for MTFC are placed into a foster care setting with the expectation of placement lasting about 6–9 months. Foster families are employees of the treatment-providing service organization and trained intensively on the implementation of behaviorally oriented, highly structured interventions (e.g., contingency management, behavioral contracting). Foster parents are supported and supervised by MTFC case managers who serve as the coordinators of each youth's overall individualized, multicomponent treatment program. These case managers are in daily contact with foster parents via telephone calls designed to elicit clear information about the target youth's behavior, problem-solve any difficult issues, and plan for the next day. Beyond the constant behaviorally oriented treatment afforded by the foster care setting, youth often are involved also in individual skills training, supervised visits and/or family therapy with their biological or adoptive families, close monitoring of their academic progress, and psychiatric consultation; for youth involved in the justice system, probation or parole officers also will be incorporated into the overall treatment.

As we suggested above, in terms of the key theoretical precepts underscoring MTFC and MST, the two approaches rely on highly similar frameworks that integrate a multisystemic social-ecological view to address environmental influences and controls with a very clear behavioral treatment model to shape and maintain positive

behavior changes. The fundamental difference for MTFC is that youth begin their treatment in an out-of-home placement, and thus a key goal in most MTFC cases will be facilitating the transition from the foster home to the biological/adoptive family. MTFC case managers are involved directly with foster families, but also with the youths' parents/guardians, to ensure that behavioral approaches, contingency plans, and treatment gains are transferred from the foster setting to the home setting. Per the Aos et al. (1999) evaluation conducted at the Washington State Institute for Public Policy, the cost-per-youth of MTDC is estimated at about \$2,000 (relative to regular group home treatment), with benefits ranging from about \$14 to \$23 for every dollar spent.

Social–Cognitive–Behavioral Skills Training

Consistent with conclusions drawn by Lipsey et al. (2000), despite the multicomponent, multi-system nature of the three programs described above, all three—along with most other exemplary, model, or promising programs for youth offenders identified by OJJDP—incorporate some degree of interpersonal skills training. This might be in the context of negotiating parent–adolescent conflicts, as in all three programs, or navigating the various challenges of the broader social ecology, as in MST and MTFC; most often such training proceeds via a standard cognitive–behavioral approach (Borum and Verhaagen 2006; Boxer and Frick 2008a). Notably, the US Centers for Disease Control has identified this kind of social cognitive intervention as a best-practice strategy for youth violence prevention (Thornton et al. 2000). Such intervention aims to modify directly the social and social–cognitive skills youth apply in their everyday interactions and especially in the context of social conflict situations. This is consistent with contemporary views on the development and maintenance of antisocial behavior—theoretically, developmental–ecological risk factors lead to *habitual* patterns of aggressive and violent behavior by shaping social–cognitive information-processing

(SCIP) skills and strategies (Anderson and Huesmann 2003; Boxer et al. 2005a; Huesmann 1988, 1998).

As Boxer and Frick (2008b) described, with specific regard to violent youth offenders, the SCIP framework can be applied through the implementation of therapeutic exchanges designed to modify attributional tendencies, improve arousal control, teach and promote the acceptance of prosocial or at least nonaggressive alternatives to behavior, and improve individual–ecological transactions. These techniques should apply broadly to nonviolent youth offenders as well. However, we believe that the most important feature of the general SCIP approach for individual skills training and counseling interventions is the fact that it offers a structured, systematic model for teaching basic social problem-solving skills. Problem-solving training (Kazdin et al. 1992) and cognitive mediation training (Guerra and Slaby 1990) are approaches that rest on a broad base of empirical evidence and fit well into the general cognitive–behavioral model of treatment (Friedberg and McClure 2002).

Multisystem, Multicomponent Treatment Framework

Based on the available evidence, and critical commentary, it seems unlikely that interventions for youth offenders that involve only the self-system—that is, only individual counseling—can succeed. Even from a preventive standpoint, school- and classroom-based approaches that have psychoeducation as their principal modality often can involve outreach efforts to parents and teachers and modifications to school environments (see Boxer and Dubow 2002). Indeed, the role of schools in supporting intervention efforts cannot be understated given that schools are key centralized venues for the delivery of violence/delinquency prevention programming (Farrell et al. 2001; Guerra and Williams 2003). Schools have established positions in the community as well as the ability to house interventionists supporting a number of critical needs for offenders (e.g., special education services; Eggleston 2008).

It is clear that juvenile offending, or antisocial behavior more generally, evidences equifinality (Cicchetti and Rogosch 1996) or multicausality (Cowen 2000): a single outcome resulting from a variety of different risk factors that can operate on multiple levels of influence. Two of the three programs reviewed above (MST, MTFC) include at least three to four social–ecological systems in their handling of youth offender cases, and the third (FFT) deals primarily with the self and family ecosystems. From the standpoint of adopting best practices in treating juvenile offenders, without proper human and financial resources, it can be daunting to consider instantiating multisystem, multicomponent treatments in everyday work with youth offenders. However, at a minimum this could involve treatment components as simple as ensuring that parents/guardians are involved in aftercare programming (for offenders about to be released from detention), community-based monitoring (for offenders on probation or involved in diversion), and/or school-based interventions (for offenders maintained in the community). It can mean close contact between therapists and probation officers, or among therapists, probation officers, and school officials. What is essential to understand from the assertion that multisystem interventions are requisite in treating juvenile offenders is that this assertion stems from longstanding, established and very clear theory that systematizing and coordinating environmental contingencies for behavior is essential to shaping and maintaining that behavior. Although programs such as MST and MTFC have formalized methods for ensuring such cross-system consistency, those methods are based on principles derived from recognized theory and are not intended as stepwise, “cookie cutter” procedures. Indeed, even with the limitation of an office-based practice in a community mental health setting, it can be possible to implement treatment for antisocial youth that is multisystem in nature and strives toward enduring effects through the enhancement of communication between home and school and the generalization of treatment strategies to both of those settings (Boxer and Butkus 2005; Boxer and Frick 2008a).

A Critical Note About Treatment Formats

In recent years much has been made of the potential for “peer contagion” processes occurring in treatment formats that rely on the intermingling of antisocial youth, such as small-group skills training or social–cognitive intervention (e.g., Goldstein et al. 1998). The notion advanced by Dishion et al.’s (1999) seminal review in this area is that aggregating antisocial youth, particularly adolescents, in small-group therapy might produce the iatrogenic effect of increasing problem behaviors in those youth. This effect is likely to accrue through “deviancy training processes” whereby youth provide mutual reinforcement for each other’s antisocial behaviors and values in the context of service delivery. This is clearly a fraught proposition for interventionists, particularly those working in detention settings with limited clinical staffing or other settings providing therapeutic or recreational programming to groups of high-risk offenders released to the community. If group placements and programming are contraindicated, what are the reasonable alternatives?

Importantly, the evidence supporting a peer contagion effect is mixed, and socialization of behavior in small groups can occur in both directions. Boxer et al. (2005b) observed *discrepancy-proportional peer influence*: youths’ aggression scores following a small-group intervention program depending upon the interaction between pre-intervention level of aggression of others in their group and their own level of pre-intervention aggression. Specifically, although less aggressive youth tended to become more aggressive in groups of relatively more aggressive peers, more aggressive youth tended to become less aggressive in groups of relatively less aggressive peers. A recent meta-analysis of youth psychotherapy outcome studies suggests that iatrogenic effects are generally quite unlikely in group treatments (Weiss et al. 2005). Further, a recent analysis of data from 712 youth admitted to residential treatment for high-risk youth revealed decreases over time in problem behavior, especially for youth carrying diagnoses of Conduct Disorder,

and thus no negative peer influence over time (Huefner et al. 2009). Yet Shapiro et al. (2010) found that recidivism was more likely among first-time offenders evaluated in residential settings than among those evaluated in community settings. Thus, *the evidence base at this time is equivocal on the issue of whether group treatment for youth offenders should be abandoned*. The prospect of peer contagion remains, especially given developmental studies showing that aggressive friends socialize one another to become more aggressive over time (Espelage et al. 2003). Therefore, group treatment with youth offenders should minimize peer reinforcement for inappropriate behavior within the group, rely on close adult supervision, and include a behavioral management system designed to limit problems during the group.

Emerging Issues for Science, Practice and Policy

Female Offenders

Female involvement in the juvenile justice system has been rapidly increasing in recent years. In 2005, 29% of juvenile arrests involved females, which is close to twice the rate measured in 1980 (Zahn et al. 2010). This increase has become especially noteworthy with regard to an increase in arrest for violent crimes for female juveniles coinciding with a decrease for males over a similar period of time. With regard to cases filed against juveniles which were handled in U.S. Juvenile Court between the years 1985 and 2007, juvenile caseloads for females involving crimes against persons increased by 202%, compared to a 95% increase in caseloads for males over the same time period (Knoll and Sickmund 2010). As noted by Puzanchera (2009), the rate for male and female juvenile arrests for violent crime sharply increased over the course of the 1990s, whereas afterwards male involvement stabilized or decreased across many indices of violent crime. In contrast, arrest rates for females continued to rise (or decreased less). For example, females arrested for simple assault

increased 19% from 1999 to 2008 (compared to a -6% change for males). In the only category of violent crime that increased for both genders, the number of females arrested for robbery increased by 38% from 1999 to 2008, whereas males increased by substantially less—24% (Puzanchera 2009). Thus, girls are clearly becoming increasingly common consumers of juvenile justice services. Although these trends may be due to changes in law enforcement policy and procedures rather than to a real increase in violent crime perpetration (Zahn et al. 2010), the net effect is that more females are becoming involved in the juvenile justice system and needing services and treatment.

As reviewed extensively above, the development of antisocial behavior relies heavily on biological and socialization factors, and best practices in treating juvenile offenders involve, in essence, resocialization (see Guerra et al. 2005, for discussion). This raises important issues in considering how male versus female youth offenders should be treated, given differences in socialization for males and females from birth onward. Parents, teachers, peers, and the media encourage gender-typed behavior through their overt behavior and opinions expressed as well as through more subtle social messages (e.g., Galambos et al. 2009; McHale et al. 2003; Miller et al. 2006). These early learning experiences shape children's behavior into gender-typical patterns, for example, by encouraging boys to be assertive and aggressive and encouraging girls to be emotionally sensitive, nurturing, and supportive (e.g., Brody 1993; Underwood et al. 2006). Based in part on this early learning, behavior with the same goals (e.g., to harm another person) may be exhibited in different ways for boys versus girls. For example, although both boys and girls use relational, indirect, or "social" forms of aggression (i.e., behavior intended to harm another through the manipulation of social relationships; Underwood 2003), girls show a clear preference for this type of behavior when they are aggressive whereas boys are more likely to use physical forms of aggression (Österman et al. 1998; Salmivalli and Kaukiainen 2004).

Biological factors also might underpin gender differences in the development of antisocial behavior. For example, males are more likely to experience the neurological risk factors that predict problems with aggression and delinquency that were discussed earlier, such as impulsivity, difficulty paying attention, and learning difficulties (e.g., Lin 2009; Liu et al. 2000; Thompson et al. 2003). Gender differences in antisocial behavior are partially attributed to the gender differences in these risk factors, and to the way that these risk factors are expressed in light of their interaction with gendered social influences (Moffitt et al. 2001; Silverthorn et al. 2001). Other biological variables, such as early pubertal timing, influence the development of antisocial behavior and delinquency in both males and females, although early puberty seems to put girls at an especially high risk for unique problems with eating disorders, early sexual activity, early parenthood, and lower educational attainment (e.g., Ellis 2004; Ge et al. 1996, 2001; Graber et al. 2004). These problems, in turn, can serve as risk factors for involvement in delinquency for females.

Several treatment programs have specifically focused on gender in the design and/or the evaluation of their treatment programs, but the results of some of these evaluations have been less than stellar. For example, OJJDP's Girls Study Group reviewed 61 programs specifically designed for female delinquents, and they found that out of these 61 programs, only 17 had published evaluations, and of these 17 none could be rated as effective or effective with reservation. The Girls Study Group also reviewed 26 of the programs in the Blueprints for Violence Prevention database, and found that only eight out of these programs assessed whether program outcomes *differed* for boys versus girls, even though 23 did demonstrate effectiveness *across* gender (Zahn et al. 2008). Part of the difficulty in measuring outcomes by gender lies in assessment techniques for youth offenders—another publication by the Girl's Study Group (Brumbaugh et al. 2010) analyzed 143 assessment instruments designed for youth offenders in terms of the gender-based performance of the instrument, in terms of whether

it had gone through gender-based development and/or analysis. According to this analysis, only about half (73) of the instruments examined showed favorable gender-based performance.

Although significant progress has been made in terms of establishing knowledge about the development of antisocial behavior and delinquency in females relative to males, and although much has been gained in terms of learning about what types of programs are beneficial to females, there is still much work to be done. For example, along with differences in normative socialization experiences, it appears that female youth offenders might present with more extensive and/or traumatic histories of exposure to violence and associated forms of trauma (Veysey 2008; also see Chap. 30). Consequently, trauma-focused or trauma-informed care might be a critical component of best-practice treatment for female offenders.

Youth Involved in Gang Activity

Street gangs have been present in American society for decades, and the most recent gang surveillance available (2008 National Youth Gang Survey) estimates that there are approximately 774,000 gang members representing 27,900 gangs with gang presence in about 32% of all cities, suburbs, towns, and rural counties in the US (Egley et al. 2010). Data compiled by the National Center for Education Statistics (2009) suggests that about one-quarter of US secondary school students report gang presence in their schools. It appears to be the case that many of the factors associated with youth antisocial behavior generally also account for youths' involvement in street gang activity (Thornberry et al. 2003). Importantly, however, gang activity also is tied to very powerful social relationship forces: membership can be spurred and maintained by youths' desire to affiliate with close and family-like peer networks, is typically tied to neighborhood residence, and might result from multigenerational family ties to specific gangs (Dishion et al. 2005; Rizzo 2003). Further, although youth appear to select into gang activity partly on account of their

elevated antisocial tendencies, gang involvement also sparks significant increases in both violent and nonviolent antisocial behavior.

The issues described above underscore a very striking gap in the best practices literature for youth offenders: there are no established, recognized best-practice approaches for dealing with gang-involved youth (Parker et al. 2008). There are ongoing large-scale efforts to validate universally preventive gang resistance programs underway (e.g., Gang Resistance Education and Training; Esbensen 2004). But gang intervention—contending with gang activity writ large as well as youth entrenched in the gang lifestyle in particular—is a very complicated and vexing issue. As years of systematic research funded through the US Department of Justice has shown, multidisciplinary collaboratives are essential given that targeting gang activity requires clear coordination between law enforcement (i.e., specialized police units as well as prosecutors) and the social/human services network (National Youth Gang Center 2008). Still, as found in the different evaluations summarized by the National Youth Gang Center report, even when all stakeholders in a community collaborative come together for integrated intervention, the sheer intensity and scope of gang problems can be exceptionally difficult to overcome.

On a broad level, multiagency collaboration and targeted law enforcement are essential, but at the level of the individual therapist or other interventionist the path forward is less clear. One of the most central issues for both practitioners and applied researchers addressing the problem of youth offenders claiming gang affiliations and/or involved in antisocial behavior via their gang ties is whether youth must renounce their gang memberships in order to benefit from treatment. At present this is an open question. Theoretically, the answer could be both yes and no. Maintaining gang affiliation even in name only means maintaining a connection to socialization forces that promote (and perhaps require) involvement in antisocial behavior. Yet, renouncing gang membership can be a dangerous proposition for youth. From the standpoint of treatment only, it might not be necessary to renounce so long as youth become

increasingly involved in prosocial activities that limit their contact with gang associates. Alternatively, from the standpoint of law enforcement or the courts, maintaining even weak gang ties could be intolerable in the context of diversion, probation or reentry following detention. At present, there are no clear answers from scientific research, although interventionists dealing with gang-involved youth offenders are on reasonably solid ground in applying the program packages and/or treatment approaches described in the last section, under the general rubric of the principles outlined earlier.

Concluding Remarks

Despite modest documented declines in rates of juvenile arrests over the last 10 years, the absolute number of arrests is still strikingly high and there remains a clear need for implementation and dissemination of empirically supported and theoretically sound “best practice” interventions for juvenile offenders. As even a cursory review of best-practice guides will suggest, there are quite literally dozens of programs that have shown some degree of effectiveness in reducing and preventing delinquency and related problems. However, only a handful of treatment approaches examined in youth offender populations have met the most stringent evaluative criteria. These programs—FFT, MST, and MTFC—share similar theoretical foundations and rely on fairly basic but time-tested and proven intervention techniques.

Though adopting such programs is facilitated by their effective dissemination models and portability, initial costs in terms of human and financial resources can be daunting. Yet as noted, these programs are built on intervention elements—primarily, the integration of multiple systems and application of behavioral and cognitive-behavioral skills training methods—that could be incorporated into or better integrated within existing service delivery frameworks (Boxer and Butkus 2005). Implementing best-practice treatments should follow from a principled approach that acknowledges the need for evidence-based

strategies along with programming that is closer-to-home, rehabilitative, and strengths-focused (Guerra et al. 2008b; see also Chap. 19).

Improvements to the current state of interventions for youth offenders are occurring in tandem with the rise of new challenges to intervention science in this population. The rate of arrests for female juvenile offenders has doubled since 1980, with a particularly troubling spike in violent offenses perpetrated by female juveniles (Zahn et al. 2010). Treatments for juvenile offenders going forward will need to take a gendered approach to formulating treatment plans, for example, by focusing in a more targeted manner on co-occurring trauma reactions (Veysey 2008; also see Chap. 30). Further, youth gang activity is widespread, and it represents a very serious threat given the elevated violence linked to youth gang affiliation. Yet there are no empirically supported, targeted best-practice approaches for gang-involved youth (Parker et al. 2008). These are clear and present challenges in the area of treatments for juvenile offenders that must be addressed through comprehensive and sustained efforts in the research, practice, and policy arenas.

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Lenore Engel, John Abulu, and Roumen N. Nikolov

The Numbers: Children and Adolescents in Juvenile Justice Settings

In 2008, there were 2.11 million arrests of persons younger than age 18 in the USA. (Puzzanchera 2009) The Federal Bureau of Investigation (FBI) 2008 report “Crime in the United States” compiles the data reported within the FBI’s Uniform Crime Reporting Program which collects arrest statistics from law enforcement agencies across the USA. The data reflects the number of arrests, not the number of individuals arrested, and only records a count of the most serious charge for a particular arrest. Therefore it does not reflect the number of offenses resulting in a single arrest. Despite this limitation, the database offers information on the number of juvenile arrests, the number of individuals entering the justice system, the trends in these arrests and the ethnic and gender differences. For the period 1999–2008, there is a decline in all juvenile offenses leading to arrest, with the exception of robberies, which increased. Juveniles accounted for 16% of all violent crime arrests and for 26% of all property crime arrests in 2008. The violent crime index

has fallen significantly from a high in 1994. There was a 10-year decline trend in the violent crime index for the period 1994–2004, reaching a 49% decrease in 2004, then a 12% increase for 2004–2006 and a new 5% decline for 2006–2008. Youth younger than 15 accounted for more than one-fourth of all juvenile arrests, 29% for violent crime offenses and 27% for property crime offenses. Only 1% of juvenile arrests are of youth younger than age 10. In 2008, the number of reported forcible rape offenses was at its lowest since 1980. In 2008, the juvenile arrest rate on murder charges was 3.8 arrests per 100,000 juveniles ages 10–17, a decline of 5% from 2007, and 74% down from a 1993 peak of 14.4. Between 1999 and 2008, juvenile arrests for aggravated assault decreased for males, more than for females (22% vs. 17%). During the same period, juvenile male arrests declined 6%, but female arrests increased 12% for simple assault. In 2008, females accounted for 17% of juvenile violent crime arrests, 36% of juvenile property crime arrests, and 44% of the juvenile larceny-theft arrests. In 2008, there were 629,800 arrests of females younger than age 18; accounting for 30% of the total juvenile arrests. Simple assaults, larceny-theft and driving under the influence, all increased in females from 1999 to 2008, while male arrests decreased in these categories. The data shows a downward trend in juvenile crime; but increase in crime committed by females, especially “petty” crime. This may mean that the population of female delinquents in detention is on the rise, gender

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ratios are changing and so are pathology and emotional issues encountered in juvenile justice settings, posing a new set of challenges for service programming.

In adolescents aged 10–17, African American youths accounted for 52% of the juvenile violent crime arrests and 33% of the juvenile property crime arrests in 2008 (Puzzanchera 2009). The arrest rate for robbery was ten times higher for African American than for Caucasian youth. Given that many African American youth do not receive any or receive inadequate mental health services in the community (United States Department of Health and Human Services (USDHHS), 1999, 2001), as they enter juvenile justice setting, they probably are less likely to be identified in need of mental health services.

In 2008, 22% of the arrests were processed and released, 66% were referred to juvenile court and 10% were referred directly to criminal court. A survey of mental health disorders in incarcerated youths (Wasserman et al. 2003) reported that 65% of juveniles detained in juvenile detention were released within 48 hours and the rest had a mean length of stay of 27.7 days. The short length of stay in detention presents special challenges for both identifying mental health needs and coordinating linkage and community-based services.

The high number of adolescents who are arrested and then flow through the juvenile justice system makes a case for the development and integration of mental health services within the juvenile justice system to identify and characterize these youth and their needs and to attempt preventive interventions. This is also an important area in need for future research to focus on available and new treatment options (psychosocial, educational, and psychopharmacological) taking into consideration age, gender, and racial differences.

Mental Illness in Juvenile Justice Settings

Many children and adolescents in juvenile justice settings have received behavioral health services in the community, some mandated and monitored

by the courts. Often these children have co morbid mental health and substance abuse disorders (Abram et al. 2003). Most of the available epidemiological data on the mental health of juvenile delinquents has been generated by surveying youth detained in correctional (pre- and post-adjudication) settings. It has been shown that emotional problems, disruptive behavior and substance abuse, increase the risk for ongoing symptoms of Conduct Disorder and further involvement with the juvenile justice system (Plattner et al. 2009). The emotional problems also increase the risk for suicidal behavior in these youngsters, an issue that has received significant attention in detention facilities (Chapman and Ford 2008).

The Northwestern Juvenile Project, (Teplin et al. 2002) studied a random sample of male and female youths ($N=1,829$) detained in Cook County Juvenile temporary Detention Center between November 20, 1995 and June 14, 1998, for frequency of psychiatric illness and whether there were differences based on age, sex, or ethnicity. Six broad categories of disorders were ascertained, including affective disorder (major depressive episode, dysthymia, manic episodes); psychotic disorders; anxiety disorders (panic, separation anxiety, overanxious, generalized anxiety, obsessive compulsive disorder); disruptive behaviors (oppositional defiant disorder, conduct disorder); attention-deficit/hyperactivity disorder and substance abuse. Sample characteristics included, 64.1% male (1,172), 35.9% female (657), 54.9% African American, 28.7% Hispanic, 16.2% non-Hispanic white, and 0.2% other. Mean age was 14.9 years. Diagnosis was established with DISC Version 2.3. Almost two-third of male and three quarter of female detainees met diagnostic criteria for one or more psychiatric disorders. Close to 60% of the male and 67% of the female detainees met criteria for a DSM III-R psychiatric disorder that was not Conduct Disorder. Half of the male and almost half of the female youth had a diagnosable substance use disorder. Forty percent of the male and female youth met criteria for disruptive behavior disorders. More than 20% of females met criteria for major depressive episode, higher among

Table 22.1 Prevalence of psychiatric disorders among detained juvenile delinquents

DSM diagnosis	Male (%)	% Male with impairment	Female %	% Female with impairment
Any listed disorder	66.3	63.3	73.8	71.2
Any except conduct disorder	60.9	59.7	70	68.2
Any affective disorder	18.7	16.1	27.6	22.9
Major depressive disorder	13	11.0	21.6	18.9
Dysthymia	12.2	9.9	15.8	12.5
Manic episode	2.2	2.0	1.8	1.2
Psychotic disorders	1		1	
Any anxiety disorder	21.3	20.7	30.8	28.9
Panic disorder	0.3	0.1	1.5	1.0
Separation anxiety disorder	12.9	10.8	18.6	16.3
Overanxious disorder	6.7	5.9	12.3	11.5
Generalized anxiety disorder	7.1	6.4	7.3	6.8
Obsessive–compulsive disorder	8.3		10.6	
Attention-deficit hyperactivity disorder	16.6	11.2	21.4	16.4
Any disruptive behavior disorder	41.4	31.4	45.6	38.0
Oppositional defiant disorder	14.5	12.6	17.5	15.1
Conduct disorder	37.8	24.3	40.6	28.5
Any substance use disorder	50.7		46.8	
Alcohol use disorder	25.9		26.5	
Marijuana use disorder	44.8		40.5	
Other substance use disorder	2.4		6.9	
Both alcohol and other drug use disorders	20.7		20.9	

Data from Teplin et al. 2002. Used with permission

female non-Hispanic whites. Compared to male detainees, female detainees showed higher rates of psychiatric morbidity, with the exception of conduct disorder. Similarly, rates of depressive illness for female detainees (26.3%) were significantly higher than for male detainees (17.2%). In addition, the prevalence of attention-deficit/hyperactivity disorder (ADHD) (age of onset criteria not used) was higher in the detained females compared to males, contrary to reported gender ratios for the disorder in community samples (Table 22.1).

The Northwestern Juvenile Project, (Teplin et al. 2002) also noted differences in disorder rates based on ethnicity. Non-Hispanic white males had a higher prevalence of psychiatric disorders than African Americans or Hispanics, including higher rates of disruptive behavior disorders, conduct disorder, and substance use disorders. Hispanic detainees had more anxiety disorders than Caucasians and African Americans. Among female detainees, non-Hispanic whites had

significantly more disruptive behavior disorders, conduct disorder, and substance use disorders. Female Hispanic detainees had higher rates of generalized anxiety disorder. Looking at age, older male detainees had higher prevalence of any psychiatric disorder, higher rates of generalized anxiety disorder and substance use disorders, including alcohol, marijuana or combined alcohol, and other drug use disorders. Similar age differences were not found for female detainees. In the Northwestern juvenile project, juvenile detainees were also noted to have high degrees of co morbidity (Abram et al. 2003). 17.3% of females and 20.4% of males had only one major psychiatric disorder, whereas 56.6% of females and 45.9% of males met criteria for two or more disorders. After excluding conduct and substance use disorders, more females (33.6%) than males (24.2%) had two or more disorders. More females than males had two or more of the following disorders: affective, anxiety, substance use, and ADHD or behavior disorders. There were racial

Table 22.2 Prevalence of mental disorders

	Male (%)	Female (%)	Ethnic/age issue
Psychotic illness	3.3	2.7	
Manic symptoms	3.1	1.2	
Major depression	10.6	29.2	
ADHD	11.7	18.5	Lower in studies with older subjects
Conduct disorder	52.8	52.8	Higher in older adolescents

Data from Fazel et al. 2008

and ethnic differences in frequency of comorbidity with non-Hispanic whites having two or more disorders more frequently than African Americans. There were age differences noted for males, where older males had more comorbid diagnoses than younger males. These differences were not seen in females. A high number of detainees had both a mental disorder (psychosis, mania, or major depressive disorder) and a substance use disorder (10.8% for males and 13.7% for females).

Fazel et al. (2008) conducted a systematic review of 25 published surveys (1966–2006) of psychiatric morbidity of detained adolescents ($N=16740$) age range 10–19, to estimate the prevalence of psychiatric disorders. Fifteen surveys were from the USA, four were from the UK, and one each from Australia, Russia, Holland, Denmark, Canada, and Spain. Psychotic illness affected 14,710 adolescents. 3.3% of males had a current psychotic disorder (430 of 12,468 adolescent boys). 2.7% of girls were affected by psychotic illness. Data on manic episodes was limited to a few surveys; four reported manic episodes in boys to a combined prevalence of 3.1%, while only one study reported mania in girls with prevalence estimate of 1.2%. Eighteen surveys reported on major depression ($N=4,959$). In boys the prevalence was 10.6% (391 of 3,323 boys) and in girls 29.2% (457 of 1,633) with gender difference reaching significance. Thirteen surveys reported on attention-deficit hyperactivity disorder (no age of onset criteria used) ($N=14,639$ adolescents). The ADHD prevalence for boys was 11.7% and for girls 18.5%. Fifteen surveys reported on conduct disorder ($N=14,667$). Prevalence was 52.8% for boys (7,818 of 12,552 boys) and 52.8% for girls (Table 22.2).

PTSD is a highly prevalent disorder among detained youth as a large number of them have

been exposed to trauma. Researchers in the Northwestern Juvenile project estimated 92.5% of juveniles experienced at least one trauma and 84% experienced more than one (Abram et al. 2004). More males than females experienced traumatic events. The most common traumatic event was witnessing violence. Females reported being forced to have unwanted sex more often than males. The prevalence of a PTSD diagnosis in the past year was 11.2%. Having a PTSD diagnosis increased the likelihood of having other psychiatric diagnoses (Abram et al. 2007).

There is a dearth of data on the prevalence of learning and cognitive disorders in detained youth, but they are recognized to be widespread by clinicians practicing in juvenile settings. The schooling of juveniles, their special educational needs and related best practices are deservedly becoming a focus of attention (Geib et al. 2010).

The reviewed published data indicate that adolescents in juvenile justice settings have high rates of mental health disorders. This argues in favor of making mental health services readily available to detained youth. Psychiatric expertise in detention settings can be instrumental in the identification of risk and sensitizing juvenile justice staff to fragile adolescents, at risk for suicidal or violent behavior within the setting.

Basic Principles of the Practice of Psychopharmacology in Juvenile Justice Settings

The recognized nationwide “migration” of children with mental health needs into the juvenile justice system (Teplin et al. 2002) has compelled juvenile justice settings to develop programs for

the provision of mental health services. National agencies have established standards for care delivery in correctional and juvenile justice settings. Initial health screening is recommended to be performed within 1 hour of admission to a detention facility (Office of Juvenile Justice and Delinquency Prevention (OJJDP), 1994), to assess physical and mental condition, including alcohol and drug use, upon intake. Within 7 days of admission, an in-depth health appraisal, including a mental health assessment performed by a licensed health professional, is recommended (OJJDP 1994). The National Commission on Correctional Health Care standards recommend that all juvenile detention facilities provide mental health services by qualified professionals and establish minimum requirements for such care (NCCHC 2004). In a 1998 national survey, 61% of facilities report having services by a psychiatrist available (Goldstrom et al. 2000). Child and adolescent psychiatrists have become essential members of the clinical team, and are relied on for diagnostic and risk assessments, for psychopharmacological evaluations and interventions and for ongoing consultation regarding special needs planning, milieu management and staff education and guidance. In some juvenile justice settings, the child psychiatrist functions as a clinical team leader, similar to their role in mental health settings.

There are no widely accepted, much less published, best practice standards of behavioral health care in juvenile detention settings (Desai et al. 2006). Pharmacological treatment is one unique service provided by psychiatrists in juvenile justice settings. Research describing psychiatric practices in detention settings and their impact on outcomes is lacking. The general principles of safe psychopharmacological practice apply, and we have reviewed some of these here as they apply to juvenile justice settings.

As in other areas of the practice of child psychiatry, pharmacological treatments should be offered only as part of a comprehensive treatment program. There are at least three essential prerequisites for successful pharmacological treatment: (1) good assessment, leading to a psychiatric diagnosis; (2) identification of target

symptoms known to respond to medication; and (3) a working therapeutic alliance. The first task of the psychiatrist practicing in a juvenile justice setting is to establish a clinical support “infrastructure,” allowing the accomplishment of these goals.

The Identification and Assessment

Triaging is accomplished by an interview and review of available legal and treatment records. Some facilities use standardized screening tools (Grisso and Underwood 2003). Youth entering the system with preexisting mental health issues and those identified with current mental health needs are referred to a mental health professional for more detailed assessment (Wasserman et al. 2003).

Children are exposed to unique stressors during their detainment and legal proceedings, which may precipitate a psychiatric disorder. Common stressors include, but are not limited to: separation from family and support group, extended detention, peer conflict, and facing legal consequences for their actions. The psychiatrist is most likely to be asked to see a youth when there is history of multiple psychiatric diagnoses and treatments, when the youth is known to have been receiving pharmacological treatment for behavioral problems, or when there is concern for safety risks. Youth identified during the triage process with one or more of the following difficulties should be seen with priority:

- Youth with current suicidal ideation or intent.
- Youth with current homicidal ideation or intent.
- Youth with symptoms of psychotic thinking or behavior.
- History of suicidality (gestures or attempts) in the immediate family.
- Significant trauma history or recent significant loss.
- Unusual difficulties adjusting to the setting.
- Serious legal charges or impending transfer to adult correctional setting.
- Documented history of major psychiatric illness.
- Significant shame and guilt related to being detained.

Youth who are assessed to be at imminent risk of self harm, or exhibit disabling and dangerous symptoms of a major psychiatric disorder, should be considered for treatment in a psychiatric setting until stabilized. It is important that a relationship exists, where available, with psychiatric emergency services, psychiatric hospital or forensic unit. It is the psychiatrist's responsibility to advocate that treatment needs of juvenile detainees, which exceed the setting's capacity to provide for, be met in an appropriate treatment setting.

Medical screening and assessment are an essential part of a thorough psychiatric assessment. Most juvenile settings provide medical services to detained youth, including a physical screening examination during the admission process. It is important that the psychiatrist maintains close collaboration and regular communications with the medical providers involved in the detainee's care. There should be established procedures for obtaining blood samples for basic laboratory tests, and access to pediatric medical services for more complex medical studies, for example, diagnostic imaging, electrocardiograph (EKG), and pediatric subspecialty consultation. Rapid drug testing, and for settings caring for female youth, pregnancy testing, should be readily available.

It is necessary for the psychiatrist to familiarize themselves with the assessment protocol in the facility they provide service to, and to know what information is being collected and available for review. The psychiatric assessment should focus on areas to complement and complete the collected information, with the goal to establish baselines in multiple domains of function, including the individual symptoms of psychiatric illness, the youth's relationships at home, school, and the neighborhood. The psychiatrist may wish to develop a referral form that includes salient history, behavior observations, and the issues identified leading to the referral. Several general rules are helpful to remember when it comes to the psychiatric initial assessment in juvenile justice settings: one is better off asking specific questions about symptoms and other pertinent issues, leading to the completion of an accurate psychiatric diagnosis. A symptom-oriented

descriptive interview is the "gold standard" for use in diagnosis and symptom ascertainment (Kutcher and Fletcher 1997). The language of the interview must be at the developmental level of understanding of the youth and match their cognitive abilities and educational attainment. One should also remember that prolonged open-ended questioning for a long period of time may tax the youth's ability to sustain focus, prove frustrating to them and counterproductive for a therapeutic alliance. The quality of information obtained during the assessment must be scrutinized with regard to its validity and veracity, and if concerns are present, appropriate steps should be taken to assess its reliability. Obtaining collateral information can be a challenging task. Families and youth are reluctant to share any information which in their understanding can be damaging if it reaches the court. In addition, they are commonly advised to that effect by their legal counsel. Detention settings are also often asked to provide reports to the court on the detainee's behavior in detention. All these realities need to be addressed and discussed openly with the youth. Valuable sources of information can be educational records, predispositional studies and court-ordered evaluations. Community treatment records may be accessible with consent from the legal guardian.

The objective of an initial psychiatric assessment is to establish a clear psychiatric diagnosis, to identify and measure the symptoms that will be potential target for psychopharmacological treatment, and to draw up a sustainable treatment "contract" with the youth and their legal guardian.

The Target Symptoms

Whether a youth is admitted to a juvenile justice setting already treated with a psychotropic medication, or the medication treatment is initiated within the setting, there needs to be clear rationale for the treatment (NCCHC 2004). Such clarity will facilitate the communication between the psychiatrist and the youth's legal guardian and make it easier to establish a therapeutic alliance. In addition, understandable and concrete

medication treatment objectives may make it easier for juvenile justice staff to monitor behavior and help assess the outcomes of treatment. A good system of information gathering and flow is vital to safe and effective pharmacological treatment. We have found it extremely helpful to educate juvenile justice staff about the basic principles of child and adolescent psychopharmacology: what a child and adolescent psychiatrist does and how and the limits of pharmacological interventions. Setting up a treatment team which includes staff with primary care responsibilities for the youth (case worker, juvenile officer, etc.), the mental health clinician on site, the medical provider on site and an administrator with medical and mental health-care coordination responsibilities, and meeting with this team regularly, may be the best way to exchange observations and information about treatment. The use of rating scales to monitor target symptoms can be very helpful in adding focus and structure to the observations, provided that staff administering them is trained. Existing monitoring instruments used in the juvenile justice setting (e.g., observation logs, safety checks, sleeping logs) can be used to add to available sources informing pharmacological treatment. If the setting has a school on grounds, it would be important to solicit teachers' observations about behavior in the classroom, interactions with peers and adults, changes in academic performance etc. Simple and basic information about common potential medication side effects should be shared with the youth as part of the informed consent/assent process, but also with medical providers and direct care staff, so that they can identify adverse effects and communicate them to the psychiatrist early. It is also important to designate a primary contact within the setting for the youth's legal guardian, who can communicate with them as needed, and access and involve the psychiatrist in this communication. The frequency of reassessment of the youth by the psychiatrist should depend on the severity of symptoms targeted, the therapeutic agent used, and the presence or absence of adverse treatment events. During the follow-up meetings, a summary of the impressions regarding medication effects should be discussed with the youth to solicit their input

into the assessment and reassessment process, but also to invite and promote individual responsibility for their treatment. Such discussions with the youth facilitate treatment adherence and help avoid medication misuse. They may also mitigate possible unintended coercion (when the youth has the perception that complying with an expectation to accept medication treatment may help the disposition of their legal case).

The Therapeutic Alliance

A juvenile justice setting is usually not conducive to a fast and easy establishment of therapeutic rapport. The youth and their legal guardians can be suspicious of the psychiatrist and their "agenda." The psychiatrist can be perceived as an agent of the courts and detention. There can be a tendency to diminish and belittle the professional competencies of a psychiatrist working in the juvenile justice setting. Legal guardians and the youth may be not forthcoming because of confidentiality concerns and worry how information disclosed might affect their legal disposition. The youth and their guardian may be acting on perceptions and expectations created by previous treatment experiences. The best way to address these difficulties is through diligent and open communication efforts. It may help to explain to the youth the role of the psychiatrist in the setting as a consultant and care provider, and the distinction between this role and the role of a forensic evaluator. The youth may be reminded not to discuss legal charges outside of their attorney–client relationship. Often it helps to present the involvement of the psychiatrist in the context of continuity of mental health care provided to the youth in the community. It is also extremely important to contact the legal guardian as part of the informed consent for treatment process, and use this as an opportunity to introduce the psychiatrist and gather information about past medication and other treatment. Once the youth and the guardians are reassured that their concerns are listened to, and the psychiatrist is interested in their points of view, a working alliance is easier to establish, but is still fragile and subject to disruption.

Common Psychopharmacological Treatment Approaches in Juvenile Justice Settings

There is no published national data on the rates of use of psychotropic medications in detention settings. State surveys (Pennsylvania and Oregon) estimate that between 50 and 70% of youth admitted to detention are treated with psychotropic medication (Oregon Youth Authority 2002; Griffin 2000). It may be safe to assume that a substantial number of youth entering detention, may be already taking, or are in need of psychotropic medication.

The “PRN” (as needed) or “stat” (urgent) use of medications in a detention setting is usually not welcomed by the youth who may view it as a forceful attempt to control and subdue them. A youth’s family may view the behavioral difficulties a youth is having as a natural reaction to the restrictive setting. There are legal and ethical considerations making the administration of medication against a youth’s will a problem in detention settings (NCCHC 2004). Any other than “by mouth” medications are difficult to administer as they require professional staff and monitoring. One may argue that if psychiatric symptoms are of such acuity and severity as to necessitate fast administration (by injection) of medication, a different treatment setting may be required.

Initiating long-term medication treatment in a juvenile justice setting may meet with resistance from the youth and his/her family. Issues of control, the side effects of medication and agency will be at the forefront. The inherent limitations to a therapeutic alliance in a detention setting, discussed earlier, add to the deliberations when deciding whether to initiate medication treatment. Potential medication noncompliance is often an issue and direct observation during medication administration by trained staff in the juvenile setting is advisable. Therapeutic agents with narrow therapeutic tolerance and requiring close monitoring may not be a safe option for youth with history of nonadherence to treatment in the community. Considering the fragile therapeutic

alliance, we suggest using only medications with best available support for the treatment of the diagnosed psychiatric disorder.

Therapeutic Class Review

In the following section, we will discuss pharmacological agents used in the treatment of common child and adolescent psychiatric disorders shown to be affecting youth in juvenile justice settings. The doses listed should not be considered a full description of the effective or safe range. The reader may wish to consult the Food and Drug Administration (FDA)-approved package insert for full prescribing information.

Stimulants

The stimulant medications (methylphenidate, D-amphetamine, and D-, L-amphetamine) are a well-established treatment for ADHD in children and adolescents. Strong evidence for the benefit of treatment with well-managed stimulant medications was provided by the Multimodal Treatment Study of Children with ADHD (MTA), a large multicenter trial cosponsored by the National Institute of Mental Health (NIMH) and the Department of Education (MTA 1999). Motor restlessness, hyperactivity, distractibility, and disruptive behavior are common symptoms of youth in juvenile justice settings. In a randomized controlled trial ($N=84$) Klein et al. (1997) treated children diagnosed with Conduct Disorder (CD) age 6–15 for 5 weeks with methylphenidate (MPH) up to 60 mg/day. Ratings by parents, teachers, and clinicians of antisocial behaviors specific to CD were significantly reduced by methylphenidate independent of ADHD symptom severity. The authors concluded that methylphenidate has short-term positive effect for children and adolescents diagnosed with CD.

Pappadopulos et al. (2006) reviewed 45 randomized placebo-controlled trials (RCT) addressing the treatment of aggression in ADHD as a primary or secondary variable. They found an overall effects size (ES) for psychotropic agents in treating aggression of 0.56. Largest effects were noted with methylphenidate for comorbid

aggression in ADHD (mean ES=0.9; combined $N=875$). An earlier study by Kaplan et al. (1990) included nine male adolescents diagnosed with both “aggressive” CD and ADHD. Placebo controlled double blind design was used after open trials. The authors reported significant reduction in aggression in the methylphenidate treated group as measured by the Adolescent Antisocial Behavior Checklist. The hyperactivity and aggression subscale scores on the Conners’ Teachers Rating Scale also trended down, but did not reach significance.

The most common side effects of stimulants include insomnia, reduced appetite, stomachache, headache, dizziness. Weight and height suppression have been reported. Rare side effects include psychosis, mania, syncope, and hypertension. Caution should be used when treating patients with cardiac history of arrhythmia, murmurs or infection or systemic disease affecting the cardiac muscle. In stimulant naïve patients, a baseline EKG is always prudent and is necessary if there is a familial history of sudden death or cardiac disease. FDA warns of serious cardiovascular adverse events and sudden death reported with misuse. Stimulants also have a high abuse potential. Diversion of medication should be a consideration in all settings, as stimulants have a street value and can be abused, sold or traded for other drugs. Prodrugs and OROS (Osmotic-controlled Release Oral delivery System)-methylphenidate preparations may have lower abuse potential.

Nonstimulants

Atomoxetine is a noradrenergic reuptake inhibitor which affects the dopamine action in the brain. It has an FDA-approved indication for the treatment of ADHD in children and adolescents. It has been found to be useful in the treatment of ADHD with co morbid anxiety, tics, and depression (Allen et al. 2005).

Recommended maximum dose is 1.4 mg/kg/d for children over the age of 6 who weigh less than 70 lbs to 100 mg/d for children who weigh more than 70 lbs. The most common side effects include dry mouth, nausea, vomiting, decreased appetite, headache, insomnia, dyspepsia. Rare

side effects include psychosis, mania, suicidal ideation (black box warning), syncope, hypertension and liver toxicity.

Alpha 2 Agonists

Clonidine is an alpha 2 agonist used to treat hypertension. It is commonly used in child psychiatry for the treatment of disruptive behavior disorders and ADHD, but is not FDA approved for these indications. It is given in divided doses (three or four times a day) of 3–5 $\mu\text{g}/\text{kg}/\text{day}$. A randomized placebo-controlled trial of clonidine added to stimulant treatment of ADHD with co morbid Oppositional Defiant Disorder or Conduct Disorder (Hazell and Stuart 2003) showed it to be helpful in reducing conduct symptoms with well tolerated and transient unwanted effects. A 3-month, randomized, blinded, group comparison of methylphenidate combined with clonidine, clonidine monotherapy or methylphenidate monotherapy in 6 to 16-year-old children diagnosed with ADHD and comorbid Oppositional Defiant Disorder or Conduct Disorder (Connor et al. 2000), suggested that clonidine is safe and effective alone or in combination with methylphenidate. An open trial of clonidine in 17 aggressive children aged 5–15 years (Kempth et al. 1993) resulted in decrease in aggression in 15 children with minimal side effects. The most common side effects of clonidine are dry mouth, drowsiness, dizziness, constipation, sedation, and low blood pressure.

Guanfacine is an alpha 2 agonist recently approved in a sustained release preparation by the FDA for the treatment of ADHD in 6–17 year-old children (Sallee et al. 2009). The recommended daily dose range is 1–4 mg. Hunt et al. (1995), demonstrated first in an open trial that guanfacine sustained release can be beneficial in the treatment of ADHD with minimal side effects. The side effect profile of guanfacine is similar to that of clonidine.

Antipsychotics

This is a group of drugs that are used to treat severe psychiatric disorders in children and adolescents. They are divided by convention into Typical (older medications) and Atypical

(newer medications) antipsychotics. They all to a certain extent work by blocking dopamine receptors in the brain. However, other receptor-binding capabilities have been described including, but not limited to, binding to serotonergic, histaminergic, and adrenergic receptors. In other words, the antipsychotics regulate chemicals modulating many brain functions including behavior, emotions, and cognition. Most atypical antipsychotics have received FDA approval for the treatment of schizophrenia and bipolar disorder in children and adolescents. This group includes compounds brought to the market over the past 10 years as safer and better tolerated alternatives to the then existing “typical” antipsychotics. Medications in this group (the atypical) include clozapine, risperidone, olanzapine, quetiapine, ziprasidone, and aripiprazole. Target symptoms for pharmacotherapy with atypical antipsychotics typically include aggression, self injury, property destruction or severe tantrums. The advantages over the typical antipsychotics include lower risk of inducing neurological side effects such as parkinsonism in the short term and perhaps tardive dyskinesia (TD) in the long term. The Treatment Recommendations for the Use of Antipsychotics for Aggressive Youth (TRAAAY) Parts I and II promote psychosocial and educational treatment approaches as first line interventions for symptoms of aggression. How early psychopharmacological treatment is introduced may depend on the level of aggression, the severity, and pervasiveness of associated Axis I disorders and other factors (e.g., the willingness of the patient and family to engage in treatment). Using atypical antipsychotics rather than typical antipsychotics to treat aggression is recommended by the TRAAAY group (Pappadopulos et al. 2003). Risperidone is FDA approved for the treatment of schizophrenia, bipolar disorder, and symptoms of irritability in Autistic Disorder. It has the best evidence to support its use in the treatment of disruptive behavior. Numerous studies and trials in children and adolescents have described beneficial effects of risperidone in the reduction of aggressive symptoms. A placebo-controlled maintenance versus withdrawal trial of 335 youth ages 5–17 years with symptoms of

Disruptive Behavior Disorder (Reyes et al. 2006), showed evidence that patients who respond to initial treatment with risperidone continue to benefit from long-term treatment (up to 6 months). Risperidone treatment was well tolerated and modestly effective when used in combination with psycho-stimulants for treatment-resistant aggression in children with ADHD (Armenteros et al. 2007). Risperidone was more effective than placebo in decreasing aggression in a study of 20 children age 5–15 treated in an outpatient setting (Findling et al. 2000). Buitelaar et al. (2001) showed reduction in severe aggression in 38 inpatient adolescents with subaverage intelligence and Disruptive Behavior Disorder. Risperidone was more effective than placebo in decreasing disruptive behaviors in a sample of 118 children and adolescents diagnosed with Conduct Disorder, Oppositional Defiant Disorder or Disruptive Behavior Disorder Not Otherwise Specified and subaverage IQ (Aman et al. 2002).

Olanzapine is FDA approved for the treatment of schizophrenia and manic/mixed episodes of bipolar disorder for age 13–17 years. It is not recommended as first line treatment for these disorders due to the risks of hyperlipidemia and weight gain. Recommended maximum daily dose is 20 mg. One open label trial in patients diagnosed with pervasive developmental disorders (Potenza et al. 1999), reported generally positive results, though significant weight gain did occur. Reports of drug-induced diabetes in adults treated with olanzapine (Bettinger et al. 2000); (Bonanno et al. 2001) may make clinicians reluctant to continue using it in children. Quetiapine is FDA approved for treatment of schizophrenia and bipolar disorder. Ziprasidone is not FDA approved for treatment of any disorders in children or adolescents. It is associated with cardiac side effects which may lead to sudden death. Aripiprazole is classified as a partial dopamine agonist due to a novel mechanism of action. It is FDA approved for the treatment of schizophrenia, bipolar disorder and irritability in autism (age 6–17 years).

Clozapine is not FDA approved in children or adolescents. It is FDA approved for treatment of adults suffering from refractory schizophrenia and for schizophrenia-associated suicide prevention.

It is used off-label to treat children and adolescents who have refractory schizophrenia—when two or more antipsychotics have not helped. Side effects include drooling, drowsiness, extrapyramidal side effects, hypotension, fever, weight gain, seizures, and tardive dyskinesia. It has black box warnings for possible seizures, heart inflammation (myocarditis), drop in blood pressure, syncope, respiratory, or cardiac arrest. Because of its ability to cause bone marrow suppression (agranulocytosis), it is only used with ongoing blood tests to monitor the numbers of various blood cell components, most importantly white blood cells.

Typical antipsychotics include fluphenazine, haloperidol, chlorpromazine, loxapine, molindone, thioridazine, thiothixene, trifluoperazine, and pimozide. Haloperidol and lithium (a mood stabilizer) were found both to be clinically effective in 61 treatment resistant, hospitalized children aged 5–13 years with diagnosis of Conduct Disorder (Campbell et al. 1984). Antipsychotic side effects include for the typical antipsychotics: Extrapyramidal side effects—akathisia, acute dystonia, parkinsonism, seizures, weight gain, liver dysfunction, sedation, hyperprolactinemia, cardiovascular, and hematologic effects. For the Atypical antipsychotics: cardiovascular effects, weight gain, sedation, drooling, extrapyramidal side effects [including akathisia and hyperprolactinemia (rarely)], hyperlipidemia, and elevation in blood glucose. Recommended monitoring includes weight, vital signs, monitoring for abnormal involuntary movements.

Antidepressants

Selective serotonin reuptake inhibitors (SSRIs) in the pediatric population are commonly used to treat depression, anxiety and Obsessive–Compulsive Disorder. Fluoxetine is FDA approved for treatment of Major Depressive Disorder (8–18-year-olds) and Obsessive Compulsive Disorders (7–17-year-olds). The use for treatment of aggression is not FDA approved, but has been entertained based on the fact that low serotonin has been associated with aggressive behavior and impulsivity (Kavoussi et al. 1997). Escitalopram is FDA approved for treatment

of Major Depressive Disorder (12–17-year-olds); sertraline is FDA approved for the treatment of Obsessive–Compulsive Disorder (6–17-year-olds); fluvoxamine is FDA approved for the treatment of Obsessive–Compulsive Disorder (8–17-year-olds). These medications have been used also for non-FDA-approved indications in children/adolescents including Posttraumatic Stress Disorder, Anxiety Disorders (Social Phobia, Generalized Anxiety Disorder, Panic Disorder, and Separation Anxiety Disorder). Citalopram, although not FDA approved, appeared effective and well tolerated in a sample of 12 children aged 7–15 with a profile of impulsive aggression (Armenteros and Lewis 2002). The children were treated in an open trial for 6 weeks in an outpatient setting. All antidepressants carry a black box warning for suicidality in adolescents, extending to age 24. There have been no reported deaths by suicide in the study pool used for the analysis of suicidal ideation occurrences. Diligent monitoring (weekly for the first 4 weeks of treatment) is emphasized during treatment with antidepressants. Common side effects of the SSRIs include nausea, drowsiness, diarrhea, nervousness, and sexual dysfunction. Patients may also experience restlessness and increased anxiety when initiating treatment. The maximum recommended dose for treatment with fluoxetine is 80 mg/day. For escitalopram, the maximum recommended dose is 20 mg daily. For sertraline, the maximum recommended dose is 200 mg/day. For fluvoxamine, the maximum recommended daily dose is 200 mg. The tricyclic antidepressants (TCAs) may be helpful for the treatment of Anxiety Disorders and ADHD, but they are not easy to use in juvenile justice setting as they require cardiac monitoring, can be lethal in overdose, and have not been shown to be effective in adolescent depression. Clomipramine has an FDA-approved indication for Obsessive–Compulsive Disorder in 10-year-olds and above, but the more favorable side effect profile of the SSRIs, make them a preferred treatment option. Imipramine has an indication for Nocturnal Enuresis (6–18 years old). Common side effects for the TCAs include drowsiness, dry mouth, constipation, rapid heartbeat, sweating, confusion,

and disorientation among others. Rare side effects include heart damage that could lead to sudden death, hypotension, and hypertension. TCAs also carry the Black Box warning that they can increase suicidal behavior in children, adolescents, and young adults.

Benzodiazepines

Chlordiazepoxide and diazepam are approved for the treatment of anxiety in children. Common side effects are sedation, confusion, unsteady gait, nausea, constipation, and paradoxical agitation. Other serious side effects are syncope, hepatic impairment and symptoms of withdrawal if treatment is stopped abruptly. In the juvenile justice population, habituation to drug effects; and misuse or diversion of these drugs may occur.

Anticholinergic Agents

Anticholinergic agents include: benztropine, trihexylphenidyl, biperiden, diphenhydramine, and hydroxyzine. Benztropine is an anticholinergic medication with antihistaminic activity. It is used to treat muscle stiffness, shuffled gait, and other symptoms commonly known as “extrapyramidal” side effects of antipsychotics. It should be used with caution in children and adolescents. The recommended dose range is: 0.02–0.05 mg/kg daily or twice daily, 0.25–4 mg/day. Diphenhydramine is an anticholinergic and antihistaminergic medication. It is FDA approved for treatment of extrapyramidal side effects from age 2 years and for short-term insomnia from age 12 years. Hydroxyzine is FDA approved for the treatment of anxiety (symptomatic relief of anxiety and tension associated with psychoneurosis and as an adjunct in organic disease states in which anxiety is manifested) in children and adolescents. Its use for anxiety is only recommended for short term. Maximum recommended dose range is 50–100 mg/day for less than 12 years old. Those older than 12 years may use adult doses of 50–100 mg up to four times a day. Side effects of anticholinergics include constipation, dry mouth, nausea and vomiting, urinary retention, sedation. Rare side effects include psychosis, confusion, blurry vision, delirium, cardiac rhythm problems (e.g., fast heart beats), reduced sweating, and

dry skin. Diphenhydramine may also cause paradoxical reactions, extrapyramidal side effects and has had reports of abuse potential. Hydroxyzine may cause bitter taste.

Mood Stabilizers

Antipsychotics have been used as mood stabilizers in the treatment of Bipolar Disorder. Other mood stabilizers are the anticonvulsants and lithium. Anticonvulsants have been described as helpful in targeting aggression mostly in short-term studies. No anticonvulsant has an FDA-approved indication to treat any psychiatric disorders in children. However, sodium valproate, carbamazepine, and lamotrigine have been used off-label for treatment of Bipolar Disorder and aggression.

Side effects for these medications include: suppression of the function of bone marrow (which produces the cellular components of blood) leading to low counts of the various cellular components of blood for example, red blood cells, white blood cells, and platelets. It is important that blood levels be monitored for valproic acid and carbamazepine. Lamotrigine brings a risk of severe rash called Stevens–Johnson’s syndrome especially if titrated quickly or due to interactions with other anticonvulsants for example, Valproate. Lamotrigine risk for Stevens–Johnson is also higher with younger patients. Lithium is approved for treatment of Bipolar Disorder in children (acute mania), 12 years and older. It is used off-label to treat aggression, especially in children with mood disorders (Campbell et al. 1995). It has been noted to have antisuicidal properties (Ernst and Goldberg 2004). Dose for Lithium for children 12 years and older is 600–1,200 mg/day to a maximum of 2.4 g/day in divided doses, orally. A black box warning exists for toxicity of Lithium. Regular blood levels are mandatory during initiation and ongoing use. Monitoring should be from twice a week during initiation to every 2 months during maintenance. Concentrations should be kept below 1.5 meq/L and the lowest therapeutic level possible that also maintains symptom control. Side effects even at low blood concentrations may include fine hand tremors, increased urinary frequency and mild

thirst. Early signs of an increased blood level above 1.5 meq/L include vomiting, diarrhea, drowsiness, and muscular weakness with lack of coordination. As the toxic levels increase the severity of the above increases to include giddiness, unsteady gait, blurry vision, ringing in the ears and large output of urine that when measured in a laboratory shows that it is diluted. Very high lithium blood concentration may lead to organ failure especially kidney failure. Other recommended laboratory tests include monitoring of thyroid, heart and kidney function.

Conclusion

There are a large number of youth in the juvenile justice system suffering from psychiatric disorders both preexisting and occurring in the context of their confinement. Despite of all the challenges inherent to the practice of psychiatry in juvenile justice settings (unpredictable length of stay, poor family involvement, lack of trained staff to maintain therapeutic milieu among others), mental illness needs to be treated, as failure to do so can be construed as unethical, and ultimately, unconstitutional. Psychopharmacological interventions must be combined with educational and nonpharmacological interventions with the goal to optimize youth functioning and decrease recidivism. Current concepts in pharmacotherapy of psychiatric disorders of youth in juvenile justice settings involve targeting observable and measurable behavior symptoms, affecting adversely the daily functioning of individuals with psychiatric illness. Practitioners in this setting should be cognizant of the age, gender, and racial issues as they relate to the various individuals entering the juvenile justice setting. Practitioners should note that the use of FDA-approved medications should be the first line treatment for this youth as in all children and adolescents. They may be well served in referring any non-FDA medication trials to community settings where issues of control and suspicions of practitioners being agents of the State may not play a role. As the number of youth with mental health needs in juvenile justice

settings is growing, so are the investigative efforts to determine efficacy for available and new treatment modalities, including medications, tailored to the specific characteristics of this group.

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IICAPS: A Treatment Model for Delinquent Youths with Co-occurring Mental Health Disorders

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More than 1.7 million youth are presently on the delinquency caseloads of the juvenile courts in the USA (Harms 2003). Youth who enter the juvenile justice system have been found to present with a range of problematic behaviors that require mental health intervention if they are to be ameliorated (Wasserman et al. 2004). Prevalence research suggests that the rate of mental health disorders among youth in the juvenile justice system is close to 70%, exceeding the 10–20% estimated rate for youths in the general population (Espelage et al. 2003; National Center for Mental Health and Juvenile Justice 2005). One large-scale study of 1,829 male and female juvenile detainees in Cook County, Illinois found that excluding conduct disorder, nearly 60% of male and 66% of female detainees met criteria for psychiatric disorders and had diagnostic-specific levels of impairment for one or more disorders (Teplin et al. 2002).

Although considerable attention has been paid to assessing the occurrence of psychiatric disorders among the juvenile justice population, there is little data regarding entry into treatment for this population. It appears that few youths with serious disorders have accessed appropriate treatment

resources prior to coming to the attention of the juvenile justice system. Moreover, those youths in juvenile justice facilities who have been identified as having a serious psychiatric disorder are unlikely to have received treatment as few facilities within the juvenile justice system are equipped to offer any mental health intervention beyond screening. (Rogers et al. 2001) Although mental health professionals believe that mental health intervention would be beneficial in reducing recidivism and improving youth functioning (Teplin et al. 2002), there is scant information in the literature concerning best practices for the treatment of this population (Wasserman et al. 2002, 2003).

Predictably, conduct and substance abuse disorders are seen frequently among youth in the juvenile justice system. However, a significant portion of youths have been diagnosed with affective disorders, including major depressive episodes (dysthymia and bipolar disorders) and anxiety disorders, such as panic and separation anxiety and posttraumatic stress (Teplin et al. 2002; Wasserman et al. 2002). Studies have also confirmed that youth in the juvenile justice system are likely to be living in families affected by chronic, pervasive psychosocial adversity, which is a significant contributor to their vulnerability. Multigenerational exposure to violence, parental substance abuse, physical and mental illness, neglect and neighborhood disintegration often define the familial and community environment in which these youths live and further dispose them toward behaviors leading to involvement in the juvenile justice system. (Teplin et al. 2002;

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National Center for Mental Health and Juvenile Justice 2005). The role played by environmental factors in shaping behavior is well established (Patterson 1975; Rutter and Quinton 1984) and predictive of the likelihood that treatment attempts will be unsuccessful if the youth's placement in detention mitigates against the engagement of significant family members and the probability of changes in the youth's environment.

In the past decade, individual states have attempted to respond to the challenges of meeting the complex needs of court involved youths by seeking to implement interventions designed to effect environmental as well as behavioral change. Systemically supported collaborations between mental health and juvenile justice providers have shown promise of reducing the risks that youths whose behaviors bring them to the attention of the court pose to themselves and to society at large. Interventions that address the complex, multisystemic needs of both youth and their families may be able to divert youths from the justice system and promote rehabilitation, recovery, and pro-social behavior. This chapter describes the Intensive In-Home Child and Adolescent Psychiatric Service (IICAPS), a home-based, mental health program for children and youth with serious emotional disturbance (SED), which may provide a paradigmatic model for the engagement of delinquent youths and their families in behavioral health treatment.

IICAPS

IICAPS was developed at the Yale Child Study Center in 1995 as a home-based, family focused, intensive intervention to prevent the hospitalization, institutionalization or out-of-home placement of children and adolescents with SED. Children and youth appropriate for referral to IICAPS are those at risk for psychiatric hospital-based treatment, unable to be discharged from such treatment settings secondary to the lack of community and home resources or unresponsive to outpatient, clinic-based services. Presenting diagnoses are likely to include affective, anxiety, attachment,

obsessive-compulsive, psychotic and stress-related disorders. In addition to evidencing prior involvement in the mental health system, children and adolescents appropriate for IICAPS are between the ages of 4 and 17 years of age and residing with a family committed to their long-term care and willing to participate actively in the intervention.

Over time, IICAPS has evolved into a structured, manualized, replicable model of care for children and youth with SED. In 1997, the IICAPS model received the support of the Department of Children and Families (DCF), the public agency responsible for the provision of child welfare, protective and mental health services in Connecticut. In the ensuing years, the program has become an officially recognized mental health intervention for children who meet the criteria for medical necessity, paid for by Medicaid and delivered at 20 provider sites within the state. A fee supported model of care, IICAPS integrates mental health treatment with an ecologically oriented and family-focused approach to meeting the needs of children and adolescents with SED and their families.

IICAPS was designed as a relationship-based, catalytic enhancement of outpatient services for children and youth who are not ready or able to access these services at the start of treatment. Often utilized as a bridge between hospital and home, IICAPS interventions are guided by attachment, object relations, problem-solving, cognitive behavioral and family systems theories. The IICAPS model derives from the central concepts and findings of developmental psychopathology which posit that developmental progress results from complex, continuous interactions that take place between the child's innate capacities and his or her environmental influences. This view presumes that first order changes in the child's environment can lead to positive changes in the child's developmental trajectory and reduce the stress and conflict that is likely to exist among family members (Woolston et al. 2007).

IICAPS services are provided by teams consisting of a master's level clinician (social worker, nurse, or psychologist) and a bachelor's level mental health counselor who work under the direct, weekly supervision of a child and adolescent

psychiatrist or senior clinician. Each team is responsible for delivering the interventions that constitute the program's core: assessment, evaluation, individual psychotherapy for children and adults, family therapy, couples counseling, parent guidance, behavioral management, crisis intervention, and medication management. Cumulatively, each team spends 5 h/week with an individual child and family for an average length of stay of 6 months. To assure continuity of care giving, teams are available 24 h/day, 7 days/week to intervene when family crises arise. A child psychiatrist assumes medical responsibility for the care of all patients and presides at weekly rounds at which cases are presented and discussed by the rounds group. Throughout the intervention, the treatment process remains focused on the main problem, a critical element of IICAPS. The main problem is identified by the child and family immediately following the start of treatment and is meant to describe the behavior that they believe is most likely to lead to the child's psychiatric hospitalization or institutionalization. Because the main problem must be recognized and agreed upon by the child and the family, it provides an accepted organizing structure for conceptualizing the problems to be addressed and helps to frame the treatment plan which guides the work of each IICAPS episode of care.

The overarching goal of all IICAPS treatment is the enhancement of the "quality of fit" between the child and the systems in which he is embedded. Understanding that human behavior is the result of the complex, ongoing interactions between the individual and the environment in which he lives, IICAPS interventions target the main problem as it is manifested in four influential domains: child, family, school, and community environment. Team members assist the child and family to identify and address the interplay of seemingly disparate factors which may reinforce the child's problematic behaviors in all domains.

A specific set of IICAPS tools structure and guide IICAPS interventions and simultaneously serve as fidelity mechanisms by which adherence to the IICAPS model is measured. Tools outline the specific tasks that are to be completed by the family at specific times during the intervention.

IICAPS tools function as promoters of on-going engagement, guides for clinical assessment, markers of progress throughout the intervention, aids for supervision, and the basis for quality assurance.

IICAPS incorporates five key principles each of which is central to the integrity of the model. Co-construction represents the IICAPS commitment to the development of a partnership between the child, family, and the team in the service of reaching mutual agreement on all aspects of treatment and placing the family in a position of leadership. Transparency promotes the establishment of an authentic, clearly understood dialogue between the team, the child and the family that resonates with their experiences and views. Practicality requires an on-going focus on the day to day world of the child and family and speaks to what is actually in their power to accomplish. The principle of immediacy focuses emphasis on timely implementation of the actions that the child, family and team identify as likely to lead to the successful resolution of the child's problems. Adherence to IICAPS tools functions as the fifth principle and provides assurance that the integrity of the model has been preserved faithfully.

IICAPS Treatment Phases

IICAPS interventions proceed through three treatment phases: engagement and assessment, work and action, and ending and wrap-up. Engagement and assessment, the initial phase of an IICAPS intervention, is marked by the completion of specific tools which have been designed to facilitate the development of a therapeutic alliance able to lead to behavioral change. The work begins with the creation of an initial treatment plan and the completion of a multigenerational Genogram, which is often the first time that family members are able to recognize some of the patterns and problems which have repeatedly characterized family functioning. Central to the initial treatment plan is the identification of the main problem, which is generated by the family using the principle of co-construction, a process in which the whole family must be actively

engaged. As stated above, the main problem is designed to capture the undesirable behaviors that the child and the family believe place the child at risk of psychiatric hospitalization or institutionalization and guide subsequent active intervention across all domains.

In order to help the family members understand themselves and their influence on the child's main problem more clearly, the team assists the child and family to identify their strengths and vulnerabilities in each of the four treatment domains: child, family, school, and community environment. Strengths are those attributes that the family believes can be used to ameliorate the main problem; vulnerabilities are attributes that serve as promoters of the problem. When the family is able to complete this activity, they are guided by the team to create a visual representation of the child's main problem and the factors which are perpetuating it using their own words. The document they produce is known as an EcoDomain Map. The EcoDomain Map highlights graphically the ways in which the interrelated characteristics of family members act upon the child's problematic behaviors. This information is then utilized by the family and the team to construct a final treatment plan that delineates measurable domain-specific goals and action steps. The completion of the treatment plan enables the child and family to formally enter the work and action phase, the heart of the intervention.

The work and action phase focuses the attention of the child, the family, and the team on meeting the goals and action steps that constitute the treatment plan. Treatment itself is action oriented and reality based. Problem-solving strategies are invoked extensively in the interest of helping families to improve their decision-making skills and learn to make appropriate choices for their children and themselves. The child's safety and well-being are of primary importance; barriers to improvements in the child's functioning are assessed regularly. The family's ability to respond appropriately to the child's individualized needs is evaluated in the context of his primary attachments and the need of all children for continuity of care-giving, a sense of belonging, and a feeling of well-being. Parents are helped to

address their own issues, as appropriate, in the service of ameliorating the main problem, and facilitating their child's recovery.

The severity of the main problem and progress on all treatment goals is rated regularly by the child and family on a 10-point rating scale. The family and the team engage in the rating process at the start of treatment, again approximately 6 weeks later when the creation of the treatment plan is expected to be completed, and at every subsequent 6-week period until the case is closed. The process of rating the child and family's treatment progress provides an important methodology for continuous feedback to all family members on how they are doing and how well they are able to use treatment. The on-going rating processes provide a useful strategy for obtaining data for supervision and quality assurance as well.

When the child is stabilized, 15 no longer at risk of hospitalization, and the child and family are satisfied with their progress toward achieving the goals they have established for themselves, the child, family, and IICAPS team are ready to move into the ending and wrap-up phase. During the ending and wrap-up phase, a plan is developed by the family with the team to identify the community-based services that the child and family are likely to need in the immediate future. As children appropriate for IICAPS are likely to have been high utilizers of mental health services prior to their referral to IICAPS, it is likely that they will continue to benefit from a relationship with a community mental health provider following discharge. In approximately 4 weeks which constitutes the duration of this Phase, the team works to strengthen the linkages between the child and family and the services they believe will help them to sustain the gains they have made during treatment. Team members often facilitate meetings between the family and continuing community-based providers to ensure coordination and collaboration among them, and help the family to connect with other vocational or recreational programs that can be supportive to the child or family over time.

IICAPS success at discharge is measured using data collected via a Web-based system that captures tool completion rates, main problem, and

goal attainment scores. A Service Utilization Questionnaire provides data on the mental health services used by the child 6 months prior to the IICAPS intervention and during the intervention itself. The Ohio Scales (Ogles et al. 2001) measure problem severity, functioning, satisfaction and hopefulness according to parent, child and worker report at intake and discharge. For those completing the treatment process, data have consistently revealed decreases in service utilization, decreases in problem severity and increases in functioning, hopefulness, and satisfaction across reporters. In 2006, these promising trends led the Connecticut Behavioral Health Partnership (BHP), an innovative, single managed care entity created by blending public mental health funding streams, to designate IICAPS as the first home-based mental health treatment model to qualify for an enriched Medicaid reimbursement rate. With funding assured for cases meeting authorization criteria, IICAPS began its transition from a DCF-contracted service to a replicable fee for service model for which there was considerable demand.

CSSD/IICAPS

In 2002, prior to the change in funding for Medicaid eligible children, the Court Support Services Division of the Superior Court of Connecticut (CSSD), which has responsibility for probationary services and detention facilities, selected IICAPS as a preferred treatment resource for youth in the juvenile justice system that met IICAPS referral criteria and were diagnosed with mental health disorders other than uncomplicated conduct or substance abuse disorders. The aim of CSSD/IICAPS was expanded beyond that of IICAPS to include a reduction in the use of detention facilities and a reduction in recidivism or rearrest. Initiated as a contractually funded pilot project with limited availability within the 12 Connecticut court jurisdictions, the collaboration between the judicial branch and IICAPS was expanded significantly in 2007 with the support of the CT.BHP. Currently, IICAPS is available to court involved youths in every court jurisdiction in the state.

CSSD's choice of IICAPS as its preferred in-home mental health intervention for youth with co-occurring delinquent and mental health issues was based upon the following analysis: (1) the IICAPS model is informed by theory and a commitment to continuous quality improvement based upon data collection and data feedback, (2) probation officers, who are court personnel, are viewed as essential elements of the treatment team, (3) the intervention is delivered within an ecological context and relies upon family, school, and community involvement, (4) services can be accessed easily by all family members because home is the treatment venue, (5) payment for Medicaid eligible youth is covered by a single entity, the CT.BHP, thereby eliminating conflicts between providers and multiple insurers and (6) existing data pointed to a reduction in the numbers of youth requiring psychiatric hospitalization as well as a reduction in the frequency of admission and lengths of stay for those for whom admission was needed.

CSSD has formally contracted for CSSD/IICAPS teams at 8 of the 20 IICAPS sites in the state that have been credentialed as IICAPS providers. However, Medicaid eligible youths can be referred to and served by any recognized IICAPS program. The Web-based data collection program developed for the network of IICAPS programs with the support of DCF collects comparable data for CSSD/IICAPS with the added support of that division. Both DCF and CSSD receive quarterly data reports and hold regular meetings that bring together the IICAPS developers, DCF and CSSD management and the providers who constitute the IICAPS Network.

Challenges Unique to CSSD/IICAPS

Tables 23.1 and 23.2 point to some of the unique challenges to IICAPS presented by youths with SED who are also involved in the juvenile justice system when compared with children with SED without court involvement. The data are drawn from 974 cases that closed at IICAPS and CSSD/IICAPS sites during fiscal year 2008/2009.

Table 23.1 Child and youth demographic characteristics, closed cases: fiscal year 2008/2009

Child and youth demographics	CSSD/IICAPS (<i>N</i> =183)	Non-CSSD (<i>N</i> =791)	χ^2 , d.f.	<i>p</i> -Value
<i>Sex</i>				
Male	112 (61.20%)	491 (62.07%)	0.05, 1	0.8269
Female	71 (38.80%)	300 (37.93%)		
<i>Age (in years)</i>				
<7	0 (0.00%)	88 (11.13%)	151.60, 4	<0.0001
7–9	0 (0.00%)	180 (22.76%)		
10–12	22 (12.02%)	216 (27.31%)		
13–15	131 (71.58%)	242 (30.59%)		
16+	30 (16.39%)	65 (8.22%)		
	(Mean = 14.32)	(Mean = 11.03)		
<i>Race</i>				
African American	34 (18.60%)	112 (14.18%)	6.01, 3	0.1110
Caucasian	75 (40.98%)	401 (50.76%)		
Hispanic/Latino	56 (30.60%)	209 (26.46%)		
Bi-racial/other	18 (9.84%)	68 (8.61%)		
Missing		1		

Table 23.2 Referral diagnoses, closed cases: fiscal years 2007/2008 and 2008/2009

Axial I diagnosis at referral	CSSD/IICAPS (<i>N</i> =183)	Non-CSSD (<i>N</i> =791)	χ^2 , d.f.	<i>p</i> -Value
Disruptive behavior disorders	64 (34.97%)	305 (38.56%)	14.11, 6	0.0284
Mood disorders	60 (32.79%)	189 (23.89%)		
Bipolar	18 (9.84%)	59 (7.46%)		
PTSD	11 (6.01%)	72 (9.10%)		
Psychotic	8 (4.37%)	30 (3.79%)		
Autistic spectrum	2 (1.09%)	43 (5.44%)		
Other	20 (10.93%)	93 (11.76%)		

The data presented in Table 23.1 highlight some of the differences between CSSD/IICAPS youth and children referred to IICAPS from other sources. While no gender differences are indicated, there are considerable differences in age between children referred to IICAPS and those referred by the juvenile justice system. Racial and ethnic group differences as presented in the table are not statistically significant, although a bivariate comparison of children who are Caucasian versus those of minority race/Hispanic indicate that CSSD/IICAPS youth have a statistically significant higher minority population than the children referred to IICAPS by other sources ($\chi^2=5.6825$, d.f.=1, $p=0.0171$). Further study is needed to determine if CSSD/IICAPS is reaching segments of the population in Connecticut that have not accessed mental health services in the past.

Table 23.2 displays the referral diagnoses of children referred by sources other than the court and the referral diagnoses of those youth referred to CSSD/IICAPS by the court. While the percent of children and youth with disruptive behaviors are relatively consistent across both groups, in this sample, youth in the CSSD/IICAPS group exhibit a higher percentage of mood disorders while children in the non-CSSD group show more PTSD and other nonspecified disorders.

The significant difference in the average age of CSSD/IICAPS referred youth (14.3 years) compared with non-CSSD involved children (11.0 years) underscores one of the more salient challenges for CSSD/IICAPS, the ability to authentically engage adolescents and their families in treatment. CSSD/IICAPS teams report increased resistance to engagement from youths

and their families, more willingness to blame the youth for his/her problem and less willingness on the part of the family to claim responsibility for family functioning. At the start of treatment, some parents of youth in the juvenile justice system express feelings of being “fed-up” with them, and little hope that their behaviors will change. When completing the tools parents may have difficulty identifying the youth’s strengths and often label his/her behaviors as “manipulative,” put forward for “malicious” purposes.

Many CSSD/IICAPS families have learned not to trust the systems that purport to help them. They have had infrequent exposure to qualified mental health services and are unsure of what to expect from the CSSD/IICAPS team or what is expected of them. Many youths and their parents find it difficult to believe that they will be respected by the team or that any information they provide will be shared with them. For example, teams have learned that most parents have never been shown the outcomes of the court ordered psychiatric and psychological evaluations in which they have participated. As a result, they are concerned that CSSD/IICAPS reports will contain inaccurate and damaging information about them that they will be unable to contest. Family members are wary of revealing personal information, even if in the process they might uncover some of the factors supporting the youth’s problem behaviors. To avoid the disapproval of the team and protect their own vulnerability, some youths minimize their verbal exchanges with the team at the start of treatment, which places stress on the engagement process and slows down the progress of the intervention.

It is not unusual to discover that providers who have worked with the youth and his/her family in other systems have developed negative views of them, which further complicates collaboration and in some instances leads to conflicts between providers. To prevent such conflicts and the splitting that is likely to occur as a result, active communication and collaboration between the IICAPS team and the youth’s probation officer is strongly encouraged by both the mental health and juvenile justice system.

Strategies to Engage CSSD/IICAPS Youths and Families

CSSD/IICAPS teams have found authenticity to be the gold standard for promoting active engagement with youth and their families in the treatment process. Team members have learned that “keeping it real” makes it possible for youth to trust them and develop confidence in the team’s ability to help them. Good listening skills, the ability to tolerate protracted silences, and acceptance of the youth and the family as they present themselves are essential elements that help establish the necessary therapeutic alliance. The team’s knowledge of the popular culture assists in the creation of a dialogue that youth can respect. Pretense, however, is quickly uncovered and distrusted. The use of “psycho-jargon” is also roundly discouraged. A useful engagement strategy helps the youth to view him/herself as an informed teacher able to impart specific knowledge or skills to team members. Enabling the youth to be seen as a competent and useful instructor is an important step in the process of increasing his/her motivation to engage in treatment and build hopefulness, an element essential to rehabilitation and recovery.

Role clarification prepares youths for what to expect in treatment. For many youths and their families, role definitions have become blurred as family structures have deteriorated. Youths have told CSSD/IICAPS teams that “they want their parents to be adults” or they “want to be cared about as a child.” These wishes can be made explicit and strategies for satisfying them can be addressed in the work of treatment. Youths may also be unclear about the roles that team members will play in their lives. Concise, clear statements of purpose by team members, such as “We are not here to be your friend, we are here to help you make better decisions,” go a long way toward setting the stage for the work ahead and redefining the roles and expectations of all family members.

Working with parents of adolescents, some of whom have lost confidence in their ability to be adequate parents and others who have lost the

motivation to take responsibility for parenting, requires patience and acceptance. Teams report that some CSSD/IICAPS families have few effective skills with which to control deviant behaviors and have had significant difficulties setting boundaries and limits. CSSD/IICAPS parents have reported feeling hurt, embarrassed, guilty, enraged, and inadequate as a result of their child's behaviors. Often teams can be helpful by addressing the influence of both developmental imperatives and life experiences on behaviors. CSSD/IICAPS treatment can assist families to gain control by reframing the prevailing view of the child and shedding light on the possible cognitive distortions that may have led to the problems and conflicts that threaten to disrupt the family and result in placement in detention or a psychiatric facility.

Case Illustration: Lamar

Lamar is a 16-year-old, African American male who lived with his mother, her female partner, his two female siblings and his maternal grandmother in an area affected by urban blight. He was referred to CSSD/IICAPS by his probation officer for the treatment of his depression and for improvement in his poor coping skills. Lamar had been placed on probation for bringing a knife to school which was discovered in his book bag following a fight. Although Lamar denied knowledge of the knife, he was expelled from school for a lengthy period and given 3 years on probation.

All children and youth referred to IICAPS are expected to have a past history of involvement in the mental health system. Lamar had attended out-patient treatment briefly following the death of his father but his involvement with mental health services prior to his referral to CSSD/IICAPS was minimal. He was known to use alcohol to reduce the troubling feelings of anxiety and fearfulness that often overcame him.

To begin the assessment and engagement phase, the IICAPS team, Lamar and his mother identified the main problem which might lead to his placement in detention as hanging with the wrong crowd. It was initially rated by Lamar and

his family as a five on a 10-point scale which ranged from a rarely occurring benign event to a seriously out-of-control behavioral occurrence that took place daily. The rating of 5 meant that he and his family felt that although Lamar's behaviors were not life-threatening they were fairly serious and occurred daily.

With the main problem in mind, the team assisted Lamar and his family to identify the strengths and vulnerabilities in each domain that might have some bearing on ameliorating or sustaining the main problem. Lamar's strengths were described as "being motivated," "a sense of humor," "wanting to handle his responsibilities," and "helping others." His vulnerabilities were believed by his family to be his "temper," "lack of control over what he says and does," "poor decision-making," and the ease with which he could be antagonized.

Goal setting and developing action steps are the primary tasks of the assessment and engagement phase leading to the creation of the treatment plan. The inventory of strengths and vulnerabilities is highly influential in this process. The family and the team utilized the strengths and vulnerabilities to fashion Lamar's treatment goals which were: (1) to work on his reactions when he becomes mad by finding alternative, constructive ways to release his anger, such as sports, video games, or taking long walks, and (2) to hold himself accountable and accept his responsibilities, continue to "do good," and refrain from being too harsh on himself. One of Lamar's action steps was to "shut up" and listen to others.

In the family domain, the family's strengths were identified as the times when Lamar's relationship with his mother "went well," "the fun" the family had spending time together and the fact that family members could "learn from each other." Family vulnerabilities were identified as the circumstances surrounding the death of Lamar's stepfather, Lamar's frequent arguments with his sisters, his outbursts at his mother, about whom he was ambivalent and distrustful, and his need to have a stronger voice within the family. These strengths and vulnerabilities informed the creation of the treatment goals and action steps in

the family domain which were: (1) to work on Lamar's relationship with his mother by helping him to express his feelings and opinions constructively and (2) to encourage Lamar to go to his mother for help when he experienced difficulty dealing with his sisters. He was also encouraged to talk with the team about the loss of his father when he was feeling "down or lost."

Lamar's school-based strengths were characterized by him as a "love of school," good attendance, "excellence" in his studies, and good relationships with his teachers. His vulnerabilities were "getting into fights," expulsion, and dislike of his current home-bound educational status. Lamar was able to establish goals in the school domain that captured his wish to succeed in the school environment. His goals were to work toward high school graduation, complete his homebound program, attend school daily, remain focused on his goals, and avoid getting into trouble going to and from school.

Lamar identified his strengths in the community environment domain as wanting a job, doing things "like going to the mall and eating out," a love for sports, theater and acting, probation, "which keeps him out of trouble" and his neighborhood. Lamar also considered probation as a vulnerability in the community environment domain and identified problems between neighborhoods and the fact that you "can't go outside or trouble will eventually find you" as additional vulnerabilities. Lamar's goals in this domain were to avoid violating his probation, to pay attention to his personal surroundings and possessions, and with the team, work on ways to avoid fighting, identify times and reasons why he drinks, and get a job, possibly as a volunteer in a theater program.

Course of Treatment

Once all of the assessment and engagement tools were completed, and a treatment plan developed and signed by the family, Lamar and his family entered the IICAPS work and action phase. Each week during this phase the team met with Lamar individually, with his mother individually and

with them together in a family session. Lamar engaged well in treatment and found working with the team helped him to cope with his uncomfortable feelings, particularly in regard to his stepfather's death, and improved his ability to make decisions for himself. Lamar's use of alcohol as a means of controlling his anxiety and reducing his fears decreased somewhat over the course of treatment but continued to be an area of concern. Initially, Lamar struggled with discussing his alcohol usage with the team, but gradually was able to discuss his behavior and gain insight into the difficult situations and painful experiences that triggered his drinking. His stepfather's death and his feelings of guilt because he was not able to prevent the death from occurring, appeared to be major factors leading to his anxious feelings and depressive episodes. Because they recognized that he was a harsh, self-deprecating judge of his own actions, the team worked with Lamar to help him accept his mistakes and stop seeing himself as a failure.

Lamar's decision-making skills improved to the point that he was able to state what he needed and wanted in "real time." When the intervention ended he stated that he wanted to continue to work on stabilizing his relationship with his mother. The team recognized that Lamar had a deep wish for his mother's approval, although he remained wary of trusting her with the full extent of his feelings. He was accepting of the limits established by his mother and understood that they were meant to help him.

School continued to pose problems for Lamar. His attendance suffered and his motivation decreased once he learned that he was too young for a vocational training program that he had been eager to enter. When his period of expulsion ended and he returned to high school, his anxiety escalated. He reported multiple somatic complaints and attempted to identify an alternative educational plan that would focus upon learning marketable skills rather than academic achievement. Lamar did obtain a short-term volunteer job while receiving CSSD/IICAPS treatment and continues to seek employment, although his age and the shortage of jobs in the current economic environment make his search difficult.

Ending and Wrap-Up

Planning for discharge was discussed with the family throughout the 30-week intervention, most specifically at seven times at which the treatment plan was rated in accordance with IICAPS policy that treatment plans be reviewed and rerated every 6 weeks from the time they are created. The rating of the main problem “hanging with the wrong crowd” improved from an initial rating of five (serious behavioral disturbance daily) at the start of treatment to a rating of nine (disruptive behavioral disturbance weekly) at discharge. Lamar’s success in reducing the severity of the main problem and completing the goals he had set for himself enabled him and his family to acknowledge that time had come for the ending and wrap-up phase.

At discharge the team felt that Lamar would benefit from a move to out-patient treatment and with the approval of the family made a referral to a neighborhood clinic. The team encouraged Lamar’s mother to continue to provide emotional support for him and recommended that the school system give consideration to placing Lamar in a small educational setting with access to a vocational skill building component. Most importantly, the CSSD/IICAPS team worked closely with Lamar’s probation officer who was a “good fit” for him. Although Lamar was deeply affected by the team’s leaving, he believed that his probation officer would be “someone he could continue to talk to.”

Outcome Measures

Outcome data on CSSD/IICAPS cases from fiscal year 2008/2009 ($N=183$) indicate significant positive changes in youths served by CSSD/IICAPS following intake to the program. Table 23.3 provides data on arrests of the identified youth during the 6 months prior to CSSD/IICAPS intake and during the CSSD/IICAPS

intervention. There are significantly fewer youth arrested following CSSD/IICAPS intake, and fewer arrests of youths with two or more arrests during the time period. A paired t -test of youth arrests during the 6 months prior to CSSD/IICAPS intake compared to those during the CSSD/IICAPS intervention reveals a statistically significant mean difference in arrests per child of 0.7 (s.d. = 1.6, t -value = 6.0, $p < 0.0001$).

Ohio Scales Data

The Ohio Scales are completed at intake to and discharge from CSSD/IICAPS. The parent report form is administered to the parent/primary caregiver for an identified child/youth between the ages of 5 and 18; likewise, the worker report form is filled out for an identified child/youth between 5 and 18 years of age. The youth report was developed for individuals 12 years of age and over. Problem severity domain scores represent increased severity with increasing scores, and functioning domain scores represent increased child functioning with increasing scores. In contrast, the hopefulness and satisfaction domain scores represent increased hopefulness and satisfaction, respectively, with *decreasing* scores.

Table 23.4a provides the paired t -test results for CSSD/IICAPS closed cases with Ohio domain scores at both intake and discharge for cases that completed treatment. Among cases that completed treatment there are statistically significant proportional decreases in the problem severity domain per parent, youth, and worker report from 11.6 to 14.4%, and statistically significant proportional increase in the functioning domain score per parent, youth, and worker report from 11.3 to 12.8%. Scores per parent report indicate a 14.5% increase in satisfaction with CSSD/IICAPS services over previous mental health services received, and scores per youth report indicate a 16.5% increase in satisfaction with CSSD/IICAPS services over previous mental health services received.

Table 23.3 Youth arrests at intake and discharge, closed cases: fiscal year 2008/2009 (N=183)

Arrests per identified youth	Six months prior to CSSD/IICAPS intake	During the CSSD/IICAPS Intervention ^a
None	82 (44.8%)	137 (75.3%)
1	61 (33.3%)	33 (18.1%)
2	22 (12.0%)	9 (5.0%)
3 or more ^b	18 (9.8%)	3 (1.7%)

^aMissing = 1

^bNumber of arrests per youth for 6 months prior to CSSD/IICAPS ranges from 0 to 10; number of arrests per youth during intervention ranges from 0 to 3

Table 23.4 Paired *t*-test results of Ohio domain scores at intake and discharge for CSSD/IICAPS cases that (a) completed treatment, fiscal year 2008/2009 (N=106) and (b) failed to complete treatment, fiscal year 2008/2009 (N=77)

Domains	Mean difference (s.d.)	<i>t</i> -Value	Pr> <i>t</i>	Proportional change from intake to discharge
(a)				
<i>Parent report^a</i>				
Problem severity	-14.4 (20.5)	-6.9	<0.0001	14.4% decrease in problem severity
Hopefulness	-3.4 (5.5)	-6.0	<0.0001	17.0% increase in hopefulness
Satisfaction	-2.9 (5.2)	-5.4	<0.0001	14.5% increase in satisfaction
Functioning	10.3 (20.0)	5.0	<0.0001	12.8% increase in functioning
<i>Youth report^b</i>				
Problem severity	-12.5 (17.0)	-6.7	<0.0001	12.5% decrease in problem severity
Hopefulness	-1.9 (4.5)	-3.9	0.0002	9.5% increase in hopefulness
Satisfaction	-3.3 (5.2)	-5.3	<0.0001	16.5% increase in satisfaction
Functioning	9.0 (14.5)	5.7	<0.0001	11.3% increase in functioning
<i>Worker report^c</i>				
Problem severity	-11.6 (17.4)	-6.8	<0.0001	11.6% decrease in problem severity
Functioning	9.7 (17.1)	5.8	<0.0001	12.1% increase in functioning
(b)				
<i>Parent report^d</i>				
Problem severity	-8.7 (16.6)	-3.2	0.0029	8.7% decrease in problem severity
Hopefulness	-0.5 (4.0)	-0.7	0.4991	NS
Satisfaction	-1.5 (4.2)	-2.1	0.0423	7.5% increase in satisfaction
Functioning	4.0 (11.7)	2.1	0.0449	5.0% increase in functioning
<i>Youth report^e</i>				
Problem severity	-8.5 (14.8)	-6.7	0.0139	8.5% decrease in problem severity
Hopefulness	-0.3 (4.4)	-0.3	0.7385	NS
Satisfaction	-0.7 (5.1)	-0.6	0.5339	NS
Functioning	-3.5 (21.3)	-0.8	0.4431	NS
<i>Worker report^f</i>				
Problem severity	-4.0 (12.4)	-2.6	0.0121	4.0% decrease in problem severity
Functioning	1.3 (12.1)	0.8	0.4085	NS

^aParent report missing ten observations for problem severity, hopefulness, and satisfaction domains and missing 11 observations for functioning domain

^bYouth report missing 20 observations for problem severity and functioning domains and 21 observations for hopefulness and satisfaction domains

^cWorker report missing three observations for problem severity and functioning domains

^dParent report missing 40 observations for problem severity and functioning domains and 42 observations for hopefulness and satisfaction domains

^eYouth report missing 51 observations for all domains

^fWorker report missing 14 observations for problem severity and functioning domains

Table 23.5 Paired *t*-test results of main problem scores: initial (or baseline, if no initial) score and discharge score, CSSD/IICAPS closed cases in fiscal year 2008/2009

	Mean difference (s.d.)	<i>t</i> -Value	Pr> <i>t</i>
Completed treatment (<i>N</i> =106) ^a	3.4 (3.2)	10.4	<0.0001
Did not complete treatment (<i>N</i> =77) ^b	0.8 (2.0)	1.9	0.0707

^aMissing 11 observations

^bMissing 54 observations

Table 23.4b provides the paired *t*-test results for CSSD/IICAPS closed cases with Ohio domain scores at both intake and discharge for cases that did not complete treatment. Most of these CSSD/IICAPS cases failed to complete treatment because the family made a decision to withdraw from services, the youth was revoked to a juvenile justice facility, or the youth was admitted to a psychiatric hospital or placed in a residential treatment facility without plans for immediate return home. Ohio domain scores for this group indicate smaller changes in scores, many too small to reach statistical significance. In addition, data integrity among these cases is considerably lower, with a large percentage of missing data for parent and youth report scores in particular.

Main Problem Data

Table 23.5 provides data for changes in main problem rating from the initial rating (or in absence of an initial rating, the baseline rating) to the discharge rating for closed CSSD/IICAPS cases during fiscal year 2008/2009. The mean difference in the main problem score from intake to discharge for cases that completed treatment indicates a 3.4 point change, indicating a considerable decrease in the severity of the main problem. Among cases that failed to complete treatment the mean difference of less than one point is not statistically significant, with a large percentage of missing data.

Service Utilization

Data obtained using the Service Utilization Questionnaire (SUQ) allow for evaluation of changes in treatment services utilization pre-and

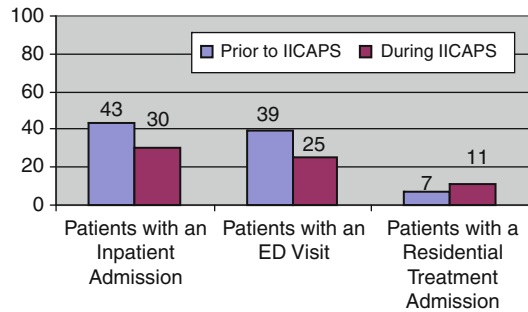


Fig. 23.1 Service utilization data: number of patients with a treatment event, fiscal year 2008/2009

post-CSSD/IICAPS intake. This instrument, developed by the Yale Child Study Center CSSD/IICAPS developers, is administered to families at intake for report of service utilization during the 6 months prior to CSSD/IICAPS intake, and administered again at discharge for report of service utilization during the intervention.

Figure 23.1 provides data on the number of youth experiencing a treatment event in the 6 months prior to CSSD/IICAPS intake and the number of youth experiencing a treatment event during the intervention. These data indicate that 43 of the 185 youth (23.5%) experienced a psychiatric inpatient stay during the 6 months prior to CSSD/IICAPS intake, but that only 30 youth (16.4%) experienced a psychiatric inpatient stay during the CSSD/IICAPS intervention, a 30% decrease in patients with a psychiatric inpatient admission. Likewise, there were 36% fewer patients with an emergency department (ED) visit following the CSSD/IICAPS intervention than for the 6 months prior to the intervention. The data for residential treatment admissions indicate that although far fewer youth are admitted to residential treatment than to psychiatric hospital prior or during CSSD/IICAPS, the number of patients experiencing a residential treatment admission

during the intervention is increased. It can be hypothesized that CSSD/IICAPS may be successfully identifying those youths whose psychopathology and environment combine to make it impossible for them to live safely at home, even with intensive intervention, and helping them to enter into a more appropriate treatment setting.

Summary

As a theory-driven, structured intervention for youths with SED involved in the juvenile justice system, CSSD/IICAPS shows promise as a replicable model for reducing psychiatric hospitalization, preventing rearrest and helping youth to access appropriate levels of treatment. When CSSD/IICAPS is delivered in accordance with its structure, and the tools, principles, and measures that are designed to guide treatment are utilized with fidelity to the model, symptom severity is decreased and functioning, satisfaction, and hopefulness are increased. As a result, youth are less likely to be placed in restrictive institutional placements such as hospitals or detention facilities and the rate of recidivism is decreased. Findings and case studies indicate that sociopathy is not the underlying reason why youth enter the juvenile justice system. It is far more likely that genetic endowment and environment interact in ways which overwhelm. The capacity of many youths to function in socially acceptable ways. Lacking sufficient limits, boundaries, and self-discipline to manage and control their impulses and emotions, they engage in behaviors that bring them to the attention of the court where constraints are imposed upon them. By bringing treatment into their homes, CSSD/IICAPS provides youths and families with the opportunity to safely unravel the complex web of experience, environment, ability, and expectation that ensnares them. The authentic engagement and commitment to working together that is highly prized by CSSD/IICAPS offers the real possibility that therapeutic gains made by the youth and his family will be internalized and lead to recovery and rehabilitation. However, even though the data are promising, much more needs

to be learned before it will be possible to testify to the effectiveness of the intervention.

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Introduction

Adolescents enter the juvenile justice system for a host of reasons, from myriad backgrounds, and with a range of offenses (e.g., Feldstein Ewing et al. 2011). Despite the heterogeneity of this population, one aspect that remains consistent is the prevalence of substance use and co-occurring disorders (e.g., Feldstein and Ginsburg 2006). Compared with their nonadjudicated peers, adolescents involved with the juvenile justice system demonstrate more profound rates of substance abuse, related consequences, and co-occurring disorders (Aarons et al. 2001; Abram et al. 2003; CDC 2006). This is problematic, as adolescents tend not to self-refer for treatment (Chung and Maisto 2006). Meaning, that despite high levels of substance use and the experience of substance-related problems, adolescents will generally not seek out resources to intervene and/or reduce their substance use. For many adolescents, substance

use by itself results in justice involvement. Once adolescents become involved in the justice system, due to staffing and financial restrictions, the standard of care for intervening with substance-related issues is often alcohol and drug education; an intervention approach that is unlikely to be effective with adolescents (Reyna and Farley 2006). And, unfortunately, studies have indicated that once justice-involved adolescents are released, they are unlikely to seek intervention—either for substance use (Lennings et al. 2006) or other mental health issues (Garland et al. 2005). While justice involvement may seem like it is only a punitive experience, for many youth being arrested may present an important and unique “teachable moment.” Adult studies have found that the arrest experience itself can be a unique and powerful motivator for change (Morgan et al. 2008; White et al. 2008). Coupled with a well-timed and empirically supported intervention, the arrest experience can provide a unique and highly salient opportunity for an adolescent to contemplate their experience, consider their future, and with the help of an interventionist, develop a prosocial plan for future behavior. Specifically, as recommended by Johnson et al. (2004), if justice programs have the resources and the opportunity, desperately needed empirically supported prevention and intervention programs can be integrated into (or immediately follow) current justice programs, providing youth with the unique and powerful occasion for the timely intervention of substance use and co-occurring disorders (dual diagnoses).

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In this chapter, we aim to elucidate what is meant by dual diagnosis and the prevalence of dual diagnoses in the US juvenile justice system. In addition, we will highlight factors that are important to consider in working with dually diagnosed youth, prevention and intervention approaches that have gained support for dually diagnosed youth (in general), and prevention and intervention programs that are promising for dually diagnosed youth in the juvenile justice system. Through this investigation, we hope to give providers an overview of relevant issues for consideration as well as potential, and promising, approaches for intervention.

The US Juvenile Justice System

In 2006, almost 1.7 million delinquency cases came forth before the juvenile courts (Puzzanchera and Sickmund 2008), meaning that a significant subset of the youth population were involved with the justice system. This is relevant, as youth involved in the justice system have been found to face greater difficulties making positive strides in academic achievement and income (e.g., Snyder and Sickmund 2006), two conditions that have been linked to poorer health outcomes (e.g., heart disease, diabetes, obesity, illness, death; US Department of Health and Human Services 2000). Moreover, justice-involved youth tend to be racial and ethnic minorities (Braithwaite et al. 2003; Feldstein Ewing et al. 2011). And, while historically, justice-involved youth have been disproportionately male, the rates of female justice involvement have been steadily on the rise (Snyder 2005). While many factors may contribute to the involvement of youth in the justice system, including societal factors, family factors, individual factors, and peer factors, the role of substance use is critical among them, as adolescent substance use has been strongly related to juvenile *and* criminal justice involvement (Slade et al. 2008; Stoolmiller and Blechman 2005).

What Is Meant by Dual Diagnosis?

Due to the frequent overlap of substance use and mental health issues, it is not surprising that frequently, these two behaviors co-occur. When an individual meets criteria for a substance use disorder (SUD; abuse or dependence), along with another co-occurring DSM-IV-TR disorder (American Psychiatric Association 2000), they receive what is termed a “dual diagnosis.” While the presence of an SUD is consistent across all those who qualify for this term, the second disorder can vary widely (from externalizing disorders like conduct disorder (CD), attention deficit hyperactivity disorder (ADHD), oppositional defiant disorder (ODD) to internalizing disorders like anxiety disorders and major depressive disorders, to all sorts of other types of disorders such as anorexia nervosa and bulimia nervosa). Among adolescents, the presence of a dual diagnosis tends to be the norm rather than the exception (Roberts and Corcoran 2005).

Co-occurrence with Externalizing Disorders

One of the predominant forms of adolescent dual diagnosis includes SUDs with co-occurring externalizing disorders. In terms of prevalence, among mainstream and general adolescent treatment samples, many studies have found that adolescents with externalizing disorders have high rates of co-occurring SUDs (58–80%; Arias et al. 2008; Chan et al. 2008). In addition, externalizing behaviors have been found to be a major predictor of future alcohol use (Kramer et al. 2008). For many adolescents, the onset of externalizing disorders precedes substance use (Chassin et al. 2002). Moreover, adolescents with comorbid SUDs have been found to initiate substance use earlier (Lillehoj et al. 2005) and have a poorer prognosis in terms of family functioning, academic achievement, and delinquent behaviors (Realmuto et al. 2009).

Co-occurrence with Internalizing Disorders

In terms of co-occurrence with internalizing disorders in general adolescent and treatment populations, Subramaniam et al. (2009) found that 15–50% of adolescents with SUDs also have a co-occurring depressive disorder. This relationship tends to be bidirectional; adolescents with depression may have greater substance use, and those who use substances may have greater (and/or more frequent) episodes of depression (Rao et al. 2009). Unfortunately, for adolescents with internalizing disorders, co-occurring substance use may negatively influence their general functioning. Studies have suggested that adolescents with co-occurring SUDs evidence greater problems in school and greater problems in general functioning than adolescents with isolated internalizing disorders (Wilens et al. 1997).

Co-occurrence with Multiple Types of Behavior Disorders

Together, these studies support that most often adolescents do not struggle with an externalizing or internalizing disorder in isolation. Rather, most adolescents must also contend with a comorbid SUD. In general, adolescents with externalizing disorders are at slightly higher risk than those with internalizing disorders for having a co-occurring SUD (Kandel et al. 1999; Wise et al. 2001). Notably, it is possible for adolescents to have both an externalizing disorder *and* an internalizing disorder, in addition to an SUD. As the number and complexity of behavior disorders increase, there is some indication that adolescents may become less responsive to traditional interventions (Rowe et al. 2004).

Considerations in Working with Dually Diagnosed Youth

The concept of dual diagnoses has become progressively more important as those working with

adolescents observe the interplay between substance use and clinically significant impairments (Hryb et al. 2007). Many different influences, extending from genetic, to prenatal, to environmental, may result in the initiation of externalizing, internalizing, and SUDs. Specifically, “multifinality” describes the phenomenon in which adolescents can experience the same early stressor (such as early childhood trauma) but respond quite differently, resulting in a wide variation of behavioral outcomes (e.g., Marsh et al. 2003). This ultimately means that can be quite difficult for clinicians and providers to pinpoint exactly why a certain type (or types) of behavioral issue may have emerged.

Ultimately, for treatment to be effective, the point of origin may be less salient than the symptoms that an adolescent is experiencing. To that end, it is quite important to consider that the experience of internalizing and/or externalizing disorders can be quite distressing. Adolescents are likely to experience feelings of sadness and confusion about why the symptoms are present, particularly if they are persistent. Adolescents may also feel angry and frustrated about not being able to increase their positive affect, and/or ability to concentrate or focus. Particularly when an adolescent is a part of a substance-using peer network, these feelings of sadness, frustration, and disappointment, may result in an adolescent shifting from nonuse to using. Similarly, adolescents who are not in substance-using networks may actually go out and seek substance-using peers in order to determine whether substance use can help reduce their negative affect or frustration. On the other hand, adolescents who casually experiment with substance use find that they subsequently function a little less effectively; namely, they fail to meet basic obligations or responsibilities (e.g., performing uncharacteristically poorly in classes, failing to meet home obligations such as watching a sibling, doing the dishes, or taking out the garbage). These oversights may cause them (or those around them) to feel sad, disappointed, angry, or frustrated with themselves leading them to decide to use substances more in order to feel better, resulting in

an unfortunate and self-propagating cycle, with the internalizing/externalizing symptoms perpetuating the substance use, and vice versa.

This is important, as dual diagnoses can significantly interfere with adolescents' daily functioning. Studies have indicated that adolescents with dual diagnoses have more difficulties with academic performance and peer and parent relationships (Lewinsohn et al. 1995). Moreover, they have been found to engage in more dangerous activities, such as violence and risky sexual behavior (Baskin-Sommers and Sommers 2006). This is quite relevant as high-risk behaviors such as substance use and risky sexual behavior may contribute to the contraction of fatal illnesses for high-risk youth, such as the development of HIV (Rowe et al. 2008).

Dual Diagnoses Within the Juvenile Justice System

One of the considerations in thinking about dual diagnoses for justice-involved youth is to gain a sense of their prevalence. Specifically, understanding how many youth are likely to meet criteria for dual diagnoses can help guide program decisions in terms of prevention and intervention efforts.

Recent efforts by Teplin, Abram, and colleagues have highlighted the prevalence of mental health disorders in a large sample of youth housed in Cook County (Chicago, IL) detention (Abram et al. 2003; McClelland et al. 2004; Teplin et al. 2005). Specifically, their work highlighted that approximately 20% of detained adolescents met criteria for at least one diagnostic disorder. More frequently (57% of females and 46% of males) adolescents met criteria for two disorders, generally falling into the categories of internalizing disorders, externalizing disorders, and SUDs. Specifically, 58% of their justice-involved sample evidenced some form of internalizing disorder, 46% of males, an externalizing disorder, and 44–50% at least one SUD (Abram et al. 2003; McClelland et al. 2004). Similarly, in a sample of youth involved in the California pub-

lic systems of care, Aarons et al. (2001) found that 62% of their justice-involved sample met lifetime criteria for SUDs. Notably, as with recent studies of justice-involved youth (Feldstein Ewing et al. 2011) marijuana and alcohol consistently emerged as the most frequently used substances across these studies.

Overlapping with the findings of other studies of justice-involved youth (e.g., Bender et al. 2007), Abram and colleagues found that approximately 30% of their sample evidenced dual diagnosis (Abram et al. 2003). Notably, in the juvenile justice system, dual diagnoses rates have been found to be higher among female and White youth, as compared with male and racial/ethnic minority youth (Abram et al. 2003). When examining the age of onset for each component of the dual diagnosis (internalizing/externalizing disorder and SUDs), Abram et al. (2003) found that most often (for 54% of males and 63% of females), the two types of disorders emerged during the same year. As found among mainstream adolescent populations, for a subsample of the youth (approximately 25–27%), the internalizing/externalizing disorders emerged at least 1 year prior to the SUDs. For an even smaller contingent (10–21% of youth), the SUD emerged at least one year prior to the internalizing/externalizing disorder.

Special Considerations in Working with Dual Diagnosis Youth

As noted, various experiences (prenatal environment, genetic influences, family, peer, and social influences) can alter an adolescent's behavior. Moreover, these factors also frequently interact to shape and transform how an adolescent interprets and subsequently behaves in the world. For example, some genetic studies have indicated that while an adolescent may have a certain genetic predisposition that might make them more likely to be taller than their peers, influences from the environment, such as the availability of adequate food, nutrition, or other basic medical needs, determines if that potential is reached.

Similarly, a child born with a predisposition for neurobehavioral disinhibition, a type of temperament/personality style that has more difficulty suppressing impulsive behaviors (Tarter et al. 2003), might be more likely to evidence the unstable aspects of that temperament if his or her environment lacks important protective factors, such as a safe, stable, positive, substance-free, and consistent home environment.

Due to disparities on how adolescents may get “referred” to the justice system (e.g., Aarons et al. 2004), it is important to consider some of the risk factors that might facilitate or exacerbate the presence of current mental health issues, including substance use, internalizing, and/or externalizing disorders.

Mediators and moderators can help us to conceptualize risk and protective factors with dually diagnosed youth (Beauchaine and Mead 2006; Kraemer et al. 2002). Specifically, moderators are factors that uniquely influence developmental trajectories and generally are not changed over time. For example, gender moderates the effectiveness of some alcohol treatments (i.e., the treatment is more useful for one gender over another; e.g., Lynch et al. 2010). Additionally, ethnicity or SES could moderate the course of substance use over development. For instance, Hispanic youth have higher rates of alcohol consumption than Caucasian youth (CDC 2006). In addition, while adolescents on average show increasing rates of substance use over development, closer examination shows that people with specific genetic predispositions (i.e., protective factors) have less severe use while individuals with other genetic predispositions (i.e., vulnerability factors) have more use (Meyers and Dick 2010; Prescott and Kendler 1999).

In contrast, mediators help explain how and why relations between variables exist over time. These are typically factors that can be changed through treatment. Risk factors that mediate outcomes can be, but are not necessarily, causal (Kraemer et al. 2002), and are often potential targets for intervention. For example, age of first drink and later alcohol use could be mediated by family conflict or life stress. A treatment that targets reductions in family conflict, and

contributes to subsequent reductions in alcohol use, demonstrates that family conflict mediated the relation between age of first drink and later alcohol use. However, the same factor could be considered both a mediator and a moderator in different contexts. For example, ethnic pride has been related to strong reductions in alcohol consumption among Hispanic youth (Gil et al. 2004), making this a protective factor and a potential moderator. If targeted in treatment, ethnic pride could become a mediator of alcohol outcomes. A list of other potentially salient moderators and mediators follows.

Family Factors

Conflict: The family can be an important protective factor. However, parents overwhelmed by stress may parent less effectively (Patterson 2002). And adolescents in households characterized by conflict, including family disruption, marital conflict, and low family harmony, are at higher risk for substance use (Hayatbakhsh et al. 2006; Richardson et al. 2002; Zhou et al. 2006), as well as externalizing disorders, internalizing disorders, trauma, and distress (Diamond et al. 2006). Notably, while SES may overlap with many family stressors, family income has inconsistently predicted adolescents’ substance use behaviors (Copeland et al. 2009; Hayatbakhsh et al. 2006; Radin et al. 2006).

Parental substance use: In addition, having a parent who has or is currently using substances significantly increases the odds that an adolescent will engage in substance use (Ehlers et al. 2006; Hoffer et al. 1999; Kilpatrick et al. 2003; Richardson et al. 2002). Beyond influencing the environment for the developing child, a parent with substance use problems may pass on genetic predispositions that contribute to difficulties with substance use (Meyers and Dick 2010; Prescott and Kendler 1999). Of adolescents entering SUD treatment, 11–23% had a parent or family members at home using substances at least weekly (Tims et al. 2002). Moreover, adolescents with frequently substance-using family members

evidenced more severe SUD diagnoses, with higher rates of cannabis dependence (14%) versus abuse (8%) (Tims et al. 2002). In contrast, some studies have found that parental alcohol use correlated with adolescents' higher acceleration of alcohol use, but not cannabis use (Kilpatrick et al. 2003; King et al. 2006). Unsurprisingly, having fewer substance-using family members has been related to better substance use outcomes (Chung and Maisto 2006).

Parental monitoring: Across cultural groups, high levels of parental monitoring and focus on the family (*familialism*), have been found to be protective, preventing adolescents' involvement in substance use and risky sexual behavior (DiClemente et al. 2001, 2003; Ramirez et al. 2004; van der Vorst et al. 2006). Adolescents' perceptions of the parental monitoring were integral, as adolescents who believed that their parents were high monitors had lower levels of SUDs (Shillington et al. 2005). In contrast, in terms of substance use progressions, the impact of parental monitoring is less clear. Some studies have not found any connection between maternal monitoring and adolescent substance use progressions (King et al. 2006). Yet, another way to investigate parent/adolescent connection and monitoring is through family dinners meals. Across adolescents, substance use, deviant peer involvement, and risk behaviors have been inversely related to family dinner frequency (Barrera et al. 2001; Fulkerson et al. 2006). Notably, rates of family dinners were significantly higher for younger, versus older adolescents (Fulkerson et al. 2006), indicating a progression of decreased parental monitoring that likely overlays with increases in peer contact.

Peer Factors

While family factors are important throughout a child's development, peers play an increasingly influential role during adolescence. In some ways, separating out the influences of parents and peers may be difficult, as the influence of peers and parents may be reciprocal. Specifically, low parental monitoring likely increases the likelihood of involvement with deviant peers, and high

parental monitoring reduces a child's likelihood of becoming involved with deviant peers (Barrera et al. 2001).

Adolescents with SUDs tend to have peer groups filled with friends who use alcohol to intoxication (64%) and abuse others substances (89%) (Tims et al. 2002). Moreover, most adolescents use substances in the context of substance-using friends (Chung and Maisto 2006; Hoffer et al. 1999; Richardson et al. 2002). In addition, number of SUD symptoms has been found to be correlated with adolescents' number of substance-using friends (Wu et al. 2004). After SUD treatment, adolescents have been found to have more serious relapses when with pretreatment friends, older peers, and social environments characterized by heavier substance use (Chung and Maisto 2006). Adolescents with social groups with low levels of peer substance use have better substance use outcomes (Chung and Maisto 2006).

Who may be most at risk for the influence of deviant peers? A study of adolescents revealed that younger adolescents and those with feelings of low self-worth were the most likely to be swayed by the substance use behaviors of deviant peers (Radin et al. 2006). In addition, externalizing behaviors may be another risk factor; adolescents with externalizing disorders reported having more involvement with deviant peers than adolescents with no psychiatric comorbidity (Diamond et al. 2006). Moreover, in terms of internalizing disorders, greater peer delinquency is associated with higher levels of depressive symptoms (Tandon and Solomon 2009). Another factor that appears to influence adolescents' risk is their perception of peer use. Outweighing the influence of internalizing and externalizing symptoms, adolescents who believed that their peers were engaging in high levels of substance use were more likely to increase their substance use (D'Amico et al. 2001).

Academic Factors

Recent research has underscored the importance of school success as a salient developmental task (Roisman et al. 2004). In addition, academic achievement, frequently a proxy for intelligence,

has been suggested to be a strong protective factor against adolescent risk behavior, particularly among disadvantaged youth (Masten 2001). This is important, as youth living in areas of high neighborhood disorder, including those with high rates of public substance use and violence, have been found to have compromised cognitive development and academic achievement (Fauth et al. 2007). However, the relationship between academic achievement and alcohol-related risk behavior is complex, and likely, bidirectional (Masten et al. 2008). Specifically, Masten et al. (2008) posit that while academic achievement may protect adolescents from alcohol abuse, substance use may interrupt critical developmental steps in school functioning.

Summary: Risk or Protective?

While it is easy to list all of the influences that might place an adolescent at risk, the alternative to each of these situations is likely to be protective for a dually diagnosed adolescent involved with the juvenile justice system. This is critical, as identifying areas of risk for these adolescents also provides potential avenues for intervention. For example, while an adolescent who has no contact with his or her family may be at a greater liability for continued substance use, greater experience of internalizing/externalizing symptoms, and future justice involvement, an adolescent who has a caring, involved, and invested family member (or family unit) is likely to have a better prognosis. Thus, identifying who might be a protective family member for an adolescent can be a solid and promising route for intervention. Similarly, helping an adolescent negotiate the transition from an antisocial to a prosocial peer environment can have sustained benefits for an adolescent. And, finally, particularly for justice-involved adolescents who may have had numerous interruptions in their academic development, helping them see that they still have potential, and facilitating the attainment of their high school diploma or GED can have long-standing positive effects.

Prevention and Intervention Approaches for Dual Diagnosis Youth

In this section, we will highlight existing prevention and intervention approaches for dually diagnosed youth. While researchers and policy makers are invested in trying to determine routes to divert youth from the justice system (Sullivan et al. 2007), significantly less is known about how to intervene with high risk justice-involved youth. Thus, it is worthwhile to know what prevention and intervention approaches have gained empirical support with dual diagnosis youth in general.

Prevention Approaches

Prevention approaches aim to prevent psychosocial problems by strengthening coping mechanisms and ameliorating early-onset symptoms (Liddle and Hogue 2000). It is clearly best to try to disrupt or divert the emergence of an issue than to try to resolve it once it is present. Thus, while this is an area of much interest, research in this area has been more controversial, for many common educational approaches have not gained empirical support (McNeill and Amos 2007; Skager 2007). However, one avenue that may be of assistance is improved assessment. Accuracy in assessment provides a venue for early detection of the emergence of substance use, internalizing, and externalizing disorders. An example of a current measure that has been designed to provide a broad assessment for adolescents is the Corcoran's Oregon Youth Mental Health Referral Checklist (OMHRC; Roberts and Corcoran 2005). It is inclusive in that it acquires information from the parents, mental health professionals and the youth in the context of critical needs (Roberts and Corcoran 2005). Beyond assessment, training of peer refusal skills has also been a popular strategy for trying to bolster adolescents' ability to not fall into the substance use patterns of their peers (Segal and Stewart 1996).

Intervention Approaches

Significantly more support has been garnered in the area of intervention. Recent research has categorized treatments for dually diagnosed adolescents into three categories: serial, parallel, and integrated (Bender et al. 2006). Serial treatments include separate and sequential treatment for substance dependence and for the co-occurring externalizing/internalizing disorder. Parallel treatments involve having both types of disorders (substance use and co-occurring condition) treated at the same time but by different professionals. Integrated treatments involve a combined approach designed to treat both aspects of the dual diagnosis at once. When choosing a treatment approach, it is important to be attentive to the fact that none of the current treatments are panaceas; rather, due to the factors elucidated above (parent, peer, academic factors), the best (most effective) treatment for one adolescent may not work as well for another. However, seven interventions have gained promise with dually diagnosed youth (Bender et al. 2006). They include Multisystemic Therapy (MST), Interactional Group Therapy (IGT), Family Behavior Therapy (FBT), Individual Cognitive Problem Solving (ICPS), Cognitive Behavior Therapy (CBT), Ecologically Based Family Therapy (EBFT) and Seeking Safety Therapy (SST). For a more detailed discussion of these therapeutic approaches for treating delinquent youth, please see Chaps. 19 and 21.

1. *MST*, designed by Henggeler and colleagues, this intervention aims to address the social forces acting on an individual such as family, work, and peers by enhancing an adolescents' interpersonal skills (Brown et al. 2001; Henggeler and Borduin 1990). Specifically, in this approach, therapists work with an adolescent in their natural relationships and environments to identify problem behaviors, and to tailor intervention strategies. For this intervention to be successful, it is important to develop strong working relationships with the key people in an adolescent's life, including family members, guidance counselors, and teachers. This treatment has gained substantive

empirical support in its ability to catalyze change in adolescents' social, family, and academic settings. A recent meta-analysis showed that MST helps youth to improve their social competence ($d=0.28$), reduce their associations with deviant peers ($d=0.31$), and reduce behavior problems ($d=0.34$); families to ameliorate stress ($d=1.01$) and conflict ($d=0.62$); and parents to improve their effectiveness ($d=0.94$) and monitoring ($d=0.60$) (Curtis et al. 2004). Additionally MST facilitates reductions in adolescents' number of criminal arrests ($d=0.55$), number of substance-related crimes ($d=0.29$), the severity of their arrests ($d=1.01$), days of incarceration ($d=0.55$), and self-reported drug use ($d=0.64$) (Curtis et al. 2004). Moreover, unlike many interventions that only have a single target, MST has evidenced the ability to yield generalized changes in the adolescent's skills. Although the therapy has gained great support, and is relatively time limited (4–6 months), it requires a substantial investment of staff involvement for the scheduling and delivery of services.

2. *IGT*, developed by Yalom and Yalom (1990), focuses on improving adolescents' interactions with others, including parents, peers, and teachers. IGT is a group intervention, comprising adolescents with varying levels of interpersonal skills. This set-up is deliberately created, as youth who can positively interact with peers' with varying interpersonal levels, have a better likelihood of generalizing their interaction abilities outside of the group. A component of this treatment often focuses on openness and the ability to express emotions, a skill which can be difficult for adolescents. Some of the salient therapeutic factors in this approach include universality (sharing experiences and removing isolation), altruism, instillation of hope, imparting information, developing socializing techniques, imitating behavior, cohesiveness (acceptance and validation), and self-understanding (Butler and Fuhriman 1983). While this intervention has gained preliminary empirical support for reducing substance use ($d=0.54$) and psychological symptoms ($d=0.93$), it has been found

- to result in equivalent outcomes with CBT (Kaminer et al. 1998).
3. *FBT*, developed by Nathan Azrin, uses a behavioral model to think about how an adolescent's family may inadvertently (or purposefully) reinforce an adolescent's behavior. Thus, for this therapy to be effective, all family members must attend the intervention. Subsequently, interventionists must work hard to engage the adolescent along with his or her family, and frequently do things such as making several reminder phone calls, and providing food and beverages during sessions to improve attendance (Austin et al. 2005; Donohue and Azrin 2001). Once the sessions begin, components of the treatment may include contingency management, training in communication skills around adolescent substance use, problem solving, and efforts to improve family interactions (Austin et al. 2005). Youth show reductions in the number of days that they use drugs following 6 months of FBT ($d=0.49$) and 6 months after treatment has ended ($d=0.50$) (Azrin et al. 2001).
 4. *ICPS*, developed by Spivack and Shure, is designed to improve adolescents' cognitive skills, with the goal of strengthening their decision-making abilities (Spivack and Shure 1985). This intervention approach posits that decision making is a complicated process that requires effectively navigating several steps. Thus, in ICPS, adolescents are taught how to focus attention, define the problem, think through multiple steps, and choosing the best option (Azrin et al. 2001). In this approach, it is believed that if adolescents do not work through each of these steps, they have a lower likelihood of ultimately making the best choice. Researchers have documented that 6 months of treatment contributes to reductions in the number of days of drug use ($d=0.47$), which are maintained at 6 months posttreatment ($d=0.58$) (Azrin et al. 2001).
 5. *CBT*, is a long-standing intervention approach, founded on the notion that behavioral issues stem from the contributions of thoughts, feelings, and subsequent behavioral choices. Thus, the goal of this intervention approach is to identify and resolve adolescents' maladaptive thoughts and feelings (Kaminer et al. 2002). CBT focused on adolescent substance use, externalizing and internalizing disorders, begins with the identification of key issues (e.g., substance use, depression, conduct disorder), and related symptoms. The second step focuses on reducing maladaptive thoughts and feelings through various approaches including self-monitoring, problem solving, and communication skills. Behavior is consistently monitored throughout the intervention approach to ensure that the reduction of maladaptive thoughts and feelings results in the reduction of negative symptoms (e.g., substance use, depression, conduct disorder). Once the behaviors are improved, the intervention focuses on relapse prevention and long-term management skills. This intervention approach has gained substantial support (Kaminer et al. 2002). For example, Kaminer et al. (1998) showed that CBT facilitated reductions in substance use ($d=1.33$) and psychological symptoms ($d=0.57$) among dually diagnosed adolescents.
 6. *EBFT* is based on the Homebuilders family preservation model (Slesnick and Prestopnik 2005), which is designed to provide intense treatment during times of crisis. EBFT is similar to MST in that it includes multiple levels of interactions in the adolescents' life, but is unique in that it posits that people are most open to change during a time of crisis. This therapy has gained preliminary efficacy in catalyzing and maintaining adolescent risk behaviors (Slesnick and Prestopnik 2005). Specifically, this treatment has shown immediate reductions in drug use ($d=0.55$), delinquency ($d=0.34$), internalizing symptoms ($d=0.35$), and family conflict ($d=0.47$), and improvements in parental care ($d=0.43$), which are maintained (d 's=0.76, 0.65, 0.73, 0.78, 0.88, respectively) at 12-month outcomes (Slesnick and Prestopnik 2005).
 7. *SST* is designed to treat SUDs in the context of posttraumatic stress disorder (PTSD) through

targeting the improvement of coping skills (Najavits 2002). This is highly salient for high-risk and justice-involved adolescents who may have had exposure to traumatic life events. In this approach, there are five guiding principles including (1) establishing safety as the first priority, (2) integrating treatment for PTSD and SUD, (3) focusing on ideals, (4) including cognitive, behavioral, interpersonal, and case management content, and (5) being explicit about therapist processes. Among adolescents, Navavits et al. (2006) demonstrated that SST facilitated reductions in drug use ($d=0.37-1.12$ across measures), major depressive symptoms ($d=0.40$), and trauma symptoms ($d=0.50-0.71$ across measures).

Promising Prevention and Intervention Approaches for Dual Diagnosis Youth in the Juvenile Justice System

Although research has pointed toward effective treatments for dually diagnosed youth, special considerations need to be made when applying these interventions to justice-involved youth. Due to the practical limitations of having youth residing in detention and/or other justice facilities, some of the aforementioned interventions may be more difficult to implement. Although empirically supported treatments, like the ones described above, have been shown to be most effective, implementation of new treatment systems could require a great deal of change in administration practices (Henggeler 2003). According to Williams (2009), there is a significant gap between the needs of the dually diagnosed youth and the resources and treatment available through current juvenile justice programs. These individuals have complex treatment needs and severity of symptoms, and there are practical time constraints and issues with retention.

Significantly fewer studies have been conducted with justice populations. One research group, Henggeler and colleagues, have explicitly focused on determining interventions that might

work with high-risk and justice-involved youth. In one of their earlier studies (1999), they found that justice-involved youth receiving MST significantly reduced their substance use in comparison with youth receiving the standard of care. While this highlights the promise of MST, one important consideration is feasibility. Often, justice environments do not have the time and resources to develop and engage all of the participants necessary in the successful implementation of MST. Thus, short individualized therapy and/or small group therapy may also be helpful with the juvenile justice population.

One other approach that has showed promise with substance-using, high-risk, and justice-involved youth is motivational interviewing (MI; Miller and Rollnick 2002). MI is ideal for many justice settings, as it may be a solid fit with the practical constraints of juvenile justice settings (Feldstein and Ginsburg 2006). Specifically, it is a brief intervention (1–2 sessions), which focuses on eliciting an adolescent's reasons, motivation, and strategies for change from within the adolescent. MI has been successfully conducted in both high-risk adolescent groups and individual contexts (Martin and Copeland 2008; Schmiede et al. 2009).

Conclusions

As suggested in recent work (Belenko and Logan 2003; Lennings et al. 2006), involvement in the juvenile justice system is a critical and salient time for intervention. While existing justice-based interventions may not be able to fully address the needs of high-risk, dually diagnosed youth, we believe that there are several promising prevention and intervention approaches that could be easily and successfully integrated into juvenile justice settings. Providing timely and empirically supported intervention approaches is critical for dually diagnosed justice-involved youth, who are more likely to struggle with more severe and persistent substance use, internalizing disorders, and externalizing symptoms than their non-adjudicated peers.

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Jeanne Bereiter and David Mullen

Introduction

Approximately 20% of all rapes (Brown et al. 1984; Morenz and Becker 1995; Pastore and Maguire 2007) and 30–50% of child molestations are carried out by youth under 18 years of age (Brown et al. 1984; Ryan 1999). Studies of adolescent sex offenders have shown that the majority commit their first sexual offense before 15 years of age and not infrequently before 12 years of age (Barbaree and Marshall 2006; Rubenstein et al. 1993). The younger the age of the victim, the more likely they are to have been victimized by a juvenile rather than an adult (Snyder and Sickmund 2006). Preadolescents are being referred for sexual behavior problems in increasing numbers (Araji 1997). Many juvenile sex offenders (JSOs) have more than one victim, and clearly, if they begin a pattern of sexual offending as juveniles and continue sexual offending as adults, JSOs can have many victims. Studies show that JSOs average eight to nine sexual offenses, with four to seven victims (Shaw et al. 1993). Reported crime statistics underestimate the extent of juvenile sexual offenses (Moore et al. 2004).

Most sex crimes are not reported, and the juvenile justice system has historically not prosecuted juveniles for their sexual offenses in the same way that adult offenders are prosecuted (Melton 1989). Instead of legal sanctions, juveniles have tended in the past to be referred for treatment, or their sexual offenses were dismissed as just sex play, or experimentation (Koss et al. 2006). This has changed since the juvenile “crime wave” of the 1980s and 1990s. There is now a competing movement to treat JSOs like adult sex offenders, including placing them on sexual predators registries, and trying them as adults for their crimes.

Sexual offenses by juveniles are a significant problem, and it is imperative that we understand the reasons why juveniles offend sexually, and what types of treatment are effective. Additionally, JSOs are in the midst of the normal adolescent developmental task of consolidating their identity, including their sexual identity. Adolescents’ sexual interests are not yet fixed in most cases, and treatment may help to set JSOs on a more normal developmental trajectory, and end their sexual offending. Although recidivism figures for JSOs vary widely from one study to another, most agree that recidivism figures for JSOs are lower than those for adults, and most JSOs who complete sexual offending treatment do not reoffend (Alexander 1999).

Studies have been done on JSOs since the early 1940s (Doshay 1943), but it has only been over that past 20 years that sex crimes committed by juveniles have been seen as a serious problem

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rather than an issue of experimentation. There have been an increasing number of studies, but there are still no validated actuarial instruments for evaluating recidivism risk for JSOs, and it is still unclear which treatments are best for which JSOs. Much more research is needed.

Most sexual assault is committed by males rather than females. This is hypothesized to be due to the different socialization of males and females, although there is evidence that females may be less likely to be prosecuted for sexual offenses, and/or less likely to be referred to juvenile treatment centers (Bourke and Donohue 1996). Studies of JSOs provide conflicting evidence in many areas, but research has consistently shown that JSOs are a heterogeneous population (Hunter et al. 2003). This makes generalizability of results difficult, and highlights some of the difficulties of research with this population. In the past, research from adults was simply extrapolated to use with adolescents. Only in the past several decades has more specific research on JSOs emerged as more than just isolated studies.

Terminology

Terminology related to JSOs can be confusing, and different terminology can be used by different disciplines to refer to the same population.

JSO is a legal term. It refers to someone who is convicted of a sexual offense and is considered by the court as old enough to be held criminally responsible but not old enough for full adult criminal sanctions (Barbaree and Marshall 2006). Sexual *acting out*, a term derived originally from psychoanalytic literature refers to maladaptive sexual behavior that may or may not involve a violation of the law. For example, sexual promiscuity in youth above the age of consent, which varies by state, would constitute maladaptive/problematic sexual behavior but would not constitute sexual offending. *Juvenile* usually refers to persons between 12 or 13 and 18 years old. The term *adolescent* refers to the same age range as *juvenile* but carries the additional connotation of persons who are pubertal to postpubertal rather than prepubertal.

Persons who commit sexual offenses at the age of 12 or younger are usually referred to as *sexually reactive* children, or children with sexual behavior problems. Both of these terms reflect the legal and developmental beliefs that there are differences between children who sexually offend, and adolescents who sexually offend. The Association for the Treatment of Sexual Abusers (ATSA) task force defines children with sexual behavior problems as “children 12 and younger who initiate behaviors involving sexual body parts...that are developmentally inappropriate or potentially harmful to themselves or others” (Chaffin et al. 2008, p. 200).

Sexual abuse is defined as sexual activity against a nonconsenting person. Children are considered nonconsenting even if they assent, due to their age and lack of ability to comprehend the full implications of sexual activity. Sexual abuse can occur between same age juveniles if there is coercion or a power imbalance. With juveniles, sexual offending needs to be distinguished from normal sexual behavior. The exact definition of normal versus deviant sexual behavior can be difficult to state with children and adolescents, due to developmental issues and the relative lack of research on normal sexual development compared to the wealth of research on abnormal sexual development (Barbaree and Marshall 2006). Behavior can be considered deviant if it occurs an earlier age than is usual. The age of consent for sexual activity varies by state and country. In the USA, the age of consent ranges between 14 and 18.

Some JSOs show signs of *paraphilia*, which is a mental disorder involving deviant sexual behavior. One form of paraphilia is pedophilia, or sexual interest in children. Pedophilia is much more difficult to determine with juveniles than with adults, and becomes essentially meaningless when considering sexual behavior by children. According to the World Health Organization, adolescents age 16 and older can qualify if they have a sexual preference for prepubescent children who are at least 5 years younger (ICD-10 2007). Paraphilic interest occurs in perhaps 50% of JSOs (Seto and Lalumiere 2006).

Many authorities consider it important to reserve the term juvenile sex offender for adolescents who commit sexual assault, not to deviant sexual behavior per se if it does not involve sexual assault or to consensual adolescent sexual behavior.

Typology

The JSO population is heterogeneous (Becker et al. 1993; Bourke and Donohue 1996). Adolescent males comprise approximately 90% of JSOs (Davis and Leitenberg 1987). The rest comprises children 12 and under and adolescent females. Children with sexual behavior problems and female JSOs are discussed separately below. Unless otherwise specified, the rest of this chapter refers to male JSOs.

There are many developmental pathways that can lead to sexual offending, and several researchers have attempted to classify JSOs utilizing various combinations of offender and victim characteristics. Offender characteristics have included personality traits, associated psychopathology, histories of nonsexual offending, and use of violence. Victim characteristics typically focus on relationship to the offender, age (especially pubertal status), and gender. Many typologies include various theoretical relationships between these variables and putative etiologies of offending. The underlying assumption is that a reliable and empirically supported scheme can facilitate efforts to prevent and treat juvenile sexual offending as well as reduce eventual offending in adults.

Utilizing California Psychological Inventory scores from 112 adolescent male sexual offenders, Worling (2001) identified four subgroups: antisocial/impulsive, unusual/isolated, overcontrolled/reserved, and confident/aggressive. While subgroup membership was found to be unrelated to factors such as victim age, victim gender, and offender's history of sexual victimization, individuals in the two groups deemed more pathological—the antisocial/impulsive and unusual/isolated were most likely to be charged with a

subsequent violent offense (sexual or nonsexual) or nonviolent offense.

A second classification scheme (Hunter 2006) divides JSOs into three subgroups: lifestyle delinquent youth; adolescent onset, nonparaphilic youth with sexual offending toward prepubescent females; and early adolescent onset, paraphilic juveniles with deviant sexual interests, and sexual offending targeting prepubescent males and females.

Oxnam and Vess (2006) identified three subgroups among 25 male adolescents in a community-based treatment sample using the results of the Million Adolescent Clinical Inventory: an antisocial group, a socially withdrawn inadequate group, and a group that displayed relatively few traits of clinical significance. Support was found for the hypothesis that adolescent sexual offenders often display personality profiles similar to nonsexual offenders and is similar to other typologies in identifying both an antisocial subtype as well as a subtype characterized by social inadequacy.

There is mixed evidence as to whether JSOs progress to adult sexual offending. Becker and Kaplan (1988) propose that JSOs follow one of three pathways. One group comes to a “dead end” and stops offending. A second group develops deviant sexual interests and continues these as adults. A third group follows a delinquency pathway. Some authorities estimate that 10% of JSOs progress to become adult pedophiles, some become adult criminals who commit nonsexual crimes, and in 50% there is no recidivism. The sexual offending was part of adolescent delinquency, and adolescents grow out of it, some with, and some without treatment (Moffitt 1993).

Etiology of Juvenile Sex Offending

Research supports the fact that a higher proportion of JSOs were abused as children than in the general population, with some groups, such as adolescents who offend against children, or against males, reporting higher rates of sexual abuse in their own histories. Sexual behavior

occurs earlier than the norm for approximately 25% of maltreated children (Barbaree and Langton 2006). In children with sexual behavior problems, sexual victimization was their most common victimization, followed by physical abuse.

The family environment of JSOs is often characterized by instability, and few resources. According to Barbaree and Langton (2006), there are five common features in the family environments of adolescent sex offenders: lack of financial resources, poor attachment between parent and child, early exposure to sexual material and behavior, a high risk environment for sexual and physical abuse, and a lack of resources to cope with the abuse after it has happened, such as parental rejection or detachment.

There is debate as to whether childhood sexual abuse causes sexual offending. The evidence is strongest for a subgroup of JSOs: male adolescents who offend against younger boys. There are problems with data collection, since sex offenders both over and under report their own abuse. JSOs who begin offending at a younger age are more likely to have a history of childhood sexual abuse than those who begin offending at a later age (Seto and Lalumiere 2006).

The relationship between conduct disorder or antisocial tendencies and sexual offending has also been examined. Those JSOs who offend against child victims are less likely to have conduct disorder. Interestingly, a meta-analysis comparing JSOs and juvenile offenders showed that JSOs are more likely to have a history of fire setting, especially those who offend against younger children. However, overall, JSOs show less conduct problems than juvenile offenders (Seto and Lalumiere 2006).

Anomalous neurodevelopment, of whatever etiology, increases a male's risk of problematic sexual behavior, especially pedophilia. In adult studies, lower IQ is associated with offenses against younger victims (Blanchard et al. 2006). JSOs commonly have psychiatric comorbidities, such as conduct disorder, attention deficit hyperactivity disorder, mood disorders, learning disorders, and substance abuse (Galli et al. 1999). These comorbidities are more common in female than in male JSOs (Mathews et al. 1997).

Psychiatric and substance use disorders may involve decreases in impulse control, which can lead to sexual offending.

Healthy sexual development necessitates an ability to manage intimacy, as well as a stable sexual identity. These are normal tasks of adolescence, with which some teens have difficulty, and which can lead to sexual acting out (Marshall et al. 1993). Disorders of attachment and problems with the developmental tasks of adolescence can lead to coercive sexual actions. These studies are mostly retrospective, though some cross-sectional studies have been done (Smallbone 2006).

Types of Offenses

JSOs can also be classified by the age of their victims—prepubertal versus pubertal, same age, younger, or adults, whether they offend against males, females, or both, whether the assaults are penetrative versus nonpenetrative, known victims versus strangers, incest versus nonrelatives, number of victims, and use of verbal threats, homicidal threats, physical force or use of a weapon (AACAP 1999).

Victim Characteristics

The majority of victims of male JSOs are females, but adolescent sex offenders commit most of the sexual assaults against boys (Hunter and Becker 1999). The majority of the victims of JSO are younger than 9 years old (Ryan et al. 1996) and when males are victimized, they tend to be younger than the females who are victimized.

Evaluation of the Juvenile Sex Offender

The purpose of the clinical assessment is to assess amenability to treatment, required level of care, individualized treatment goals, and risk of recidivism (Center for Sex Offender Management 2006). Holistic assessments should include evaluation of

risk for substance abuse, self-injurious behavior, nonsexual offending, and victimization. Ideally, the clinical evaluation of the JSO will be done after adjudication and prior to sentencing, to allow the evaluation to be maximally helpful in guiding sentencing and treatment, and to minimize the juvenile's tendency to deny, minimize, or lie about the offense(s.)

Assessments should involve objective instruments whenever possible, and should be used to formulate individualized treatment plans. As with other juvenile offender populations, higher risk juveniles generally need more intensive treatment than lower risk populations. Repeated assessments are necessary at least annually, to evaluate the efficacy of treatment and need for continued treatment. Due to the rapid developmental changes in juveniles, the types of treatment from which they may benefit needs to be reevaluated periodically.

It is helpful to have the JSO fill out a questionnaire about sexual offenses, sexual history, and other personal history, rather than obtaining the information verbally. It is important to obtain all the facts and details about the JSO's offenses, and not to accept vague generalities.

Reporting laws and limits of confidentiality should be discussed. The JSO and guardian should sign an informed consent form, including (if applicable) consent for "off label" medication use, or controversial assessment techniques, such as phallometric assessment. Information should be obtained from multiple sources, including medical and psychological reports, offense reports, victim statements, child protective services reports, and probation reports. It is not adequate to rely solely on the juvenile's self-report, due to the risk of the juvenile lying or minimizing.

A structured clinical interview should be done with the juvenile, containing all the normal elements of a complete psychiatric evaluation, such as developmental and psychosocial history, medical history, past psychiatric history, substance abuse history, and school history with special attention to learning problems. The clinical interview should include specific assessment of the juvenile's sexual history, and is often referred to as a *psychosexual clinical evaluation, or sex offender-specific evaluation.*

Important points in the sexual history include the juvenile's knowledge and understanding of normal sexual activities, exposure to sexually explicit behavior or material, sexual development, and sexual experiences, including abuse history. It is important to determine the established pattern of sexual offenses, such as victim profile, internal and external triggers for the acts, use of threats, aggression, and preferred pattern of sexual activity. A history of physical abuse, emotional abuse, or neglect should be obtained. The interviewer should ask about other disruptive behavior, illegal activities, aggression, and arrests not related to sexual offenses. Cognitive performance should be assessed, looking in particular at IQ and learning disabilities. A medical examination should be obtained, to rule out neurological conditions, as well as other common pediatric medical problems.

Psychological testing is an important part of the assessment of the JSO, though no self-report instruments or clinician administered instruments have been validated for use with JSOs. Commonly used instruments include The Adolescent Sexual Interest Card Sort, The Adolescent Cognitions Scale, the Multiphasic Sex Inventory, SCL-90, Psychopathy Checklist-Revised, MMPI (Bourke and Donohue 1996). The Adolescent Sexual Behavior Inventory (ASBI; Friedrich et al. 2004) obtains information about inappropriate sexual behaviors from both the adolescent and caregiver. More general psychological testing assessing mental health symptoms, delinquency, and substance use, are also important. Projective testing methods such as Rorschach, and human figure drawings have been utilized in the assessment of child sexual abuse but their use has become increasing controversial with some studies supporting their use and others concluding that they are ineffective. West (1998) in a meta-analysis of 12 studies involving sexual abuse and four involving physical abuse concluded that projective testing was effective in discriminating sexually abused children from nonsexually abused children. However, Garb et al. (2000) reanalyzed the same studies and concluded that West's original analysis was flawed and concluded that projective testing could not be recommended in the detection of child sexual abuse.

Actuarial assessments of recidivism risk have been studied and validated in adult males, and are now the standard of care, but have not been adequately studied in adolescent males to recommend their use in the JSO population, especially for long-term risk assessment (Worling and Langstrom 2006). However, the instruments can help identify relevant risk factors. The Juvenile Sex Offender Assessment Protocol-II (JSOAP-II, Righthand et al. 2005) is designed to assess the short-term recidivism risk of juvenile males between 12 and 18 years of age. The items explore static, or historical factors such as sexual preoccupation, antisocial behavior, as well as dynamic, or changeable, factors such as clinical intervention and community stability. It has not yet been cross-validated. The ERASOR (Worling 2004) is a relatively short-term (less than 1 year) risk assessment tool for juvenile males between the ages of 12 and 18, which also includes static factors but focuses more on dynamic risk factors to aid in the development of treatment targets.

More controversial assessment instruments in JSOs include penile plethysmography, and polygraph testing. Penile plethysmography, which measures blood flow to the penis, is used in adult male sex offenders to measure their level of sexual arousal to specific sexual content. It has generally not been advised with JSOs, due to lack of demonstrated efficacy and ethical concerns, including exposing minors to deviant sexual material. Recently, however, a study showed that posttreatment inability to suppress deviant arousal—sexual arousal to paraphilic or unusual objects and themes, such as male and female children—was associated with sexual offense recidivism over 6-year follow-up (Clift et al. 2009). If used, these assessment instruments are generally reserved for older adolescents, in select cases.

In evaluating the JSO, it is important to take developmental factors into account while doing a holistic assessment that includes both a general multifaceted evaluation and specific psychosexual evaluation of the youth. Although actuarial assessment instruments can be helpful, the evaluator must keep in mind that none of them have been adequately validated for predicting recidivism risk in juvenile males, much less for use in younger males or in females.

Best Practices for Assessment

1. Have the juvenile fill out a questionnaire giving the details of sexual offenses, sexual history, and other pertinent history.
2. Obtain and review all available reports: forensic, police, child protective services, victim impact statements, offender's version of the offense(s), psychological testing, psychoeducational testing.
3. Perform a detailed clinical interview of the juvenile, including past medical history, psychiatric history, substance abuse, abuse history, social, educational, family, and legal history.
4. Perform a psychosexual clinical evaluation.
5. Interview collateral contacts (parents or guardians, other family members, child protection professionals, school officials).
6. Perform a medical examination to screen for neurological and other problems.
7. Perform psychological testing to evaluate personality functioning, cognitive functioning, learning disabilities, and psychiatric comorbidity.
8. Consider actuarial risk assessment using instruments such as JSOAP-II or ERASOR.
9. Consider use of penile plethysmography or polygraph testing in certain older adolescents.
10. Evaluate stability of juvenile's placement, and the ability of family/placement to provide supervision and safeguards for any potential victims in the home.
11. Evaluate community support systems, and individual/family and community protective factors.

Treatment

Treatment for JSOs ranges from highly structured residential programs to unstructured outpatient programs. The need to protect the community must be balanced against the obligation to treat the juvenile in the least restrictive setting. There are more community-based programs than residentially based programs, in an approximate ratio of 2:1 (Burton et al. 2006). Indications for residential treatment of JSOs include safety issues

for both the juvenile and his potential victims. See Bourke and Donohue (1996) for a review.

Historically, treatment programs for juveniles were modeled upon similar programs for adult males, and made use of cognitive behavioral therapy–relapse prevention (CBT-RP)-based treatment. Treatment programs grew out of the need for such programs, rather than from an evidence base as to what does or doesn't work with JSOs. Most programs still use this model (McGrath et al. 2003).

Given the similarities in risk factors for juvenile sex offending and juvenile nonsexual offending, and the recognition that JSOs' problems are multidimensional, there has been a shift in focus in the past few years from predominantly cognitive behavioral-focused treatment, to family and community-based treatments, such as multisystemic therapy (MST) and functional family therapy (FFT) (Letourneau et al. 2009; Letourneau and Borduin 2008).

Both CBT-RP and MST have been modified to target the needs of the JSO population, and treatment programs, whether community based or residential, often combine elements of both CBT and MST (Borduin and Schaeffer 2002; Walker et al. 2004).

Cognitive Behavioral Therapy–Relapse Prevention

CBT-RP has been the gold standard for sex offender treatment (Gray and Prithers 1993). It may be provided in either residential or community-based programs. Treatment involves the offender accepting responsibility for his behavior, dealing with denial, identifying the cycle of sex offending behavior, exploring his own history of abuse and family factors related to the sexual offending, developing empathy with the victim(s), correcting cognitive distortions, decreasing deviant arousal, identifying and managing risk factors, improving social skills and developing prosocial skills, improving sexual knowledge, treating substance abuse, and relapse prevention (Center for Sex Offender Management 2006; Ertl and McNamara 1997).

Cognitive restructuring is a technique used to correct the cognitive distortions that feed sex offending, such as the thought that the victim wants or deserves the abuse. The offender is taught to verbalize the thoughts and beliefs that justify the sexual offending. These statements are then challenged by the therapist and group members (Ertl and McNamara 1997).

To decrease deviant sexual arousal, CBT-RP may include aversive techniques, such as covert sensitization, imaginal desensitization, and satiation training. Although aversive behavioral treatment has been shown to be helpful with adult male offenders, there is not the same evidence base for its use in youths, and there are concerns regarding the ethics of using some of its techniques with minors (Bourke and Donohue 1996). As discussed above, not all JSOs have pedophilia, and sexual preferences among juveniles are not fixed. Therefore, the application of adult treatment models designed to uncover and treat deviant sexual arousal may not be appropriate or necessary for most juveniles (Hunter 1999; Johnson 2005; Rich 2003).

In covert sensitization, the sexual offender visualizes a scene of sexually deviant behavior, followed by visualization of a "repulsive" image with the aim of pairing the two images in order to decrease the offender's interest in the deviant behavior. This technique has not been well studied in juveniles (Bourke and Donohue 1996). It relies on offender's self-report, and thus will not work in an unmotivated individual or in one with cognitive limitations.

In imaginal desensitization, the offender performs progressive muscle relaxation, then, in a state of relaxation, imagines beginning a behavior which has led to deviant sexual behavior in the past. The offender imagines the scene just up to the point where he would engage in the deviant behavior, and at that point the imagined scene is modified so that he does not engage in the deviant behavior, and remains calm and relaxed (McConaghy et al. 1989). Research indicates that this technique is more effective than covert desensitization.

Satiation training involves having the offender masturbate to ejaculation while thinking about or

viewing appropriate sex scenarios, then continuing to masturbate post ejaculation while thinking about or viewing deviant sexual scenarios. Satiation training is believed to work by producing boredom and “physical depletion” to the deviant material. This technique is usually modified with juveniles to involve either verbal satiation or laboratory satiation due to ethical concerns about showing juveniles deviant sexual material (Bourke and Donohue 1996; Hunter and Goodwin 1992).

CBT-RP may also include victim impact groups, in an effort to help the JSO develop empathy for his victims, and anger management training to help decrease the offender’s physical aggression and coercive behavior.

JSOs are often ill informed about sex, or can have serious misinformation (Prendergast 2004). Most treatment programs for JSOs include sex education, although there is little to no research on the efficacy of this intervention with JSOs (Bourke and Donohue 1996).

Multisystemic Therapy

MST is an evidence-based treatment developed for youths with conduct disorder and its associated problems (Boxer and Goldstein *in press*; Guerra and Williams *in press*). Several studies of MST with JSOs indicate that it is also effective for this population (Borduin and Schaeffer 2002; Henggeler et al. 1998, 2009).

MST addresses the multiple determinants of antisocial behavior, and is provided in a community setting (Letourneau and Borduin 2008). Common goals include improving family functioning, improving parenting skills, increasing the adolescent’s association with prosocial peers, improving the adolescent’s social and problem solving skills, improving school performance, and increasing community supports. The MST team works with the adolescent, parents, and other systems involved in the adolescent’s life, such as the school. The treatment team usually consists of a therapist, case manager, and behavior management specialist. The work is intensive, occurring multiple times per week. Therapists carry a low case load, and someone on the team

is available to the family 24 h a day, 7 days a week. Examples of community-based multisystemic treatments include Wraparound Milwaukee and the Norfolk Juvenile Sex Offender Program (Hunter et al. 2004).

Advantages of MST in the treatment of JSOs include its ability to address the multiple factors leading to juvenile sex offending, its community rather than residential treatment focus, which makes it a lower cost option than residential treatment, and its emerging evidence base. Henggeler et al. (2009) found that MST decreased both antisocial behavior and deviant sexual interest among the youth studied, and that these outcomes were mediated by increased caregiver follow-through on discipline and oversight of the youth’s choice of friends.

Functional Family Therapy

FFT has been advocated as a treatment for JSOs by researchers such as Carr (1995, 2000). It has been shown to decrease recidivism in this population, and is a relatively short-term, cost-effective treatment (Mendel 2000). The coercive style of family interaction found in many families of JSOs is thought to lead to the cognitive bias that social interactions lead to conflict. FFT helps to externalize the problem rather than seeing it as something intrinsically wrong with the adolescent, and works with the entire family unit, not just the adolescent (Boxer and Goldstein *in press*; Guerra and Williams *in press*). Like MST, FFT helps families to provide more appropriate structure, limits, and supports to youth, and targets the family factors such as lack of supervision that can lead to youth sex offending.

Individual Versus Group Therapy

Therapy groups can be helpful in minimizing the offender’s ability to manipulate the therapist, and can often be provided at a lower cost than individual therapy. Therapy groups should contain a mix of youths with different offending histories. A mixed group increases the ability of group

members to confront each other's denial and rationalization and decreases the chance that group members will increase each other's behavior problems (Dishion and Dodge 2005). Adolescence is developmentally a time when peers and their opinions are crucially important, often more important than the opinions of adults. This can make group therapy especially powerful, but can also make it intimidating.

With adolescents, individual therapy may need to occur prior to beginning group therapy, due to adolescents' fear of appearing in a bad light in front of their peers, and their developmental need to become stronger as individuals prior to being able to work productively in a group. This is in contrast to sex offender programs for adults, which often begin with group therapy work (Prendergast 2004).

Additional Forms of Therapy

McMackin et al. (2002) describe the importance for relapse prevention of identifying potential traumatic triggers in JSOs that have histories of victimization in order to avoid the progression of an offense cycle that begins with feelings of intense fear, helplessness and horror and ends with a deviant act. The JSO sample in this study identified a very high rate of trauma exposure at 95% with sexual abuse occurring in all but 12.5% of the sample.

JSOs, like other juveniles, benefit from family involvement in their therapy and treatment of the family itself. For children with sexual behavior problems, family therapy may be the primary therapy modality. For adolescents, it is a critical component of treatment, and should be provided no matter which theoretical model of treatment is being used.

Social skills training is a usual component of both CBT and MST-based treatments. Juveniles are influenced by their peer group, and adolescents can become involved in sex offending as part of gang initiation, or as a way to ingratiate themselves with peers. In these cases, the treatment to increase an adolescent's sense of autonomy and self-efficacy can be effective.

Substance abuse treatment and educational/vocational rehabilitation are important foci of treatment for most JSOs. Due to the high comorbidity of psychiatric problems in JSOs, psychiatric evaluation and treatment, including pharmacotherapy of comorbid psychiatric disorders, should be a part of treatment. In a study by McGrath et al. (2003) it was noted that not all treatment programs provided psychiatric consultation.

Pharmacologic Treatment

There are four main types of pharmacological treatment used for sex offenders: selective serotonin reuptake inhibitors (SSRIs), naltrexone, anti-androgens, and gonadotropin-releasing hormone agonists (GnRH). Pharmacological treatment is designed to reduce the sex offender's sex drive through either hormonal or nonhormonal means. None of the treatments are FDA approved for this use. Additional concerns about their use in juveniles include the potential adverse effects of anti-androgens on the pubertal growth and physical development of adolescents. Concerns have also been voiced about their efficacy in adult sex offenders (Prendergast 2004). If compulsive sexual behavior has already been established, sex offenders can buy testosterone on the black market to counteract the effects of the treatment, or can engage in nonpenetrative abuse.

SSRIs and naltrexone are both nonhormonal treatments. SSRIs are used in the treatment of depression and anxiety disorder, and have long been known to interfere with sexual functioning in some patients. This side effect has suggested their use in the treatment of sex offenders. Studies in adult male sex offenders have been generally positive, with reductions in paraphilic urges, masturbation, and hypersexual behavior (Kreuger and Kaplan 2002). Naltrexone is an opioid antagonist that affects the central nervous system's processing of pleasure and pain. One study in JSOs (Ryback 2004) showed benefits.

Hormonal treatments interfere with testosterone, thereby lowering the sex offender's sex drive. These medications include finasteride, cyproterone acetate, and medroxyprogesterone

acetate. GNRH agonists include leuprolide, goserelin, and triptorelin. Their use is at times called *chemical castration* since they effectively eliminate testosterone production. They carry the risk of significant side effects, including hot flashes, impotence, weight gain, and bone demineralization. To a lesser extent, these side effects are also found with the other hormonal treatments.

Pharmacological treatment for JSOs is generally reserved for older adolescent males with paraphilias, and significant risk of recidivism. Treatment generally begins with an SSRI, and only in rare cases would hormonal treatments be used, and then in low doses. GNRH analogs would virtually never be used in JSOs.

Caveats About Treatment of Juvenile Sex Offenders

JSOs, like their adult counterparts, can lie, deny, and minimize, so it is relatively easy for inexperienced therapists and other personnel working with sex offenders to be “conned” into thinking the sex offender has been rehabilitated when he has not, or that he has told the truth about all his offenses when he has not. It is suggested that clinicians obtain a second opinion regarding treatment, risk of recidivism, and recommendations to the legal system, due to this risk.

In working with JSOs, as with all adolescents, and all adjudicated persons, the limits of confidentiality should be clearly specified. Clinicians treating JSOs will be required to communicate with professionals from various agencies, and clients should be made aware of this explicitly. Sex offenders will be unlikely to be truthful if the information they give to their treatment provider(s) can be used against them legally. It is difficult for them to be truthful about their actions at the best of times, due to factors ranging from shame to fear of legal actions against them for other offenses for which they have not been caught.

Specialized training of therapists and other providers is generally recommended due to the specialized nature of the treatment provided, the high stakes if treatment is unsuccessful, and the increased risk of professional burn out or vicarious

traumatization due to listening to stories of abusive/deviant sexual behaviors, and the attitudes of the JSO that go along with this. However, the effectiveness of MST suggests that specialized training in sex offender treatment may not always be required (Chaffin 2008).

The cold, confrontational style used by some therapists in the past with sex offenders has been shown to be less effective than a warm, supportive style (Marshall 2005). A punitive approach by therapists and other treatment personnel cannot be recommended. There is evidence that it can increase shame, inhibit healthy sexual development, and replicate earlier experiences of abuse (Marshall 2005). Instead, current concepts of engagement with sex offenders emphasize the development of partnership between therapist and juvenile, and the need for the juvenile to identify his or her own reasons for change (Jenkins 2006).

Psychodynamic psychotherapy and supportive therapy have not been proven to be effective (Bourke and Donohue 1996; Prendergast 2004).

The primary goal of treatment for JSOs is to decrease criminal behavior, not to cure or fix a mental health problem, though this can also be a goal. Treatment is usually involuntary therefore motivation can be low, or the motivation can be to avoid or minimize legal sanctions, or to get out of treatment, rather than to solve the problem with sexual behavior.

Aftercare

Aftercare is essential, no matter whether the sex offender treatment was residential or community based. It is more common for residential programs to assist in aftercare than for community-based programs to do so, and the Safer Society 2002 nationwide survey reviewed by McGrath et al. (2003) indicated that 100% of residential programs provided aftercare, compared to 73% of community-based programs. Relapse prevention is a main goal of aftercare. Assistance in finding appropriate housing, schooling, or jobs, or other case management needs are also important.

Juveniles will usually return to live with their families. Attention needs to be paid to whether their victim(s) live in the home, and the family's ability to support the juvenile in not reoffending. This highlights the need for family therapy while the offender is in treatment, and aftercare including the family in ongoing family therapy or monitoring is advisable in most cases.

Recidivism

JSOs have a low rate of recidivism, especially with treatment. Recidivism for JSOs who have received treatment for sexual reoffending is approximately 10% (Davis and Leitenberg 1987; Fortune and Lambie 2006) though estimated figures vary widely, from 0 to 40% (Worling and Langstrom 2006). Recidivism rates for children are even lower, as discussed above, and children who receive treatment have recidivism rates for sexual behavior problems similar to those of children with attention deficit hyperactivity disorder. Recidivism rates for untreated youth are higher. Worling and Curwen (2000), looking at youth who received cognitive behavioral treatment with family interventions versus untreated youth found that the untreated youth recidivated at a rate of 18%, whereas the recidivism rate for treated youth was only 5%. In addition, they found that treated youth had lower recidivism rates for sexual offenses, nonsexual violent offenses, and nonsexual and nonviolent offenses.

Recidivism rates for nonsexual offending are higher, between 8 and 52%. In those JSOs with antisocial behavior, there can be extremely high rates of nonsexual reoffending. Hagan et al. (1994) found 8% sexually reoffended, whereas 46% nonsexually reoffended in 2 years. Risk factors for reoffending nonsexually differ from those for reoffending sexually, and include conduct disorder, death threats, and/or use of a weapon.

When looking at recidivism rates for JSOs, it is essential to look at relative risk rather than absolute risk since some juveniles who are adjudicated for nonsexual crimes, with no history of sex offenses, later offend sexually, with rates up to 10% (Worling and Langstrom 2006).

Recidivism risk assessment is extremely important for a variety of reasons, including recommendations regarding length and type of treatment, criminal sentencing, aftercare, and sex offender registration. Within the heterogeneous JSO population, there are subgroups with a low risk of reoffending, and ones with a high risk of reoffending.

Factors predicting sexual recidivism have been examined by Langstrom and Grann (2000) who concluded that JSOs were three and a half times more likely to reoffend sexually if they had a history of sexual offending prior to the index offense, poor social skills, male victims, and more than two victims. According to Worling and Langstrom (2006), the empirically supported risk factors for sexual reoffending are: deviant sexual interest (either prepubertal victims, or use of violence), history of previous offenses and/or convictions, more than one victim, victimizing strangers, social isolation, and not completing specific JSO treatment. There is less evidence for the following: problematic parent-adolescent relationship and attitudes supportive of sexual offending, such as the belief that the victim wanted or deserved the offense.

Evidence is lacking or mixed for the following factors: high stress family environment, impulsivity, antisocial traits, interpersonal aggression, negative peer associations, sexual preoccupations, male victims, child victims, violence or threats or weapons used, an environment that supports reoffending.

Evidence is against the following as risk factors, although many of these are often cited as risk factors: the adolescent's own history of sexual victimization, the commission of nonsexual crimes, victim penetration, and denial of offending. Some researchers have found that JSOs who deny their crimes are actually less likely to reoffend (Langstrom and Grann 2000). However, denial of responsibility can lead to lack of completion of treatment (Hunter and Figueredo 1999). There is no data to support the claim that low victim empathy is a risk factor for recidivism.

The Adam Walsh Child Protection and Safety Act (2006) organizes sex offenders into three tiers. It mandates registration for all offenders

convicted of sex crimes, and requires offenders to update their whereabouts at frequencies of every 3 months to 1 year, depending upon the tier. It mandates lifelong registration for Tier 3 offenders, and 15 year registration for Tier 1 offenders. Minors 14 years and older convicted of a sex offense are required to register as Tier 1 offenders if their offense is against a child under the age of 12 (Chaffin 2008).

There have been concerns voiced by many researchers and others involved in the care of JSOs regarding this mandatory registration of juveniles as sex offenders. Evidence suggests that sex offender registries and community notification for juveniles do not decrease sexual recidivism rates (Caldwell and Dickinson 2009; Letourneau and Armstrong 2008). Sex offender registries may in fact increase the likelihood of reoffending due to the adverse effects of increasing social isolation and stigma (Zimring 2004). Furthermore, sex offender registries go against the original aim of the juvenile justice system, to act in the best interest of the child. Organizations such as ATSA voice further concerns (Prescott and Levenson, ATSA). The lack of empirically validated actuarial individual risk assessment tools means that the actual reoffense risk for a particular juvenile cannot be known. Sex offender registries assume ongoing recidivism risk for many years to life, and this is not true for most juveniles, who are still developing cognitively and emotionally, and will change dramatically during their adolescence. Furthermore, juveniles suffer increased negative social consequences of sex offender registries compared to adults, such as interference with their ability to obtain housing or to finish their education or establish employment.

Effectiveness of Treatment for Juvenile Sex Offenders

Treatment effectiveness for JSOs has been measured through recidivism rates, self-report, and physiological assessment, with recidivism rates the most popular method (Camp and Thyer 1993).

There have been several randomized controlled trials of MST, all showing efficacy (Borduin et al. 1990, 2009; Borduin and Schaeffer 2002). Recently, several studies have compared MST with treatment as usual, which is generally a combination of group CBT and individual treatment. Juveniles in the MST treatment showed significantly lower recidivism rates for both sexual and nonsexual offenses, as well as less deviant sexual interest, less substance abuse, and less out-of-home placement (Letourneau et al. 2009). Many researchers now recommend MST as the treatment of choice for JSOs (Chaffin 2008; Letourneau et al. 2009).

There have now been several meta-analyses of sex offender treatment for juveniles. In the meta-analysis by Walker et al. (2004) of ten studies of treatment effectiveness, results were positive, and were significantly higher than effect sizes of treatment for adult male sex offenders. Cognitive behavioral treatments had the largest effect sizes, and treatment appeared more effective when delivered by more highly trained clinicians.

Reitzel and Carbonell (2006) performed a meta-analysis of nine studies, concluding that the sexual recidivism for those who received sexual offender treatment was 7.37%, versus control group sexual recidivism rate of 18.93%. Their meta-analysis did not demonstrate the superiority of CBT programs over other treatment programs, but every study included showed a positive effect size, and studies of MST, which showed good effect sizes, were not counted as CBT-based treatment. They note that JSO treatment is so new that there have only recently been enough studies available for inclusion in meta-analysis, and those studies that do exist have enough methodological flaws that it is difficult to conclude which type of treatment is superior.

In summary, the evidence suggests that the treatment of JSOs decreases recidivism of both sexual and nonsexual reoffending, and is more effective than the treatment of adult male sex offenders. More research is needed to determine whether MST will prove to be more effective than CBT-RP, and if so, in which subgroups of JSOs.

Commonalities and Differences Between Adult and Adolescent Data

Both JSOs and adult sex offenders target known victims, cause harm to victim, plan their attacks, have cognitive distortions, have some social deficits, and are a heterogeneous group.

There are similarities and differences between recidivism risks for adults and adolescents, and as with every other factor of treating JSOs one must beware of extrapolating from adult data. Many of the differences between JSOs and adult sex offenders are related to adolescent development. As discussed previously, adolescents are less fixed in their sexual interests and orientation. It is more difficult to evaluate adolescents for psychopathy since a degree of self-centeredness is developmentally normal and adolescents cannot be diagnosed with antisocial personality disorder before the age of 18. However, due to the often severe nature of the antisocial behavior that is frequently associated with the presence of the psychopathic syndrome, characterized by lack of empathy, remorse or guilt, extreme egocentricity and irresponsibility, and the fact that these traits are frequently noted to begin early in development (Blair et al. 2005) a youth version of the Hare Psychopathy Checklist was developed (Forth et al. 2003). Impulsivity is developmentally more normal, and results in some opportunistic perpetration. There is evidence that more juvenile offenders than adult offenders have a history of sexual or physical abuse. This is especially true for female JSOs. Social environment, family functioning and the parent-child relationship are more important for juveniles than for adults.

Special Populations

Children with Sexual Behavior Problems

The incidence of sexual offending by children is rare, and no population-based figures are available (Chaffin et al. 2008). Recently, there has been an increase in referrals of children with sexual behavior problems, but it is not known whether

this represents a true increase in incidence, or an increase in awareness of the problem and of the referral.

Evidence indicates that children with sexual behavior problems are a distinct population, and do not represent the same population as adult sex offenders (Chaffin et al. 2008). As with adolescent sex offenders, they are a heterogeneous population. There appears to be a higher percentage of female children with sexual behavior problems than in the adolescent JSO population (Silvosky and Niec 2002). Children with more severe sexual behavior problems tend to have more comorbid family and mental health problems, but distinct taxonomic subgroups have not been identified (Pithers et al. 1998).

It was originally thought that sexual abuse was the cause of children's sexual behavior problems, and evidence supports the fact that children who have been sexually abused engage in more sexual behaviors than children who have not been sexually abused (Friedrich et al. 2005). Current thought is that although sexual abuse may be a cause of children's sexual behavior problems, it is not the sole cause, since many children with sexual behavior problems have no history of sexual abuse. Other factors are similar to the factors identified in the histories of JSOs: maltreatment, adverse family environments, including violent and sexualized environments, and exposure to sexually explicit material. For some children, sexual behavior problems are part of overall problems with disruptive behavior (Friedrich 2007). Other reasons for children's sexual behavior problems include curiosity, anxiety, imitation, attention seeking, and self-calming behavior (Silvosky and Bonner 2003).

It is important, and at times difficult, to distinguish sexually inappropriate behavior from normal childhood sex play. However, normal sex play rarely involves sexual intercourse or oral sex, is rarely a persistent preoccupation, and, when it occurs with others, does not involve force. Normally, a child will change his or her behavior if prompted to by adults, as for example when an adult instructs a child that it is okay to engage in masturbatory behavior when alone in his room, but not in public areas such as at school.

It is important to determine whether the sexual behavior is normal for a child's age and culture, since these activities vary depending upon a child's age, developmental stage, and culture (Friedrich et al. 2001).

Assessment should be individualized, and includes determination of whether or not there is a need for treatment, and what type of treatment is indicated. Clinical assessment is not the same as an investigation into whether or not a particular sexual behavior occurred, nor is it a forensic evaluation. In contrast to work with JSOs, where comprehensive assessments are generally indicated, a more limited assessment can often be done, at times in one session. The assessment should include clinical interview of the child, interview with caregivers, and administration of selected assessment instruments (Chaffin et al. 2008). It is essential to determine the risk to the child or other children of the child remaining in his/her environment.

Children with sexual behavior problems can have comorbid psychiatric and learning problems, and these should be evaluated. Other behavior problems should also be evaluated. Adversities in the environment, and abuse histories should be explored. Occasionally, children's sexual behavior problems may be part of a major psychiatric disorder, such as bipolar disorder.

As with adolescent sex offenders, it is important to obtain a clear, detailed history of the sexual behavior problems, their progression over time, and their relation to events in the child's life. Vague generalities are not sufficient. When evaluating the sexual behavior problems, it is important to know whether it involves just the child, or others, if it is planned or impulsive, and if it involves coercion or force. In interviewing children about sexual matters, it is important to be aware of the child's developmental level, to be aware that children may lie about any negative behavior, or, alternatively, may agree with the interviewer for a variety of reasons, even if the interviewer is suggesting something that is not true. Children must be interviewed in a sensitive, supportive manner, and leading questions or intimidation must be avoided. The goal is not to obtain a confession (Chaffin et al. 2008).

There are several assessment instruments that can be used with this population. The Child

Sexual Behavior Inventory-III (CSBI-III, Friedrich 1997) is designed for children ages 2–12. Age and gender norms are available. It can be used to help discriminate between developmentally normal and abnormal sexual behavior. The Child Sexual Behavior Checklist (CSBCL-2nd Revision, Johnson and Friend 1995) is designed for children 12 years and younger, and, similar to the CSBI-III, gathers a wide range of information, including contributing factors that can help with assessment and treatment planning. The Weekly Behavior Report (WBR, Cohen and Mannarino 1997) is a shorter instrument, useful for tracking ongoing changes in behavior and sexual behavior.

Short-term outpatient treatment is usually sufficient, and the more intensive residential-based treatments or MST recommended for many adolescents are rarely required. Treatment should involve parents or caregivers, and both the clinical and the research literature supports the conclusion that treatment works better with caregiver involvement. Parenting and behavior management skills are taught and a variety of approaches have been used and appear to be successful: group therapy involving the parent, parents group, joint dyadic sessions, and parent collateral sessions (Chaffin et al. 2008). Parental involvement also helps to make the changes in the children's environment that can be necessary to change their behavior, such as providing increased supervision, removing sexually explicit material from the home, and so on. Work with caregivers also helps to improve the emotional quality of the child/caregiver relationship.

The research on treatment outcomes for children with sexual behavior problems recommends short-term outpatient CBT treatment as the first-line treatment for most children with sexual behavior problems. Exceptions include children at risk in an outpatient environment, such as psychotic or acutely suicidal children. Research indicates that structured, sexual behavior problem-focused CBT treatment including caregiver involvement works better than unstructured supportive therapy or play therapy (Carpentier et al. 2006). In fact, at 10-year follow-up of children with sexual behavior problems randomly assigned to either a 12-week CBT treatment or a 12-week play therapy group,

the children treated with CBT showed no more sexual behavior problems (2%) than a clinic comparison group of children without sexual behavior problems (3%), whereas the play therapy group children's rate of sex offenses was 10% (Carpentier et al. 2006). Good treatment outcomes have been obtained for both boys and girls, children with mild and severe sexual behavior problems, children with only sexual behavior problems and children with sexual behavior problems as part of an overall problem with disruptive behavior. For children with comorbid trauma symptoms, or posttraumatic stress disorder (PTSD), CBT targeting both their PTSD and their sexual behavior problems has been successful (Chaffin et al. 2008). CBT treatment may be provided in group or individual formats, and group treatment can be done in mixed sex groups. The most important factor appears to be treatment approach (i.e., CBT) rather than treatment modality.

When providing sexual behavior problem-focused CBT for children, it is important to take into account children's developmental differences. For example, children with sexual behavior problems are usually not able to plan the "grooming" of victims engaged in by some juvenile and adult sex offenders. Thus, the focus in older juvenile/adult CBT treatment on correcting cognitive distortions, and learning about the cycle of sexual behaviors and how to interrupt the cycle is less relevant for the treatment of children. Children, compared to juvenile and adult sex offenders, are more likely to be helped by learning rules about behavior, such as "good touch and bad touch" and "don't touch other children's private parts."

Recidivism risk is very low with proper treatment, and the vast majority of children with sexual behavior problems who receive proper treatment do not have an elevated risk of future sex offenses.

Female Juvenile Sex Offenders

The prevalence of female JSOs is difficult to determine due to low incidence, and lack of reporting (Becker et al. 2001). Arrest data of female adolescent sex offenders handled by the juvenile courts shows that females are responsible

for 3% of forcible rape and 5% of other violent sex offenses, and 19% of nonviolent sex offenses annually (Snyder and Sickmund 2006).

The backgrounds of female JSOs are similar to those of male JSOs, with sexual abuse and physical abuse being common. In general, childhood maltreatment history is stronger for female than for male JSOs. Most girls who sexually offend come from backgrounds of severe family dysfunction and low social support.

Female JSOs typically offend against younger children, usually less than 6 years old, and do so while babysitting or engaged in child care. Thus, they know their victims. 20–25% of female JSOs use force when offending, similar to the statistics for male JSOs (Hunter et al. 2006). Most act alone, which is different from adult female sex offenders, who commonly offend with a male partner. More than 50% offend against more than one victim, and most offend against victims of either gender, in contrast to male JSOs who, when they offend against children, typically offend against girls. When adolescent females sexual offending involves penetration, it is more often against the same sex, in contrast to male JSOs.

Research on female JSOs is extremely limited. Mathews et al. (1997) identified three subgroups: Group 1 are naive females who offend out of curiosity about sex and a desire to experiment. Group 2 are sexually reactive girls who victimize younger children in a pattern similar to their own victimization, and have offended against children for several months. These females are more likely to have psychiatric problems, and to come from dysfunctional families. Group 3 are more severely disturbed adolescents with more extensive sex offending. Their sexual acting out has been present for a longer period of time, involving more victims. Sexual acting out may involve force. They are likely to come from families with severe dysfunction.

There is high psychiatric comorbidity, with more than 70% having received previous mental health treatment (Mathews et al. 1997). Common psychiatric disorders include PTSD and mood disorders, conduct disorder, and attention deficit hyperactivity disorder. Risk factors for sexual offending in adolescent girls include a history of sexual and physical victimization, coming from a dysfunctional family, parent/child relationship

difficulties, antisocial peers, academic failure, pregnancy, early onset of puberty, mental health problems, and substance abuse (Blanchette and Brown 2006; Chesney-Lind and Shelden 2004).

There is a lack of sex offense-specific assessment instruments for female JSOs. One exception is the Youth level of Service/Case Management Inventory, which has been validated on juvenile females, though it was developed based upon the risks and needs of males (Schmidt et al. 2005). Assessment of female JSOs consists primarily of clinical interview, review of records, and psychological testing. As with the assessment of male JSOs, use of multiple informants and multiple sources of data is essential. Physiological assessment is possible with females, through vaginal photoplethysmography, and viewing time, but its use in adolescent females is not advised, due to the lack of research on the validity of use in this population, and the lack of research on whether deviant arousal and sexual preferences are associated with recidivism in females (Center for Sex Offender Management 2007).

Sex-specific treatment programs are recommended (Hunter and Mathews 1997) and have become the norm in recent years. As with male JSOs, treatment should be individualized and occur along a continuum from less to more intensive. Hunter et al. (2006) report that Group 1 can usually be treated in the community, with a combination of individual, group, and family therapy. Sex education, therapy to increase their self-esteem, and social skills training, are important. Treatment often can be completed in 3–6 months and prognosis is good. Group 2 also have a good prognosis with appropriate treatment. Treatment may require out-of-home placement in a setting in which there are no younger children, and should include the treatment for psychiatric comorbidity and psychoeducation about normal female sexuality. Group 3 is more difficult to treat, due to their psychiatric comorbidities, and problems with trust. Treatment is generally residential or in treatment foster homes, and should involve the treatment of PTSD and other psychiatric problems.

In treating female JSOs, it is important to recognize that they are often victims as well as offenders. Girls and women grow up with different

sociocultural messages than men, have different problems with self-image, and more importance is given to interpersonal relationships. Focus in treatment on intimacy and relationship skills, family reunification, and communication skills are important. Data about treatment outcomes are lacking. It is not known whether restrictions on unsupervised contact with minors or on jobs that could bring them into contact with potential victims are applicable to female JSOs, due to a lack of research in this area.

Research Issues and Needs

There is need for further research in all aspects of work with JSOs. Due to the heterogeneity of male JSOs, and the further differences with children and females, typology research is needed to evaluate treatment effectiveness with different subgroups (Hunter et al. 2003; Worling 2001). To aid in determining subgroups of JSOs, it is important to include the age and pubertal status of victims.

Treatment effectiveness research is needed. Recidivism rate, the most popular method in use, has several methodological flaws. The low base rate of recidivism for JSOs, combined with short follow-up intervals makes it difficult to obtain statistically meaningful results. The fact that many sex offenses go unreported further confounds the picture. It has been recommended (Walker et al. 2004) that future studies use multiple methods to measure recidivism, and that more head-to-head comparison of CBT-based treatments and multisystemic-based treatments be done. In adult males, it is clear that recidivism is related in part to the degree of paraphilia/deviant sexual interest, and to the degree of psychopathy. This is less clear in adolescent males, and even less clear in adolescent females or children.

Assessment and actuarial instruments have been relatively well delineated and validated for adult male sex offenders. Several instruments show promise for work with male JSOs. There is a particular need for further research on assessment instruments and actuarial assessments for females, where there has been no published study specifically looking at recidivism.

Further areas in need of research include normal childhood and adolescent sexuality and research looking specifically at minority adolescent sex offenders.

Conclusion

JSOs are a heterogeneous group, with both similarities and differences from adult sex offenders. Children less than 12 years old, and females, need to be assessed and treated in separate, age and sex-specific programs.

Treatment for JSOs is more effective than it is for adult sex offenders, and there is a lower recidivism rate than for adults. Both cognitive behavioral and family–community-based treatments appear to work. Many JSOs are more like other youth with conduct disorder than they are like adult sex offenders. Further study is needed in order to elucidate whether one form of treatment is more effective overall, or for particular subgroups of JSOs. Logically, MST or other community–family-based treatments would be most helpful for those JSOs whose sexual offending is part of conduct problems. For JSOs with paraphilias, CBT-based treatment would make sense. The more deterrent-based approaches used in adult males, such as aversion therapy, biological therapies, and sex offender registries do not appear to be useful or advisable in the vast majority of cases of JSOs.

Although more research is needed, it is clear that optimism is justified in the treatment of JSOs.

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William L. Risser and Jan M. Risser

Significance of the Problem

An obvious question about sexually transmitted infections (STIs) in juvenile offenders is: why should we be concerned? Several reasons are relevant. First, individuals have significant personal risks that include: human immunodeficiency virus (HIV) infection; pelvic inflammatory disease (PID) in females infected with chlamydia, gonorrhea, and/or bacterial vaginosis (BV); cervical cancer in females infected with the human papilloma virus (HPV); recurrent painful initial episodes and recurrences in both sexes if they are infected with the Herpes simplex virus (HSV); chronic infections leading to eventual liver cancer and liver failure in youth who have chronic hepatitis B or C infections; increased risk of HIV infection in persons who have STIs associated with genital or rectal inflammation; congenital infections in infants of mothers infected with gonorrhea, chlamydia, HPV, and, most seriously, HIV, syphilis, and HSV; pregnancy complications in females who have syphilis, bacterial vaginosis, or trichomoniasis; and psychological

distress and disturbance of personal relationships caused by a STI diagnosis.

Second, STIs in juvenile offenders have public health implications. Adolescents in the age group 15–19 years have among the highest prevalence of several STIs, and juvenile offenders have among the highest prevalence of most STI infections in this age group. Therefore juvenile offenders are an important potential source of infection for others in their communities.

In this review, we will begin by discussing the epidemiology of STIs. Even non-clinicians may find this information useful in understanding which incarcerated youth are at risk of these various infections. We then briefly discuss diagnosis and treatment. Although clinicians need this information, others may wish to know how STIs must be managed. We cover risk factors; anyone interested in STI prevention must be knowledgeable about these. Finally, we review preventive interventions. Only two have been used in incarcerated youth, but the others have been applied to adolescents who have similar demographic backgrounds.

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Epidemiology of STIs in Juvenile Offenders

Among adolescents 15–24 years of age, 98% of all cases of notifiable infectious diseases reported in 2007 were STIs, including: 779,280 cases of chlamydia; 209,678 cases of gonorrhea; 2,305

cases of AIDS; and 2,481 cases of primary and secondary syphilis (Hall-Baker et al. 2009).

The prevalence of almost all STIs is highest in Blacks, intermediate in Hispanics, and lowest in Whites (Centers for Disease Control and Prevention [CDC] 2009c). This has an obvious implication for juvenile offenders, who are disproportionately from minority groups. Most of the research about STI prevalence in juvenile offenders has been in those who are incarcerated; a much larger number are either arrested and released or are in community diversionary programs. However, it is reasonable to assume that this larger group has a similar risk of STIs as the incarcerated subgroup.

Chlamydia and Gonorrhea Infections

The most common treatable STIs are infections with *Neisseria gonorrhoeae* (gonorrhea) and *Chlamydia trachomatis* (chlamydia). Adolescent females age 15–19 years have the highest prevalence of chlamydia and gonorrhea infection of any other age group among both men and women. Adolescent males 15–19 years have the second greatest prevalence of these two infections among men; the highest prevalence is among males 20–24 years old.

Among adolescents 15–19 years of age, Blacks have eight times the prevalence and Hispanics twice the prevalence of gonorrhea, compared to Whites. For chlamydia, Blacks have 15 times the prevalence and Hispanics almost twice the prevalence, compared to Whites (CDC 2009c).

The CDC monitors several STIs in adolescents 12–18 years of age entering juvenile corrections facilities. In 2008, the overall prevalence of chlamydia was 14.5% and the prevalence of gonorrhea 4.6%. In males, the prevalence of chlamydia was 6.4% and the prevalence of gonorrhea was 1.1% (CDC 2009c). These values are in contrast to those found in a private practice, where 0.9% of males and 2.7% of females aged 15–24 years had chlamydia and no males and 0.5% of females had gonorrhea (Best et al. 2001).

The most significant risk of these infections is the complication of PID in females, with its

relatively common long-term sequelae of infertility, ectopic pregnancy, and ectopic pregnancy. The incidence of PID is unclear because it is hard to assemble a cohort of at-risk adolescent females and follow them longitudinally. However, it is not a rare infection; one study found 8.6% of women to have PID at the time of admission to a juvenile facility and an additional 8.0% developed PID during their first month of incarceration (Risser et al. 2005).

We determined the prevalence of chlamydia and gonorrhea in incarcerated youth at the Harris County (Houston, Texas) Juvenile Detention Center in 2006 and 2007 (unpublished findings), using an accurate nucleic acid amplification test (NAAT) on urine. We evaluated 6,805 sexually active, mostly heterosexual males: 49% were Hispanic, 38% black, 12% white, and 1% Asian. Mean age was 15.2 years. Almost all were heterosexual: three had practiced survival sex with a male partner, three others were gay, and two reported intravenous drug use. Seventy-eight percent were sexually active the month before admission, 69% reported using a condom at last intercourse, and 29% had had a new partner in the previous month. Of these, 7.7% had positive urine tests for chlamydia, 0.68% for gonorrhea, and 1.0% for both organisms. The total prevalence of infection with either organism was 9.4%.

We also evaluated 1,425 sexually active heterosexual females: 45% were black, 31% Hispanic, and 24% white. The mean age was 15.4 years. Five were gay or bisexual, one reported intravenous drug use, and 8.5% had traded sex for drugs or money. Seventy-four percent were sexually active the month before admission, 49% had used a condom at last intercourse, 19% had had a new partner in the previous month, and 8.5% had traded sex for drugs or money. Of these, 17.2% had positive urine tests for chlamydia, 4.6% for gonorrhea, and 5.8% for both organisms, for a total prevalence of infection of 27.6%.

HIV

Although it is possible that many of the HIV-positive young adults in the 20–29 year-old age

group were infected as adolescents, and that infections are undoubtedly being missed, the number of adolescents who have new diagnoses of HIV infection is quite low and the majority are gay males and/or injection drug users. In the United States during 2007, approximately 1,200 males and 525 females aged 15–19 years received a new diagnosis of HIV/AIDS (CDC 2009a).

In our detention center study, youth received HIV tests (serum EIA and Western Blot if needed) if they had suspicious symptoms, had not tested for greater than 1 year, had another STI, reported that they sold sex, or requested testing. Two of 2,524 males (0.08%) were positive for HIV infection; their only admitted risk behavior was heterosexual intercourse, and we could not rule out congenital infection. None of 807 females (0%) was positive for HIV infection (unpublished data).

While our detention center population has high rates of chlamydia and gonorrhea, and clearly have unprotected sex, they were not at significant risk of HIV infection.

Syphilis

Syphilis is of concern because of the risk of an infected mother infecting the fetus or newborn, which can result in stillbirth, low birth weight, and/or congenital infection. If congenital infection is not recognized and treated, it can be fatal or can permanently damage a variety of organs of the baby (Risser et al. 2005). Syphilis also causes genital inflammation that can increase the risk of HIV infection. In adolescents and adults with new infections, progression of untreated syphilis infection to tertiary syphilis with its devastating organ destruction is rare in the US.

Syphilis in adolescents is at a low level currently, although it is increasing. The high-risk groups include gay youth and homeless youth who practice survival sex. In 2008, 575 cases of early syphilis (primary or secondary) were reported in males and 31 cases were reported in females in the 15–19 year old age group (CDC 2009c).

We also screened for syphilis among our detained youth. Two of 2,524 males had syphilis (0.08%), as did four of 807 females (0.5%). The same comments concerning the low risk of HIV infection in these youth despite their high risk of infection with gonorrhea and chlamydia apply for syphilis as well.

Herpes Simplex Virus Infection

HSV is of concern because congenital infections may be devastating, and because genital inflammation caused by HSV may increase the transmission of HIV. Infections are frequently recurrent. This infection may cause physical and emotional distress. A national probability sample found that 6% of adolescents ages 12–19 had antibodies to HSV-2, the virus subtype that is transmitted sexually (Risser et al. 2005). Among incarcerated males and females 13–18 years, the prevalence of HSV-2 was 6%.

Human Papilloma Virus Infection

HPV is probably the most common STI in males and females less than 25 years of age (Risser et al. 2005). It is not a reportable disease, and is difficult to study in males, and so the epidemiology of HPV infection is incompletely known in adolescents. In a national study of a probability sample of US residents, the prevalence of infection in female adolescents aged 14–19 years was approximately 25% (Dunne et al. 2007). It is reasonable to assume that the prevalence in juvenile offenders is at least that high. Prevalence varies by race/ethnicity and is highest among Black women (39%) compared to White and Hispanic women (both 24%) (Dunne et al. 2007).

HPV infection can cause cervical cancer. While cervical cancer is rare in adolescents, HPV infection is not: 20% of adolescents aged 18–25 years are infected with at least one of the high-risk HPV types (Manhart et al. 2006). A vaccine is now available against the HPV types that cause

70% of cervical cancer. It has been available for females for several years; recently it has been approved for use in males.

Bacterial Vaginosis

This infection occurs in sexually active females but is not sexually transmitted; it results from a disturbance in the normal vaginal bacterial flora. Women with BV are at increased risk of adverse pregnancy outcomes and of PID (Hillier et al. 2007). BV has been shown to increase the risk of acquiring other STIs, including chlamydia and gonorrhea (Koumans et al. 2007). BV infection also increases the risk of acquiring HIV, and in those infected with HIV, BV infection increases viral shedding (Cu-Uvin et al. 2001; Myer et al. 2005).

The prevalence of BV among women aged 14–49 years is approximately 30%, and the prevalence varies by race/ethnicity. In the 2001–2004 NHANES population-based study, the prevalence of BV infections was 40% among blacks, 33% among Hispanics, and 17% among whites (Allsworth and Peipert 2007). Juvenile offenders probably have values at least this high.

Trichomoniasis

Trichomonas vaginalis is an STI caused by a pathogenic protozoan parasite that causes vaginitis in women (Hobbs et al. 2008). Untreated trichomoniasis increases the risk for both acquiring and transmitting HIV infection. Adverse pregnancy outcomes are also associated with trichomoniasis during pregnancy. Trichomoniasis is also a marker of risk for infection with more serious STIs.

Trichomonas is not a notifiable infectious disease; an estimate of the national prevalence in 2001–2002 was 3%. Prevalence was 11 times higher in Black women (13.5%) than White women (1.2%) and Mexican American women (1.5%) (Helms et al. 2006). Studies in female adolescents have found a prevalence ranging from 3 to 48%. Among 12–18-year-old women at a juvenile detention center in Seattle, 48% were infected (Sorvillo et al. 2001).

Hepatitis Infections

Hepatitis A and B can be sexually transmitted; this most commonly occurs in gay males. Although some hepatitis C cases are sexually transmitted, the majority result from sharing of drug equipment and needles. Hepatitis A rarely results in acute liver failure and does not cause chronic infection. Hepatitis B and C infections can result in chronic infection that can cause cirrhosis and liver failure. At some point in their life, approximately 30% of the US population has been infected with hepatitis A, 5% with hepatitis B, and 2% with hepatitis C (CDC 2010). Most clear the infections with no further medical complications.

Diagnosis and Treatment

We now move on to diagnosis and treatment. These are complex topics that cannot be adequately covered in a chapter of this length. We will provide resources for those areas that we cannot discuss fully. The discussion that follows is based on the authors' personal experience and on the definitive source of information on all aspects of STIs, namely the textbook *Sexually Transmitted Diseases* (Holmes et al. 2008).

An essential resource for clinicians who manage STIs is the CDC's *Sexually Transmitted Diseases Treatment Guidelines*; the most recent version was published in 2006 (CDC 2006b). These are available online at www.cdc.gov; they also can be downloaded to mobile devices or printed. Occasional updates occur on this website. The guidelines have useful information on the epidemiology and diagnosis of many STIs, and a thorough discussion of treatment for the usual patient and for those who have medication allergies, are pregnant, or who have HIV infection. In the discussion that follows, we will mention the most commonly used therapies; for a more thorough discussion, the reader should read the CDC guidelines.

Pictures of STI lesions, including those of syphilis, HSV, and HPV infection, can be found

online, for example, in the “Images” section of Google Scholar. Information on specific diseases can be found in a variety of electronic databases, for example STAT!Ref, a resource developed by the American College of Physician.

To prevent reinfection, it is important to treat the sexual partners of individuals who have a STI. Partner notification will be discussed in section “Prevention.”

Chlamydia and Gonorrhea

Diagnosis of these infections has been greatly improved by the development of NAATs that can be used on urine, vaginal, urethral, or cervical samples. NAATs have made testing for these two infections much more acceptable because urethral or cervical swabs are no longer required; NAATs are also more accurate than cultures. Some programs have arranged for patients to provide urine or vaginal samples by mail, and screening can be done at non-clinical sites. Gonorrhea in symptomatic males can also be reliably diagnosed by gram stain of urethral discharge.

Because of the large proportion of chlamydia and gonorrhea infections that are asymptomatic (gonorrhea > 50% and chlamydia > 75%), screening of asymptomatic patients is important. The CDC recommends at least yearly chlamydia screening of sexually active females 25 years old and younger. In those found to be infected, research has shown that reinfections within 3 months are common, and both males and females with a previous infection should be screened every three months (both sexes). Although there is not complete agreement about universal screening of young males for chlamydia infection, the CDC recommends it in high-risk settings that include juvenile detention facilities (CDC 2006b). The CDC’s recommendations for screening for gonorrhea are less specific, but include the testing of high-risk individuals, including juvenile offenders (CDC 2006b).

For uncomplicated chlamydia and gonorrhea (asymptomatic or symptomatic urethritis in males and females, and asymptomatic and symptomatic cervicitis in females), single dose therapy is

available. For gonorrhea, this includes ceftriaxone, 125 mg intramuscularly, or cefixime, 400 mg orally. For chlamydia, the treatment is azithromycin, 1 g orally. Single dose oral therapy has obvious advantages, including the possibility of directly observed therapy in a clinical setting. The CDC does not recommend tests of cure for either organism in patients who definitely received adequate therapy (CDC 2006b), although a careful recent study found that 8% of females treated with azithromycin experienced treatment failures (Batteiger et al. 2010). If a patient has only been tested for one of these two infections and has a positive test, it is important to treat for both, because an individual infected with one of these organisms has approximately a 25% chance of being infected with the other.

For upper genito-urinary tract infection (epididymitis, orchitis, or prostatitis in males, PID in females), or for rectal or oral infections, single dose therapy is not appropriate. Patients require 10–14 days of therapy with at least two antibiotics.

Treatment of sexual partners is essential but complicated. Although newly infected individuals are usually told to inform their sexual partners of the infection and encourage them to seek medical care and to get treated, this often does not happen, and re-infection rates are quite high. Many states have laws that prevent physicians from prescribing treatment to persons whom they have not examined; in the absence of such laws, physicians may still be reluctant to provide partner prescriptions. However, in areas that do allow dispensing doses of medications to the sexual partners of their infected patients, reinfection rates have been reduced (*NEJM* Feb 17, 2005—Matthew Golden).

Among women, the most common serious complication of these two infections is PID. Most patients with PID have relative mild lower abdominal pain without systemic symptoms. The minimal diagnostic criteria recommended by the CDC are adnexal, cervical motion, or uterine tenderness on bimanual pelvic examination (CDC 2006b). Oral treatment for patients who are not severely ill, pregnant, or vomiting is as effective as hospital treatment. A commonly used regimen

is ceftriaxone, 250 mg intramuscularly once, combined with doxycycline, 100 mg orally twice a day for 14 days.

HIV Infection

The CDC now recommends testing patients in all health-care settings for HIV. High-risk persons should be tested at least annually. Pregnant women should be tested early in pregnancy and again in the third trimester if they are at high risk of infection (CDC 2006a). Early detection may allow timely treatment, for example of pregnant women to prevent congenital infection, and may lead to safer sex behavior by some infected individuals, thereby preventing HIV transmission to their sexual partners. The standard test is an ELISA test that has high sensitivity, resulting in very few missed diagnoses at the cost of some false positive tests, followed by a Western blot test that has high specificity and therefore eliminates these false positives.

Although some investigators state that many young adults infected with HIV were infected while adolescents, the prevalence of HIV at testing among adolescents is quite low. Positive tests usually occur in the high-risk groups of MSMs, males who practice survival sex (sex with men to make money to live on), and intravenous drug users who share needles. Although heterosexual transmission to black females is relatively common in adults, the level of risk to black adolescent females is not well understood.

The treatment of HIV infection is complex and is best provided by an experienced infectious diseases expert.

Syphilis

Syphilis testing should be done yearly in sexually active males and females and probably more often in MSMs; in patients with recent syphilis infections; and in patients who have suggestive symptoms that include symmetrical rashes with or without other symptoms such as fever and malaise, or who have suspicious lesions on the

genitals, anal outlet, or mouth. Most patients will be asymptomatic and identified by routine screening. Syphilitic ulcers are called chancres and are usually painless. If they are on the genitals, nontender enlargement of the inguinal lymph nodes may be present. However, diagnostic error is common in the evaluation of genital ulcers, and more than one infection may be present, so that syphilis testing should be routine when any genital ulcer is present.

A commonly used screening test for syphilis is the quantitative rapid plasma reagin (RPR) test. This evaluates for antibodies that are induced by this infection but that are not specific to the syphilis organism, *Treponema pallidum*. The result is reported as a titer in the form 1:X, for example 1:32, which means that the antigen is still present in a 1:32 dilution of the serum sample. A positive test requires confirmatory testing for specific treponemal antigens using one of several tests, for example, the microhemagglutination-Treponema pallidum test (MHA-TP) test, because the RPR test can be falsely positive in normal individuals or those with several other diseases.

The RPR test can be negative early after infection, so that repeat testing is needed if the diagnosis is suspected.

The treatment of choice for syphilis is 2.4 million units of intramuscular benzathine penicillin. If the duration of infections is thought to be more than a year, or is unknown, three injections at weekly intervals are required. There are alternative regimens for persons allergic to penicillin. Because this is the most reliable treatment, the CDC recommends desensitizing pregnant women allergic to penicillin and using this drug, to prevent congenital infection of the fetus or newborn.

Following treatment, repeat quantitative RPR testing is recommended to determine if the titer is falling, indicating successful treatment. A four-fold decrease in titer, for example from 1:32 to 1:8, is considered evidence of successful treatment. The longer the infection has been present, the slower the decline in titer. Some successfully treated individuals continue to have a positive titer indefinitely and are called "serofast."

Syphilis is one of only a few STIs for which health departments try to identify sexual partners

of infected individuals to provide testing and treatment. Using the information provided by the patient, disease intervention specialists go into the community to find sexual contacts. Success is limited by the failure of the patient to provide useful identifying information and by the inability to find contacts even if their names and descriptions are known.

Herpes Simplex Virus Infection

Symptomatic HSV infections cause painful vesicles that quickly unroof and become shallow ulcers. Systemic symptoms may be present. Genital lesions often cause tender, enlarged lymph nodes in the inguinal area. Diagnosis can be made by culture or by the more sensitive DNA amplification test; the probability of a positive test in an infected individual decreases the longer the lesion is present. Antibodies appear after several days, but usually cannot differentiate new from previous disease, unless they are known to be absent at the onset of symptoms. Recurrence of infection is common.

Several antiviral antibiotics are available for treatment in a patient who is sick enough to need them [see the CDC STD treatment guidelines (CDC 2006b)]. They do not decrease the likelihood of recurrent symptomatic outbreaks. Treatment of recurrences can benefit patients who have more than mild symptoms. Antiviral agents can also be used on a regular basis to decrease the frequency of recurrences.

Other STIs

Human Papilloma Virus Infection

HPV infection can cause characteristic lesions in males and females, most commonly on the genitalia, although some presentations can be confused with other skin problems. Diagnosis is usually clinical. Papanicolaou (Pap) testing is used to diagnose cervical infection that has caused precancerous or cancerous changes. Because cervical cancer is rare in adolescents,

the current recommendations are for this testing to begin at age 21.

Advanced precancerous or actual cancerous lesions are uncommon in adolescents. If a Pap smear has been done and is mildly abnormal, a schedule of Pap retesting is usually recommended. Females who have another abnormal testing during this testing period, or who have advanced precancerous lesions, need a colposcopy for more definitive evaluation.

A variety of topical agents can be used to treat visible warts [see CDC treatment guidelines (CDC 2006b)], although these frequently disappear over the course of several months. Some of these therapies can be used at home. None is 100% effective. Extensive or symptomatic lesions can be treated more aggressively with laser therapy or surgical removal.

Effective immunizations are available (see the “Prevention” section of this chapter).

Bacterial Vaginosis

BV is often asymptomatic, but it can also cause a discharge that is typically gray, thin, and homogeneous and that causes an unpleasant odor. This discharge and odor are the symptoms that cause women to seek medical attention. Diagnosis is commonly made clinically using Amsel’s criteria. If a woman has three of the following four findings, she is considered to be infected: a thin, gray, homogeneous discharge; abnormal epithelial cells called clue cells on a saline preparation of vaginal discharge; an elevated pH of the discharge (>4.5); and a positive “whiff test,” which is the release of the odor of organic amines when discharge is combined with 10% potassium hydroxide.

One of several effective treatments is doxycycline, 100 mg orally twice a day for 7 days, if the patient is not pregnant [also see the CDC treatment guidelines (CDC 2006b)].

Trichomoniasis

This infection also causes a vaginal discharge that may be yellow and copious. The diagnosis is

usually made when motile trichomonads are seen on a saline wet preparation of the discharge; the organism may also be cultured. A single oral dose of 2 g of metronidazole is usually effective treatment.

Hepatitis Infections

These infections often are asymptomatic but may present with jaundice, fever, malaise, anorexia, and/or nausea and vomiting. The diagnosis is made by the presence of serum antibodies, antigens, or sometimes the virus. Both hepatitis B and C may resolve spontaneously or may cause chronic infection. The latter are recognized by persistent hepatitis B surface antigen or by hepatitis C virus in the bloodstream. Therapies are available to treat chronic infection; these are not always effective. Immunization can prevent hepatitis B (see the "Prevention" section).

Risk Factors

The following discussion is adapted from our two previous reviews (Risser et al. 2005, 2008) and from the review by DiClemente et al. (2008). Primary references are available there. Note that many of these risk factors are present in juvenile offenders.

Adolescents' risk factors include personal behavioral factors such as early age of sexual debut, many partners, concurrent partners, older partners, frequent partner change, inconsistent or incorrect condom use, sex traded for drugs or money, sex partners who inject drugs, and inability to notify partners that they need to be treated for an STI in order to prevent reinfection. Douching may be associated with an increased risk of developing chlamydia infection and PID. Anal-receptive sex in both homosexual and heterosexual adolescents increases the risk for HIV and hepatitis B and C infection, syphilis, and chlamydial and gonorrheal proctitis. Oral-anal sex in gay males can result in hepatitis A infection and infection with intestinal bacterial pathogens

such as Salmonella. Lesbians are at lower risk of acquiring STIs than are heterosexual adolescent females but have the same infections. If a lesbian has had sex with men, she may contract STIs and spread them to her female partners.

Adolescents may not perceive themselves to be at risk of infection or may not have the social skills to insist on condom use and other protective behaviors. Alcohol or drug use may lead to failure to use condoms or to other high-risk sexual behaviors. Adolescents who have a history of sexual abuse are more likely to practice risky sex, as are those who have low self-esteem, are depressed, or have other mental illnesses.

Parental and peer factors can affect the likelihood of risky behavior (DiClemente et al. 2008). Parental factors include lack of support, lack of supervision, poor communication, failure to provide sex education, and, especially, failure to monitor adolescents' activities and friendships. If adolescents think that their peers are having unprotected sex, they are more likely to do so.

Social issues are important. Adolescents can be reasonably conservative in their sexual behavior but be at increased risk of infection if their partners come from a group with a high prevalence of STIs. This is one explanation for the increased STI risk in black women, who usually have sex with black men. Black women may have sexual behaviors that are similar to other racial/ethnic groups who are at lower risk of STIs, but the men they are having sex with may have high-risk behaviors.

The sexual content presented in the media may increase the likelihood of risky sexual behavior.

Lack of health insurance or absence of a confidential source of health care even if adolescents are insured may result in failure to receive treatment for STIs, increasing the risk that partners will be infected. Even if free STI clinics are available, adolescents may not know about them, may not be able to get to them, or may not choose to go.

Some studies have found that adolescents who use hormonal contraceptives are less likely to develop PID. Women who use an intrauterine device have an increased incidence of PID in the first month after insertion, a risk that can be

lowered by identifying and treating gonorrhea, chlamydia, and bacterial vaginosis before insertion. A biologic factor common in female adolescents is the presence of cervical ectopy, which probably makes chlamydia and gonorrhea infections more likely.

We have mentioned that inflammatory STIs increase the risk of acquiring HIV infection. These include gonorrhea, chlamydia, trichomoniasis, syphilis, and HSV infection.

Prevention

Developing interventions that change the behavior of adolescents, including juvenile offenders, to prevent STIs is a daunting prospect. Prevention must begin with a thorough education about the risk factors for STIs. Once educated, adolescents must be able to adopt the behaviors to prevent infection. These behaviors include males having the forethought and self-discipline to use condoms, and their partners having the determination and negotiating skills to insist on condom use. To avoid infection and its complications, adolescents must understand that screening and treatment are important, even though they often do not know if they are infected because many STIs are asymptomatic. If the poor impulse control and judgment, learning difficulties, substance abuse, concrete thinking, and mental health problems (including attention deficit disorder) of many juvenile offenders are added to the other obstacles to practicing preventive behaviors, the prospect of success seems dim.

A recent study of adolescents illustrates these difficulties. Batteiger et al. (2010) followed a group of adolescent females for 4 years. Initially 10.9% of the youth were infected with chlamydia; after 18 months, 10.6% were infected; and after 4 years, 10.4% were infected. Most (84%) were reinfections. Even though these young women had contact at least every 3 months with the study staff and had been thoroughly educated about how to avoid STIs, some of them had unprotected sex with a new or an untreated partner and became re-infected.

Interventions need accurate evaluations of effectiveness. Self-reports of changes in behavior are commonly used but are subject to error. For example, Rose et al. (2009) studied black females 15–21 years old who reported consistent condom use in the 14 days before they were evaluated. Of 186, 63 (34%) had genetic material from sperm in their vaginal fluid. Condom use has to be both consistent and correct; intervention studies have generally not addressed errors in condom use.

Length of follow-up is also important in evaluating the success of a behavior-change intervention; long-term changes in behavior are the goals of these interventions. At least 1 year of follow-up is desirable, and preferably more.

It is well known that results of randomized controlled trials (RCTs) are usually better than results when the same intervention is used under non-experimental circumstances; intervention success during routine use should be evaluated. Some prevention programs have been developed for use in indigent, minority adolescents who share the demographic characteristics of many juvenile offenders.

In their review, DiClemente et al. (2008) discussed the elements that they have identified in many of the successful programs. These include tailoring and targeting the intervention to a specific group of adolescents; the use of a theoretical framework to guide the program, most commonly Social Learning Theory and Social Cognitive Theory; and implementing a broad range of approaches that address areas such as self-esteem, social competence, and problem-solving. Some of the effective programs have been brief and others more time-intensive. They have been implemented in a variety of settings: clinics, community sites, schools, inpatient substance abuse programs, and detention centers.

Below we describe several well-known STI prevention programs proven effective in RCTs that have targeted minority youth, as well as two small programs for incarcerated juveniles. Note that all have used self-report of sexual behavior as primary outcomes; some also evaluated incident STIs. Project RESPECT has received great attention because of the brevity of its intervention.

Jemmott et al. (2005) performed an RCT of a program to reduce HIV risks among 682 inner city black and Hispanic females, mean age 15.5 years, at an adolescent medicine clinic. The results of three 250-min skills-based interventions based on cognitive-behavioral theories and elicitation research were compared to those of a health-promotion control intervention. At the end of a year, the subjects receiving the intervention reported significantly fewer sexual partners than the control subjects and were less likely to test positive for an STI (10.5% vs. 18.2%).

Kamb et al. (1998) A large RCT called Project RESPECT was conducted at five public STI clinics and compared enhanced counseling (four interactive theory-based sessions); brief counseling (two interactive risk-reduction sessions); and two brief didactic messages typical of routine care (control sessions). The brief counseling sessions consisted of two 20-min interventions, one at the first clinic visit and the second at a follow-up visit to receive test results. The subjects included 5,758 heterosexual, mostly indigent minority males and females 14 years old and older. At 1 year, 20% fewer participants in the two counseling interventions had new STIs compared to those in the control group. This result was similar for men and women and was greater for adolescents (although the data for adolescents is not provided). The authors concluded that short counseling interventions using personalized risk-reduction plans can increase condom use and prevent new STIs.

St. Lawrence et al. (1995) conducted a RCT called "Becoming a Responsible Teen (BART)" among 236 indigent black male and female adolescents aged 14–18 years attending community health centers. The program compared an educational intervention with an 8-week program that combined education with behavioral skills training. One year later, the intervention subjects reported significantly less unprotected vaginal intercourse and had discontinued altogether unprotected anal intercourse, a risk factor for HIV infection.

DiClemente et al. (2004) conducted at community health agencies an RCT called "Sistas Informing, Healing, Living and Empowering

(SiHLE)." The intervention for black adolescent females consisted of four 4-h group sessions. These addressed ethnic and gender pride, HIV knowledge, communication, condom use skills, and healthy relationships. At 12 months, compared to the control group, the intervention group reported improvement in several STI-prevention behaviors, including using condoms more consistently over the 12-month period (adjusted odds ratio 2.01, 95% confidence interval 1.28–3.17).

In a detention facility, 58 male adolescents aged 16–19 received a four-session AIDS education program. Ten months later, their self-reports of sexual behavior were compared to those of 99 control youth. The intervention group was significantly more likely to report increased condom use (Magura et al. 1994). In contrast, an intervention for 396 black and white male and female adolescents aged 14–19 years, including 228 incarcerated youth, that included skills-based condom use training was not successful in changing self-reported condom use at 3 and 6 month follow-ups (Gillmore et al. 1997).

When individuals are found to have an STI, informing their partners ("partner notification") can prevent their being re-infected and can protect their partners from possible adverse effects of the infection. Partner notification can be performed by the infected individual, or by someone else, for example, a health department worker or the treating physician. US health departments generally have limited resources, and syphilis is usually the only disease for which their workers assist in partner notification. Physicians rarely make the partner contacts. No specific approach has yet been proven to be very effective, but promising techniques include providing patients with medications or prescriptions for their partners; with home sampling kits that the partners can mail in; or with information for partners explaining the need for treatment (Trelle et al. 2007).

Immunization is one way to prevent some STIs. Since the early to mid 1990s, hepatitis B vaccine has been administered to most infants. Hepatitis A vaccine is now recommended for children and adolescents living in high-risk areas. The immunization to HPV is now widely available

to both males and females to prevent the subtypes of HPV that cause visible lesions and the subtypes that cause 50–70% of cervical cancer. This immunization often is free to indigent adolescents but may not be required for school entry. Incarcerated youth who are sent to long-term facilities may be required to have at least the immunizations required by the school system.

Research is underway for vaccines to HIV (with disappointing results so far); gonorrhea; chlamydia; HSV; and syphilis. Biologic factors are making vaccine development difficult (Holmes et al. 2008).

Conclusion

An important part of health care for incarcerated youth is the diagnosis and treatment of STIs, which are common and significant problems for these adolescents. Many of the risk factors for STIs are in theory modifiable, but the behavior changes necessary to reduce risk are not easy for this population. However, some preventive interventions have been successful in similar adolescents, and their application to incarcerated youth deserves consideration.

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A Self-Regulation Model for the Treatment of Pathological Juvenile Firesetters

27

Alan I. Feldberg and John H. Lemmon

The USA has had a substantial and persistent fire problem that, despite intervention, has remained remarkably consistent over the years. In 2005, fires in the USA claimed 3,675 lives, caused 17,925 injuries, and accounted for property losses of over ten billion dollars (National Fire Protection Association 2006a). Approximately 32,500 intentionally set fires (arsons) claimed the lives of 295 people and caused property damages of approximately \$733 million in 2007 (U.S. Department of Justice 2008; U.S. Fire Administration 2007a). Furthermore, since 1977, arsons have claimed the lives of 13,405 people and caused property damages in excess of \$29 billion (U.S. Fire Administration 2007a).

Arson is a particularly serious problem among juveniles. According to recent Uniform Crime Report data, children under the age of 18 accounted for almost half (49%) of all arson arrests in 2006, even though they accounted for just under one quarter of the U.S. Population (24%) (Federal Bureau of Investigation 2007; U.S. Census Bureau American FactFinder 2007). The findings indicate that children are substantially overrepresented among arsonists by a rate

two times higher than expected in the population. Tragically, children are also the most likely victims of juvenile firesetting accounting for 85% of all fatalities (Putnam and Kirkpatrick 2005; U.S. Fire Administration 2004). In terms of demographics, 81% of all juveniles arrested for arson were Caucasians and 88% were males (Snyder and Sickmund 2006).

One of the key research questions have been the delineation of juvenile fire play, the relatively normal explorations of fire, from juvenile firesetting, habitual and serious firesetting behavior that is often driven by pathological dynamics. Kolko (2002) indicates that approximately one-half of all boys have engaged in inappropriate “fire play” during their childhood. Fire play behaviors which include “playing with matches” or setting toys on fire have the potential for devastating effects on life and property even in the absence of any destructive intent. However, by all indications juvenile fire play can be effectively addressed through fire safety education programs.

Conversely, juvenile firesetting is more problematic to understand and more difficult to address. Since juvenile firesetting has not received as much attention as other adolescent problems, (i.e., gang behaviors) the development of effective interventions has been impeded. Nevertheless, some knowledge has been gained about the risk factors associated with firesetting behaviors along with some logical treatment ideas that may mediate those effects. Due to the complexity and severity of the problem there is a pressing need to formulate treatment strategies.

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The purpose of this essay is to present a definitive model for treating pathologically motivated juvenile firesetters.

Firesetting as a Predictor of Serious Criminality

Apart from the seriousness of the act, firesetting should be considered a developmental step on a pathway to deviant criminality (Farrington 1986; Loeber and Farrington 2001; Loeber and Hay 1994; Loeber and LeBlanc 1990; Patterson 1982; Patterson et al. 1991). The existence of ecological stressors during childhood (Belsky 1980; Bronfenbrenner 1979; Garbarino 1999; Loeber and Farrington 2001) such as child maltreatment, trauma, impulsiveness, or family dysfunction, serve to reinforce deviant emotional processes that can trigger firesetting along with other serious deviant behaviors. Earlier research by MacDonald (1963) indicated that firesetting, animal cruelty, and enuresis made up a triad of predictors associated with aggression in psychiatric inpatients. McDonald's work was corroborated by Douglas and Olshaker (1995) who reported that several of America's most heinous criminals had childhood histories of firesetting. Research derived from the National Youth Study (Loeber and Farrington 2001) also reports that juvenile firesetting is a robust predictor of future antisocial behavior. Merz-Perez and Heide (2004) recently reported that a history of childhood arson and animal cruelty were significant predictors of violent adult offending. The literature consistently indicates that firesetting is symptomatic of serious antisocial behavior. This fact certainly highlights the need for a definitive understanding of firesetting etiology and the development of treatment models that can mediate these effects.

A Review of Firesetting Etiology

In contrast to general theories of firesetting (see discussion in Bachelard 1964; Lewis and Yarnell 1951) that emphasize a singular cause, current

theory development features a comparative approach that features multiple causations. In Fineman's (1980) review of the juvenile firesetting literature, he questioned the assumption that children who set fires have similar backgrounds, motives, drives, and reinforcement histories. Fineman argued that there were four motivational typologies of juvenile firesetting. The majority are motivated by curiosity. Fineman indicated that curious firesetters usually set only one fire which generally frightens them and prompts them to call for help. He suggested that good educational programs would generally be effective in eliminating this type of firesetting. Fineman also identified children motivated by crises as well as those who use fire for delinquent purposes. Fineman finally speculated a fourth typology which he described as pathological firesetting. He believed that pathological firesetters had varied motivations that required extensive psychotherapy. Elaborations on these pathological motivation types are certainly in order to advance our understanding of firesetting behaviors.

Other theorists have also suggested that the motivation for firesetting can be classified into specific typologies. Canter and Fritzon (1998) have also suggested a four part typology classified along two dichotomously arranged dimensions that include firesetting directed at persons versus objects and firesetting motivated by expressive (emotional) needs versus instrumental (goal-directed) incentives (e.g., expressive-person firesetting motivated by anxiety compared to instrumental-person firesetting motivated by revenge, (see also the discussion in Santtila et al. 2003).

Santtila and his colleagues found some evidence to support Canter and Fritzon's typology. Using a sample of 230 juvenile firesetters in England, they were able to classify 35% of the fires as instrumental-person (motivated by revenge), 59% as instrumental-object (motivated by pragmatic reasons such as covering up a crime), 29% as expressive-object (motivated by fire fascination), and 14% as expressive-person (motivated by a cry for help). They also identified specific risk-factors associated with each typology (e.g., the expressive-person typology was

associated with a history of institutionalization for child maltreatment and a diagnosis of depression; while the instrumental-object typology was associated with a history of prior convictions for thefts, vandalisms, and burglaries). One implication of the Santtila study (2003) is that different motivations to set fires follow different development pathways.

The idea of relating risk factors to motivational types was proposed by Kolko and Kazdin in the 1980s with their presentation of a three-part ecological model of fireplay and firesetting (see discussion in Kolko and Kazdin 1986). Their ideas offered a conceptual blueprint of firesetting derived from reviews of the existing literature and included (1) a learning element suggesting that juvenile firesetting was related to early exposure to firesetting activities; (2) an individual risk-factors element that could include factors such as a limited awareness of fire hazards, emotional deficits including discomfort with human interactions, difficulties in handling face-to-face conflicts, social immaturity, or isolation, and (3) a parent/family risk-factors element that could include poor parental supervision, parent-child attachment disorders, parental pathologies such as histories of alcohol abuse, mental health problems, criminal behaviors, and stressful family life events like divorce or the death of a parent. One implication of Kolko and Kazdin's ecological model is that specific motivational types might be associated with the different risk-factors. Furthermore, motivational types may be dynamic meaning they vary from early childhood through adolescence while others may be static meaning they remain constant throughout each stage of child development.

Kolko (2002) later reported four psychological profiles among juvenile firesetters. These included curious firesetters who set fires out of fascination, pathological firesetters who set fires as a symptom of their psychopathology, expressive firesetters who set fires as a cry for help, and delinquent firesetters who set fires as a function of their antisocial behaviors. In contrast, Putnam and Kirkpatrick (2005) argued that there are only two motivational types; expressive, (e.g., arson as

an expression of psychopathology or unresolved trauma) and instrumental, where firesetting is employed to achieve an established goal (e.g., arson for profit, to conceal a crime, and so forth). The authors (see discussion in Putnam and Kirkpatrick 2005) have also outlined a number of causal explanations.

Researchers (Kolko and Kazdin 1990; Santtila et al. 2003) have also identified specific firesetting risk factors. Their findings suggest that firesetters exhibit higher levels of antisocial behavior, conduct disorder, impulsivity, lower levels of sociability, and that their families exhibit more dysfunctional parental systems and pathological family dynamics. However, little is known about the impact of these risk factors on the development of different motivational typologies. Additionally, Putnam and Kirkpatrick (2005) emphasize the need for a validated classification system that distinguishes high and low risk youth firesetters.

In addition, little is known about the factors that transition a child from fireplay to more serious firesetting. From a developmental perspective, Kolko and Kazdin (1986) discussed a risk assessment explanation stating that firesetting behavior evolves as the child matures and is produced by individual and environmental risks and that firesetting motivations change as children mature. Unfortunately, there is a paucity literature that elaborates on how firesetting behaviors emerge or change over time.

A Typology of Juvenile Firesetting Motivation

In an effort to answer some of the firesetting etiology questions, Feldberg et al. (2007) have developed a seven-part typology of firesetting motivation that isolates two domains of firesetting pathology; both of which are driven by a need to regulate emotions.

Pathological motivation include *inhibitory* types in which firesetting is used to calm or diminish emotions and *excitatory* types in which firesetting is used to stimulate emotions. Feldberg's typologies address a range of fire play

(curious or accidental) and firesetting behaviors; and in regard to the latter include both instrumental (*delinquency motivated*) as well as the two pathological typologies.

Curious and accidental fires are generally set by younger children who witness adults setting appropriate fires and try to imitate them. A combination of fire safety instruction and increased structuring for safety by the responsible adults is usually a sufficient intervention.

Firesetting can also be prompted by a *crisis* and is often motivated as a purposeful *cry for help*. This type of firesetting behavior often involves a child who is under unusual psychological duress but who feels inhibited from sharing the duress with an appropriate adult. This child, usually in the elementary school years, uses firesetting as a way to escape the situation that is creating duress. Although fire safety education is an important element in the intervention, therapy is also necessary to help the child resolve the underlying crisis and to safely and effectively learn how to voice their problems in order that more effective problem solving can ensue.

Delinquency motivated firesetting, although motivated by criminal intent, is also purposeful in nature. Firesetting of this kind is driven by a means–ends calculus where fire is used as an instrument such as the concealment of crimes or the destruction of evidence. Although firesetting of this nature is serious, it is different from pathologically motivated behavior in that the delinquent firesetter does not have the emotional connection to fire that the pathological offender has. Delinquent firesetters usually respond to clear consequences for their behavior that may also include restitution and community service. Other restorative justice practices including victim–offender mediation and circles are helpful in establishing positive relationships with victims and healthier relationships with their community.

Pathologically motivated firesetting is the most problematic to treat since it is driven by irrational content. Feldberg identified four categories of pathological firesetters that fall into two specific typologies. The cardinal feature of each typology is that fire is used to regulate emotions. There are two *inhibitory* types in which

emotion is calmed or diminished by firesetting and two *excitatory* types in which emotions are stimulated.

The first inhibitory type is the *revenge firesetter* who is motivated by rage. Associated with the affective arousal are cognitions that an injustice has been done. After this fire is set, affective arousal rapidly diminishes and the fire setter usually has a smug sense of validation. The second inhibitory type is the *maladaptive coping firesetter*. This type of youth offender is usually a loner with a limited capacity to cope with anxiety, depression, or damaged self-esteem. Starting and watching fires inhibit emotional arousal. It can also be a source of comfort and the stimulus for self-esteem-enhancing fantasies. Extreme examples of the maladaptive coping firesetters include youths who set several fires on a daily basis, usually in a somewhat repetitive pattern or even a ritualized manner.

Excitatory types include the *fire-fascinated* youth who develops a compelling attachment to some features of fire, most usually relating to the colors and/or motion of flames. This dynamic usually is set in force at a relatively early age, perhaps 4 or 5 years old. When in proximity to fire, this type experiences heightened and positive emotions, an excitatory process. These types of firesetters may experience a tremendous sense of existential aliveness that can be so intense that outsiders can easily witness affective arousal in their facial and postural features, sometimes even if there is no fire present but the person is only thinking about fire. The second excitatory type is the *thrill-seeking* firesetter who achieves a significant “adrenaline rush” from firesetting. The thrill seeker enjoys the destructive impact of fire and may rapidly progress from setting small fires to setting much bigger fires to bigger structures such as a warehouse. The thrill seeker usually enjoys a cluster of grandiose cognitions in which they are certain of their ability to outwit authorities and investigators. These offenders are quite dangerous and treating the more serious ones cannot be safely accomplished in an outpatient setting.

There are two etiological factors that motivate pathological firesetting. Our explanatory model

describes how neglect creates attachment pathology. Maltreatment along with other adverse experiences such as domestic violence, crime, accidents, or natural catastrophes traumatize children. The second feature of our explanatory model involves an understanding of the effects of trauma and the dynamics of trauma recovery. Both attachment and trauma lead to deficits in self-regulation and neural-psychological functioning resulting in pathological firesetting. In terms of physiology, neural-scientists (see discussion in Kandel 2006) have established that encoding of experience, basically memory, particularly long-term memory, is essentially a bio-chemical and electrical process that over time becomes a neural pathway that directs cognition, emotion, and behavior. In terms of self-regulation, psychologists including (Schoore 2001; Siegel 2007) indicate that neural pathways are responsible for deficits in self-regulation capacities. Siegel has explicated nine forms of psychological and physiological integration that result in increased self-regulation.

Our intervention approach provides a comparative set of clinical strategies that emphasizes restoration of healthy brain functioning. In order to accomplish this task, it is prudent to begin by mapping out a developmental framework for understanding two key etiological features of pathological firesetting.

Attachment Insecurity and Pathological Firesetting

Understanding the Effects of Child Neglect

There has been a consistent and growing body of research that singles out maltreatment as a prominent risk factor in delinquency in general and specifically in juvenile firesetting. (Feldberg, et al. 2007; Kolko and Kazdin 1990; Root et al. 2007; Sakheim and Osborn 1986; Yarnell 1940) Neglect has been given considerable attention in the etiology of childhood fire play dating back to the work of Yarnell (1940) and other (Kaufman et al. 1961)

psychoanalytic theorists. Yarnell's (1940) study of hospitalized juvenile firesetters emphasized fire setting as an aggressive response by neglected children to the trauma of parental rejection.

Sakheim and Osborn (1986) have also identified a history of maltreatment as a common characteristic in the psychological profiles of institutionalized juvenile firesetters. Sakheim and Osborn (1999) later identified characteristics that differentiated children with severe firesetting behaviors from minor and non-firesetters. Child neglect in the form of maternal rejection and abandonment was one of the key family risk factors identified. In addition, a variety of individual risk factors including defiance of authority, fire fascination, early exposure to fire, lack of empathy, revenge fantasies, and cognitive impairment were cited.

Other researchers (Kolko 1985; Kolko and Kazdin 1986; Slavkin and Fineman 2000) have also cited the importance of neglect/parental rejection as a prominent risk factor in the etiology of firesetting. Studies by Kolko and Kazdin (1990, 1991, 1994) have focused on the quality of parenting and reported that parents of firesetters experience greater psychological distress, marital maladjustment, exposure to stressful life events, less acceptance of their children, less involvement in activities that enhances the child's personality development and family relationships, and less supervision and discipline than parents of non-firesetters.

Parental neglect and rejection has also linked to motivational tactics employed by children who set fires out of revenge (Root et al. 2007) or as a "cry for help" (Fineman 1995) motivated by the need to be removed from an abusive family environment. In their study of outpatient juvenile firesetters, Root et al. (2007) found that maltreated children had more fire incidents and demonstrated greater versatility in their firesetting.

Feldberg and his colleagues (2007) reports similar findings in a study of institutionalized juvenile firesetters in Pennsylvania. Clinical reports indicated neglect as a *constant* in the histories of the firesetting youths while the prevalence of physical abuse was extraordinarily high

(75%) in contrast to the prevalence rate of maltreatment among a comparable group of delinquent offenders.¹ Feldberg concluded that neglect triggered clinically substantive attachment disorders that were profoundly prevalent among pathologically motivated firesetters.

The diverse and consistent findings documenting the connection between maltreatment and serious youth firesetting compels attention to how neglect impacts both the psyche and the brain. In terms of the psyche, attachment theory (Bowlby 1980a; Crittenden and Ainsworth 1989; Heide and Solomon 2004) provides a theoretical vantage point for understanding how neglect contributes to the risks of juvenile firesetting. To make a succinct but accurate point, juveniles with healthy attachments do not purposively set destructive fires.

From a relational perspective, serious juvenile firesetters typically have difficulties with trust. Furthermore, they encounter major problems with modulation of feelings and regulation of behavior. Unfortunately, they usually reject opportunities for guidance and support. These difficulties reflect attachment problems. Bowlby (1980a, 1973, 1980a, b) postulated that there is a biologically driven two-person developmental psychology between the infant and the primary attachment figure, usually the mother that has implications for healthy life-long development.

Attachment Dynamics

Secure attachment provides a healthy base for the infant in which behavioral repertoires organize, feelings develop, and relationships prosper. This attachment style provides the infant with external support during times of overwhelming affect (e.g., when the infant becomes frightened, angry, or sad) that later develops the individual's ability to self-regulate emotion (Kopp 1989). Securely attached infants have caretakers who also respond to and mirror positive affects, providing a very

salient expectation of relationship being a potentially feeling good experience (Goldberg et al. 1994). External supports offered by a competent and caring parent leads to the critical formation of an infant's internal relational map built on two key assumptions. One, when distressed the person is able to reach out to others and expect help. Two, the person learns that if someone can successfully soothe their emotions, they can also learn to soothe their own emotions. Additionally, securely attached people are better able to cope with stresses such as loss and abuse. Their resilience is more robust.

Secure attachment also has a very important impact on the capacity for one to have integrated memory, the kind of memory that is necessary for a person to develop a coherent personal narrative history. Thus, people with secure attachment have a sense of their own developmental history and the continuity between their personal history and their current life. They have rich memories. People who have not achieved attachment security encounter memory blockage that can sometimes be profound. Unfortunately, these memory blockages are all too noteworthy in the treatment of the serious juvenile firesetter. Clinically, "I don't/can't remember my past" is a statement that is frequently cited in psychotherapy sessions with this population. Such clients are all too aware that their memory processes are faulty and many have the perception that "my head isn't right."

Attachment disruptions may have an enduring impact on personality functioning, capacity for adaptive and maladaptive coping, and on the health of positive relationships, including both intimate relationships and parenting relationships. Three pathological variants to secure attachment have been identified. Crittenden and Ainsworth (1989) identified the anxious-ambivalent and the avoidant types. Bolen (2000) identified the third variant, known as the disorganized-disoriented type. These insecure attachment styles are commonly referred to as anxious, avoidant, and disorganized.

In the anxious attachment, the child's bid for proximity is frustrated by a conflicted parent. When mothers do respond to their distressed child, their ambivalence limits their ability to

¹Lemmon (1999) reported the prevalence of abuse at 33% and neglect at 52% in a study of low-income, inner-city delinquent youths in Pennsylvania.

fully engage. When separated from the mother, the child does not have the capacity to feel secure and thus reacts with even more distress. Under this condition, the child develops persistent and intense attachment-driven behaviors that may be mingled with anger. These relationships are driven by the dynamics of clinging, control, and manipulation in order to achieve relief from distress. In this attachment style, the parents may resort to threats of abandonment as a means to assert control over the child whereas the child may resort to antisocial behaviors as a means to control the parent. The two-person psychology in the anxious attachment pattern is frustrating to both parent and child. The critical features set in place in this attachment pattern include a demanding but unsatisfying relationship style. Personality pathology arising from this pattern may include a mix of passive aggressive and dependent features. According to Mikulincer et al. (2003), when under distress, anxiously attached people are prone to *hyperactivating* strategies in which they seek support through clinging and control, while making efforts at minimizing distance from others.

In the anxious attachment, a parent-child relationship exists, albeit a conflicted one. With avoidant attachment, the child has no meaningful relationship with others. In this case, the attachment figure's anxiety prohibits her from becoming psychologically accessible to her child. The child "attunes" to the fact that proximity-seeking behaviors are ineffective. This child displays little stress when separated from the mother and upon reunion avoids rather than seeks proximity with her. The child becomes used to meeting his or her needs through self-absorbed gratification without concern for the impact of their behaviors on others. Bowlby (1980a) argued that in cases of severe avoidant attachment, the autonomic nervous system becomes impaired and the person develops a condition referred to as "*defensive exclusion*," preventing the child from experiencing love. Under conditions of distress, Mikulincer et al. (2003) state the avoidant attached person uses *deactivating strategies* and become overly self-reliant. Because consideration of others is avoided, in extreme cases, such children may

develop narcissistic and sociopathic tendencies related to this attachment pattern. If it feels good and does not have painful consequences, persons with this attachment configuration may just as well do whatever their impulses suggest.

Bolen (2000) identified a third variant of insecure attachment, disorganized attachment. The disorganized attachment pattern includes a primary attachment figure who behaves unpredictably when the child displays proximity-seeking behaviors. These parents may themselves be victims of unresolved trauma, including the unresolved loss of their own attachment figures, or unresolved maltreatment; therefore, they are frightened and inadvertently frightening to their children. Disorganized children have no coherent coping strategies in order to draw a figure toward them when distressed and they display diverse and sometimes contradictory behaviors upon their parent's return. These behaviors can include strong avoidance along with undirected expressions of fear, distress, or apprehension. They may appear confused or disoriented in both their behaviors and their affects. Bolen points out that the disorganized child may display autistic-like symptoms and may be misdiagnosed as such. In response to stress, these children thus appear ineffectual and disorganized. Personality functioning may cluster in the disorganized range of paranoid and schizotypal functioning and, such persons may appear with autistic spectrum disorder symptoms.

Attachment styles have implications through development. During adolescence, there is a normative transition from the child's relationships with his family members into the peer group. Research demonstrates that the adolescent task of increasing relationship with friends is highly influenced by the earlier attachment patterns. From a peer perspective, secure attachment appears to allow for better judgment about peer relationships, the maintenance of primary family relationships concurrent with peer relationships, and the use of peers in healthy co-regulating relationships. In contrast, serious juvenile firesetters frequently either have difficulty forming relationships with others and become loners or become involved in superficial relationships in which

delinquent activities and thrill-seeking defiant actions are encouraged.

Therapists who use an attachment model seek to help people with problematic attachment move toward what is known as earned attachment security. People can be helped to grow beyond their attachment difficulties (Bolen 2000; Fahlberg 1970) particularly in a growth-inducing environment. According to the attachment therapeutic model, it is possible to alter deactivating and hyperactivating patterns and help adolescents to attune to other people, thus improving their interpersonal functioning and reducing their risk for recidivism. Attachment therapists well understand how memories pertinent to attachment can be encoded in two major ways, explicit and implicit memories. These memory systems provide a segue into brain processes relevant to the therapy of juvenile firesetters.

Trauma as a Confounding Etiological Factor

In addition to the findings of neglect in the backgrounds of pathological firesetters, there are also indications of exceedingly high levels of trauma in the developmental histories of these juveniles. Feldberg et al. (2007) reported that almost three quarters of a studied sample had a history of physical abuse while almost one third had been victims of sexual abuse. Both of these numbers are considerably higher than delinquent children who are not pathological firesetters (Lemmon 1999).

There is a clinical relationship between attachment pathology and trauma. First, it is very likely that attachment pathology children are more vulnerable to being traumatized than those with secure attachments. Those who do not achieve attachment security are not as likely to be protected by adults and do not develop the capacities to protect themselves. They do not regulate themselves as well and thus may arouse frustration in others. They are also compelled to engage in relationships that are deviant and destructive. Second, attachment pathology dramatically reduces a person's resilience to trauma. Once traumatized,

attachment pathology lessens one's capacity to seek solace, support, and comfort in the presence of another human being, probably one of, if not the most, reparative factors for trauma injury.

Part of the body's response to trauma occurs within the autonomic nervous system. This is made up of the parasympathetic and the sympathetic systems. The parasympathetic system can be thought of as the system's brakes. It is a system that slows and calms down our biological activation such as heart rate. The sympathetic system is more like the accelerator, speeding up the system. Thus, in the face of stress, the sympathetic system readies us for our more activated survival responses, such as flight or fight. Specifically, the response of the autonomic nervous system, though not typically under our conscious awareness or control, sends messages from the heart to the brain, thus affecting our brain functioning. Under threat or trauma, the sympathetic system may become too stimulated, leading to an overly variable heart rate rhythm and a lack of heart rate coherence. This chaos gets sent through nerve fibers up to the brain, interfering with optimal functioning.

Within the brain, a whole cascade of responses to trauma can occur. The amygdala, the brain's epicenter of primitive fear and rage, responds by activating the hypothalamus, the pituitary gland, and the adrenal gland, known as the HPA axis. These processes occur on a fast track, without mediation by our thinking brain, the cerebral cortex. Adrenaline is released, quickly heightening alertness and memory. Next in the response chain is the release of cortisol that prepares the body for the fight-flight response. While these emergency processes are quickly switched on, downregulation is not as speedy or as easy (see discussion in Siegel 2007).

The best way to "turn off" the emergency apparatus is within the matrix of a supportive and atoned relationship. Unfortunately, the person with an insecure attachment history is at a tremendous disadvantage in accessing relationship to downregulate. Consequently, cortisol levels remain elevated and the trauma memory does not become part of a healthy narrative memory that allows for psychological perspective and healing. Instead, the traumatic memory plays havoc with

the mind, leading to fragmentation of the psyche. Additionally, negative affect can remain as an overly potent force within the amygdale, giving rise to easily triggered affective arousal of negative affects such as rage and fear of such intensity that behavioral responses can be irrational and destructive. Only when the thinking cortex is turned on can the juvenile firesetter re-appraise his firesetting as problematic.

Neural pathways connect the mid brain (home of the limbic system) to the frontal cortex (home of executive functioning), and the emotional activation undermines the capacities of the frontal executive system, leading to poor executive functioning. In such cases, there can be interference with attention, delaying gratification, impulse control, causal reasoning, decreased organizational levels, difficulty forming an integrated one's self (identity), stunted problem solving, and poor regulation of affective responses. Many of these features aptly describe juvenile firesetters.

An especially important area of concern has to do with the tremendous academic deficits in the juvenile firesetter. Typically, these teens academically function below grade level, become disenfranchised with school, and drop out of an active learning process. This may be partly explained by the impact of trauma on memory, particularly when we begin to realize how central memory is for learning. Memory consolidation following trauma becomes much more difficult. The hippocampus is vitally important for consolidation of new memories. In fact, there is evidence that the hippocampus actually may become smaller as a consequence of trauma (Bremner and Narayan 1998). One result is that the memory consolidation required for future learning becomes compromised.

An Integrated Treatment Model of Self-Regulation

The treatment needs for the pathological firesetter are diverse and demand a range of clinical responses from the helping professional. The integrated model includes six elements which are described below.

Promoting a Fire-Safe Therapeutic Framework

A safe therapeutic framework is imperative in providing clinical services and it is even more of an issue in situations in which there is a risk of additional fires. Issues of safety will require close attention and may begin with a focus on residential fire safety. While all dwellings should be fire alarmed and have extinguishers, many families and even treatment facilities may fail to meet these basic safety features. Putting safety systems into place realistically increases safety. However, there is also another important benefit. A family's capacity to activate themselves by procuring and installing safety equipment may send an important message of concern and safety to the child, a message that fire can be dangerous and that safeguards are to be valued.

Furthermore, safety is imperiled as many families express a cavalier attitude toward ignition devices such as matches and lighters. Youngsters may gain overly easy access to such devices especially when family members are smokers, often light candles, and families that heat their shelters with heaters that need to be lit. These families may need therapeutic coaching, encouragement, and support so that they become much more conscientious about where they store their lighters and matches. Often times, parents of these families may think that they have already safeguarded these materials by putting them somewhere that they believe, erroneously, that is either secret from or non-accessible to their children. Aiding the family to have a more responsible attitude toward matches and lighters can be quite important.

A contemporary problem is that many lighters are made in a variety of interesting and entertaining shapes and colors, sometimes as a facsimile of other items such as a firearms or a car. Such lighters may have an appeal to many people as curiosity items that can be symbolic of a person's interests and passions. A fire-safe attitude may be enhanced by discussion of these issues in juvenile firesetter families.

Currently, most households rely on a host of flammable petrochemicals, many of which are at least combustibles, if not accelerants. These

chemicals can provide quite a laboratory for the curious child and a dangerous treasure trove for the child who is developing a pathological connection to fire. Thus, it can be helpful to guide a family to conduct an inventory of and minimize flammable household chemicals.

Aerosol products are particularly attractive to the juvenile firesetter who use these as torches. Unfortunately, spray cans may explode with dire medical consequences. These activities are commonly viewed on Internet movie sites and promote further experimentation.

Our treatment model focuses on changing the individual's psychology from the use of fire as a self-regulation mechanism to having a more responsible and safe attitude about fire. Fire safety education is an important component of this approach. Fire safety education teaches factual information about fire, how it burns, the dangers of firesetting, and the impact of firesetting legally, economically, and in terms of risk to human health.

Many communities have structured opportunities for juvenile firesetters to receive such education, frequently made available through a juvenile firesetter coalition or multi-disciplinary team. Unfortunately, not all communities have developed such resources. If this is the case, the therapist should provide fire safety education, either formally, or interwoven throughout treatment sessions. However, therapists need to be mindful that some clients will use this information to increase their proficiency in setting fires and to avoid detection. It is important to monitor each client's reactions about fire safety information as a means to explore their attitudes toward fire. If the client appears to be using the discussion about fire to emotionally regulate themselves by becoming excited by even the discussion of fire, this reaction should be therapeutically addressed.

Addressing Minimization and Denial

Clinical experience suggests a number of resistances to candid firesetting disclosure, some centered on external issues and some focused on

deeper psychological issues. It is important to understand such resistances in order to aid the client to overcome these barriers so that treatment is effective.

One of the most important resistances to acknowledging firesetting has to do with the juvenile's attempts to avoid legal culpability. Juveniles frequently exert effort in order to avoid detention, criminal proceedings, legally imposed fines, being placed on probation, or placed in a residential center. Their creative attempts to evade responsibility often persist even after they have been adjudicated generally by shifting the blame onto others.

Several forms of clinical resistance need to be addressed in working with the juvenile firesetter. First, the juvenile firesetter may exhibit pride in his ability to evade detection. While many of these youths are failing to succeed at home, school, and the community, they construct narcissistic defenses against these failures. This is commonly observed in connection to scholastic achievement. Despite very poor grades, the firesetter maintains an inner sense that they are still "smarter than" those who are achieving far more than they are. This same narcissism approach is often displayed in terms of juvenile firesetting and results in the youth's sense that he is smart enough to avoid detection and, failing that, he is at least smart enough to successfully deny his responsibility once he has been detected.

A second form resistance involves avoiding internal shame that may exist even in those who display the narcissistic tendencies discussed above. Though a juvenile may have set a multitude of fires and expressed a smug pride in their ability to do so while avoiding detection, there is usually a deeper sense of shame attached to the commission of arson. Among delinquent offenders, arsonists are rarely seen as high status criminals.

A third form of resistance involves adolescent identity. These juveniles can be diagnostically puzzling, hard to place and sometimes fitting several diagnostic categories including the autism spectrum disorders, pervasive developmental disorders, reactive attachment disorders, schizoaffective disorder, bipolar disorder, and/or

borderline personality disorder. Frequently, these diagnostic conundrums are mirrored within the firesetters themselves who have a sense of themselves as being odd, not fitting in, and feeling different. Their own firesetting activities may well reinforce their sense of being different. Fears that their sense of oddness will be exposed are quite private and sometimes provide a reason for tenacious defenses.

Dealing with firesetter resistance demands clinical flexibility. There are times when the therapist must be hard, confrontational, and non-yielding with the firesetter. At other times, the therapist may make a compassionate appeal to the firesetter and his future health, telling the firesetter that he will feel better after he faces his problems directly. There are other times when the therapist must intervene by using his or her therapeutic capacity for empathy to “un-stick” the resistances described above. All of these tools may need to be applied with reference to the Index fire, the fire that brings the child or adolescent to treatment and then likely will need to be applied again as the clinician helps the firesetter to explore their firesetting history.

Guiding Changes in Firesetter Attitudes

An important concept is that most juvenile firesetters have very distorted attitudes about fire. A sense of fire danger is largely absent from the firesetter’s psyche. Unfortunately, the concept of fire as dangerous is misrepresented by the mass media. Guiding the juvenile firesetter to accept that fire is destructive and dangerous is an important step in the treatment process.

For other firesetters, the danger and destructive aspects of setting fires is one of the reasons that fire becomes so attractive. They already understand that fire is dangerous. Helping these types of firesetters develop strong cognitions for avoiding the destructive and dangerous aspects of firesetting is challenging. This task is facilitated by the use of fire safety education in combination with confrontation of the firesetter’s attitude that fire is an acceptable tool to regulate emotions. The therapeutic message must always be clear

and it must assert that the use of fire to regulate emotions is unhealthy. The message must not be one that is perceived as rejecting of the client and must respect that an individual may use fire to decrease uncomfortable feelings or to increase a sense of excitement and existential aliveness. The formation of a sound psychotherapeutic alliance with the firesetter, however, should rest (at least partially) on weakening the attachment to fire and the associated replacement of the individual’s psychological regulation by fire with more adaptive and safer forms of regulation.

Addressing Firesetter Motivation

Understanding firesetting motivation is critical in matching appropriate treatment to each firesetter, an important aspect of maximizing positive outcome. In fact, failure to recognize the motivational issues for the firesetter can undermine successful treatment in some cases and can, potentially, lead to an iatrogenic outcome with others. An example of reducing the success of treatment can occur if the therapist ignores the excitatory forces within the fascinated and thrill-seeking firesetter. In this case, the therapist will totally miss some of the most potent forces that propel the firesetter’s activities. This firesetter may well become even more dangerous.

For instance, the *cry for help* firesetter requires special therapeutic consideration. In these cases, the underlining crisis that precipitated the fire will likely remain in effect afterwards. The therapist may detect the child’s anxiety and evasiveness in these circumstances. Misinterpretation of evasiveness may lead to a false conclusion that the child has more delinquent or pathological motivations, resulting in a form of treatment that “misses the boat.” Under such circumstances, the *cry for help* firesetter may increase his resistance to dealing with the issue of crisis in their life and become cynical about the potential of adults to be helpful.

There may be confusion about the category of the delinquent firesetter. Many older children may begin to set fires in the presence of a delinquent group. Delinquent dynamics are clearly at

work in such situations. However, we have found that there is oftentimes a pathological firesetter within the delinquent group, who is using fire as a self regulatory process consistent with firesetting pathology. An example of this was a group of five teenagers who set at least a dozen fires within their community to buildings, cars, and a motorcycle. Assessment of four of these firesetters led to the conclusion that three of them met the criteria for the delinquent firesetter. However, one of the youngest of the group had strong pathological firesetting motivations, *even though he was a member of a delinquent subgroup*. This pathological firesetter required more extensive treatment efforts than his peers.

One of the challenges in assessing firesetting motivation is in understanding that the assessment of motivation is much more about the clients rather than the fires they set. This is not to say that the firesetting history is not vitally important. In cases in which there is progressively serious firesetting, pathological motivations can frequently and accurately be inferred. However, in cases of less severe firesetting, it is vital that the therapist focus on the understanding of the motivation, not the impact of the fire. Even very serious fires can be set with less serious motivations.

Increasing Self-Regulation

The unhealthy relationship with fire which characterizes pathological firesetters is a function of structural abnormalities within the brain that arise largely out of experiences. Neural pathways that provide healthy children with mechanisms to regulate emotion even when they are stressed do not exist among these children. Our treatment model is designed to help them develop new neural pathways that are requisite to regulate emotion. These new neural pathways open channels for self regulation through person-to-person relationship and healthy activities. While we generally advocate a comprehensive treatment approach, we assert that the most effective change agent to help the brain to heal itself is an interpersonally informed therapy experience that

occurs within an environment in which safety is secure and there is sufficient structure to preclude both maladaptive and dangerous attempts at self regulation. In some cases, we strongly encourage the use of other modalities in the treatment of the firesetter in an effort to activate a brain function that is not responding sufficiently to the interpersonal therapeutic approach mentioned above.

Because pathological firesetting includes an unhealthy relationship with fire, the presence of pathological firesetting strongly suggests that the pathological firesetter has attachment problems. In a sense, the relationship the firesetter has in using fire to regulate means that something has not developed along proper developmental lines in respect to relationships with people. The challenge for understanding the development and treatment of those with attachment disorders is that attachment processes, though enormously influenced by experience, are not always easily accessible within our verbally mediated minds. This is not simply a matter of resistance in a classical sense in which that which makes one anxious or painful is moved out of consciousness. It is due to the way the brain develops biologically. Because of this, painful memories are not so easily accessible within the therapeutic process. This is a phenomenon that needs to be differentiated from therapeutic resistance as the solution to it is different than that of dealing with the resistance process. Neural science can help to explain this issue.

The human brain is asymmetric in size, function, and development. The right hemisphere develops more robustly during the first 2–3 years of life, responding to attachment patterns and lays the neurological substrate for secure or insecure attachment. During the time frame in which attachment processes are so vitally being organized, the brain's dominant activity is centered in the right hemisphere. Furthermore, primal emotional material, particularly negative emotions such as fear and anger, easily stimulated by abusive, chaotic, and neglectful parenting that many of these firesetters have grown up within, rests in a lower brain center, the amygdala, a part of the limbic system (see discussion in Badenoch 2008; Siegel 2007).

Verbal processing is a task that does not develop until later in life and is a left brain dominated activity. Left brain processing, even in the mature brain, occurs at a slower pace than right brain processing and the processing of raw emotion often occurs by a fast track so that we may find ourselves responding to emotion faster than we are aware. Memories that we can more easily access are part of our slower but easier to know explicit memory system. Memories that are harder to access are usually part of our implicit memory system. For better or worse, problematic attachment memories are encoded within our implicit memory systems, not easily accessible in normal situations.

The implication of neurological development is that our brains, even in healthy development, are built to pick up, process, and react to relational data faster than we can rationally think through these processes. With less secure attachment, more disparate and less integrated brain functioning will occur. In other words, more insecurely attached people are more prone to problems stemming from a lack of integration of brain functions. Additionally, they have greater difficulty in relationship formation, one of the necessities in developing a therapeutic relationship, as well as in accessing and modifying the material encoded within their brains based on memories (Badenoch 2008; Bowlby 1980a, b; Crittenden and Ainsworth 1989). A therapeutic problem is that the serious juvenile firesetter frequently is impacted by memories that he cannot easily “grab a hold of” within his own mind, much less verbalize to the therapist, *even if the firesetter is not resistant*.

From the neurobiological perspective, the therapeutic task is to help the firesetter to more effectively utilize left brain systems of cognition while they also overcome their implicit right brain and amygdalar memories, so that they can function in a healthier, safer manner in which fire no longer becomes a solution to deep-seated psychological problems. We refer to our treatment model as a *brain geography model*. This model entails four therapeutic dimensions for consideration in the treatment of the firesetter.

The first group of interventions is known as top-down interventions. Top-down approaches refer to

both a geographical positioning of interventions as well as the concept of improving the individual’s system of control system in an effort to increase regulation of the emotional over-reactivity and the implicit memory systems that become activated within the juvenile firesetter, creating risk for fire-setting recidivism (as well as other destructive behaviors). Essentially, these approaches rely on developing cortical processes, mostly within the frontal and prefrontal cortex, to counteract and suppress emotional activity that derives from implicit memories.

Top-down approaches are facilitated by a cognitive-behavioral approach in which issues of impulse control, anger management, affect differentiation, and affect tolerance can be worked on in a step-by-step approach with the firesetter. The success of this work depends on the capacities of the client to review and accept areas of weakness and to apply rational thought to overcoming such weaknesses.

The top-down approach also has implications for the development of a psychotherapeutic relationship. This is an approach that demands collaboration between therapist and firesetter. This work is not so intrusive as to bring forward major defensive operations. In other words, client and therapist can frequently engage in this work without untoward de-stabilization and, in fact, with a sense of comfort. As the client collaborates in such work, there is a deepening of rapport. In many cases, this gets the therapy off on a positive track. The client thus can build a more significant psychotherapeutic relationship as this work progresses. In this phase, clients are helped to develop and practice specific skills that help them to feel more in control in their daily lives. In the best of cases, the client applies new skills successfully and develops a sense of increased self efficacy. A positive outcome with the cognitive-behavioral approach is that it reinforces a positive working alliance with the therapist.

An important aspect of top-down work is to build a realistic sense of fire as dangerous into the minds of the juvenile firesetter, a concept heretofore absent from the firesetter’s psyche. This task is facilitated by the use of fire safety education in combination with confrontation of the firesetter’s

attitude that fire is an acceptable tool to regulate emotions. Using fire to decrease uncomfortable feelings or to increase a sense of excitement and existential aliveness is a problem that the authors believe requires active intervention.

The work of top-down interventions often times has to be extensive due to the overall problems with self regulation within the firesetter. These useful interventions include evidence-based training of anger management, anxiety control, and impulse control. Mindfulness training is another form of top-down intervention as it seeks to invigorate the capacities of the prefrontal cortex and the integrative functions that emanate from that region (see discussion in Siegel 2007). These interventions focus on activating the prefrontal and frontal cortex, the locations largely responsible for executive functioning. Helping these structures to “get on board” increases inhibitory resources in order to control impulses and affects arising from the midbrain. Impulse control, judgment, capacity for affect modulation, frustration tolerance, and the ability to anticipate consequences all largely emanate from this region of the brain. Helping the client to establish capacities at self-regulation is an essential focus of treatment. It is within this arena that cognitive behavioral strategies can be very effective.

The second group of interventions focuses on healing within the brain’s right hemisphere and can be considered *bottom-up*. The task is to activate attachment processes and to help the firesetter move toward attachment security for the many firesetters who have problems in this area. As explained previously, the lack of relatedness that many serious juvenile firesetter’s exhibit appears to be one of the very serious sequeli of a neglectful past. In order to understand this area, the clinician needs to assess the quality of the firesetter’s relationships. A caution is mentioned here. Often times, the more delinquent juvenile firesetter frequently talks extensively about their “friends,” often times either accomplices or spectators in firesetting. However, examination of these relationships usually reveals very superficial qualities in the relationship as well as a drive to prove oneself as powerful and courageous through the commission of delinquent acts.

Therapy interventions focused on attachment issues require a greater degree of clinical sophistication than do the top-down approaches enumerated above. This is because attachment difficulties present a formidable clinical challenge. In treatment, the implicitly encoded old attachment experiences must be disconfirmed and their power must be reduced. Meanwhile, new experiences that occur within treatment must transfer from working, or short term memory, into long-term memory while, simultaneously, processes cascading from problematic implicit memory must be stemmed, modified, or replaced. In other words, a positive relationship with the therapist is not enough for the firesetter. It is only when this relationship challenges the past implicit memory damage that real change occurs.

In dealing with attachment issues, the client must have some positive rapport with the therapist. The therapist needs to monitor the firesetter’s distancing and avoidant maneuvers in the sessions, energetically “pulling the firesetter into a psychological orbit” as the client becomes more able to tolerate this. This process usually arouses anxiety within the firesetter and the nature of the anxieties can be diverse. Nevertheless, the therapist, by being attuned to such anxieties, can help the client to explore and work through the relevant issues, sometimes on more than one level.

A recent clinical example is of a 16-year-old male who was able to describe that he wanted to develop more trusting relationships in residential care but also noted “I really don’t want to get too dependent, when I go home I’ll have to get used to depending only on myself.” Initially, the anxieties of this teenager were talked about in terms of the very real possibilities he would have for follow up care. However, the issue was also examined in relationship to his significant peer issues as well as family of origin relationship issues. As these issues were attended to, the client began to re-appraise his fears and increased his capacity for relatedness with the therapist. The client first began to notice that he felt better after clinical sessions and then observed that his improvement in organization and regulation began to sustain between sessions. He was able to make movement toward attachment security.

He began to find some measure of compassion for others whom, during his past, he had seen as weak and vulnerable, prone to exploitation by him.

The bottom-up approach focus on the movement toward attachment security from anxious, avoidant, and disorganized attachment styles to a more secure style brings with it new developments in organization, self-regulation, and empathy development. Within the context of a healing relationship, the firesetter activates a self and other caring capacity within his brain. Cognitive-behavioral strategies become better integrated into the developing personality of the firesetter.

In the area of attachment issues, if the therapist's own attachment experience has been basically sound, this is an area in which the therapist may productively allow their own intuition about the relationship issues the client has in the here and now to be given verbal expression, mostly in a supportively manner. At times, the therapist will need to be pointedly critical of the neglectful and/or abusive caretaker behaviors the firesetter endured, especially as these are re-enacted in the here and now. Of course, the therapy task is to offer this criticism in the service of the firesetter's development, not in the service of the countertransference aroused within the therapist. At selected times, the therapist may need to actively contrast their own attunement with the firesetter with the parent's lack of attunement, setting the stage for the firesetter to discover the possibility of healthy interaction and its contribution to self-regulation.

Because of attachment pathology, juvenile firesetters frequently have problems with a coherent narrative or biographical memory. In one example, a 15-year-old firesetter who lost his father to cancer when he was 9 could recall any memories of his father prior to his illness, during the illness, or of the adjustments the family had to make following the death. Furthermore, the same teenager had amnesia for most of his early life events. He claimed, as children like him frequently do, "I can't even remember what I did yesterday." As he developed a secure therapeutic relationship, he began "filling in" the gaps in his autobiographical memory.

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A critical component in the treatment of juvenile firesetters is in the area of memory retrieval and the integration of associated emotions. As firesetters begin to piece together the "what happened" of their past they then retrieve the emotional memories associated with these events. In the case covered above, our client was able to recall memories of his father and then had an outpouring of grief. Once the affect is processed, there is a reduction in the power of that affect to trigger future destructive behaviors. Therapists can track their clients' filling in the blank areas of their narrative puzzles as explicit memories crystallize.

Many missing memories in juvenile firesetters involve abusive and neglectful experiences. There is a strong tendency among these children to deny their maltreatment or that the abuse or neglect has had a deleterious impact. Social pressures can affect psychological processes especially when children are told to "forget about the past." Family therapy can sometimes be very helpful in resolving such situations. To illustrate, one of our firesetters had been abducted and brutally sexually abused by an unknown assailant when he was a small child. When the family located the child, a confrontation occurred with the assailant who murdered the boy's uncle and shot his father. His mother's attempt to deal with this overwhelming trauma had urged her son "to forget the past and focus on the present." In family therapy, she began to disclose that she had recurring traumatic nightmares of the events. At this point, the family transitioned from a defensive stance in which each member dealt with their pain in isolation to a supportive stance in which each member could effectively share their trauma.

Maltreatment is a common traumatic experience associated with juvenile firesetting behavior. Processing experiences of abuse and neglect is painful and creates a sense of vulnerability. Thus, there are powerful intra-psychic reasons that the firesetter wants to avoid this work. Admission of either abuse or neglect within his family can be difficult for adolescents. Both may imply to the adolescent a sense of betrayal of his own family system that, however, harmful in the past, the adolescent may still have hopes of

creating a healthier bond with. Also, vulnerability to abuse and neglect experiences may well create an uncomfortable impingement on the adolescent's desire to see himself as powerful, stereotypically adequate in terms of his emerging masculinity, and capable.

Therapists must utilize sound clinical judgment in evaluating how to proceed with defenses to disclosing and working through traumatic experiences. In some cases, they may have to assert that neglect and abuse actually occurred. However, one issue that may be difficult for therapists is to balance empathic support without reinforcing externalization of responsibility. There are times in which discussion of maltreatment may reinforce the strength of externalizing defenses. Therapists must be clear that, whatever the obstacles to healthier development, the choice to set a fire is never an acceptable one.

A third aspect in the treatment of the juvenile firesetter centers on trauma recovery. Whereas neglect seemingly results in global attachment problems, the impact of trauma is that highly emotional memories are created within the subject. Neither neglect nor trauma provides for healthy conditions for development but they appear to have different impacts. Neglect is a usually a diffuse condition that involves an *absence of attunement*. It is processed within the brain considerably differently than the *encoding of specific events*.

Traumatic memories are potent emotional memories. They exact tremendous pressure on the psyche. There is commonly a formation of rigid defensive processes intermixed with activation, sometimes quite unconscious, of very emotional expressions. From the point of view of brain geography, midbrain activation within the amygdala creates an upsurge of rage and fear. Additionally, sensory data from memories appears to be stored within the structure that processed the data at the time it first occurred. Thus, the triggers to activation of traumatic memories may occur through stimulation of the visual, tactile, olfactory, or auditory senses. Primary regions for these senses are in the occipital lobes, sensory-motor strip, mid brain, and temporal lobes and association areas are frequently within the

parietal lobes. Trauma activation is thus a complex brain event and this fact may be one of the factors that make recovery so difficult.

Often times, abuse and neglect issues are lumped together and considered as identical issues. Although attachment and trauma are difficult psychological issues, the absence of differentiation confounds therapeutic work. Abuse and neglect are distinct psychological and neural-biological processes. An understanding of the differences and interconnections between attachment and trauma is important in informing therapists as to how to intervene with pathological firesetters.

Abuse experiences are discrete, traced in memory in a similar manner that a video camera would record an historical event. These memories may or may not be available to conscious awareness but they are still explicit. Memory processes will record the traumatic event within the context of how the child interpreted it at the time it occurred. One of our firesetters recalled the following traumatic event from early childhood. His mother placed his brother and himself into a bathtub filled with scalding water in an attempt to punish them. When he shared this memory with his mother, she denied that the event had occurred. This denial was worked through when the mother received independent confirmation of the incident from her other son. While the firesetter had difficulty understanding and processing the emotional significance of this event on his development and his firesetting issues, his retrieval indicated an exquisitely nuanced and sequential set of memories from before the bath tub incident, his mother's affect at the time, the pain of the event itself, and his humiliation that his mother had maltreated him.

In contrast, neglect experiences are harder for the memory system to encode simply because these are memories of events that did not happen. This can be like trying to video air, creating memories that have little form and content. It is hard for the human psyche to store memories of events and interactions that never occurred. These memories are implicit memories.

From a neurological standpoint, the interpersonal attunement that is the foundation for secure attachment is a process that is dominated by right

hemisphere brain processes. This hemisphere is more connected than the later developing left hemisphere with lower brain centers responsible for emotional processes such as emotional expression and control. Schore (2001) points out early attachment problems lead to “a blunting of the stress-regulating response of the right (and not left) prefrontal cortex that is manifest in adulthood.” Thus, in his view, vulnerability to post traumatic stress disorder (PTSD) is laid down in quite early life even though the traumatic event that leads to PTSD can arise much later in life. The implication is clear. Those with attachment security have more robust healthy adaptation to trauma than those with attachment insecurity. Without attachment security, the individual’s capacity to regulate negatively emotionally charged mental events suffers.

Lack of attachment security is a deficit-based psychology. With the introduction of trauma, psychological injury is amplified. However, in contrast to attachment processes, trauma is an activating event. Trauma activates hard wired survival processes such as fight or flight. However, once survival processes are triggered, they remain activated beyond their functional utility and prompt the victim to respond as though they continue to face real danger. This causes social and psychological dysfunction.

In terms of clinical issues, explicit memories of trauma are usually addressed by the juvenile fire-setter prior to a focus on implicit memory issues related to attachment processes. However, the client’s sense that the therapist has the capacity to appropriately attune with the client as they process trauma lays the groundwork for the client’s movement toward attachment security. In a sense, the “good enough” capacity for the therapeutic dyad to work through trauma issues provides for a deepening of the therapeutic relationship, a harbinger of more secure attachment.

Biofeedback as an Aid for Self-Regulation

There is an inverse relationship between attachment pathology and the client’s ability to establish

a therapeutic relationship. Youths with the most severe attachment disorders are the least capable of utilizing traditional treatment. This is not a problem of resistance. The key issue with attachment impaired youths is that they lack the relationship tools to enter into therapeutic alliances. Essentially, the therapist–client dyad is set up for superficial but mutually frustrating interactions. Introduction of biofeedback shifts the counseling environment from one beset with frustration to one in which the therapist and the client can share an activity that is perceived as therapeutic. It empowers the client through learning self-regulation.

Biofeedback is a process in which clients learn to regulate processes that were typically thought to be outside of conscious control. This process involves activities that are considered autonomic, or involuntary, processes such as heart rate, peripheral skin temperature, muscle tension, and heart rate coherence (Thompson and Thompson 2003). Biofeedback instruments collect information about autonomic processes and provide feedback about these processes (in colorful computer screen images). This modality gives clients power over processes heretoforth thought to be outside of their control.

The client who cannot relate to others usually becomes interested in the auditory and visual images on the computer screen that reflect his “involuntary” bodily processes. As the client learns to manipulate the feedback parameters he gains a sense of control and accomplishment. For example, clients learn how to regulate processes such as skin temperature, which reflect their level of anxiety. Thus, learning how to regulate temperature provides an avenue for people to learn to regulate anxiety. Biofeedback involves multiple techniques, two of which have important applications in treating juvenile firesetters. These include heart rate coherence training (HRCT) and electroencephalogram (EEG) feedback. These techniques can be used in treating the attachment and trauma issues related to serious firesetting. In our formulations, HRCT is capable of reaching those with relatively moderate attachment pathology whereas EEG feedback is able to impact those with severe attachment pathology.

HRCT is a moment-to-moment measure of the balance between the two branches of the autonomic nervous system (ANS), the sympathetic and the parasympathetic. In brief, the sympathetic system is the activator within the ANS while the parasympathetic is the system that slows down processes. Heart rate variability is impacted by mental and brain processes such as emotions and thoughts. Emotional stress increases sympathetic activity and decreased parasympathetic activity. Heart rate variability training has increased a positive balance, bringing a stronger sense of control to our firesetters. The heart rate variability technique is easily accessible and gives our clients a sense of how biofeedback works. Attaching the sensor apparatus is quite easy. Our clients become aware that their training is not dependent on visual motor skills; what happens on the screen is a function of “no hands” training. The fact that our client’s ANS controls the computer generated feedback is often an intriguing and compelling connection for them. They train themselves to enter a more regulated state. As the client becomes more intrigued about internal processes, they begin to form rapport with our therapists.

A clinical example of our use of HRCT involved a 16-year-old (referred to as Mike) who had a history of lighting approximately 35 destructive fires. Mike’s background was fraught with loss, the most troublesome of which was the death of his mother who was largely inadequate in providing for his basic needs, preoccupied with her own substance abuse. Mike, though shy and superficial initially, was slowly able to develop rapport with his therapist and enjoyed the human interaction and a sense that his therapist was attuned to his emotional needs. When sad, guilty, or angry, Mike was incapable of regulating his behaviors. This had a detrimental impact on his self-esteem. While Mike cognitively understood this deficit, the use of cognitive-behavioral techniques only appeared successful in sessions. In the calmness of the sessions, Mike’s left hemisphere processing was adequate to regulate his emotions. In real-life situations, however, the arousal within his limbic system incapacitated the cognitive-behavioral strategies Mike had learned and practiced in sessions.

Using HRCT, Mike could watch the graphic design of his heart rhythm on the computer screen. He then began to effect control over his heart rhythm by applying breathing and relaxation techniques. He soon became adept at molding his heart rate coherence to meet the system’s reward criteria. Mike quickly became more capable of regulating himself in sessions and was able to transfer these skills in real-life situations. HRCT is a straight forward skill that allowed Mike to gain emotional control, replace his sense of treatment frustration with a sense of success, and raise his self-esteem. The value of HRCT is that it is simple to learn, rapidly improves self-regulation, and is relatively inexpensive to apply.

Firesetters with severe attachment pathology are so disorganized or avoidant that they cannot establish the beginnings of therapeutic rapport that is essential for the workings of therapy. EEG feedback is the appropriate treatment modality for these types of cases. A clinical example involved a 17-year-old firesetter (referred to as Tom) who burned down three separate buildings and set multiple trash can fires in his community. Simply put, Tom did not seem to care about himself or others except when engaged in fast-paced activities. Tom was not suicidal but routinely injured himself in activities such as BMX riding. Consequently, he had a history of multiple fractures and other injuries, which left him with deformities. Tom’s mother had a history of severe psychiatric problems resulting in the termination of her parental rights. Tom had spent time living with a variety of relatives usually wearing out his welcome in short order. Even over a fairly long period of time, his investment of energy, affect, and meaningful dialogue did not develop sufficient traction to move toward a therapeutic alliance. Tom displayed no interest in getting help. The relational aspects of Tom’s right hemisphere brain seemed to be nonfunctional. Since there was no stability within the transference, the promise of short term progress never materialized. Sessions were an ordeal for both Tom and therapist.

We used brain EEG in an attempt to activate his right hemisphere. EEG feedback (also known as neurofeedback therapy) collects data on the

brain's bio-electrical activity and organizes these data into meaningful auditory and visual feedback. Using EEG feedback, clients learn to shift their brain wave activity into more self-regulated states. There is evidence (Demos 2005; Thompson and Thompson 2003) that this technique can be successfully applied to the treatment of related mental health problems including attention deficit disorder and depression. More specifically (Huang-Storms et al. 2006), EEG feedback is effective in treating acting out children with maltreatment histories. Fisher (2007) also reports that EEG feedback is a useful therapeutic tool in working with traumatized and attachment disordered clients, by facilitating client capacities for meaningful engagement.

The focus on EEG feedback for Tom involved remediation of his right hemisphere processes. As Tom began EEG feedback, he demonstrated progress by becoming more clinically engaged. For the first time, he expressed care for and about family members. Later, at his own initiative, Tom began to focus on increasing his impulse control using EEG feedback at sites designed to modify the frontal brain processes. He continues to make progress regarding attachment and impulse control by utilizing this combination of biofeedback and therapy.

Summary

It is evident that juvenile firesetting is a serious problem that places people and communities at risk. However, the treatment of serious juvenile firesetters has been hindered by the lack of a coherent clinical model. Under traditional approaches, many of these juveniles appear to be untreatable because their attachment pathology interferes with adequate capacities to form even a tentative psychotherapeutic relationship. In this essay, we have addressed some of these limitations by offering a comprehensive model of firesetting etiology, motivation, and treatment. The key issue in addressing this problem is to understand the pathological firesetter. Pathological firesetters have deficits in self-regulation that are caused by underlying attachment pathology and

trauma issues. Child neglect and abuse weigh heavily as critical factors in the etiology and treatment of pathological firesetters.

A variety of self-regulation strategies have been outlined that can maximize safe and effective treatment. Our comprehensive approach calls for increasing clients' capacities for self-regulation, therapeutically working through significant trauma, and aiding them in moving toward attachment security. For clients who are difficult to treat, we proposed and explained the use of biofeedback as a method to increase their engagement in meaningful therapy. Hopefully, this information will lead to more viable ways to treat these impaired children and thus prevent further entrenchment in the criminal justice system while increasing successful treatment outcomes.

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Donna Macomber and Elena L. Grigorenko

The real voyage of discovery consists not in seeking new lands but seeing with new eyes

Marcel Proust (1871–1922)

Mentor–protégé relationships have existed throughout history in politics, music, business, and entertainment—Aristotle mentored Alexander the Great, Bach was a mentor to Mozart, Richard Branson was a protégé of Freddie Laker, Sir Anthony Hopkins was mentored by Sir Laurence Olivier, and Harry Potter had his Dumbledore. The origin of the term for sage advisor has been traced to the period when Odysseus left his son, Telemachus, under the care of his wise friend, Mentor, when he departed for the Trojan War (Lytle 2009). Mentors are trusted friends, counselors, or teachers, acting as positive role models, who share their knowledge with a younger, less experienced person. Modern mentoring programs have strong face validity—they seem like they should work, instinctually we believe they can work, and, furthermore, we want them to work (Roberts et al. 2004). Mentoring is said to be one of the most popular social interventions in American society (Rhodes and DuBois 2008), and there exists a “good news only” mindset within the media that tends to undercut the impact of any legitimate empirical findings (Rhodes and

Lowe 2008). The Office of Juvenile Justice and Delinquency Prevention (OJJDP) supports mentoring as an effective way to prevent at-risk youth from becoming involved in delinquency (<http://www.ojjdp.gov/>). An estimated three million youth are in individual mentoring relationships in the U.S. In the twenty-first century, federal funding for mentoring programs has increased considerably with appropriations by Congress of \$100 million (Rhodes and DuBois 2008).

At-Risk Youth

Children and youth considered to be at-risk tend to be from large, often single-parent, families coping with chronic poverty. Parents work long hours and children are unsupervised and often left to their own devices after school. Neighborhoods are prone to gangs, drugs, and violence, and community resources are negligible. Many at-risk youth suffer from physical or sexual abuse, neglect, or have witnessed violent behavior within their families or neighborhoods. Schools are poor, and children and youth do not perform well academically and may engage in disruptive and aggressive behaviors while in school. Potential outcomes for at-risk youth are daunting and include teenage pregnancy, drug use/abuse, chronic truancy, mental health issues, and/or criminal or antisocial behavior (Stephens 2010). As adults, at-risk children and youth have a high rate of divorce, chronic unemployment, physical and psychiatric problems, substance

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abuse, demands on the welfare system, and criminal activity (Keating et al. 2002).

Risk and Protective Factors

Resilience is the ability to positively cope with stress and adversity. Three clusters of protective factors that foster psychological resilience have been identified: (1) individual, (2) family, and (3) community. Individual characteristics include intelligence, self-esteem, and disposition; family characteristics involve consistent and close relationships; and community characteristics entail bonding to nonrelated individuals who are positive role models, connections to community organizations, and good schools (Rhodes and Lowe 2008). “Mentoring programs for at-risk youth seek to minimize risk factors (e.g., behavior problems, academic failure, association with delinquent peers) and maximize protective factors (involvement with supportive adults and peers, problem-solving skills, self-esteem, and social and interpersonal skills)” (Britner et al. 2006, p. 749).

Hart et al. (2007) investigated risk and protective factors of violent juvenile offenders. On the basis of whether they had ever been convicted of a violent or nonviolent offense, youth participants were placed into three categories: nondelinquent, nonviolent delinquent, and violent delinquent. Significant risk factors were determined to be substance use, age of first substance use, and learning problems; while protective factors included negative attitudes toward violence, having contact with a caring adult in the community, parenting style, and GPA. High rates of juvenile crime are embedded in a number of interconnected social problems (e.g., substance abuse, child abuse and neglect, family violence, teen parents, latchkey children, and poor parenting skills) (Hinton et al. 2003). As one might expect, violent delinquent participants were found to be high on risk factors and low on protective factors. More importantly, the authors established that although non-delinquent participants had some of the same risk factors as violent delinquent

youth, they also had significantly more protective factors, suggesting that if at-risk adolescents have protective factors in place, they are less likely to engage in delinquent behavior. When gender differences were considered, an important predictor of delinquent and violent behavior was having a caring adult at school for females, and for males, predictors included GPA, power and security related to aggression and violence, learning difficulties, and substance use/abuse at an early age (Hart et al. 2007).

Although the impact on community-based mentoring on risk factors for delinquency is well established, less is known about the effects of mentoring on delinquency and anti-social behavior (Roberts et al. 2004). The Study Group on Serious and Violent Juvenile Offenders (SVJ) convened by the OJJDP determined that programs that address both risk factors and the introduction of preventive factors are the most promising prevention in early intervention programs for SVJ offenders (Catalano et al. 1999). Problems that exist within multiple levels (e.g., school, family, peers, and culture) should be addressed and the dysfunctional interactions between each of these systems should be the focus of preventive approaches to juvenile offender treatment (Hinton et al. 2003).

Developmental Considerations

During the period of childhood and adolescence, interpersonal relationships are evolving, self-esteem is tenuous, and individual identity is formed. According to psychosocial development theory, younger children enter a stage of “Industry versus Inferiority” during the ages of 5–11, while adolescents (ages 12–18) begin the “Identity versus Confusion” phase (Erikson 1968). Younger children learn, create, and accomplish new skills and knowledge and significant relationships move outside of the home and parental influence. Parents are important but they are no longer the authorities they once were. Children develop a sense of pride in their accomplishments and abilities

during this time. According to Erikson (1968), unsuccessful navigation of this stage of development can result in unresolved feelings of inadequacy among peers leading to low self-esteem and doubts about ability for success. The association between an adolescent's self view and behavior is of special relevance for at-risk youth (Spencer and Jones-Walker 2004). Subsequently, adolescents find that life is becoming more complex as they are neither child nor adult, and they begin to struggle with social interactions, grapple with moral issues, and embark on a search for individualism and identity (Erikson 1968), as well as independence (Langhout et al. 2004). During the "Identity versus Confusion" stage, adolescents enter a period of withdrawal from responsibilities (e.g., a "moratorium"). A moratorium is a postponement of decisions concerning long-term commitments, and an exploration of new experiences or adventures. Successful navigation of this stage can lead to more sound decisions about the future; however, unsuccessful navigation results in role confusion and turmoil manifesting into insecurity and uncertainty about themselves and the future. As expected, the most significant relationships for adolescents are with peer groups (Spencer and Jones-Walker 2004) as adolescents developmentally shift from parental or family influences and do not engage in close relationships with teachers as in the elementary school years (Darling et al. 2006). During this period, issues of acceptance or rejection in relationships are especially significant (Grossman and Rhodes 2002). Not only are at-risk children and youth exposed to a multitude of environmental and societal stressors that exert indirect and direct influences on behavior, but they are coping with inherent developmental changes as well.

Theoretical Frameworks

The following is a brief review of several frameworks in socialization and development theory, and their relevancy to mentoring programs for at-risk youth.

Acceptance–Rejection Theory

Parental love is essential to a child's healthy social and emotional development. Self-reported levels of parental acceptance rejection have been linked to personality and functioning (Britner et al. 2006). Anxiety and insecurity, a disposition toward behavior problems and conduct disorders, depression or a depressed affect, and involvement in drug or alcohol abuse has been linked to youth perception of parental rejection, and these personality characteristics can manifest throughout the lifespan with perceived rejection by a significant other at any point in life (Rohner 2008). Unintended or negative effects and the risks associated with prematurely terminated mentor relationships should be studied particularly in light of the histories of some at-risk youth (Britner et al. 2006; Grossman and Rhodes 2002).

Attachment Theory

Relationship experiences during the first few years of a child's life create a guideline that children follow to navigate their world outside of the parent–child relationship. With successful attachments, children form solid bonds to parental figures early in life. Successful attachments take place when a child in distress cues a parent/caregiver who then provides support, comfort, and affection. A reciprocal relationship develops where comfort, security, and love are exchanged. Unsuccessful attachments occur when the child feels inadequately soothed and comforted, and over time, may eventually reject parental support. When children fail to use parents for support and comfort, a void develops that over time fosters anger and frustration in the parent–child relationship (Goldsmith 2010). Several studies have found that an indirect effect of solid mentoring relationships was improvement in the quality of the parent–child relationship (Big Brothers Big Sisters of America, <http://www.bbbs.org>; Britner et al. 2006; Generations United, <http://www.gu.org>; Grossman and Tierney 1998; Langhout et al. 2004; Rhodes 2002; Rhodes et al. 2000; Taylor et al. 1999).

Host Provocation Theory

As described above, at-risk youth face a multitude of internal and external challenges. Host Provocation Theory holds that when at-risk youth are negatively influenced by antisocial stressors and provocations and lack internal (self-regulatory capacity) and external (parental control) safeguards, they are more likely engage in unlawful activity. Good mentors may successfully monitor children and shield them from antisocial inducements (Britner et al. 2006).

Oppression Theory

Multiple oppressors (e.g., racial minority status and poverty) influence the at-risk youth and may lead to feelings of powerlessness and lack of control limiting opportunities to experience ambition and success. A mentor can be a compelling role model—providing connections to resources and opportunities, and serve as a paradigm of possibilities (Britner et al. 2006).

Rhodes Model

This model stresses the importance of mentor responsibility. Long-term commitments, careful screening procedures, adequate and ongoing training, and continuing support are identified as integral components to the successful mentor-mentee relationship. Mentors can act as positive role models and encourage youth to feel connected to their communities and help them in goal setting, academics, and positive extracurricular activities (Britner et al. 2006). The Rhodes Model maintains that caring, enduring mentoring relationships impact youth outcomes through social, emotional, cognitive, and identity development (Rhodes 2005; Rhodes and DuBois 2008).

Social Support Theory

A plain and simple description of social support is a positive association or helpful behavior provided to a person in need. In Social Support

Theory, mentors provide resources that are of value (e.g., guidance, information, and skill acquisition). Support from mentors may help youth to avoid a range of negative outcomes (e.g., drug and alcohol abuse, teen pregnancy, dropping out of school) (Britner et al. 2006)

Sociomotivational Model of Mentoring

Relevant behavior in context is predisposed by three categories of needs (connection, self-reliance, and competence). Three aspects must be present in the satisfaction of these needs: structure (e.g., mentors providing guidance and information while clearly stating expectations and consequences), involvement (e.g., investment of time, attention, instruction, and resources), and support for autonomy (e.g., encouragement toward independent thinking, recognition and respect for individuality). This model links characteristics of the mentoring relationship, motivational goals, and outcomes (Britner et al. 2006).

At-Risk Youth and Crime

Included in the numerous negative outcomes for at-risk youth is criminal or antisocial behavior. Nationwide, law enforcement made an estimated 13,687,241 juvenile arrests (excluding traffic violations) in 2009. Of these arrests, 581,765 were for violent crimes and 1,728,285 were for property crimes (Uniform Crime Reports 2009). Of note, among juvenile detainees, males from minority and low-income backgrounds, are over-represented (Morrison 2002), as are youth with special learning needs (Leone 2004; Quinn et al. 2005). “It is a complicated braid of inadequate education, criminalization, unjust hiring practices, poverty, and racism that forms a pathway that for many Black males is inescapable” (Woodland 2008, p. 557).

With the brief increase in youth violence in the 1980s and 1990s, there was a shift in the juvenile justice system from one of paternal benevolence to a more penal reactionary stance (Merlo and Benekos 2003; Piquero and Steinberg 2010).

This was a simple “quick fix” knee-jerk reaction to juvenile crime brought about by three factors: (1) media perpetuation of public fear by reporting random acts of violence by youth and the victimization of strangers, (2) the demonization of youthful offenders as dangerous and unremorseful, and (3) misgivings of the system’s ability to control youth violence (Merlo and Benekos 2003). Public outcry influences public policy, and to gain support for re-election, policymakers act based on what they believe the public desires. “From 1985 to 1997, the number of youth younger than age 18 sentenced to adult state prisons increased from 3,400 to 7,400, and the number held in state prisons increased from 2,300 to 5,400” (Merlo and Benekos 2003, pp. 278–279). A juvenile who enters the adult system is labeled a convict and carries the accompanying negative social circumstances (Jones-Brown and Henriques 1997) undermining successful reentry into the community (e.g., gainful employment, a return to school and eventual graduation, refraining from substance use). After Columbine and other school shootings in the 1990s, zero tolerance laws for fighting, bullying, weapons possession, and drug possession were established and adopted by school districts throughout the country. The objective of the zero tolerance laws was to make schools safer; however, broad interpretations have resulted in an excessive number of suspensions and expulsions for seemingly trivial offenses.

At this time, there is evidence of a withdrawal from the punitive, rigorous approaches characteristic of the 1990s. Perhaps this is due to lowered crime rates (particularly among juveniles), and lack of evidence that harsher punishments deter criminal activity. Arrests of juveniles for all offenses decreased 8.9% in 2009 when compared with 2008, while arrests of adults declined 1.2% (Uniform Crime Reports 2009). There also appears to be a change in public perception as well.

Piquero and Steinberg (2010) surveyed approximately 2,000 adults from across four states as to their preference for rehabilitation or incarceration of juvenile offenders. Their findings discredit conventional belief that the public favors incarceration of youth over rehabilitation. In fact, a greater number of respondents

favored additional rehabilitation over additional confinement, and were willing to pay additional taxes to pay for it (Piquero and Steinberg 2010). In May of 2010, Senator Frank Lautenberg (D-NJ) introduced the Juvenile Mentoring Program (JUMP) Act of 2010 (S.3353). JUMP 2010 is an amendment to the Juvenile Justice and Delinquency Prevention Act of 1974 (<http://www.govtrack.us/congress/>), and proposes availing funds to local agencies for putting into practice mentoring programs that serve at-risk youth in high crime areas. At this time, S.3353 has been read twice and referred to the Committee on the Judiciary for review (<http://www.govtrack.us/congress/>). Informal feedback from a JUMP-sponsored mentor program from 1995 indicated that 30% of participants showed improvement in school attendance and academics, 35% showed improvement in their general behavior, and 48% showed increased frequency of appropriate interactions with peers (Jones-Brown and Henriques 1997).

With the shift from a punitive response to a rehabilitative stance to juvenile offenders, mentor programs have become a popular prevention/intervention strategy. An attractive feature of mentoring programs for delinquent youth is that they take place in the community where youth learn to manage daily situations that affect their lives (Jones-Brown and Henriques 1997), as well as the capacity to change the underlying causes of delinquency (e.g., poverty, unemployment) by tapping into the unique strengths of different communities (Spencer and Jones-Walker 2004). However, juvenile offenders, upon reentry into the community, receive services from school, health and human service, law enforcement, and family court professional teams, but mentor programming is rarely integrated into these services (Britner et al. 2006).

Mentor Programming Impact on Recidivism

Mentoring has been implemented as an intervention in the criminal justice system as a method of reducing reoffending (recidivism) and increasing

positive life outcomes. The success or failure of mentoring programs for juvenile offenders is often determined by recidivism rates. The dilemma with this approach is how recidivism is defined and measured (Stoodley 2010). Should recidivism be considered as rearrest, readjudication, or reconfinement? Does recidivism occur even if the charges are not sustained or are status offenses (i.e., those that can only be committed by juveniles)? What if new charges are relatively minor or technical program violations? Using recidivism rates as the sole measure of program effectiveness is an easy way to dismiss other potential positive effects and claim “nothing works” (Jones-Brown and Henriques 1997). The Council of Juvenile Correctional Administrators (CJCA), with support from the OJJDP, identified three goals related to recidivism measurement: (1) reduced reoffending, (2) increased support for evidence-based programs (proven and promising), and (3) support the continuous quality improvement of programs and systems of services (Stoodley 2010, p. 86).

A study by Blechman et al. (2000) compared three intervention strategies to prevent recidivism among juvenile offenders upon reentry into the community: Juvenile Diversion (JD), JD plus skills training (JD + ST), and JD plus mentoring (JD + MEN). Participants with prevalent charges of theft, burglary, criminal mischief, assault, disorderly conduct, and possession of controlled substances were randomly assigned to the three groups. Recidivism rates were determined by review of official records of the dates of arrests and associated criminal charges preceding and following the intake arrest on charges of auto theft, criminal mischief, and disorderly conduct (though most participants were found to have multiple charges). Those in the JD program wrote letters of apology and performed community service; the JD + ST group wrote apology letters, performed community service, and attended anger management, personal responsibility and decision-making classes; and the JD + MEN participants wrote apology letters, performed community service, and were matched with adult volunteer mentors by a community agency. Data analysis indicate that 63% of the JD + ST group

were not arrested 2 years or more after first arrest compared to 49% in the JD + MEN and 54% in the JD group (Blechman et al. 2000). In this instance, mentoring was found to be the least effective intervention in reducing recidivism rates than either the Skills Training or Juvenile Diversion group.

Bouffard and Bergseth (2008) compared outcomes for youth returning from out-of-home placement who received reentry programming in addition to traditional probation services with comparable youth returning from out-of-home placement with no reentry services. Out-of-home placement facilities and juvenile probation staff work in tandem to provide juvenile offenders support and services before, during, and after they transition into the community. Reentry services included a paid transitional coordinator who engaged in a number of mentoring and supervisory activities. Juvenile offenders participated in or completed a substantial portion of services referred by transitional coordinators. The preliminary results of this study suggest that the addition of a transitional coordination providing comprehensive reentry services may improve both adjustment to the community and success in desisting from crime and delinquency, and that control approaches alone (probation with no reentry services) may not be sufficient (Bouffard and Bergseth 2008). Here, several recidivism measures were taken into account: (1) criminal and noncriminal (status) reoffending rates; (2) analysis of the time to reoffending; and (3) analysis of the number of later official contacts.

As with the reentry program described above, the Intensive Aftercare Program (IAP) (Altschuler and Armstrong 1994), is a reentry program for juveniles that includes: a three-phase design, a needs assessment, and coordinated case management (Bouffard and Bergseth 2008). Case managers and rehabilitative services are coordinated over three phases: prerelease planning phase, reentry preparation (short-term postrelease phase), and community-based services phase after release from placement. The Serious and Violent Offender Reentry Initiative (SVORI) (Winterfield and Brumbaugh 2005) is a similar model for adults as well as juvenile offenders

returning to the community. The authors claim that with these programs, the rates of recidivism can be decreased with supervision and support. Services and support should be individualized to the needs of the offender while in custody, continuity of required services should be secured, placement services in the community should be determined by the needs of the offender, and provision of treatment services during placement should be continued by the aftercare community.

Jolliffe and Farrington (2007) of Cambridge University conducted a meta-analysis of 18 studies of mentored and control/comparison groups and their impact on reoffending. All but two of these studies were conducted in the US; the others were carried out in England and Wales. The overall results show that mentoring significantly reduced subsequent offending. However, the effectiveness of mentoring was related to key components of the individual studies. The successful mentoring programs differed from less successful mentoring programs on the following attributes:

- Interventions where the mentor and mentee spent more time together per meeting.
- Interventions where mentors and mentees met once a week or more.
- Those interventions in which the intervention was a part of a multimodal treatment plan (e.g., behavioral modification, supplementary education, or employment programs) (Jolliffe and Farrington 2007, p. 8).

It should be noted that reoffending was generically defined as “apprehended by police” in this meta-analysis (Jolliffe and Farrington 2007, p. 8).

Recent Research

Perhaps the largest and most prominent mentoring program is the Big Brothers/Big Sisters of America (BBBSA). BBBSA was founded over a hundred years ago and currently operates throughout the U.S. and in 12 countries around the world (<http://www.bbbs.org>). At-risk children and youth from single-parent families are matched for approximately 1 year with appropriate mentors who undergo a screening and training process.

Several studies on the effects of the BBBSA mentoring program have been conducted and are described below. The Substance Abuse and Mental Health Services Administration (SAMHSA) Registry of Evidence-based Program and Practices (NREPP) (<http://www.samhsa.gov>), an online registry of independently reviewed and rated interventions, assessed BBBSA as an “effective program”; while a similar program, Across Ages, received “model” program status (Rhodes 2008).

Across Ages (<http://acrossages.org>) is an intergenerational, multisystemic approach to mentoring at-risk children and youth. Adults aged 55 or older are recruited, trained, and matched to youth in their community. Older adult mentors are invaluable because they have an opportunity to feel significant and invested in the future, while young people receive extra attention, guidance, and support from a caring adult (Generations United, <http://www.gu.org>). In addition to spending 1–2 h/week with their assigned Across Ages mentor, youth perform community service hours, undergo social competence training, and participate in monthly family activities. Outcomes from a randomized pretest/posttest, control group study design include improvement in knowledge about and reactions to drug use, decrease in alcohol and tobacco use, improvement in school-related behaviors, improvement in attitudes toward school and the future, improvements in attitudes toward adults in general and older adults in particular, and improvement in well-being. Family outcomes included increased participation in school-related activities, more positive communication with children, engagement in more positive family activities, improved access to community resources, and expanded support (Taylor et al. 1999).

Other intergenerational mentoring programs include Mentor Link—a mentoring program that matches older adults with high school students who need guidance and assistance to resolve social, educational or employment problems and to counsel youth in setting realistic goals for themselves. Mentors of the Bridges Intergenerational Mentoring program offer assistance to immigrant

children with their assimilation to a new culture, provide academic support, improve communication skills, and foster personal development (Generations United, <http://www.gu.org>).

Public/Private Ventures conducted a study of youth from eight different BBBSA programs in the United States. Participants were matched with appropriately screened and trained mentors while a corresponding control group was placed on a waiting list for 18 months (Grossman and Tierney 1998). At the 18-month follow-up, findings indicated that youth who participated in the program felt more competent about doing school work, attended school more, received better grades, were less likely to start using illegal drugs or alcohol, were less likely to hit someone, and had better relationships with parents (Grossman and Tierney 1998; Big Brothers Big Sisters of America, <http://www.bbbs.org>; Generations United, <http://www.gu.org>).

Participants from the Grossman and Tierney study (1998) were further evaluated on multiple domains: academic adjustment (Rhodes et al. 2000), duration of relationships (Grossman and Rhodes 2002), relationship styles (Langhout et al. 2004), and same-race and cross-race mentor matching (Rhodes et al. 2002). A brief description of each evaluation follows.

Rhodes et al. (2000) examined direct and indirect influences of mentor relationships with regards to academic adjustment. The treatment group (e.g., those youth that were in matched mentor relationships) reported improved parental relationships, enhanced scholastic competency, and better school attendance at 18-month follow-up although the treatment group and nontreatment group were equivalent at baseline assessment. Indirect effects of mentoring led to statistically significant improvements in increased school value and improved grades (Rhodes et al. 2000). Grossman and Rhodes (2002) examined the effects of length and duration of mentoring relationships. Interpersonal relationships are key components in the developmental stages of children and adolescents. Abused or neglected youth who have experienced mistreatment may have difficulty trusting adults which may hinder the relationship building process (Britner et al. 2006).

The authors found that youth in mentor matches that lasted longer than 12 months reported significant increases in self-esteem, perceived social acceptance, perceived scholastic competence, quality of parental relationships, school value, and decreased drug and alcohol use. Conversely, youth in matches that terminated within the first 3 months of the relationship indicated decreases in self-esteem and perceived scholastic competence; while matches that lasted less than 6 months indicated no significant positive effects and an increase in alcohol use. Prematurely terminated mentor relationships may arouse feelings of rejection and disappointment manifesting in negative emotional, behavioral, and academic outcomes (Grossman and Rhodes 2002). Not only do early terminations have a negative impact on the child, but it negatively impacts program staff and financial resources given the effort involved in recruiting, screening, training, and matching volunteers (Rhodes and Lowe 2008). In a similar study, results indicate that positive effects of youth outcomes became increasingly stronger as the mentor–mentee relationship persisted for longer periods of time. In addition, regular mentor contact was found to augment security and attachment in the mentor relationship as well as in other important relationships (Rhodes and Lowe 2008), and mentor relationships that end prematurely due to problem behaviors result in disappointment, rejection, and betrayal (Rhodes et al. 2009).

Quantity is not the only important factor in mentor relationships—quality is also a fundamental component of the mentor–mentee relationship. Youth from BBBSA study (Grossman and Tierney 1998) were asked to characterize their matched mentors on four parameters: (1) moderate, (2) unconditionally supportive, (3) active, and (4) low-key (Langhout et al. 2004). Ratings were determined by youth responses to survey questions regarding the frequency and type of activities mentors engaged in with mentees and youth impressions or feelings toward his or her mentor. Those youth that reported the largest number of benefits (e.g., decreased alienation from parents, decreased conflict and inequality with friends and improved sense of self-worth

and school competence) characterized their relationships in terms of “moderate” levels of activity and structure. Those in the “active” group and “low-key” groups were shown to have improved school and peer relationships, and less peer conflict, respectively. Surprisingly, those from the “unconditionally supportive” group showed no positive effects and reported an increase in parental alienation (Langhout et al. 2004). Finally, an analysis of the impact of same-race versus cross-race mentor matches was undertaken by Rhodes et al. (2002). It is assumed that an adult of a different racial and ethnic background cannot connect to youth or teach youth how to cope in society if he or she has not had the experience of being of minority status. Unfortunately, the shortage of minority mentors may result in longer wait for mentor matches. On the other hand, cross-race mentoring may be a way to bridge social distances and increase awareness by challenging cultural beliefs, and the quality of the mentor relationship should be more important than race. Results indicate that youth in cross-race relationships were more likely to talk to their mentors and perceived their mentors as providing more unconditional support compared to youth in same-race relationships. Parents of same-race matches were more supportive of the relationship than were parents of youth in cross-race matches; while parents of youth in cross-race matches were more likely to believe that the relationship improved their children’s peer relationships, the mentor tried to build on the youth’s strengths, and that mentors took them places they wanted to go. Adopting a flexible, youth-centered style in which the young person’s interests and preferences are emphasized can further close enduring ties (Rhodes and DuBois 2008). When gender was considered, however, negative effects were reported. Minority boys in cross-race matches experienced a greater decline in perceived academic competence and self-worth than minority boys in same-race matches, and minority girls in cross-race matches experienced a greater decrease in school value and self-worth than did minority girls in same-race matches. The authors concluded that trusting and supportive relationships appear to be

possible for minority youth in same- and cross-race relationships, and the quality of these relationships appears to be in combination with other factors (e.g., gender, interpersonal inquiry, parental attitudes) (Rhodes et al. 2002).

Data from Project Youth Connect (PYC), a multisite evaluation focused on the prevention, reduction, and delay of substance abuse among at-risk youth, was used to evaluate the influence of the mentor-youth bond (Thomson and Zand 2010). Study findings further validate Rhodes et al. (2000), Grossman and Rhodes (2002), Spencer (2006), and Darling et al. (2006)—that mentoring relationships play a significant role in positive relationships between youth and other adults particularly when youth perceive mentors as genuine, compassionate, and as companions.

Keating et al. (2002) examined an intensive mentoring program focused on youth deemed at-risk for mental illness or juvenile delinquency, but who were not yet court involved. Pre- and postintervention data were collected from youth, parents, and teachers. Mentors reported the number of hours spent with youth and the activities completed. The study sample consisted of primarily male, African American youth between the ages of 10 and 17 years old. Post-intervention data indicated that mentoring was successful in decreasing problematic behaviors, but the authors question whether this change can be credited exclusively to mentor support and guidance, other factors, or combination (Keating et al. 2002).

An examination of aggressive and delinquent behaviors among Chicago urban youth found that neighborhood level resources such as social cohesion and collaboration between neighbors, available organizations and services (e.g., parks/playgrounds, community newsletters, neighborhood watch programs, tenant associations), and accessible youth services (e.g., recreation programs, after-school programs, intervention services, and mentoring/counseling programs) are protective factors against highly aggressive behavior (Molnar et al. 2008). This study cohort was from the Project on Human Development in Chicago Neighborhoods (PHDCN) (Earls and Buka 1997)—a longitudinal, interdisciplinary study of how families, schools, and neighborhoods

affect child and adolescent development and to enhance the understanding of the developmental course of both positive and negative human behaviors. The PHDCN specifically examined the pathways to juvenile delinquency, adult crime, substance abuse, and violence.

After-School Programs

Parents working long hours result in children and youth being left to their own devices upon school dismissal. After-school programs provide various activities to these children including athletics, the arts, tutoring/academic study, social skills and communication, or are focused on improving behaviors. These programs are often delivered in a group format by paid mentors through school or community programs; however, others are lead by volunteers who individually interact with youth.

Middle school students with a history of school suspension and/or expulsion were nominated by principals and administrators for a mentoring program which targeted at-risk youth for delinquent behavior (Jackson 2002). Mentors were junior and senior undergraduate students with prerequisites in child development, psychopathology, and intervention who spent an average of 15–20 h/week with their matched mentees over a two semester period (Jackson 2002). During and at the end of the program, parents reported significant decreases in internalizing and externalizing behaviors; however, teachers reported no significant changes although participants had few to no school violations by the end of the program. In a comparable study, eighth grade students from middle schools with significant academic and disciplinary problems participated in a mentor program aimed at reducing school-related disciplinary problems (Rollin et al. 2003). Students participated in the program for approximately 2 h/day, 4 days/week throughout the school year. At-risk factors included involvement in the juvenile justice system, fighting or other disciplinary problems at school, high absenteeism, or overage for grade. Study results indicate that students in the mentoring program

had less in-school suspensions, fewer days of out-of-school suspensions, and a decrease in the number of infractions on school property as compared to those students not receiving mentorship services (Rollin et al. 2003).

According to Woodland (2008), there are three types of after-school programs that appear to be promising in the lives of young Black males: (1) the extracurricular model which provides sports, arts, tutoring, homework assistance, etc.; (2) the mentoring model such as BBBSA, and (3) Cultural Rites of Passage programs—culture-based interventions to supplement and support the transition of Black youth to adulthood. Urban African American students entering the middle school environment participated in a group mentorship program which emphasized remedial education and an appreciation of African American heritage (e.g., the Village Model of Care) in promoting school bonding, social skills development, and academic achievement (Hanlon et al. 2009). Employing culturally sensitive principles and methods, the Village Model of Care is a program developed by African American professionals, and preventive interventions incorporated structured group mentoring (mentors were from the community who acted as educators and advisors), parental empowerment and support services, and community outreach services. At 1-year follow-up, parental participation in the intervention program was found to be positively related to improvement of grade point average of these children, and there was evidence of improvement in their school adaptation and achievement (Hanlon et al. 2009). Participants at risk for academic failure and expulsion due to office referrals, suspensions, and fighting in school were selected to participate in the Maat Academy—a culturally sensitive mentoring model to improve school behavior, academic performance, and social skills (Mitchell et al. 2002). Black male adults were employed to improve the academic and social skills of the participants. After 1 year, students demonstrated increased classroom participation, were less likely to be directed to leave classes, and received significantly fewer office referrals (Mitchell et al. 2002).

And last but not least, a meta-analysis of 55 evaluations (some of which may be described here) of the effects of mentor programs on youth realized a mean effect size of 0.14–0.18 on a variety of outcome measures (Bouffard and Bergseth 2008), and that at-risk youth appeared to reap the largest benefit from participating in mentoring programs (DuBois et al. 2002). Overall findings, however, suggest that although significant positive effects were found for the psychological, social, academic, and employment outcomes, as well as for the reduction of problem behaviors for youth, these effects were, in fact, small (DuBois et al. 2002). Of note, the authors were not able to differentiate effects for juveniles involved in the justice system and those who were not (Bouffard and Bergseth 2008). As in Grossman and Rhodes (2002), the authors propose that “frequency of contact, emotional closeness, and longevity of relationships may each make important and distinctive contributions to positive youth outcomes” (p. 187). The authors support continued implementation and dissemination of mentoring programs for youth, but they suggest innovation and experimentation with enrichment to program design.

It should be noted here that several authors described limitations to their research. The most recurrent include: (1) significant but modest positive outcomes (Catalano et al. 1999; Jolliffe and Farrington 2007; Grossman and Tierney 1998; DuBois et al. 2002; Langhout et al. 2004; Rollin et al. 2003); (2) primary reliance on self-reports; (3) nonrandom assignment to treatment and control groups (Hanlon et al. 2009; Hart et al. 2007; Jackson 2002; Keating et al. 2002; Roberts et al. 2004; Rollin et al. 2003); (4) small sample sizes (Jackson 2002; Keating et al. 2002; Rollin et al. 2003); and (5) that cause–effect relationships were unclear (Hart et al. 2007; Jackson 2002; Keating et al. 2002).

Mentor Characteristics

Descriptions of at-risk children and youth and several different mentoring programs have been provided throughout this chapter. However, little

has been said about mentor characteristics. What particular attributes and skills are necessary for an individual to be a successful mentor? Few guidelines exist to address the ethical responsibilities and commitment of adult mentors, or even provide a clear agreement as to what they should be (Rhodes et al. 2009). For volunteer programs, potential mentors typically undergo a screening process and background check before they are matched to a youth in the program. Although some programs describe this screening process as “intensive” (e.g., BBBSA, <http://www.bbbs.org>), specifics are not provided. Some programs take the intergenerational approach and recruit older individuals (e.g., Across Ages, Mentor Link, Bridges Intergenerational). For goal-oriented mentor programs (e.g., skills training, employment, academics/tutoring), mentors are typically paid, and the screening process is, in all probability, designed as employer/employee interview (e.g., inquiry of educational background, work experience, qualifications to administer a particular program, etc.).

One can assume that program administrators screen potential mentors for past criminal history so as to protect their clients from any harm. Rhodes et al. (2009) recommend explicit guidelines similar to the American Psychological Association’s (APA) ethical principles and conduct code of psychologists to address the ethical responsibilities and obligations of mentors. The proposed five guiding principles are:

1. Promote the welfare and safety of the young person. Work to benefit youth or at the very least do not harm.
2. Be trustworthy and responsible. Satisfy meeting frequency and match duration as predetermined by the program.
3. Act with integrity in mentees’ schools, homes, and communities by being respectful and not in such ways that require programs to run interference.
4. Provide justice for young people. Exercise good judgment and take precautions to ensure biases do not result in prejudicial treatment of the mentee.
5. Respect the young person’s rights and dignity, right to privacy and confidentiality. Understand

the youth's personal goals, desires, and values and involve youth in decision making.

Youth and mentors determined specific traits as instrumental in creating satisfying relationships: the mentor should understand the youth's reluctance to trust, the mentor should understand that at least initially the relationship would be unidirectional, the mentor should acknowledge the youth's interests and take them seriously (e.g., do not criticize or preach), the mentor should make an effort to relate to the youth's experience without prying into private matters, and the mentor should attempt to understand the youth's family (Jones-Brown and Henriques 1997).

As mentioned previously, at-risk children face a multitude of psychosocial stressors and may present with symptoms of psychopathology. Chief of among these are externalizing behaviors [e.g., attention deficit hyperactivity disorder (ADHD), aggression, oppositional defiant disorder (ODD), or conduct disorder (CD)]. Internalizing pathology may also be present (e.g., depression or anxiety). For youth who are exposed to violence, posttraumatic stress disorder (PTSD) may manifest itself in externalizing behaviors, internalizing behaviors, or both. Mentors should be cognizant of how these challenges, in addition to inherent developmental changes, may affect the youth's attitude in developing a successful mentor relationship. Quality leaders need skills to be able to intuit and assess complex psychological and environmental situations and act accordingly (Larson and Walker 2010).

Because such complex situations can be encountered while mentoring at-risk youth, programs must be honest with potential mentors regarding the expectations, time commitment, and the risks versus benefits of working with special populations of youth (Britner et al. 2006). Additional, ongoing training and supervision should familiarize mentors with the problems imposed by low-income, urban settings, and a clear identification of the goals of the mentoring relationship can provide guidance as to how mentors are trained to be effective in reaching those goals (Langhout et al. 2004). Rhodes and Lowe (2008) suggest that the importance of consistency,

handling terminations, ethical quandries, advocacy on behalf of the child, gifts and money, working with the child's family/school diversity issues could be potential topics for supplemental mentor training:

To improve practice and program quality, the youth development field would benefit from open discussion and ongoing training on the diverse dilemmas that leaders encounter, and the appropriateness of different types of responses.

(Larson and Walker 2010, p. 347)

Final Thoughts

Given the importance of providing preventive interventions to at-risk children and youth and the potential benefits of youth mentoring programs, evidence-based practice from longitudinal research is crucial in the pursuit of positive outcomes. Research evaluations employing systemic evaluation that address overlapping populations, risks, and interventions are a necessity to test the efficacy of programs, implement changes to existing programs, and guide the development of new endeavors. Current research supports the idea that an inclusive multisystemic approach to the individual, the family, the school, and the community increases the likelihood of positive outcomes for at-risk children and youth (Hinton et al. 2003).

Public opinion and public policy are currently very supportive of mentor programming, and believe in its potential for success. The JUMP Act of 2010 proposes to avail public funds to local agencies for mentor programming, and in a plan to continue the 2009 "Be a Mentor" campaign, the OJJDP expected to reach 3.5 million people through its ad in the game programs for Major League Baseball's 2010 American League and National League Championship Series and the World Series inviting adults to "Step Up to the Plate" by becoming a mentor. This ad will also appear in the program for the 2011 All-Star game.

In January of 2010, President and Mrs. Obama celebrated National Mentoring Month by bringing together mentors and mentees from across the country to participate in a conversation about

the importance of volunteers being involved in the life of a young child.

Every person in this room remembers a teacher or mentor that made a difference in their lives. Every person in this room remembers a moment in which an educator showed them something about the world—or something about themselves—that changed their lives. It could be a word of encouragement, a helping hand, a lesson that sparked a question, that ignited a passion, and ultimately may have propelled a career.

President Barack Obama
White House Press Release
January 6, 2010

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Introduction

Through years of experience working directly with children and families exposed to violence, and developing, implementing, evaluating and supporting multidisciplinary programs that interrupt the cycle of violence, the Yale Child Study Center's National Center for Children Exposed to Violence (NCCEV) has developed a unique vantage point from which to understand the phenomenon of children's exposure to violence. In this chapter, the scope of the problem and the effects of exposure are described. The ways in which unaddressed exposure to trauma and violence constitute both a dire threat to public health and a significant criminal justice crisis are presented. Trauma is placed at the center of the cycle of violence and the mecha-

nisms by which a multitude of risk factors (such as unaddressed exposure to child abuse, domestic violence, school violence, and community violence; substance abuse; and school failure) aid in the perpetuation of the cycle of violence from child victim/witness to juvenile/adult offender are described. Several NCCEV programs are described to illustrate the ways in which multidisciplinary, integrated approaches to prevention, early identification and early intervention, and collaborative responses that incorporate law enforcement, mental health, and social services are critical to effectively addressing the needs of children exposed to violence. An argument is made for increased support for such programs to break the cycle of violence.

Children Exposed to Violence: The Scope of the Problem

Across America children are exposed to violence at alarming rates. A 2009 national survey reveals that in the previous year 60% of children and adolescents suffered at least one victimization, 46.3% experienced a physical assault, 25.3% witnessed violence, 9.8% witnessed intra-family assault, 10.2% were subjected to child maltreatment, 10.2% experienced a victimization-related injury, and 6.1% experienced sexual victimization (Finkelhor et al. 2009b). The sheer number of child victims is equally striking. The US Department of Health and Human Services reports that during 2007 an estimated 794,000 children were confirmed by child protection

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agencies to be victims of abuse or neglect (US Department of Health and Human Service Administration on Children Youth and Families 2009b), and during 2008, 463,000 children were placed in the foster care system (US Department of Health and Human Service Administration on Children Youth and Families 2009a). Of the over 22 million children between the ages of 12 and 17, close to two million have been victims of serious sexual assault, nearly four million have been victims of serious physical assault, and nine million have witnessed serious violence. Children are victims in 58% of all forcible rapes, and 15.5 million children are exposed to domestic violence every year. As authors of the 2007 article *Best Interests of Society* (Harris et al. 2007) observe, while the number of children exposed to violence and potentially traumatic events (PTEs) alone should raise enormous concerns, the psychological and physiological impact of childhood traumatic events constitutes an urgent public health crisis (Bremner 2003; Harris et al. 2004; Sharfstein 2006; van der Kolk et al. 2005).

The Effects of Violence Exposure on Children

Children who are victims of, or witnesses to, violence suffer potentially devastating consequences. Exposure to violence affects how children feel, act, think, and learn. Children with histories of traumatic reactions to PTEs and those living in families affected by multiple social adversity factors are at greatest risk for poor long-term adaptation and adverse psychological outcomes (Cooley-Quille et al. 2001; Overstreet and Braun 2000; Overstreet et al. 1999; Pine and Cohen 2002). These children are at highest risk for a host of psychiatric disorders and maladaptive behaviors, including: PTSD, chronic depression and anxiety, alcohol and drug abuse (Anda et al. 2006; Harris et al. 2007), personality disorders (Boney-McCoy and Finkelhor 1995; Campbell and Schwarz 1996; Freeman et al. 1993), conduct problems (Mrug and Windle 2009), school failure (Schwartz and Hopmeyer Gorman 2003),

repeat victimization (Finkelhor et al. 2007, 2009a), and violent criminal conduct that often mirrors the violence to which they were originally exposed (Herrenkohl et al. 2007; Herrera and McCloskey 2003). Not surprisingly, children who have experienced the greatest number of contributing risk factors are at greatest risk of perpetuating the cycle of violence.

Specifically, exposure to violence in early childhood is associated with higher risk for physical aggression, delinquency and violent behavior in adolescence (Jenkins and Bell 1997; Lansford et al. 2007; Mersky and Reynolds 2007; Shakoor and Chalmers 1991; Thornberry 1994). Being abused or neglected as a child increases the likelihood of arrest as a juvenile by 53% and the likelihood of arrest for a violent crime as an adult by 38% (Widom and Maxfield 2001). Traumatic childhood events are documented in the histories of as much as 98.6% of juvenile delinquents (Carrion and Steiner 2000). A comparison of delinquent and non-delinquent youth found that a history of family violence or abuse is the most significant difference between the groups (Lansford et al. 2007). Mothers who were abused or neglected as children are significantly more likely to abuse or neglect their children than mothers who were not abused (Heyman and Smith Slep 2002), and children who have been exposed to domestic violence are more likely to be victimized by violence themselves than counterparts from nonviolent households (Mitchell and Finkelhor 2001).

While the mental health, education, and criminal justice consequences of childhood exposure to violence are well documented, the public health consequences have only recently been explored. The Centers for Disease Control and Prevention Adverse Childhood Experiences (ACE) study is a landmark investigation of the links between childhood maltreatment and later-life health outcomes. The ACE study reviewed over 13,000 enrollees in Kaiser Permanente health insurance plans and their experience of a number of traumatic childhood events, including the following: psychological, physical, and sexual abuse; violence against the mother; living as a child with a household member who abused substances, was suicidal or mentally ill; and physical and emotional neglect.

These experiences were found to have had a dose–response or “significant graded relationship” to each of the adult health-risk behaviors and diseases that were examined (Anda et al. 2006; Felitti et al. 1998). For example, compared to individuals who had not experienced any of the listed adverse childhood events, respondents who had experienced four or more of these adversities had a 4- to 12-fold increased likelihood of alcoholism, drug abuse, depression, and suicide attempts and a 2- to 4-fold increased likelihood of chronic smoking and sexually transmitted diseases (Dube et al. 2002; Felitti et al. 1998).

Furthermore, these adverse childhood events emerged as the most significant predictors of ischemic heart disease (Dong et al. 2004), cancer, chronic lung disease, skeletal fractures, and liver disease, which rank among the leading causes of death in adulthood (Felitti et al. 1998). What explains this profound linkage between traumatic childhood events and dire adult physical conditions? ACE investigators posit that health-risk behaviors may serve as the connection between traumatic childhood events and the development of adult disease years later because individuals exposed to violence and trauma often turn to chronic smoking, alcohol, and drug use to cope with anxiety, depression, and anger. As the ACE study clearly illustrates, childhood adversity, particularly exposure to trauma and violence, presents an enormous public health crisis.

Who “Sees” Children Exposed to Violence?

Professionals in the fields of psychology, psychiatry, law, criminal justice, medicine, education, and other child- and family-serving disciplines confront daily the consequences of childhood exposure to violence and trauma. However, each professional who works with children—each policy maker and public official; each police officer, prosecutor, judge, and corrections officer; each social service worker, mental health professional, and child advocate; each clergy member, teacher, mentor and parent—views the phenomenon and outcome of children’s exposure to vio-

lence from a unique perspective. Each of these viewpoints represents a unique and important part of the picture. Yet, when the wide array of professionals who work with, and care for, children approach the problem of children exposed to violence solely from their independent professional vantage points and service silos, viewing the issue only through the lens of their discrete professional training, the “big picture” of how the pieces come together is obscured. The teacher sees the traumatized child as the “discipline problem” who is unable to learn, behaves disruptively in the classroom, and is at risk of dropping out. The police officer sees the traumatized child as a “witness” on yet another domestic violence call to the same address of parents who were themselves so often victimized as children. The emergency room doctor and the prosecutor see last month’s traumatized gunshot victim return as this month’s “patient” and “perpetrator.” Tragically, this approach often leaves parents (who may not always recognize the impact of violence exposure at the time of the original event or during the period of chronic exposure) struggling and without coherent, integrated support when their child subsequently develops crippling psychiatric symptoms; fails in, or drops out of, school; begins chronically abusing substances; or enters the criminal justice system. Moreover, a mental health professional may never see the affected child until years later, when severe psychiatric outcomes of untreated trauma demand the attention of overstretched clinical services, social services, drug abuse programs, prisons, and probation officers.

Focusing on Trauma

Children who are at high risk for posttraumatic disorders and developmental derailment as a result of adverse experiences and exposure to trauma may be the least likely to become engaged in traditional trauma-focused or other mental health treatments (Burns et al. 2004). Yet, they are seen by different child-serving professionals every day. Thus, it is important to focus on the psychological roots of trauma precisely because it is *not* where

service providers holding each piece of the puzzle usually begin. Using a trauma lens to view the problem of children exposed to violence can have a unifying effect across service providers struggling to understand and address children's needs. As individual pieces of a child's experiences and behavior are brought together, a more complete picture is revealed. Service providers begin to see the multifaceted nature of the problem of children exposed to violence and effective multifaceted solutions are forged (Harris et al. 2007).

What Is Trauma?

To understand the anatomy of trauma in a visceral way take a moment to experience this exercise suggested in *Listening to Fear* (Marans 2005):

Sit back in your chair. Perhaps close your eyes. Picture yourself at 7 years old. You are asleep in bed. Imagine that you have just had a nightmare. Not simply a bad dream, but a nightmare where the worst eventuality that you can imagine has become a reality in your mind. Take a moment to think about what would have constituted that personal terror to you as a child. That experience cycles in your mind without abatement. Your feelings of fear and helplessness mount and you become overwhelmed. You cannot tolerate it anymore. You wake up. Your heart is racing, your chest pounding, perhaps you are sweating. You look around. Disoriented, you ask "Where am I?" Your thinking is chaotic, disorganized. The external world is completely confusing. At first you cannot move, but then you run—hopefully to a parent or other trusted adult—for comfort. And what, in this vision, do those adults do? They may simply tell you, "It's only a dream, go back to bed now." Or, they may listen as you talk about your fear and try to console you. In more clinical terms, they may help you reassert pre-event capacity. By talking calmly with you and listening to your thoughts, the trusted adults help decrease confusion and reestablish causal thinking. They talk with you about nightmares and provide you with information about the predictable nature of your individual

response to these overwhelming events. You begin to separate fantasy from reality. Your experience starts to feel tolerable. You start to reestablish a sense of control. Your body begins to regulate. You are able to go back to sleep.

What were the sources of danger you imagined in this nightmare scenario? In all likelihood you may have just imagined loss of your own life; the loss of the life of a significant other; the loss of love of another or of oneself; severe damage to your body; frightening loss of control of your impulses, affects and thoughts; or a world so disrupted by disaster, destruction and danger that it is no longer recognizable, no longer available as a reliable frame of reference for the routines of daily life.

Now what happens if you are a child and this nightmare is not a textbook exercise, but a daily reality? When the unwanted feelings of helplessness and terror do not, and cannot, subside? When the cycle of acute reactions, hyper vigilance and the search for protection cannot end, and eventual reassertion of regulation and safety does not happen? Research indicates myriad negative sequelae of trauma exposure, in both the immediate aftermath of an event and in the longer term (Margolin and Gordis 2000; Osofsky 1999). Exposure to trauma activates our stress-response systems. Our alarm systems go off, attention gets focused and reactivity changes from goal-directed reflection to survival responses. Overwhelming, unanticipated danger leads to subjective experiences of helplessness, loss of control, terror, and the immobilization of usual methods for decreasing danger and anxiety (fight or flight), resulting in neuro-physiological dysregulation that compromises affective, cognitive, and behavioral responses to stimuli. In turn, information processing changes and executive decision-making processes are altered.

Following a traumatic event, children may exhibit some or all of the following symptoms: *Signs and symptoms of children's exposure to violence: Peri-traumatic responses*

- Sleep disturbances
- Separation anxiety
- Hypervigilance
- Physical complaints

- Irritability
- Reexperiencing/reenactment of the event
- Nightmares
- Impulsivity and distractibility
- Regressive behaviors
- Blunted emotions
- Changes in social functioning
- Social avoidance
- Dissociation
- Emotional numbing
- Social avoidance
- Aggressive play/behaviors
- School difficulties/failure

There is evidence to suggest that psychological trauma in fact constitutes injury, which can result in sometimes severe deviations from the normal trajectory of human development and a host of adverse and debilitating psychological, physical, and social consequences (Marans and Adelman 1997; van der Kolk 1987). Event factors including physical proximity to the event, emotional proximity to the event (e.g., whether there is a direct threat to a child, whether the child is a victim, whether the perpetrator is a parent or other trusted adult), and secondary effects of primary importance (e.g., the extent of physical displacement and social disruption that result from the event), combine with individual factors including genetic vulnerabilities and capacities, prior history (i.e., consistent stress or one or more stressful life experience/s), history of psychiatric disorder, familial health or psychopathology, levels of family and social support, and the age and developmental level of the child exposed, to determine the unique trajectory of sequelae following violence exposure. When both psychological and neuro-physiological alterations are unremitting, posttraumatic stress reactions can become chronic; if left untreated, they can persist for long periods of time and extend into adulthood. Following prolonged or intense exposure, neural systems can change and a person's brain can literally become altered or "rewired."

Longer-term consequences of traumatic exposure can include the following:

- Attachment problems
- Eating disorders
- Suicidal behavior

- Anxiety
- Mood disorders
- Substance abuse
- Violent/abusive behaviors
- Somatic problems
- Sexual problems
- Personality disorders

Trauma and the Cycle of Violence

Trauma can be viewed as the hub of the cycle of violence, circling from childhood exposure to violence to adult perpetration of violence back to childhood exposure. The spokes of the wheel that propel its revolution are represented by the hosts of risk factors. These risk factors, including unaddressed exposure to child abuse, domestic violence, school violence, and community violence; substance abuse; and school failure, aid in the perpetuation of the cycle of violence from child victim/witness to juvenile perpetrator to adult offender. (Conversely protective factors, such as familial supports, become the breaks on the wheel.) Unaddressed exposure to childhood trauma and violence thus constitutes both a considerable public health threat and a significant criminal justice crisis. Understanding trauma and its psychological sequelae as central to the issue of children's exposure to violence is thus essential to the forensic, juvenile justice, and criminal justice systems.

What Works? Prevention, Early Identification, and Collaborative Intervention

Clinic-based treatments alone are often incapable of addressing the magnitude of traumatic burdens and the devastating effects of children's exposure to violence. Indeed, there is some evidence that adolescents who are victimized are less likely to seek mental health services (Burns et al. 2004; Guterman et al. 2002), and far too often when children are exposed to PTE, the impact of their trauma exposure and their subsequent needs go unrecognized and unaddressed for years.

These failures are particularly significant given the well-established role that support—especially familial support—plays as a primary protective factor for children exposed to a PTE (Hill et al. 1996; Kliewer et al. 2004a, b; Ozer et al. 2003).

In order to provide adequate support to children exposed to violence, children affected by PTEs must be identified early. In addition, broader systems of care must increase their awareness and understanding of childhood trauma and identify collateral responses (e.g., reestablishing safety, provision of basic needs, return to routines, and assessment and treatment of affected parents). When professional perspectives remain disconnected and isolated in service silos, the picture of both the problems and potential solutions associated with children's exposure to violence remains fragmented. Utilizing a trauma lens to collectively view and understand the needs of children exposed to violence, however, can lead to a shared frame of reference and a basis for coordinated action (Harris et al. 2007). Multidisciplinary, integrated approaches to prevention, early identification and early intervention, and collaborative responses that incorporate law enforcement, mental health and social services, are critical to effectively addressing the needs of children exposed to violence and breaking the cycle of violence.

Since its inauguration in 1999, the NCCEV at the Yale Child Study Center has continued to develop, implement, test and replicate just these types of collaborative, multidisciplinary intervention strategies that address the needs of children and families exposed to violence and help interrupt the cycle of violence. Four of these innovative strategies are described here.

The Child Development-Community Policing Program

The Child Development-Community Policing (CD-CP) program is a national model of law enforcement-mental health collaboration designed to reduce the negative impact of children's exposure to violence by coordinating the response of law enforcement, mental health, and other social service professionals from the initial moment of

crisis (Marans 1996; Marans et al. 1995; Marans and Berkman 2007). CD-CP originated as a partnership between the Yale Child Study Center's NCCEV and the New Haven Department of Police Service in 1991. While the city of New Haven remains the center of CD-CP theory and practice development and training and technical assistance, the program has been adopted or adapted in more than a dozen communities across the country, with Providence, RI, Wilmington, DE, and Charlotte, NC representing the leading replication sites. The CD-CP program is based on three premises deeply rooted in the day-to-day experiences of both law enforcement and mental health professionals serving children exposed to violence: (1) police officers are the most significant first responders to violent and catastrophic events that affect children's lives, yet they frequently lack both the specialized training and necessary partnerships to meaningfully respond to the children exposed to violence whom they served; (2) at the same time, mental health and other social service professionals are often unlikely to come into contact with the vast majority of children at risk of developing negative outcomes as a result of their violence exposure at a time when early intervention could make a meaningful difference in those children's lives; and (3) without effective early identification and intervention strategies the same police officers too often will see the same children continue on a trajectory from child victim/witness to juvenile/adult offender; and without effective early identification and intervention strategies mental health and other social services providers are frequently hampered in their ability to render meaningful support to these children and aid in the interruption of the cycle of violence. Thus, CD-CP partners law enforcement officers with mental health and other social service providers at the earliest opportunity and offers multidisciplinary acute and follow-up services that provide the early identification and intervention that are so critical to improving children's lives and keeping children and communities safe.

In CD-CP communities, mental health professionals are on call 24 h a day, 7 days a week, to respond immediately to police calls involving child victims or witnesses to violence. Police

officers play a central part in the intervention, capitalizing on their roles as representatives of control and authority in the face of violent and traumatic events. Working together, police, mental professionals, child protective service professionals, and other providers, coordinate multisystem interventions that reestablish safety, security and well-being in the immediate wake of violent events. In partnership, CD-CP clinicians and officers help set the most vulnerable children and families on the path to recovery, interrupting a trajectory that otherwise frequently leads to increased risk of psychiatric problems, academic failure, encounters with the criminal justice system, and perpetuation of the cycle of violence.

The CD-CP intervention typically begins with the identification, by police, of children and families deemed to be at-risk due to their exposure to violence and PTEs. Children and families are usually seen by the CD-CP team acutely, or within 36 h of a PTE and police-initiated call for service. In addition, children and families are referred to the CD-CP program through child protective services, hospitals, emergency departments, specialized sexual abuse clinics, and other community agencies and practitioners. As part of the *acute crisis response*, the multidisciplinary team works together to provide order and containment to the situation; attend to basic needs of the victims; remove children from further threat; make immediate plans for safety; consult with social service providers; make necessary assessments, diagnoses, and triage of victims; provide acute services; and arrange for clinical, policing and other social agency follow-up services. CD-CP then supports and augments the acute response with *follow-up services*, including the following: (1) *consultation services* that provide police officers with the opportunity to confer with NCCEV clinicians about cases in which children have been victims of or witnesses to violence prior to the clinician's direct involvement with families; (2) *weekly case conferences* that enable all members of the CD-CP team (including police officers, mental health professionals, educators, social service workers, and juvenile justice professionals) to confer about new and ongoing cases and plan individualized follow-up to meet the safety and security needs of

children and families; (3) *cross-training* which trains police and other professionals in child development, human behavior, and the effects of violence exposure and which trains mental health clinicians in policing procedure and practices; and (4) *trauma-focused treatment* which is provided to children and families in need through NCCEV's trauma treatment clinic.

An independent evaluation of the CD-CP program, funded by the US Department of Justice Office of Juvenile Justice and Delinquency Prevention and conducted by ICF International (formerly Caliber Associates), was completed in 2008. Using a mixed method design that included comparative case studies of children and families exposed to violence, law enforcement survey data, and interviews and focus groups with key stakeholders, the evaluation describes how children, families, law enforcement, and clinicians benefit from the CD-CP program in New Haven and the value CD-CP adds for those providing and receiving services. Specifically, the evaluation found that: (1) acute responses removed barriers to services (many families that received CD-CP acute responses voiced appreciation for the program because they were provided with an immediate entrée to wraparound services that they never knew existed or might be available to them); (2) police officers' knowledge and understanding of the issues faced by children and families improved as a result of CD-CP (officers reported a greater awareness of how violence and other trauma impacts children, and a greater sense of professional efficacy in their work with children and families as a result of the program); and (3) CD-CP clinicians benefited from immediate and ongoing access to families (allowing greater insight into the needs, challenges and resources of children and families exposed to violence, and offering more opportunities to engage families in services).

The Domestic Violence Home Visit Intervention

Over 15.5 million children are exposed to domestic violence each year in the USA, and seven million are exposed to intra-familial violence

characterized as chronic and severe (McDonald et al. 2006). The rates of domestic violence, children exposed to domestic violence, and child abuse and maltreatment often increase in times of high unemployment and economic downturn. Children exposed to domestic violence are particularly vulnerable to negative outcomes. They are at substantially higher risk of psychological and behavioral difficulties, and they have a significantly increased likelihood of perpetuating the cycle of violence as adults—both as victims and as offenders. Children who have been exposed to domestic violence are 158% more likely to be victimized by violence themselves than counterparts from nonviolent households (the risk is 115% higher for boys and 229% higher for girls) (Mitchell and Finkelhor 2001), and children exposed to domestic violence are at greater risk of repeating their experiences as perpetrators of violence in their own intimate relationships. Evidence also suggests a disturbing linkage between domestic violence and child abuse (Osofsky 2003), with researchers estimating that in more than half the households where there is domestic violence, children are also physically abused (Straus and Gelles 1990). Yet, despite the magnitude of the problem, and the long-lasting and devastating consequences of exposure to interpersonal violence in the home, the needs of children exposed to domestic violence are regularly overlooked by parents and professionals, and meaningful opportunities to interrupt the cycle of violence are frequently lost.

In addition to causing incalculable human suffering primarily to women and children, domestic violence results in staggering social costs. Domestic violence constitutes 15–50% of police calls for service across the USA (Friday et al. 2006; Hendricks 1991; Klein 2009); these calls are often repeat calls to the same address; and these repeat calls are often a result of marked escalation of violence within the home (which initial calls did not prevent or abate). Accordingly, officers often report frustration with domestic violence work, as they find themselves limited in their capacity to intervene meaningfully with families caught in the cycle of violence, in spite of significant expenditure of law enforcement time and resources. Moreover, it is estimated

that the annual costs of domestic violence to US businesses in lost work time, increased health-care costs, higher turnover and lower productivity is between five and ten billion dollars. In a 2003 report, the Centers for Disease Control estimated that the health-related costs of intimate partner violence in the USA exceed \$5.8 billion per year (Centers for Disease Control and Prevention 2003). Of this \$5.8 billion, \$1.8 billion represented indirect costs such as lost wages and productivity, and nearly \$4.1 billion was associated with victims requiring direct medical and mental health-care services. In addition, intimate partner violence victims lose nearly 8 million days of paid work each year—the equivalent of more than 32,000 full-time jobs and nearly 5.6 million days of household productivity (Centers for Disease Control and Prevention 2003).

To address the overwhelming personal devastation and mounting social costs associated with domestic violence, NCCEV developed the Domestic Violence Home Visit Intervention (DV-HVI). DV-HVI is a specialized component of the CD-CP program, currently operating in New Haven. Versions of the DV-HVI are also being employed in select CD-CP sites (e.g., Charlotte, N.C., Providence, R.I., and Wilmington, DE). The intervention focuses on the central role of domestic violence in perpetuating the cycle of violence, and translates what has been learned about the impact of interpersonal violence into the development and implementation of effective collaborative law enforcement strategies that address the needs of women and children exposed to domestic violence. DV-HVI aims to decrease the level of violence to which women and children are exposed; reduce children's repeat exposure to escalating episodes of violence; address the complex and intertwined legal, psychological, and practical issues that confront families exposed to domestic violence; reduce isolation experienced by affected women and children; ease the practical and psychological burdens on battered women that can interfere with their ability to maintain safety and security for their children; and increase women's and children's access to social supports that can help ensure the freedom from fear essential to optimal levels of self-determination, family health, and well-being.

The cornerstone of DV-HVI is *home visit outreach* by teams of law enforcement officers, domestic violence advocates, and mental health clinicians, to households in which there has been an incident of domestic violence reported to the police. The police/advocate team home visits occur within 72 h of a domestic violence incident and are designed to: (1) assist in immediate safety planning; (2) provide information regarding the criminal justice system (e.g., protective orders), advocacy services, and other available assistance (e.g., 911 phones, lock changes, shelters); (3) establish personal contact between families and local officers; (4) enhance domestic violence enforcement; (5) increase parents' awareness of children's responses to PTEs; and (6) facilitate connections between families and community services, including mental health assessment, and treatment for affected children. Following the initial outreach visit, a wide array of advocacy, mental health, and social support services are offered and may be provided, depending on the needs and preferences of the individual woman and her children. These include assistance with criminal and family court proceedings, assistance with basic needs, and engagement in clinical services for children and adults.

DV-HVI is specifically designed to address the unique and particular concerns of women of diverse backgrounds and their children, and the model is sensitive to cultural and linguistic difference among families and communities. For example, in New Haven, DV-HVI has been implemented with a mostly low-income population, including a high percentage of Latina women. Parent guides and other materials have been translated into Spanish, and the program seeks to match advocate/clinician and/or officer ethnicity to victim ethnicity whenever possible. A study of the factors associated with engagement in the DV-HVI in New Haven found that victim–advocate ethnic match significantly predicted time spent with victim and the number of DV-HVI services provided (Stover et al. 2008). Hispanic women who were served by a Hispanic advocate received the most time on the case and were provided with a broader range of services than those who did not have an advocate–victim ethnic match. Furthermore, the study observed

that a Spanish-speaking advocate, conducting visits in Spanish, may open the door to ongoing advocacy support and treatment, a victim–advocate ethnic match may result in more detailed information about the severity of the incident, and improved communication may result in greater clarity on the part of the victim about her rights (Stover et al. 2008). Moreover, the culturally and linguistically specific services may contribute to the victim's enhanced feeling of safety beyond what might be expected at the time of the incident from interaction with police officers alone (who may have limited Spanish language proficiency or ability to communicate with the victim). These findings are significant, given that Hispanic women, especially those with low acculturation, have been found to have lower use of health-care and social services following an incident of interpersonal violence than African American and Caucasian women (Lipsky et al. 2006).

A comprehensive evaluation of the DV-HVI, conducted in New Haven in 2006–2007, found that: (1) families that received DV-HVI visits were more likely to call the police for new domestic violence incidents in the 12 months following the visit than comparison families, these new calls were significantly less likely to involve violent incidents than were calls from comparison families, and these calls were significantly more likely to involve verbal altercations or violations of court orders; (2) families that received DV-HVI visits felt safer and more positive toward the police following the visit than families that received standard 911 police service; and (3) families that received DV-HVI visits were more likely than comparison families to engage their children in mental health and other support services in the 12 months following the visit (Stover et al. 2008, 2009, 2010).

The Child and Family Traumatic Stress Intervention

Studies reveal that family support is a primary protective factor for children exposed to violence and other PTEs (Hill et al. 1996; Kliewer et al. 2004a, b; Ozer, et al. 2003), but all too often there

is a failure of social support and communication within families regarding posttraumatic symptoms and the opportunity for familial assistance is lost. After years of developing law enforcement/mental health collaborative interventions, and providing acute and follow-up clinical services to children and families exposed to violent and catastrophic events, NCCEV recognized a need for family strengthening strategies that supplement the early identification, intervention, and stabilization provided by law enforcement/mental health partnerships. The Child and Family Traumatic Stress Intervention (CFTSI) is a brief early intervention model that can be implemented with children 7–18 years old together with their parent/caregiver either shortly after a PTE or in the wake of a later disclosure of traumatic events that occurred earlier in a child's life. The goals of the four session CFTSI model are to (1) improve screening and identification of children impacted by traumatic stress, (2) reduce traumatic stress symptoms, (3) increase communication between caregiver and child about child's traumatic stress reactions, (4) provide skills to help master trauma reactions, (5) assess child's need for longer-term treatment, and (6) reduce concrete external stressors (e.g., housing issues, systems negotiation, safety planning, etc.) which enables caregivers to reduce distractions and focus on their children in the aftermath of violent and traumatic events.

The intervention is designed to be implemented by a mental health clinician (and, when appropriate, a case manager) working in collaboration with law enforcement and child protective service partners. The model recognizes that environmental, legal, and service system issues often impinge upon a family's ability to attend to a child's psychological needs following the exposure to violence and PTE. CFTSI therefore addresses case management issues while educating families about a child's reactions to traumatic events, enhancing child–parent communication about the particular child's experiences and reactions, and offering specific behavioral interventions to address symptoms that are of greatest concern to the child and family. Clinicians also collaborate with law enforcement and child protective service partners to address safety issues

and assess the ongoing nature of physical threats, both of which are essential to maintaining effective and supportive case management.

CFTSI is currently being employed in New Haven and in a select group of Child Advocacy Centers, where it has become an integral part of the multidisciplinary service delivery model and where it is regarded as consistent with both successful criminal prosecutions and effective child welfare practices. Moreover, the clinical results of initial CFTSI efforts are extremely promising. A randomized controlled comparative effectiveness trial was completed in 2009 and found that children receiving CFTSI were 65% less likely than comparison youth (who received a standardized psychoeducational intervention) to meet criteria for full PTSD at the 3-month follow-up, and were 73% less likely than comparison youth to meet combined criteria for partial and full PTSD at the 3-month follow-up (Berkowitz et al. 2011).

Tracking and Intervening with Youth at Risk for Violent Crimes

Like many communities, New Haven experienced an upsurge in youth-involved gun violence over the past several years. In response to a request from the Mayor's office, NCCEV developed the blueprint for a multidisciplinary strategy for identification and engagement of youth most at risk for perpetration of violence. With risk reduction as the primary objective, the plan focused on enhanced collaborative supervision, predicated on the assumption that decreasing anonymity, increasing accountability, and expanding pro-social opportunities can result in reduced violent criminal behaviors and improved community safety. While there are numerous other sophisticated approaches to addressing the problem of identifying, tracking, and intervening with youth at risk for perpetrating violent crime, the New Haven strategy calls upon neighborhood-based police commanders and officers to identify youth ages 12–18 at greatest risk for perpetration of violent crimes based on their history of gun involvement, violent behavior, and drug use or dealing; their involvement with (or leadership

role in) groups of youths engaged in criminal activities; and their status with respect to school and/or court-ordered supervision.

Under the New Haven strategy, once a list of youth at greatest risk is compiled from each of New Haven's policing districts, a case management team (comprised of representatives from the police department, probation and parole services, schools, prosecutor's office, youth services, behavioral health and community outreach services) coordinate intervention strategies addressing identified youth, including the following (1) home visits (and other direct outreach) to youth and their families to determine unmet needs of youth (e.g., educational, medical, mental health, job-training, supervised prosocial activities); (2) identification and enforcement of court orders across policing, probation, parole, and court services; (3) identification of school status (e.g., attendance, discipline issues, academic difficulties) and increased communication between school personnel, SRO's and community-based law enforcement personnel; (4) development of "face-books" with information about identified youth disseminate to neighborhood police and community-based partners to aid in monitoring contact; (5) close coordination with existing law enforcement units to target criminal enterprises of identified youth (e.g., gun, narcotics enforcement, robbery units of the New Haven Department of Police Services); and (6) tracking and evaluating implementation and success of individual case plans.

Much was learned about the potential benefits and challenges of this model through an initial attempt to pilot the strategy in New Haven during 2007–2008. While the lack of adequate funding prevented a full study and was an obstacle to bringing the recommended range of agency participants to the table, nevertheless NCCEV personnel teamed with New Haven police officers and engaged in home visits, needs assessment, and coordination of education, behavioral health, and law enforcement services. The profile of the young people involved included: numerous previous arrests; inadequate supervision and consequences for infractions of probation orders; failure of previous comprehensive educational, mental

health and vocational assessments; extensive trauma histories; absence of consistent parenting; and high percentage of incarcerated parents or other family members.

Policy Implications

Clearly much is known about the prevalence and consequence of childhood exposure to violence; yet this knowledge has not translated into national, wide-spread, and fully scaled implementation of effective multidisciplinary interventions. If we understand the etiology of the problem; the roots in psychological trauma; the profound mental health, physical health, public health, educational, economic, and criminal justice consequences—if we can, in essence, predict these children's futures—why can't we do more as a nation to prevent and intervene effectively?

Certainly a lack of necessary government and philanthropic resources to adequately fund service delivery systems, further diminished during periods of economic uncertainty, is a significant factor. The gap between available funding and need is also exacerbated by economic conditions: connections have been demonstrated between economic hardship and interpersonal violence (Benson et al. 2003; Fox and Benson 2006) and between poverty and child maltreatment risk (Berger 2004), which indicate an increased need for these resources at a time when they are most scarce. However, limited funding streams are only part of the answer. Failure of early identification and lack of coordinated response continue to impede wide-scale progress. As we know, the majority of severely and chronically traumatized children are not found in mental health clinics. They are typically seen as the "behavior and discipline problems" in child care settings, or the "trouble-children" in schools where their histories of maltreatment are routinely unrecognized. Or, they emerge in the child protective, law enforcement, substance abuse treatment, and criminal justice systems, where the roots of their problems—their exposure to violence and abuse—are often ignored, unidentified, and unaddressed. Moreover, given how service systems

are currently organized, each system works mostly from within its own isolated silo and is thus unable to construct a comprehensive picture of the range of problems afflicting a child. Without such a picture, service providers can, at best, attempt to meet the child's needs from the sole perspective and circumscribed resources of their own agencies, but they are not equipped or empowered to coordinate their responses across the other systems of care that are critical to addressing the full spectrum of a child's needs. As we have seen too often, parallel engagement with at-risk children yields multiple missed opportunities. Conversely, multidisciplinary responses that identify children early by connecting the dots between early childhood trauma and the provision of services, and that work collaboratively across disciplines to embrace the totality of a child's life experience, yield results.

As a nation we need to create a bridge between what we know about the clinical phenomena of children's exposure to violence and trauma and existing systems of care so that these systems can become better coordinated to meet children's needs. We need prevention programs that identify at-risk children early; we need to forge multidisciplinary, coordinated interventions; and we need to adequately fund and scale effective trauma-informed multidisciplinary prevention and intervention strategies. Legislators appropriating federal dollars must begin to view childhood exposure to violence as a mental health issue, a criminal justice issue, an education issue, a housing issue, and a work force issue. Policy makers across agency silos of juvenile justice, mental health, education, housing, and the labor force must recognize the multifaceted nature of the problem and combine and coordinate resources to effectively combat both the human and economic costs associated with children's exposure to violence and our failure to address children's needs.

On the federal level, these efforts can be best supported by policy makers willing to adopt a new model of fiscal support, based on incentivizing collaborative innovations in the field, leveraging public, private, and philanthropic resources, and rewarding effective innovation. Government officials should leverage their commitments by

partnering with philanthropies and the private sector to match funds and commit resources to multidisciplinary programs that deliver results, that are sustainable, and that are ripe for national scale. A federal innovation fund that is devoted specifically to the issue of children exposed to violence, that leverages public, philanthropic, private, and nonprofit dollars, and that scales effective multidisciplinary interventions has the potential to yield wide-spread lasting results, dramatically improve children's lives, and restore safety in our communities.

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*I have heard there are troubles of more than one kind. Some come
from ahead and some come from behind. But I've bought a big bat. I'm all ready you see.
Now my troubles are going to have troubles with me!*

Dr. Seuss

In the motion picture, *Good Will Hunting*, Matt Damon portrays a character whose history of severe physical abuse appears to be linked to his extensive juvenile record and mental health problems in young adulthood. This is an unfortunate example of art imitating life, where as many as 90% of juveniles involved with the U.S. justice system will report having experienced a traumatic event at some point in their lifetime (Abram et al. 2004). This high prevalence of exposure to traumatic events among juvenile offenders underscores the need for mental health providers and administrators alike to understand the trauma-related clinical implications for psychosocial treatment of this population. Thus, the goal of this chapter is to aid clinicians in better serving the mental health needs of juveniles who have experienced traumatic events. The chapter is divided into two sections. The first section provides necessary background information regarding the link between trauma and delinquent behavior, which serves as a framework for psychosocial treatment of this population. The second section describes existing empirically supported treatment options for traumatized juveniles

and provides a list of clinical implications and recommendations extending from the literature reviewed throughout the chapter. Ultimately, we hope the information in this chapter will help alter the trajectory of traumatized juvenile offenders in a more positive direction.

Background

Definition and Prevalence of Traumatic Events in the General Population

Traumatic events (TEs) are those that involve actual or threatened death or serious injury, or a threat to the physical integrity of self or others (American Psychiatric Association 1994). TE exposure can include a range of experiences, such as motor vehicle accidents, natural disasters, acts of mass violence, and interpersonal violence (sexual assault, physical assault, witnessed violence). TEs are common among youth (Finkelhor et al. 2009; Hanson et al. 2008; Zinzow et al. 2009), and experiences of interpersonal violence are among the most frequently studied and reported in this population. Finkelhor et al. (2009) reported lifetime rates of sexual assault, physical assault, and witnessing violence to be 4.7%, 61.1%, and 43.3%, respectively, in a large community sample ($n=1,467$) of youth between the ages of 2–17 years. Based on findings from the National Survey of Adolescents (NSA; Kilpatrick et al. 2003), a nationally representative sample of 4,023 adolescents age 12–17 years, Hanson et al. (2008)

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reported lifetime rates of sexual assault at 8.2%, physical assault at 22.5%, and witnessing violence at 39.7%, with 48% of adolescents reporting some type of violence exposure in their lifetimes.

The prevalence of TEs has been shown to vary depending on income, ethnicity, and gender. For example, minority groups (e.g., African Americans, Hispanics) appear to experience higher rates of TEs compared to Caucasians (Crouch et al. 2000; Hatch and Dohrenwend 2007). Studies have further shown that prevalence of TEs decreases as income increases, but that this relationship may be associated with ethnicity (Crouch et al. 2000; Korbin et al. 1998). For Caucasian adolescents, the negative relation between income and victimization is relatively robust. However, family income appears to be less likely to protect African-American and Hispanic adolescents from TEs, particularly from witnessing violence (Crouch et al. 2000). With regard to gender, boys have been shown to be at increased risk for exposure to TEs overall and to witnessing violence specifically, while girls are at higher risk for sexual abuse (Hanson et al. 2008).

Prevalence of Traumatic Events in Juvenile Offenders

Juvenile offenders have consistently reported significantly higher rates of TEs in comparison to community populations (Dixon et al. 2004). For example, among a sample of incarcerated youth, Wood et al. (2002b) reported that 57% had witnessed a homicide, 17% had witnessed a suicide, and 72% reported having been shot (or shot at). High rates of other types of interpersonal violence also are reported among incarcerated youth (Smith et al. 2006; Wood et al. 2002a), with documented rates of physical and sexual abuse 200–300 times that of the national population (U.S. Department of Health and Human Services 2004). In one study of 898 juvenile offenders, over 90% of the sample had reported a TE in their lifetime (Abram et al. 2004). Specifically, 53% (54% of boys, 49% of girls) of this sample had “been in a situation where you thought you/someone

close to you was going to be hurt very badly or die,” 35% (35% of boys, 31% of girls) had been physically assaulted, 58% (59% of boys, 47% of girls) had been threatened with a weapon, 4.4% (2.4% of boys, 30% of girls) reported sexual assault, and 74% (75% of boys, 64% of girls) said they had witnessed violence. Clearly, both incarcerated boys and girls are at increased risk for victimization. However, gender differences in types of exposure have been yielded in other investigations of delinquent youth. Specifically, girls have been found to be more likely to report histories of physical and sexual abuse than boys (Smith et al. 2006), whereas boys have been found to report significantly higher levels of witnessed community violence than girls (Wood et al. 2002b). For example, in the aforementioned Abram et al. (2004) study, female offenders were 12.5 times more likely to experience sexual assault than male offenders, and Smith et al. (2006) found that 93% of incarcerated girls had experienced at least one incident of physical or sexual abuse.

Trauma-Related Mental Health Sequelae

Exposure to TEs has been linked with a wide range of mental health difficulties and problematic functioning, such as anxiety and mood disorders, risky behaviors, physical health problems, and revictimization (Boney-McCoy and Finkelhor 1996; Kendall-Tackett et al. 1993; Neumann et al. 1996; Roodman and Clum 2001). Posttraumatic stress disorder (PTSD) is one of the most well-documented outcomes of exposure to TEs among youth and adults (Breslau et al. 2004), particularly following experiences of interpersonal violence (O’Hare and Sherrer 2009). PTSD is a DSM-IV (APA 1994) Axis I anxiety disorder that includes symptoms of reexperiencing the event (e.g., acting or feeling as if the traumatic event were recurring), avoidance (e.g., efforts to avoid activities, places, or people that cue memories of the traumatic event), and hyperarousal (e.g., exaggerated startle response). With regard to prevalence in the general population,

3.7% of boys and 6.3% of girls in the NSA reported experiencing enough symptoms within the 6-month period prior to assessment to meet PTSD diagnostic criteria (Kilpatrick et al. 2003). Risk for PTSD was higher for Hispanic and African-American adolescents relative to their Caucasian counterparts.

Incarcerated youth (from nonviolent to serious, violent offenders) tend to experience elevated rates of mental health problems and diagnoses that are typically related to exposure to TEs (Huizinga and Jakob-Chien 1998). Specifically, studies have revealed a high prevalence of PTSD among juveniles in detention centers, with 10–32% of detained juveniles meeting full criteria for PTSD (Abram et al. 2004; Burton et al. 1994; Cauffman et al. 1998; Steiner et al. 1997) and 46% meeting partial criteria for PTSD (Smith et al. 2006). In addition to PTSD, studies have identified a high prevalence of comorbid psychiatric disorders among incarcerated juveniles (Cocozza 1992; Dixon et al. 2005; Ulzen and Hamilton 1998; Vermeiren 2003). For example, Abram et al. (2006) examined over 1,800 detained youth and found that 93% of juveniles diagnosed with PTSD also met criteria for at least one comorbid psychiatric disorder.

Depression—and suicidal ideation in particular—is frequently comorbid with PTSD among samples of nonincarcerated youth who report TE exposure (Waldrop et al. 2007). For example, in the NSA (Kilpatrick et al. 2003), adolescents who experienced sexual assault, physical assault, or witnessed violence were approximately 2.5 times more likely to report comorbid PTSD and depression than adolescents who had not experienced such interpersonal violence. Based on these findings, it is likely that high comorbidity between PTSD, depression, and suicidality presents a significant concern for traumatized juveniles involved with the justice system. This is further supported by data indicating that the prevalence of suicide in juvenile detention and correctional facilities is more than four times greater than youth suicide overall (Hayes 2000).

Traumatized adolescents also are at higher risk for experiencing problems with substance abuse and dependence than their nonvictimized

peers (e.g., Clark et al. 1997; Giaconia et al. 2000). In the NSA, Kilpatrick et al. (2000) found that exposure to TEs, such as child physical abuse, child sexual abuse, or witnessed violence, significantly increased risk of alcohol, marijuana, and hard drug abuse and dependence. Further, adolescents who experienced sexual assault were six times more likely, and those who witnessed violence were nine times more likely, to report comorbid substance abuse and PTSD than adolescents who had not experienced such victimization. Some research suggests that substance use is reported as or more frequently than PTSD among victimized samples. For example, within a sample of 269 adolescents with a childhood sexual abuse history, Danielson et al. (2010a) found drinking alcohol to intoxication (39.4% lifetime, 31.2% past year) was the most frequently reported problem among the youth, compared to lifetime or past 6-month PTSD (reported by 26% and 14.4% of the sample, respectively). In addition, approximately one quarter of the sample reported engaging in nonexperimental drug use in the past year. This is particularly concerning, given the link between substance use and other health risk behaviors, such as risky sexual behaviors and reckless driving (Brookoff et al. 1994), often observed in juvenile populations (Centers for Disease Control and Prevention 2008). In other words, the high prevalence of substance use among traumatized adolescents may also suggest high prevalence of other negative health sequelae.

This relation between victimization and substance use has been repeatedly demonstrated within studies of juvenile offender populations (Crimmins et al. 2000; Dembo et al. 1988; Dembo et al. 2007; Erwin et al. 2000b; Perron and Howard 2009; Staton et al. 2001). For example, in a study of 414 juvenile offenders, Crimmins et al. (2000) found that youth who had been raped by a family member were 4.45 times more likely to use cocaine than those who did not report rape. In the same study, juveniles who had witnessed a shooting or stabbing outside their home were 3.15 times more likely to drink alcohol and 4.19 times more likely to smoke marijuana compared to their peers who had not witnessed this type of

violence. In a recent study of 723 juvenile offenders, Perron and Howard (2009) found that inhalant users reported significantly higher rates of trauma compared to nonusers. Given the relatively limited amount of prospective literature on the association between victimization and substance use in the juvenile offender population, it is unclear whether victimization is predictive of substance use, and/or whether this relation is accounted for by other factors (e.g., personality, peer use, parental monitoring, neighborhood safety). However, it is clear that substance use and victimization co-occur at high rates among juvenile offenders.

Reciprocal Link Between Trauma and Delinquent Behavior

Based on available data, it is clear that exposure to TEs is highly prevalent among juvenile offenders and that this exposure is associated with a myriad of mental health and behavioral outcomes. Of particular relevance for this chapter, research has repeatedly demonstrated a link between TEs and delinquent behavior in adolescence (Brener et al. 1999; Brown et al. 1999; Siegel and Williams 2003; Widom and White 1997). The nature of this link appears to be bidirectional. That is, some studies suggest that experiencing a TE renders a juvenile at risk for involvement in the juvenile system, whereas other research indicates that involvement in the juvenile justice system leads to later trauma and victimization. Below we briefly review the literature from both perspectives.

Trauma as a Risk Factor for Delinquent Behavior

As presented earlier, delinquent behavior has been posited in the media and indicated in the literature as a mental health outcome resulting from TE exposure among adolescents. For example, in the study noted above, Danielson et al. (2010a) found that delinquent behaviors (i.e., attacking someone, selling drugs, robbery, breaking into someone's vehicle or home, arrest history, being sent to jail or juvenile detention) were reported equally or more frequently than PTSD among the sample of sexual assault victims. About 24% of the adolescents indicated that they had engaged

in delinquent behavior in the past year, and 37% reported they had engaged in delinquent behavior in their lifetime, compared to those reporting past 6 months (14.4%) or lifetime (26%) PTSD diagnostic symptoms. Studies examining youth who have engaged in delinquent behavior (i.e., those involved in the juvenile justice system) demonstrated rates of self-reported victimization as high as 70–92% (McMackin et al. 1998; Rivera and Widom 1990; Steiner et al. 1997). Another recent study indicated that nearly 50% of the youth entering into a juvenile assessment center following arrest (due to engagement in delinquent behavior) had endorsed a history of physical abuse, while 25% reported sexual victimization (Dembo et al. 2007). Nonetheless, it is important to note that the majority of these studies involved a cross-sectional design, limiting the ability to determine causality. In other words, although these investigations clearly suggest a link between trauma and delinquent behavior, we cannot definitively conclude that the TE exposure caused the subsequent delinquent behavior. Thus, building on this line of research, a recent longitudinal study from a nationally representative sample of 3,614 adolescents (National Survey of Adolescents-Replication) demonstrated that interpersonal violence (i.e., physical abuse and/or assault, sexual abuse, witnessed violence) reported at the initial (Time 1) assessment predicted delinquent behavior reported 1 year later (Time 2) (Begle et al. 2010). When investigated separately by gender, Time 1 physical abuse and/or assault and witnessed violence predicted Time 2 delinquent behavior for boys, while Time 1 sexual abuse predicted Time 2 delinquent behavior for girls in the study. These findings suggest that victimization may be the precipitant or at the very least, an important factor, in subsequent delinquent behaviors.

Aside from associations between victimization and delinquency across a relatively short time frame (up to 1 or 2 years), studies have indicated that there may be a “cycle of violence,” such that victimization in childhood increases the likelihood of criminality in adulthood (Kjelsberg and Dahl 1998, 1999; Widom 1992). In support of this “cycle of violence” theory, results from a longitudinal study of 1,575 adolescents indicated that those who reported a victimization history

were more likely to be arrested for a criminal act as adults (42% vs. 33%), and to engage in more frequent and violent offenses when compared to their nonvictimized counterparts (Widom and Maxfield 2001). These findings were consistent across gender and race, highlighting the generalizability of this link.

Delinquent Behavior as a Risk Factor for Victimization

In contrast to the findings that victimization drives subsequent delinquency, other studies have supported the opposite temporal link: that adolescents who engaged in high-risk behavior are more likely to experience subsequent victimization (Burnam et al. 1988; Pedersen and Skrondal 1996; Windle 1994; Wood et al. 2002a). As one explanation for these findings, researchers have posited that lifestyle differences between teenagers may place some at increased risk for victimization. That is, adolescents who engage in high-risk behavior (e.g., gang activity) may be more vulnerable to experiencing victimization involving interpersonal violence (e.g., witnessing community violence) due to criminal and deviant lifestyles and greater exposure to potentially dangerous situations (see Danielson et al. 2006). In the NSA-R study described above (Begle et al. 2010), adolescents who engaged in high-risk behavior (i.e., delinquent behavior and/or substance use) at Time 1 were more likely to report physical abuse and/or assault or witnessed violence 1 year later. This finding was consistent across boys and girls in the nationally representative sample. However, a different pattern of findings were found for sexual abuse. More specifically, girls who engaged in high-risk behavior (i.e., delinquent behavior and/or substance use) were *not* more likely to report sexual abuse at 1-year follow-up as compared to girls who did not engage in these behaviors.

Summary

Overall, TE exposure, and interpersonal violence in particular, are prevalent among juveniles involved in the justice system and have both

short- and long-term effects on adolescent and adult outcomes. When untreated, TE exposure and related mental health problems (e.g., PTSD, depression, substance use) in this population can increase the vulnerability for comorbid psychiatric disorders, behavioral and health problems, impaired interpersonal relationships, and other negative outcomes, such as high risk for suicide and self-harm behaviors (Giaconia et al. 2000). In addition, research indicates that incarcerated youth who have been exposed to interpersonal violence and experience related mental health problems demonstrate a higher likelihood for recidivism than their peers who do not report TEs (Dembo et al. 1995; Lewis et al. 1989). Taken together, these findings highlight the need to ensure that evidence-based trauma informed services are available to youth involved in the juvenile justice system. This means that mental health providers working with this population need to be informed on the most efficacious treatments for this population.

Treatment

Previous studies strongly suggest that trauma treatment is important for juvenile offenders who have experienced high rates of TEs, even if they are not currently reporting PTSD symptoms (Smith et al. 2006). The first section of this chapter provides the background and framework that underscores the need for trauma-related mental health treatment for this population. It is critical for professionals involved with the juvenile justice system to understand the link between trauma and delinquent behavior, as well as the “best practices” for intervention. In this section, we begin with an overview of mental health treatments used within the juvenile justice system. After briefly describing the key components to a standard trauma assessment with youth, we review existing empirically supported interventions (ESTs) (i.e., treatments that have been supported in research through published randomized controlled trials) for trauma-related symptoms, as well as promising practices (i.e., interventions that have been developed but are only in the early stages of empirical evaluation). Finally, we present

clinical recommendations and future directions for psychosocial treatment of traumatized juveniles based on our review of research and clinical work in this area.

Mental Health Treatment Within an Incarcerated Juvenile Population

Given the high prevalence of mental health disorders among incarcerated juveniles (Cocozza and Skowrya 2000), especially those who have experienced exposure to TEs (Abram et al. 2004), one would assume that mental health services are readily accessible among this population. However, available information suggests otherwise. For example, findings from a study on incarcerated youth in the Virginia Juvenile Justice System demonstrated that, although 8–10% of detainees reported mental health problems requiring immediate attention, only 14% of those youth were receiving ongoing mental health services (Justice Services Virginia Policy Design Team 1994).

Of the published studies that have investigated treatment outcomes for incarcerated juvenile offenders, behavioral and cognitive-behavioral treatment interventions appear to be the most effective in reducing recidivism and risk for future delinquency when compared to nondirective and psychodynamic treatment approaches (Andrews and Bonta 1994; Gendreau and Ross 1981; Goldstein 1988; Henggeler et al. 2002). Thus, several treatments aimed at decreasing maladaptive behaviors and helping adolescents take responsibility for their delinquent acts are available (Bazemore and Terry 1997; Carey 1997); several of these include a strong family component. Although there is variability across interventions, common elements of these treatments include the targeting of decision making, social skills, anger management, substance use, juvenile offending, and family and community involvement (McMackin et al. 2002) via ESTs (e.g., contingency management). A more extensive discussion about intervention approaches with this population can be found in other chapters in this book (see Boxer and Goldstein 2010; Guerra

and Kirk 2010). However, some of these interventions are described briefly below.

Multisystem therapy (MST) has been one of the most extensively evaluated treatment approaches for juvenile delinquency and is one of the most cost-effective. MST is an ecological approach that has been found to be efficacious in decreasing both delinquent behaviors and drug use in high-risk youth (Henggeler et al. 2002). The fundamental goal of MST is to empower families to effectively resolve and manage serious, current clinical problems, as well as the potential problems likely to occur during adolescence. Thus, MST aims to help youth and their families develop the capacity to cope with problems by utilizing resources within the families' ecologies (e.g., school, community at large). The MST treatment manual (Henggeler et al. 1998) describes the empirical, conceptual, and philosophical bases for MST and delineates the process by which the youth's and family's problems are prioritized and targeted for change.

Another example of an EST for delinquent behavior is Multidimensional Treatment Foster Care—Adolescents (MTFC-A), a model developed for adolescents 12–18 years old with severe emotional and behavioral disorders and/or severe delinquency. The goals of *MTFC-A* are to create opportunities for the adolescents to live with foster families rather than in institutional settings and to prepare their caregivers (to whom they will return posttreatment) by teaching strategies to increase effective parenting. Key elements of treatment include providing a consistent reinforcing environment that involves mentoring and careful monitoring; developing a daily structure with set expectations and limits, as well as clearly specified consequences delivered in a teaching-oriented manner; and helping youth to avoid deviant peer associations. Multiple randomized clinical trials have demonstrated that *MTFC-A* is efficacious in reducing delinquent behaviors (Leve et al. 2005; Chamberlain and Reid 1998).

In addition to MST and *MTFC-A*, other family-focused treatments have been shown to reduce problematic behavior in adolescents through randomized controlled trials, including brief structural family therapy (BSFT; Szapocznik

Table 30.1 Steps to standard clinical assessment of traumatic event history among youth (adapted from de Arellano and Danielson 2008)

1. *Take a semistructured approach* to the assessment of traumatized juveniles, where all family members (when possible) are assessed with the same core questions about the types of traumatic events experienced, as well as the range of past and current problems exhibited or reported by the youth. Depending on the responses to these core questions, more individually tailored follow-up questions can be asked of each child and family member. Traumatic events assessed typically include child sexual abuse, child physical abuse, exposure to domestic violence, exposure to community violence, natural disasters, and serious accidents, where significant injury is experienced or witnessed
2. Trauma interview *questions should be framed in a behaviorally specific and nonstigmatizing way* (e.g., “Have you ever been hit so hard that it left bruises?” should be asked instead of “Have you ever been physically abused?”). Similarly, questions regarding symptoms also should be framed in descriptive, nonjargon terms
3. *Consider timeline and developmental issues.* Questions should be asked regarding the chronology of the traumatic event in relation to the mental health problems reported during the interview, so as to estimate direct effects of the traumatic event versus premorbid conditions and/or determine whether exposure to trauma has worsened a preexisting condition (e.g., delinquent behavior worsens after a sexual assault)
4. When multiple family members present for a trauma assessment, *trauma history and the trauma-related problems experienced by each family member should be assessed separately.* This includes gathering trauma-related information on both parents/caregivers. Assessing how parents have coped with their own trauma history provides important information about how they have modeled response to traumatic events to their children and how well are they able to provide support and nurturance for the children following their own traumatic incident
5. In cases involving child maltreatment, it will be important to *assess the current safety of the living environment for the child victim (if youth is not being detained)*, as well as any siblings or other minors or vulnerable others. The assessor may need to make a report to the local Department of Social Services, develop a safety plan with nonoffending caregivers, and/or refer the family to treatment. For juveniles who are remaining in the home, it may be necessary to continue to assess risk of harm throughout the course of treatment
6. *Use standardized paper-and-pencil self-report and parent-report measures* as a complement to a trauma assessment. Most standardized measures provide normative data (often by age, gender, and race/ethnicity), which can help clinicians determine the clinically significant problems to be targeted in treatment beyond behaviors that have resulted in juvenile justice involvement. See Strand et al. (2005) for a comprehensive review of measures

and Williams 2000) and multidimensional family therapy (MDFT; Liddle et al. 2001). Each of these aforementioned treatments are considered to be efficacious for reducing the targeted delinquent or problematic behavior, but none specifically address comorbid mental health concerns related to TE exposure (e.g., PTSD). Because neither TE history nor trauma-related distress are directly targeted in these treatments or reported in the published studies, it is unknown the extent to which these interventions would successfully decrease PTSD in symptomatic youth. Given the significant percentage of incarcerated juveniles who report trauma histories and comorbid trauma-related problems (as reviewed above), the need for implementation of interventions within this population is clear. However, before treatments can be implemented, it is important to identify which juveniles may require trauma-focused intervention, highlighting the need for assessment. In the next section, we provide a

brief review of clinical assessment protocols to assist in identifying youth offenders in need of further intervention.

Assessment of Trauma

As suggested by this review, TE exposure and associated effects tend to be overlooked in juvenile offender populations. In general, the focus of assessments and rehabilitation efforts tend to be on the “externalizing symptoms/behaviors” that led to involvement with the juvenile justice system. In order to identify which juveniles have experienced TEs—and which ones report related symptoms (e.g., depression, anxiety, PTSD)—a thorough trauma-focused clinical evaluation is necessary. de Arellano and Danielson (2008) reviewed the key components that should be incorporated in a standard trauma assessment (see Table 30.1). Additional recommendations for trauma assessment within a

juvenile offender population are provided under section “Summary, Recommendations, and Future Directions for Treatment.”

Treatment of Trauma-Related Sequelae in Youth

A more thorough discussion of trauma assessment in this population can be found in Ford (2010).

Clinical research over the past two decades has been conducted to examine the efficacy of various approaches to treatment of trauma-related mental health symptoms. Multiple treatments have been identified as theoretically sound, clinically useful, and rigorously tested through randomized controlled trials. The treatments found to be effective have emerged as “best practices” for use with abused and traumatized youth and their families. Others are considered “promising practices” as they have undergone some empirical investigation (e.g., through open clinical trials and case studies)—but have not yet undergone evaluations using more rigorous randomized controlled designs.

Trauma-focused cognitive-behavioral therapy (TF-CBT; Cohen et al. 2006) is considered the “gold” standard treatment approach because it has the most empirical support. TF-CBT is a cognitive-behavioral exposure-based intervention that addresses PTSD and depressive symptoms, as well as other significant emotional and behavioral difficulties, related to youth trauma exposure. TF-CBT involves both youth and caregivers in individual and conjoint sessions, with specific focus on building a therapeutic alliance between family members. The treatment consists of approximately 12 sessions, although it may be extended based upon needs of the youth and family. TF-CBT components are summarized based upon the acronym, PRACTICE, which includes (P)sychoeducation about the impact and common reactions to traumatic events; (P)arenting skills focusing on the youth’s emotions and behaviors; (R)elaxation and stress management techniques; (A)ffective expression and modulation skills; (C)ognitive coping and processing; (T)rauma narration, in which the youth provides a specific account of the traumatic experience; (I)n-vivo

mastery of trauma reminders; (C)onjoint parent-youth sessions to assist the youth and parent in discussing the trauma aloud; and (E)nhancing future safety and development. While all components of treatment are important, the trauma narrative component is a unique aspect of TF-CBT, as it directly addresses the TEs and the youth’s response to the event. TF-CBT can be easily administered in a clinic or outreach setting, including detention centers (de Arellano et al. 2005), which further suggests its potential utility with a juvenile offender population.

To date, eight empirical investigations have evaluated the utility of TF-CBT with over 500 youth participants, including adolescent populations (for a review, see de Arellano et al. 2008). Results clearly demonstrated that TF-CBT was efficacious in the treatment of PTSD, depression, and behavioral difficulties among trauma-exposed youth—and that TF-CBT was superior to comparison conditions, such as supportive therapy. Therefore, there is a strong, broad consensus that TF-CBT has been well-tested and found to be efficacious in reducing problems associated with TE exposure. As a result, TF-CBT has been given the highest available ranking for empirical support across multiple sources; it was deemed as a “well-supported, efficacious treatment” by the Office for Victims of Crime (OVC) Guidelines project (Saunders et al. 2004), and by the NCTSN (<http://nctsn.org/nctcs/>); was designated as a Model Program by the Substance Abuse and Mental Health Services Administration (<http://nrepp.samhsa.gov/>); and was ranked in the highest category of Well-Supported-Effective Practices by the California Evidence-Based Clearinghouse (<http://www.cachildwelfareclearinghouse.org/>).

Cognitive Behavioral Intervention for Trauma in Schools (CBITS; Jaycox 2004) is another trauma-focused intervention that has received empirical support for reduction of trauma-related symptoms. It is a cognitive-behavioral intervention aimed at reducing symptoms of trauma exposure, such as PTSD, depression, and general anxiety, in youth from underserved ethnic minority populations who typically have difficulty accessing mental health services due to a host of barriers. CBITS is delivered within a school setting and utilizes a

community-based partnership model to increase parent and family involvement in treatment. The model consists of ten group sessions, 1–3 individual child sessions, 2 parent sessions, and 1 teacher session; which focus on education about reactions to trauma, relaxation training, cognitive therapy, real life exposure, stress or trauma exposure, and social problem solving. Because, by definition, this model is delivered in a school setting, it would only be applicable to those juveniles who are currently attending school.

Results from a randomized clinical trial demonstrated that, following engagement in the CBITS intervention, youth displayed improvements in functioning, including decreased PTSD and depressive symptoms, when compared to a comparison group at the end of treatment (Kataoka et al. 2003) and to wait-list control participants at a 3-month follow-up (Stein et al. 2003). CBITS also has undergone clinical trials to examine efficacy in reducing symptoms of trauma among culturally diverse populations (Kataoka et al. 2003; Stein et al. 2003). This model has been rated as a promising practice by the NCTSN (<http://nctsn.org/nctsn/>).

Seeking Safety (Najavits et al. 1998) is a coping skills treatment intervention targeting comorbid PTSD and substance use problems following TE exposure. The 24-session treatment consists of cognitive, behavioral, and interpersonal components. Seeking Safety covers 25 topics that fall under five key principles: (1) Safety as the priority of the first stage of treatment; (2) Integrated treatment of PTSD and substance use; (3) Focus on ideals with the title of topics framed positively to combat pathology (e.g., honesty to combat denial, lying, and false self); (4) Four content areas: cognitive, behavioral, interpersonal, and case management; and (5) Attention to therapist processes. Seeking Safety differs from other cognitive-behavioral approaches to trauma treatment, in that it does not typically include exposure or “processing” of the TE. Seeking Safety can be delivered in an individual or group format and has been used with incarcerated adult populations, suggesting that use with juvenile offender populations is feasible.

Seeking Safety has been evaluated in various adult populations (e.g., Desai et al. 2008; Hien et al. 2004; Holdcraft and Comtois 2002), including incarcerated women (Zlotnick et al. 2003). Some results from controlled (Gatz et al. 2007; Morrissey et al. 2005) and randomized controlled trials (Hien et al. 2004) suggest that the treatment is efficacious in reducing PTSD and substance use in various populations. In contrast, a recent multi-site randomized controlled trial reported that Seeking Safety was no more effective than a health education intervention in reducing women’s PTSD symptoms and substance use (Hien et al. 2009). To date, one study has examined Seeking Safety among an adolescent population (Najavits et al. 2006). Results demonstrated that participants in Seeking Safety reported significant reductions in substance use, cognitions related to trauma and substance use, and psychiatric functioning following treatment when compared to a treatment-as-usual group of adolescents. However, significant improvements in PTSD symptoms were not observed. Thus, the developers have noted that Seeking Safety may require some additional clinical modifications to increase its utility with adolescent populations. Seeking Safety has been rated as “Supported by Research Evidence” by The California Evidence-Based Clearinghouse (<http://www.cachildwelfareclearinghouse.org/>).

Based upon the significant associations between TE exposure and high-risk behaviors (i.e., delinquency and substance use), the field is moving toward the development and evaluation of integrated interventions that target both the victimization as well as prevention and/or treatment for high-risk behaviors in adolescents. Examples of these promising practices include risk reduction through family therapy (RRFT; Danielson 2006), trauma systems therapy (TST; Saxe et al. 2007), and structured psychotherapy for adolescents responding to stress (SPARCS; DeRosa and Pelcovitz 2005).

RRFT (Danielson 2006) is an intervention designed for adolescents who have been exposed to sexual assault, which aims to reduce risk of high-risk behaviors, PTSD, depression, and revictimization and to improve “ecological functioning” (e.g., school attendance, engagement in positive

family activities, time with non-substance-using peers, etc). As an integration of TF-CBT and MST (described above), the RRFT therapist works with each adolescent to improve coping with trauma-related memories, emotions, and thoughts—while also working with the family to address risk factors (e.g., parental monitoring) and to bolster protective factors (e.g., increase number of non-substance-using peers and structured, positive activities) at each level of a youth's ecology (i.e., individual, family, peer, school and community). The manual targets seven primary, overlapping components: Psychoeducation, Coping, Family Communication, Substance Abuse, PTSD, Healthy Dating and Sexual Decision Making, and Sexual Revictimization Risk Reduction. RRFT can be administered in clinic or community settings and case studies suggest it can be successfully implemented in a juvenile detention center (Danielson and Begle 2009). Results from an open pilot trial of ten participants through 6-month posttreatment follow-up are promising (Danielson et al. 2010b), and a NIDA-funded randomized controlled trial comparing RRFT to usual care is currently underway (1K23DA018686).

TST (Saxe et al. 2007) involves interventions that work in two dimensions: strategies that operate through and in the social environment to promote change and strategies that enhance the individual's capacity to self-regulate. The TST model involves choosing a series of interventions that correspond to the fit between the traumatized child's own emotional regulation capacities and the ability of the child's social environment and system-of-care to help manage emotions or offer protection from threat. The results from one open pilot trial ($n=110$) have been published to date, demonstrating significant reduction of trauma symptoms, improvements in emotional and behavioral regulation among children, as well as a more stable social environment after 3 months of treatment (Saxe et al. 2005). TST is currently being adapted to address the complex treatment needs of adolescents experiencing traumatic stress and abusing substances (TST-SA).

SPARCS (DeRosa and Pelcovitz 2005) is a group intervention that was designed to address

the needs of adolescents who have experienced chronic trauma, may still be living with ongoing stress, and are experiencing problems in several areas of functioning. Areas targeted in SPARCS include difficulties with affect regulation and impulsivity, self-perception, relationships, somatization, dissociation, numbing and avoidance, and struggles with the purpose and meaning in life. Results from case studies and an open pilot trial suggest that SPARCS can be useful in reducing trauma-related symptoms in this population. SPARCS may be useful to juvenile offenders who continue to be exposed to trauma while pursuing treatment (e.g., living in a neighborhood where there is frequent gang violence within viewing distance).

Despite the existence of ESTs for trauma-exposed adolescents (e.g., TF-CBT) and multiple promising practices (see Coutois et al. 2009 for additional examples), the issue remains that: (1) most of these treatments have not been evaluated specifically in a juvenile offender population; and (2) these treatments are not readily available to juvenile offenders, particularly those who are incarcerated. Further, some of these treatments call for a group format, which is common in juvenile detention sites but may not be ideal for this population. Specifically, some controlled studies suggest that offering treatment to juvenile offenders in group settings can be iatrogenic—that is, problem behaviors get reinforced by the peer group and consequently increase rather than decrease (e.g., Dishion et al. 1999). This is not to say all groups are contraindicated; but rather that group treatments should be monitored carefully when involving juvenile offenders. Clearly, more research is needed to identify and evaluate effective trauma-focused treatment interventions for this population.

Summary, Recommendations, and Future Directions for Treatment

Based on the aforementioned literature and a long collective history of clinical work and research, in this section, we: (1) review the themes that have emerged regarding psychosocial treatment for

traumatized juveniles; (2) highlight areas of primary importance; and (3) offer specific recommendations for trauma-focused assessments and treatment with juvenile offender populations:

1. Assessment of traumatic event history should be an essential part of the intake process for juvenile offenders when entering the juvenile justice system and/or beginning rehabilitation via psychosocial treatment (Erwin et al. 2006b). When assessing TE history, and interpersonal violence in particular, the use of behaviorally specific terminology is needed. It is not sufficient to ask whether or not a youth has ever been traumatized or abused, because many juveniles may not recognize that certain experiences (e.g., physically abusive punishment by a caregiver, date rape) are considered victimization. Further, because substance use and victimization co-occur at high rates among juvenile offenders, evaluation of substance using behavior and risk also should be considered a critical component in the assessment of incarcerated youth.
2. Since data consistently indicate that approximately one-third of female juvenile offenders report a history of sexual assault, protocols for sexual assault-related follow-up services should be implemented. For example, referrals for medical/gynecological examinations should be made to help ensure the physical well-being of the youth (e.g., no sexually transmitted diseases or lingering infections) and to provide corrective information about consensual sexual decision making. Given the empirical link between sexual assault and risky sexual behaviors among adolescents (Parillo et al. 2001), referrals for empirically supported HIV prevention services (e.g., Diclemente et al. 2004) would likely be beneficial for those who report being (consensually) sexually active at the present time or in the past.
3. Similarly, whereas juvenile prostitution has been viewed as a delinquent behavior in the past, recent clinical, research, and social policy advances have resulted in its redefinition as a form of victimization (i.e., “commercial sexual exploitation”) (Mitchell et al. 2010). Nonetheless, such sexual exploitation may lead

to arrests for juvenile prostitution, rendering it difficult for juveniles to endorse and/or conceptualize such experiences as victimization and making it unlikely that they will receive trauma-focused treatment. Efforts to educate law enforcement agents and other parties involved in the rehabilitation of juvenile offenders about sexual exploitation should continue. Specific to implications for trauma-focused treatment with youth having experienced sexual exploitation, thoughts and feelings regarding these experiences, particularly with regard to “blame/responsibility” for this victimization (e.g., self vs. adults involved in the exploitation), will be important to target.

4. Psychoeducational information regarding the strong link between TEs and juvenile offending should be disseminated to all professionals involved in rehabilitation efforts, including administrators of detention facilities, judges, police, probation officers, doctors and nurses, psychologists, and social workers. Providing psychoeducation to involved professionals, as well as the juveniles themselves and their family members, can help reduce stigmatization of this population by increasing recognition that neither TE experiences nor engagement in risky behaviors, such as delinquency, following TE exposure is uncommon. Such efforts would also increase the likelihood that trauma-focused psychosocial treatment options are made available to the youth and family. As part of the psychoeducation, however, careful emphasis should be placed on the fact that prior TE exposure does not force a juvenile to offend—nor does it excuse juvenile-offending behaviors. Indeed, the majority of youth who experience trauma do not go on to engage in delinquent behaviors. Nonetheless, understanding that a relation exists between a juvenile’s trauma history and his/her delinquent behaviors can have significant implications for treatment. For example, consider a youth who is arrested for selling drugs to support a personal drug habit, which had developed after witnessing a sibling getting shot and killed. Part of the rehabilitation of this youth should involve learning healthier coping

strategies when facing thoughts, feelings, and reminders of his sibling's death.

5. Just as we would expect that an asthmatic or diabetic juvenile offender in need of medical intervention would receive empirically supported treatment, we should insist on the same standard for traumatized juvenile offenders in need of mental health treatment. Thus, it is imperative that frontline clinicians working with this population are familiar with and trained in ESTs for treatment of trauma-related symptoms. Published manuals, in-person workshops, and web-based trainings can help improve dissemination of such ESTs and reach larger numbers of clinicians at a faster pace. As one example, for clinicians wishing to learn TF-CBT to implement with this population, *TF-CBTWeb* is a free web-based training program for clinicians holding a master's degree or higher (tfcbt.musc.edu). In-person training sessions on the implementation of TF-CBT are also held regularly and are listed on *TF-CBTWeb*. The most recent version of the TF-CBT manual (Cohen et al. 2006) provides detailed information on implementation and is available for purchase. These trauma-focused ESTs can be offered in conjunction with—or following—offender treatment (i.e., treatment that targets the offending behavior). However, in most cases, trauma-focused interventions should not be offered in place of offender treatment. For example, a juvenile sex offender who experienced his own victimization as a child should receive both sex offender treatment (i.e., to address his perpetration) and TF-CBT (i.e., to address his victimization).
6. Further, as the field moves toward integrated approaches to treatment, additional research is needed to evaluate current promising practices that combine ESTs for both delinquent behavior and other trauma-related mental health symptoms (e.g., PTSD). Integrated approaches may be more cost-effective than separate treatments, and it is likely that these would be preferred by clients and their families, particularly those who are feeling burdened by system demands and referrals for a multitude of services

(Cocozza et al. 2005). As noted above, several ESTs exist for delinquent behavior and for trauma-related symptoms, such as PTSD. Based on these existing, but separate interventions, the following components are recommended for consideration for integrated treatment approaches:

- (a) Psychoeducation regarding delinquent behavior, trauma, and their relationships (as noted above).
- (b) Incorporation of the youth's ecology into treatment, including interventions (when possible and applicable) at the family, peer, school, and community levels (in addition to individual clinical work).
- (c) Replacement of unhealthy coping skills with a plethora of healthy coping skills.
- (d) Development of a "trauma narrative" where a youth talks freely about the details, distress, and other feelings surrounding a TE experience, and receives corrective information regarding inaccurate or unhelpful cognitions he/she has formed about the TE experience. It is important to recognize that agency regulations (e.g., rules regarding private sessions when clinician is from outside the agency), time, and space constraints may serve as barriers to implementing trauma-focused treatment with incarcerated youth. For example, space limitations may make it difficult to ensure the adolescent's privacy, or time constraints may impede completion of a trauma narrative. Psychoeducation for administrators may help to address some of these barriers by increasing their understanding of the importance of trauma-focused interventions.
- (e) Enhancement of skills to reduce risk of revictimization (given the reciprocal relation between delinquent behavior and victimization), which may indirectly decrease recidivism as well. For example, when engaging a juvenile in revictimization risk reduction work, a clinician can help the juvenile to recognize and avoid high-risk people (e.g., peers that are involved in gangs) and situations (e.g.,

party where drugs are being sold) and to develop the realistic refusal skills to do so successfully.

7. Juvenile offenders are at risk for suicide, and those with a TE history are likely at even greater risk (Hayes 2000). The assessment and monitoring of suicidal ideation and behavior should occur at each session.
8. When trauma-focused treatment with juvenile offenders must occur in a group format (e.g., due to time, budget or personnel constraints), it should be done cautiously and with close monitoring. It is strongly recommended that the development of a trauma narrative should not occur in a group setting because of the possibility that hearing multiple accounts of TEs could exacerbate symptoms or contaminate an individual's account of their own experiences.

In sum, the primary aims of this chapter were to (1) provide an overview of the extant research and clinical literature regarding the link between trauma and delinquent behaviors among adolescents; (2) describe available ESTs for trauma and delinquency; and (3) provide recommendations for integrated approaches to address the multiple needs of this population. We are encouraged by the progress being made in the field. However, the tasks ahead are to continue our development of *integrated* treatment approaches; ensure that they undergo rigorous evaluation to determine their efficacy; and disseminate these approaches to clinicians, administrators, and youth advocates. In striving toward these goals, we will have the opportunity to change the trajectory of traumatized juvenile offenders so that they will put down their “bats” (as suggested in Dr. Seuss’ quote at the beginning of the chapter)—and, instead, be armed with the tools to cope with their experiences and make better choices for the future.

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Posttraumatic Stress Disorder Among Youth Involved in Juvenile Justice

31

Julian D. Ford

More than three quarters of youth involved in the juvenile justice system have been exposed (usually repeatedly) to traumatic stressors, including abuse or family or community violence, life-threatening accidents or disasters, and interpersonal losses. The prevalence of posttraumatic stress disorder (PTSD) among justice-involved youth is three to ten times greater than in community samples. In addition, justice-involved youth with PTSD are at high risk for problems, including depression and suicidality, oppositional-defiant and conduct disorders, risk taking, and substance abuse. This chapter provides an overview of clinical epidemiology research on PTSD, comorbid emotional and behavioral disorders, and complex traumatic stress disorders associated with the poly-victimization experienced by many youth in the juvenile justice system. Evidence is described of complex forms of PTSD among justice-involved youth that include: (1) persistently reduced adaptive arousal reactions and episodic maladaptive hyperarousal, (2) impaired information processing and impulse control, (3) self-critical and aggression-prone cognitive schemas, and (4) deviant peer relationships that model and reinforce disinhibited reactions, maladaptive ways of thinking, and aggressive, antisocial, and delinquent

behaviors. Findings are highlighted concerning PTSD and vulnerable subpopulations, including girls, ethnoracial minority youth, and juveniles charged with sexual offenses. Finally, the chapter concludes with a discussion of trauma-informed approaches for court proceedings, juvenile justice facilities and rehabilitation services, and mental health treatment.

Clinical Epidemiology of Trauma Exposure and PTSD in Justice- Involved Youth

By definition (American Psychiatric Association 2000), traumatic stressors are events that involve a threat, or the actual occurrence, of an untimely death or severe physical injury that could be life threatening, or a violation of bodily integrity (i.e., sexual assault or molestation). Childhood and adolescent exposure to traumatic stressors appears common across societies. Between 25% (Costello et al. 2002) and 43% (Silverman et al. 1996) of children in the USA are estimated to experience at least one (Seedat et al. 2004) traumatic stressor. More than 75% of adolescents in the USA and South African and Kenyan 10th graders (Seedat et al. 2004) reported having experienced at least one traumatic stressor in their lifetimes. Other studies indicate that as many as one in five (20%) 3-year-olds in community samples had experienced potentially traumatic family violence (Mongillo et al. 2009), and

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almost one in three adolescents (30%) (Kilpatrick et al. 2000) had experienced potentially traumatic physical or sexual assault. Between 50% (Kilpatrick et al. 2000) and 80% (Finkelhor et al. 2009) of children and adolescents in the USA report being victimized, including sexual assault (5–8%), physical assault (22–61%), abuse (16%), witnessing family violence or abuse (10%), or murder of a family member or friend (8%).

Youth in the juvenile justice system often have experienced multiple forms of traumatic stressors, including victimization (e.g., abuse, family, and community violence), life-threatening accidents or disasters, and interpersonal losses (Abram et al. 2004; Ford et al. 2008b). Between 75 and 90% of youth in juvenile detention facilities report a history of exposure to at least one potentially traumatic event in large surveys of relatively representative samples (Abram et al. 2004; Ford et al. 2008b). Prevalence estimates of being threatened with a weapon (58%) (Abram et al. 2004), traumatic loss (48%) (Ford et al. 2008b), and physical assault (35%) (Abram et al. 2004; Ford et al. 2010d) are very high in juvenile detention samples compared to community samples. In studies with smaller samples of consecutively detained girls, sexual abuse was the most frequently reported traumatic event (55–70%), but physical assault (46%), physical abuse (33%), traumatic loss, and kidnapping (30%) also were frequently reported by the justice-involved girls (Ariga et al. 2008).

In the USA (Copeland et al. 2007; Mongillo et al. 2009), PTSD is rare among young (ages 0–4) children (0.6% prevalence) and school-age children (1% prevalence), but less so among adolescents (5% prevalence) (Kilpatrick et al. 2003). Similar estimates include just under 1% of Puerto Rican children (Canino et al. 2004) and just over 1% of Bangladeshi children (although children living in slums were more likely to have PTSD; 3.2%) (Mullick and Goodman 2005). Other large-scale studies have reported PTSD to be less common, affecting only approximately 1 in 1,000 children in Great Britain (Ford et al. 2003) and Brazil (Anselmi et al. 2010). However, as many as one in eight children in a community sample in the USA (13.4%) reported some PTSD symptoms, and children who had been exposed

to psychological trauma also were at risk for depression and anxiety disorders (Copeland et al. 2007). Among 10th graders, more than 25% in a South African sample and 5% in a Kenyan sample met criteria for PTSD (Seedat et al. 2004), and 8% of adolescents exposed to terrorism in Israel had probable PTSD (Pat-Horenczyk et al. 2007).

PTSD occurs only following exposure to traumatic stressors, but results from a confluence of several risk (e.g., family or personal history of psychopathology, anxiety-proneness, parental PTSD) and protective (e.g., social support, education) factors, of which trauma is but one (Brewin et al. 2000; Ozer et al. 2003). Higher prevalence estimates of PTSD have been reported for youth in psychiatric and justice settings than in community populations. One in four (Ford et al. 2000; Mueser and Taub 2008) adolescents in psychiatric treatment meet criteria for PTSD. Similarly, 27% of Swiss male juvenile offenders (Urbaniok et al. 2007), 25% of Russian male juvenile offenders (Ruchkin et al. 2002), and 10–19% of detained youth in the USA (Abram et al. 2004; Cauffman et al. 1998; Ford et al. 2008b; Steiner et al. 1997) meet criteria for PTSD. A study that directly compared PTSD prevalence in two high risk samples found similar prevalence levels among boys remanded to secure facilities compared to those in mental health treatment programs (Urbaniok et al. 2007). Although a study of American juvenile detainees found that girls and boys were comparable in the prevalence of PTSD (Abram et al. 2004), studies with female juvenile offender samples from Australia (Dixon et al. 2005) and Japan (Ariga et al. 2008) reported substantially higher prevalence estimates for PTSD (37% and 33%, respectively) than those reported for male juvenile offenders (see Gender Issues, below).

Regarding comorbidity, youth with PTSD consistently are found to be at risk for other anxiety disorders, as well as affective, psychotic, eating, substance use, and disruptive behavior disorders, in community (Copeland et al. 2007; Ford et al. 2009b; Giaconia et al. 1995), clinical (Ford et al. 2000; Mueser and Taub 2008) and juvenile justice samples (Abram et al. 2007; Ariga et al. 2008; Dixon et al. 2005; Ruchkin et al. 2002). PTSD also is associated with increased risk of cognitive

impairment (Moore 2009; Schoeman et al. 2009), possibly exacerbated by learning disabilities or dissociation (Morgan et al. 2006; Sequeira and Hollins 2003).

Specifically among youth in juvenile detention, 93% of those who met criteria for PTSD based on a structured research interview had at least one other psychiatric disorder—almost 50% more than detained youth who did not meet criteria for PTSD (64%) (Abram et al. 2007). A majority (54%) of the detained youths with PTSD had at least two *types* (i.e., affective, anxiety, behavioral, or substance use) of comorbid psychiatric disorders. One in nine detained youths with PTSD (11%) had all four types of comorbid psychiatric disorders. For boys, PTSD was associated with all types of comorbid psychiatric disorders, while among girls the primary comorbidities of PTSD were alcohol or drug use disorders. Boys also were more than three times more likely than girls to have a comorbid psychiatric disorder if they had PTSD. Despite the exceptionally high level of PTSD prevalence and comorbidity that was identified with the structured research interview protocol, PTSD is very rarely identified by juvenile justice or community mental health services (Garland et al. 2001). PTSD also has been shown to fully (for girls) or at least partially (for boys) mediate the relationship between childhood exposure to violence and problems with depression and anxiety (Ruchkin et al. 2007). PTSD symptoms also are associated with heightened problems with impulsivity and oppositionality among psychiatrically impaired children and youth (Ford et al. 1999). Abram et al. (2007) therefore conclude that “Detection of comorbid PTSD among detained youths must be improved. PTSD is often missed because traumatic experiences are rarely included in standard screens or volunteered by patients. When planning treatment, clinicians must consider ramifications of comorbid PTSD” (p. 1311).

Complex Trauma, Complex PTSD

Before considering implications of a PTSD perspective for juvenile courts, correctional and rehabilitation services, and mental health programs, the

complex nature of traumatic experiences and post-traumatic sequelae experienced by many justice-involved youth warrants consideration. Complex traumatic stressors (hereafter “complex trauma”) are a subset of these dangerous or harmful events in which the person suffers not only a traumatic shock but also severe disruption in their development of core self-regulatory competences (Ford 2005) or attachment bonds (Cook et al. 2005). Exposure to complex trauma places children at risk for a range of serious internalizing (e.g., fear, depression, somatic complaints) and externalizing (anger, aggression, oppositional-defiant, conduct disorder, substance abuse) problems that have substantial social, educational, and economic costs (Foster and Jones 2005; Zakireh et al. 2008).

Complex trauma may include not only physical or sexual abuse or neglect but also other forms of victimization such as family and community violence, physical and sexual assault, and bullying (Finkelhor et al. 2009), as well as exposure to broader types of violence, such as war, captivity, genocide, terrorism, torture, and forced displacement from home and community (Joshi and O’Donnell 2003; Porter and Haslam 2005). Complex trauma often is cumulative, involving repeated episodes over prolonged periods or multiple types/stressors that have been described as “poly-victimization” (Finkelhor et al. 2009). Increasing complexity of trauma exposure is associated with increasingly severe and chronic symptomatic problems and impairment (Anda et al. 2006; Briere et al. 2008; Cloitre et al. 2009). These problems are manifestations of deficits in core self-regulatory competences (Ford 2005), including: (a) attention and learning, (b) sensorimotor functions, (c) working (short-term processing), declarative (verbal), and narrative (autobiographical) memory, and (d) emotion regulation and social relatedness (attachment). Complex trauma exposure is associated with altered cognitive information processing, schemas, and expectations which may lead the youth to be prone to endorse aggression (Bradshaw and Garbarino 2004; Dodge et al. 1995), submit to victimization (Ponce et al. 2004), or experience high levels of self-criticism and shame (Alessandri and Lewis 1996; Glassman et al. 2007; Sachs-Ericsson et al. 2006). Moreover,

complex trauma may lead to involvement with peers who engage in, model, and encourage delinquent behavior (Ford et al. 2010a). Association with delinquent peers increases the risk of delinquency due to the clustering of behavior problems (Donovan et al. 1988), peer modeling (Dishion and Dodge 2005), and engagement in violence secondary to alcohol (Swahn and Donovan 2004, 2006) or drug use (van den Bree and Pickworth 2005), or combinations of these factors (Finkelhor et al. 2007a).

Several lines of evidence suggest that complex trauma puts youth at risk for increasingly severe juvenile justice involvement. Exposure to childhood abuse (Ayoub et al. 2006; Dodge et al. 1995), family violence (Buka et al. 2001; Haj-Yahia 2001), and community violence (Fehon et al. 2001; Ruchkin et al. 2007; Stein et al. 2003a) are predictive of the development of beliefs, attitudes, and peer group affiliations (Ford et al. 2010a) endorsing delinquent behavior. Moreover, exposure to domestic violence has been shown to be associated with lower levels of intellectual functioning independent of genetic effects (Koenen et al. 2003), and with impaired arousal regulation (Saltzman et al. 2005).

Dysregulated stress reactivity (Lopez-Duran et al. 2009; van Bokhoven et al. 2005; Yang et al. 2007) may include diminished (Ford et al. 2010b) as well as excessive reactivity to stressors. Specifically, complex trauma histories and complex forms of PTSD and its comorbidities may increase youths' risk of entry into and recidivism in the juvenile and adult criminal justice systems by contributing to or exacerbating several risk factors: preoccupation with one's own and other persons' anger (Pollak and Tolley-Schell 2003); generalized expectancies of being physically or sexually harmed (Gully 2003); a hostile/aggressive information processing style (Dodge et al. 1995); a bias toward attending to and perceiving stimuli as signs of threat (Pine 2007); deficits in cognitive operations necessary for selective sustained attention, hypothesis testing and problem solving, and organizing verbal information (Beers and De Bellis 2002) and short- and long-term verbal memory (Cordón et al. 2004), and detailed overinclusive memories of past traumatic events

(Cordón et al. 2004). A biological link between complex trauma and delinquency risk is suggested by evidence that childhood exposure to domestic violence or abuse (Choi et al. 2009; De Bellis and Kuchibhatla 2006) and childhood sexual abuse (Kitayama et al. 2007; Lanius et al. 2005; Schmahl et al. 2003) are associated with dysregulation specifically in brain areas and pathways associated with stress reactivity (Saltzman et al. 2005) and cognitive appraisals and intellectual functioning (Koenen et al. 2003).

As a result of impaired self-regulation, youth with complex trauma histories often develop externalizing problems (e.g., hostility, oppositionality, impulsivity) in childhood (Ford et al. 1999, 2010c; Mongillo et al. 2009), adolescence (Farrington and Loeber 2000; Ford et al. 2008b, 2009a; Ruchkin et al. 2007; Turner et al. 2006), and adulthood (Brodsky et al. 2001; Corstorphine et al. 2007; Cuomo et al. 2008; Kausch et al. 2006; Roy 2005; Zanarini et al. 2002). These youth tend to be diagnosed with externalizing disorders, such as attention deficit hyperactivity disorder (ADHD), oppositional defiant disorder (ODD), and conduct disorder (CD), or personality disorders, or behavioral dyscontrol syndromes that manifest in the form of suicidality (Ford et al. 2008b; Swahn and Bossarte 2007; Waldrop et al. 2007), substance use disorders (Ford et al. 2008b; Kilpatrick et al. 2000; Kilpatrick et al. 2003) and preteen substance use (Hamburger et al. 2008), and incarceration (Holmes and Sammel 2005). While those diagnoses may be warranted, youth with complex trauma histories who receive these diagnoses have been shown to have particularly severe emotional and behavior problems (Ford et al. 2009a, 2010a). Thus, complex trauma warrants attention as a potential exacerbating factor among justice-involved youth with a variety of psychiatric diagnoses, in order to develop services that address their severe symptomatology.

Estimates of complex trauma stressor prevalence are high among children or youth in juvenile justice programs, comparable to those for children in psychiatric treatment. A hierarchical cluster analysis of trauma exposure in a large representative sample of youth in juvenile detention

yielded a prevalence estimate of 35% for complex trauma (Ford et al. 2010d). This is about three times higher than the 10–13% estimates of poly-victimization from epidemiological study of children and adolescents (Finkelhor et al. 2009) and adolescents (Ford et al. 2010a), but comparable to those with child or adolescent psychiatry samples. In an inpatient child psychiatry sample, 33% had a documented history of sexual abuse, 47% had a documented history of physical abuse, and more than two thirds had experienced removal from their home before the age of five (69%)—almost half (45%) having had multiple out-of-home placements—or potentially traumatic violence (70%) (Ford et al. 2009a). In an outpatient child psychiatry sample, most (>67%) diagnosed with ODD had been victimized per their own or their parent’s report, compared to one third of the patients diagnosed only with ADHD and 13% of the patients diagnosed with an adjustment disorder (Ford et al. 1999). Poly-victimized children also are more likely than others not only to be revictimized (Finkelhor et al. 2007b), but also to suffer accidental or bereavement traumas (Finkelhor et al. 2007b; Ford et al. 2009a, 2010a).

Complex trauma was found to be associated with risk for juvenile delinquency in a national survey of the US adolescents (Ford et al. 2010a). Victimization has been shown to place youths at risk for delinquency (Dembo et al. 1989; Nofziger and Kurtz 2005) and to be associated with more severe delinquency (Dembo et al. 2000). Youth who have been victimized by abuse or violence also have been found to be more likely to recidivate than other youth (Dembo et al. 1995; Heilbrun et al. 2005; Ryan and Testa 2005). The impact of complex trauma may be particularly adverse for youth who become involved in delinquency: poly-victimized youth who were involved in delinquency reported more severe psychological distress than poly-victimized youth who had no involvement in delinquency (Cuevas et al. 2007). Violence may be especially detrimental for delinquent youth: violence exposure was found to be more strongly associated than a history of abuse with risk of juvenile offending (Eitle and Turner 2002) and with the severity of

traumatic stress symptoms and risk of suicide and substance abuse (Ford et al. 2008b), among detained juvenile offenders.

Programmatic and Clinical Challenges of PTSD with Justice-Involved Youth

PTSD resulting from the types of complex trauma that are commonly reported by youth in juvenile justice populations thus may lead to extremely problematic forms of dysregulation, including diminished adaptive arousal reactions, episodic maladaptive hyperarousal, impaired information processing and impulse control, self-critical and aggression-endorsing cognitive schemas, and peer relationships that model and reinforce disinhibited and aggressive ways of thinking and behaving. This constellation of problems poses significant challenges for court proceedings, correctional and rehabilitation services, mental health screening and assessment, and the mental health treatment of youths involved in the juvenile justice system.

While *not* suggesting that every delinquent youth is emotionally dysregulated due to traumatic victimization, these findings suggest that by focusing on sanctions and services that address *emotional dysregulation* and *distorted information processing* the juvenile justice system can play a vital role in both helping children who have been traumatically victimized and reducing the likelihood of recidivism and escalating danger to society by youthful offenders whether they have or have not been traumatically victimized. This perspective is consistent with legal concepts, such as zero tolerance (Secker et al. 2004) and restorative justice (Bazemore et al. 2005). Zero tolerance is an approach to criminal justice policy which emphasizes personal responsibility and societal safety, while restorative justice emphasizes the need to integrate community and offender and allow the offender to recognize and repair damage to the community. To the extent that delinquent youths are behaving dangerously as a result of dysregulated emotions and distorted information processing, they will best be able to take responsibility

and to show respect for other people and the law if they are assisted in *gaining the capacity to manage their emotions and think clearly enough to act responsibly* (Ford 2005).

Juvenile justice systems have not routinely addressed PTSD. However, in the past decade, as traumatic stress researchers have demonstrated that psychological trauma exposure and PTSD are prevalent among juvenile justice-involved youth, there has been a push to improve the juvenile justice system's response to traumatized youths (Ford et al. 2007). At the same time, new approaches to identifying and treating traumatic stress disorders among youth have emerged. The resources include two related but distinct approaches to services for justice-involved youths: (1) *trauma-informed services* (e.g., screening for trauma history and traumatic stress symptoms; providing education for youths, families, and legal and healthcare professionals and staff about how to recognize and manage traumatic stress) and (2) *trauma-specific services* (e.g., in-depth assessment and evaluation of trauma history and traumatic stress disorders; psychological or psychiatric treatment for PTSD) (Ford et al. 2007).

Court Proceedings

Trauma-informed expertise may be needed when mental health professionals serve as expert witnesses for the plaintiff or the defendant in a civil case or for the prosecution or the defense in a criminal case. Expert testimony may involve either a presentation to the court of background factual information relevant to the case (e.g., defining PTSD and how it may affect a youth's behavior and mental state) or conducting an individualized evaluation of a youth charged with violating the law and testifying about the results (e.g., assessing trauma history and PTSD symptoms to determine whether PTSD should be taken into account in judicial decisions). As an expert witness, the trauma-informed professional may be called upon to estimate the likelihood that PTSD contributed to a youth's alleged delinquent behavior or compromised his or her ability to competently make decisions and act responsibly either at the time of

an infraction or during a hearing. The expert witness also may be asked, by an attorney representing parties involved in a lawsuit or a defendant in a juvenile hearing, or by the judge, to make judgments of the extent to which harm sustained by a child victim includes posttraumatic psychological injury, and recommendations for services (such as mental health treatment) or resources (such as foster or adoptive placement for a maltreated child) needed to enable the victim to recover from the harm, or to be able to competently stand trial, or to successfully and safely return to the community. Expert testimony may be requested concerning the scientific status of controversial matters such as whether traumatized persons can recall traumatic events accurately many years or decades after the fact, particularly if they did not recall the events for a period of time. Expert testimony also may be requested about the scientific status of specific trauma assessment instruments, such as the accuracy of questionnaires or structured interviews for determining a youth's trauma history or PTSD. The reliability, validity, and predictive utility of tests and measures with persons involved in legal cases—such as how to determine if a youth is falsely claiming or exaggerating the severity of exposure to traumatic stressors or PTSD symptoms—e.g., “malingering” (Hall and Hall 2007), is another question requiring trauma-informed expertise.

The clinical role for trauma-informed professionals in forensic settings also may include conducting pre-adjudication or follow-up mental health assessments that are used by the judge to assist in decisions without having the professional actually testify in court. The forensic mental health role also may involve directly providing or overseeing the provision of trauma-specific therapeutic services, such as a psychologist, social worker, or counselor doing group or one-to-one psychotherapy for a legally detained, incarcerated, or probated youth. Conducting clinical quality assurance studies also may require trauma-informed expertise, such as reviewing court-ordered mental health assessment reports in order to determine if trauma history and PTSD were appropriately assessed and considered in the assessor's conclusions and recommendations.

Correctional and Rehabilitation Services

Trauma-informed education can enable administrators, supervisors, and line staff in juvenile justice facilities and community-based programs (e.g., probation, risk reduction, diversion) to help traumatized youth to anticipate and respond effectively to trauma-related triggers without reacting maladaptively due to PTSD symptoms (Ford et al. 2007). The initial reaction by administrators and staff to a trauma-informed approach to preventing recidivism and enhancing program and community order and safety often is that PTSD will be used as an “excuse” to justify misbehavior by the youths themselves or to reduce youths’ accountability and responsibility by soft-hearted therapists or advocates. However, when trauma-informed milieu or probation programs actually are instituted, youth learn that they can *and must* take responsibility for understanding and managing PTSD symptoms in order to not inadvertently be victimized by their own stress reactions that are no longer adaptive. In trauma-informed programs, youth and adults (e.g., detention line staff, probation officers) alike learn that they share a common and universal human challenge of anticipating, recognizing, and gaining control over stress reactions. For youths, the problematic stress reactions take the form of PTSD symptoms. For the adults working with youths, their own stress reactions become more manageable when understood as vicarious or secondary trauma (Caringi and Pearlman 2009)—the frustration, irritation, impatience, grief, guilt, and disappointment that inevitably occurs when attempting to help traumatized youths who fluctuate unpredictably between being emotionally shut-down and explosive, and passively defiant or oppositional and defiant, as a result of PTSD.

For example, a trauma-informed approach to empowering both adult justice professionals and the youth with whom they work has been instituted system-wide by the Connecticut State Judicial Branch’s Court Support Services Division in juvenile justice programs (Ford et al. 2007). The intervention, Trauma Affect Regulation:

Guide for Education and Therapy (TARGET ©) (Ford and Russo 2006; Ford and Saltzman 2009), provides education about traumatic stress and training on self-regulation skills not only for youth but also for administrators, supervisors, line staff, officers, public defenders, teachers, and health-care and social work professionals in residential (e.g., detention, respite) and community-based (e.g., risk reduction, family support, probation) juvenile justice programs. All participants are encouraged to use the knowledge and skills in all of their interactions, not just in designated individual or group learning sessions. Consultation is provided on an ongoing formal and informal basis to assist each program’s staff in tailoring the model to their milieu and goals, as well as to ensure fidelity of implementation of the model over time. The current biopsychosocial research base on PTSD is translated into nontechnical concepts and practical skills in order to make the concepts and skills readily accessible. The goal is to create a social environment that, consistently across all programs, supports recovery from trauma by providing mentoring and role modeling (by peers as well as adults) of well-regulated responses to both minor and major stressor experiences.

Three studies have been completed evaluating the effectiveness of TARGET with youth involved in or at risk for involvement in the juvenile justice system. A randomized clinical trial of TARGET delivered for 12 sessions on a one-to-one basis with girls who reported delinquent behavior and met diagnostic criteria for PTSD showed that TARGET was superior to a relationally-focused treatment as usual psychotherapy in reducing PTSD symptom severity (Ford et al. 2012). A field study of TARGET implemented as a group and milieu educational intervention in mixed gender juvenile detention centers demonstrated that, after controlling for potential confound variables (e.g., site, severity of offense, gender, age), for every four sessions of TARGET received there was one fewer disciplinary incidents and a 2.5 hour reduction in the use of seclusion by center staff in the first 14 days of detention (Ford and Hawke *in press*). Youth with clinically significant scores on the MAYSI-2 Traumatic Experiences subscale showed particularly strong benefits

associated with receiving TARGET, including two fewer disciplinary incidents and a 4 h reduction in the use of seclusion by center staff in the first 14 days detention. An independent quasi-experimental study of TARGET as a group and milieu educational intervention in specialized high security mental health incarceration units for juvenile offenders found that units implementing TARGET had 50% fewer incidents involving threats by youths or use of seclusion over a 16-month period, compared to a 300% increase in each type of incident during that time period on matched units delivering services as usual (Marrow et al. [in press](#)). In addition, youths receiving TARGET reported statistically significant increases in self-efficacy and satisfaction with juvenile justice services, as well as reductions in depression symptoms, while youths on the comparison units reported reductions in self-efficacy and satisfaction and increased depression symptoms.

Other empowerment-based educational and therapeutic interventions that have been adapted for traumatized youth warrant evaluation in juvenile justice. These include systemic/organizational change models, Sanctuary© (Bloom et al. [2003](#)) and Trauma Systems Therapy (Saxe et al. [2007](#)). Seeking Safety is a therapy for co-occurring PTSD and addiction (Najavits et al. [2006](#)). Attachment, Regulation, and Competence (Kinniburgh et al. [2005](#)), Life Skills Life Story (Cloitre et al. [2006](#)), Structured Psychotherapy for Adolescents Responding to Chronic Stress (DeRosa and Pelcovitz [2008](#)), and Trauma Recovery and Empowerment Model (Fallot and Harris [2002](#)) are additional therapeutic models that were developed specifically for complex PTSD.

Screening and Assessment

The primary focus of PTSD screening and assessment is determining each youth's trauma history and the sequelae that most seriously impair functioning and compromise her or his and others' safety and functioning (Ford [2009](#)). Adolescents, including those in juvenile detention settings (Abram et al. [2004](#); Ford et al. [2008b](#)), are able to

credibly self-report past traumatic experiences when provided with brief and behaviorally specific questions that do not include vague and affectively charged terms, such as "abuse" (Ford [2010](#)). Screening for PTSD has been done in juvenile justice populations with brief but comprehensive self-report measures, such as the Traumatic Events Screening Instrument (TESI) (Ford et al. [2008b](#)) and the UCLA PTSD Index (Steinberg et al. [2004](#)), or with the Massachusetts Youth Screening Instrument-2 "traumatic experiences" (MAYSI-2 TE) subscale (Grisso et al. [2001](#)). Detained youth reporting a history of potentially traumatic events on the MAYSI-2 TE were found to have a symptom consistent with PTSD (Ford et al. [2008a](#)). However, an MAYSI-2 critical item set was found to better identify youth (especially boys) who did *not* report PTSD symptoms than those who disclosed PTSD symptoms (Cruise et al. [2009](#)). Moreover, Ford et al. ([2008a](#)) found that another subgroup of detained youth who did not endorse traumatic events on the TE reported severe symptoms (i.e., somatic complaints, hopelessness, substance abuse) that were consistent with a history of complex trauma. Although symptoms alone should not be used to infer a complex trauma history, these findings suggest that more than the MAYSI-2 may be needed to identify detained youth with PTSD, especially with complex trauma histories. Even on detailed screeners, such as the TESI and UCLA RI, youth may not recognize the significance of, or defensively under-report, potentially traumatic events, such as abuse, violence, or loss, and PTSD symptoms such as hypervigilance, hyperarousal, or avoidance of trauma reminders.

A major challenge for assessment and classification of youth in secure justice settings is distinguishing between reactive and proactive aggression (Connor [2002](#)). Proactive aggression is associated with positive outcome expectations (Pardini et al. [2004](#)) for aggression and the presence of "callous and unemotional" traits (White et al. [2009](#)) that are considered to be a negative prognostic factor for treatment or rehabilitation (Frick et al. [2003](#)). PTSD's symptoms of flashbacks, emotional numbing, and hyperarousal (including extreme anger) may lead a youth to

appear to be premeditated, callous, and unemotional in acting violently or delinquently. Yet, maltreated youth are more likely to engage in *reactive* than proactive aggression and PTSD's defensive hypervigilance can be very difficult to distinguish from proactive attempts to aggress in order to purposively harm others. Complex trauma, such as maltreatment and disrupted primary attachments, has been shown to be associated with conduct, impulsivity, attention, and delinquency problems independent of the effects of externalizing or internalizing psychiatric disorders (Ford et al. 2009a, 2010a).

PTSD secondary to complex trauma may offer an approach to understanding reactive aggression among youth in secure justice settings as maladaptive attempts to cope with trauma-related perceived threats as well as an instrumental and defiant counter-reaction to perceived powerlessness, betrayal, and abandonment that is consistent with PTSD (Ford et al. 2006). Indirect support comes from findings that psychiatrically impaired youth with physical abuse histories were *hypo*-aroused in response to a physical stressor (Ford et al. 2010b). What appears superficially to be emotional callousness due to autonomic hypoarousal or apparent indifference to harm to self or others may be a biologically based reactive (defensive) response secondary to complex trauma.

For example, a girl with an extensive history of delinquency had a family history with correspondingly extensive modeling of antisocial and aggressive behavior, putting her at risk for antisocial behavior due both genetically and to social learning (Lahey et al. 1999). When interviewed she stated that she would “hurt anyone who tries to hurt me—make them pay so they never disrespect me or try to [challenge] me. I don’t care if they get hurt, or if I get hurt, I’m not gonna be anyone’s bitch. I’ll do them first if I have to, you can’t let anyone make you their bitch.” This girl also had been sexually abused as a young child by male relatives and sexually assaulted by older boys in group home placements. She clearly endorses the use of aggression on an instrumental basis, but that appears to be primarily self-protective due to a sense of being violated based upon a history of complex trauma (Dodge et al. 1995, 1997) rather

than actually enjoying harming or controlling others. From a complex trauma perspective, she requires help in preventing further victimization and evaluation for treatment for complex PTSD as well as comorbid depression or dysthymia. While she technically met criteria for ODD and conduct disorder, as well as for cocaine abuse and alcohol and marijuana dependence, without interventions and placements designed to restore her sense of safety, trust, and personal control, and treatment to enable her to respond to trauma reminders without angry and fearful hyperarousal, emotional numbing, and hypervigilance, she is likely to continue to rely upon the symptoms of those disorders to simply cope and survive.

Mental Health Treatment

Psychotherapy is the first line of evidence-based treatment for youth with PTSD (Cohen et al. 2009). Pharmacotherapy may be used for specific symptoms, but does not have an established evidence base for treating childhood PTSD (Connor and Fraleigh 2008). The most extensively researched therapy is trauma-focused cognitive behavior therapy (TF-CBT), which teaches coping and cognitive reappraisal skills and then helps youths to construct and share with a caregiver a narrative account of specific traumatic event(s) (Cohen et al. 2006). TF-CBT was developed for and has been tested primarily with child victims of sexual abuse (and more recently others who experienced traumatic losses or were exposed to the September 11th, 2001 attacks in New York) (Lang and Ford 2008)—but infrequently with adolescents and not in the juvenile justice system. Externalizing behavior problems (e.g., ODD, CD) that are common among justice-involved youth are associated with poorer outcomes in TF-CBT (Cohen et al. 2009). TF-CBT also recommends (with some empirical support; Lang et al. 2010) participation by a supportive caregiver, but this often is not possible with youth in justice settings. Therefore, TF-CBT must be used cautiously to treat justice-involved youth, and other variants of CBT, such as the school-based group model, cognitive behavioral intervention for traumatized

students (CBITS) (Stein et al. 2003b), and the family education model, parent–child interaction therapy (PCIT) (Timmer et al. 2005), should be considered with justice-involved youth.

Gender Issues

In the past two decades, the incidence of juvenile justice involvement among girls has risen substantially, compared to relatively stable levels for boys (Chamberlain and Leve 2004). As noted above, justice-involved girls report sexual abuse and kidnapping far more often than boys, as well as comparably frequent and severe exposure to physical violence and loss (Abram et al. 2004; Ariga et al. 2008; Cauffman et al. 1998; Dixon et al. 2005; Steiner et al. 1997). As a result, these girls often are involved with child protective services and are at risk for substance abuse, risky sexual behavior, teen pregnancy, intergenerational family/domestic violence, community violence, physical illness, unemployment, school failure, and adult incarceration (Kerr et al. 2009; Smith et al. 2006). Incarcerated girls also are 11 times more likely than boys to die (Teplin et al. 2005).

Almost 20 years ago, the 1992 Reauthorization of the Juvenile Justice Delinquency Prevention Act required states receiving federal funding to “identify gaps in their services to female offenders and develop gender-specific programs” (Physicians for Human Rights 2009). Trauma-informed services therefore must include “comprehensive gender-specific programs ... [with] education, job training, family support services, counseling and health services ... ideally focusing on individual empowerment and competency-building” (Physicians for Human Rights 2009). A unique program designed originally for justice-involved girls (although also successful with boys), multidimensional treatment foster care (MTFC) provides foster placements with a rich array of support for the youth, biological family, and foster parents. MTFC has been shown to be efficacious in reducing girls’ future arrests or incarceration, pregnancy, school failure, and delinquent peer affiliations (Chamberlain et al. 2007; Kerr et al. 2009).

Ethnoracial Minority Youth

Youth from ethnoracial minority backgrounds are overrepresented in the juvenile justice system (Iguchi et al. 2005). Incarceration of minority youth potentially perpetuates societal stigma and cultural trauma, and places them at risk for illness (Iguchi et al. 2005) and violent death (Teplin et al. 2005). However, African American and Latino/Hispanic youth were not more likely than White youth to report trauma exposure or PTSD (Abram et al. 2004), nor multiple (comorbid) psychiatric disorders (Abram et al. 2003, 2007). Culturally relevant role models and practices for preventing and recovering from complex trauma are needed—but not yet developed (Pole et al. 2008)—for justice-involved youth. For example, the CBITS program was adapted for Latino youth and shown to be well accepted and associated with reduced PTSD (Kataoka et al. 2003).

Juveniles Charged with Sex Offenses

Juveniles charged with sex offenses (JSOs) are at risk for nonsexual as well as sexual reoffending (Caldwell 2007; Waite et al. 2005). JSOs with sexual abuse histories tend to be more aggressive than other JSOs (Smith et al. 2005). Interviews with the clinicians treating 40 juvenile sex offenders indicated that 95% had experienced at least one past traumatic event and that their risk of PTSD (65%) was substantially higher than for other justice-involved youth (McMackin et al. 2002). The clinicians viewed the trigger(s) for sex offending as related to a prior trauma in 85% of the youth, including feeling helpless, fearful, or trauma-related horror (McMackin et al. 2002). Another study found that one in seven JSOs met criteria for a dissociative disorder, particularly those with past physical abuse (Friedrich et al. 2001). However, although sexual abuse has been hypothesized to place youth at risk for sex offending (Friedrich 2000), it has not been found to correlate with any specific features or types of sexual offending (Hunter et al. 2003) nor with risk of sexual reoffending (Worling 2006). Thus, PTSD warrants careful assessment with JSOs.

Conclusion

Justice-involved youth are at high risk for histories of complex trauma, including poly-victimization, abuse and family violence, and losses, and for PTSD with complex comorbidities and self-regulatory deficits (e.g., dysphoria, oppositional-defiance, risk taking, substance abuse, diminished adaptive arousal reactions, episodic maladaptive hyperarousal, impaired information processing and impulse control, self-critical and aggression-endorsing cognitive schemas, and delinquent peer relationships). Trauma-informed interventions and trauma-specific treatments that address the sequelae of complex trauma therefore are urgently needed but still in the early stages of development and evaluation with juvenile justice populations. As PTSD is more widely recognized and better understood as a complex but manageable problem for justice-involved youth and the adults and systems working with them, enhanced outcomes (including youth and community safety, reduced delinquency and lifespan recidivism, and a healthier and more socio-economically successful young adult citizenry) can be anticipated in the next decades.

Author Note

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Trauma and Posttraumatic Stress Disorder Among Youth in the Juvenile Justice System: A Critical Appraisal

32

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Background

Scope of the Problem

Juvenile delinquency remains a significant and complex social work problem. As of 2008, there were an estimated 2.18 million youth aged 17 and younger arrested each year in the USA (Puzzanchera 2009). Some of those youth arrested may receive a restrictive court disposition for secure care placement. In 2006, approximately 92,000 youth were in secure care confinement for delinquent offenses (Sickmund et al. 2008). About 65% of these youth were serving sentences for serious crimes, such as crimes against persons, (e.g., criminal homicide, sexual assault, robbery, and aggravated and simple assault) and property offenses ($n=23,177$), (e.g., burglary, theft, and arson). The other 35% of youth were serving time for less serious offenses, such as technical violations ($n=15,316$), drug offenses ($n=7,996$), public order offenses ($n=9,994$), and status offenses ($n=4,717$), (e.g., running away and truancy) (Sickmund et al. 2008).

In addition to juvenile offense histories, youth in juvenile detention often experience a complex array of psychosocial problems. Perhaps the

most serious and often overlooked psychosocial problems are youth's exposure to trauma and related posttraumatic stress disorder (PTSD) or PTSD symptoms. Evidence suggests that upwards of 93% of juvenile offenders report at least one or more traumatic experiences, such as being a victim or witness to violence (e.g., Abram et al. 2004).

The mental health consequences of trauma, such as PTSD or posttraumatic stress symptoms also are documented in upward of 65% of juvenile offenders (Abram et al. 2007; Arroyo 2001; Burton et al. 1994; Cauffman et al. 1998). Understanding the history of trauma and PTSD among youth in the juvenile justice system is critical. The information garnered from research in this area can be used to identify those youth most at risk along with the correlates and consequences of trauma and PTSD among juvenile and youth. It also can provide information on what are the most feasible methods that can be used to inform assessment and appropriate treatment.

The Diagnostic and Statistical Manual (DSM-IV-TR) presents PTSD diagnosis as a two-step process that involves identifying the traumatic stressor/s and individuals' adverse response. A psychiatric diagnosis of PTSD is characterized by the development of "characteristic symptoms following exposure to an extreme traumatic stressor" (APA 2000, p. 463). The diagnostic criteria for PTSD includes exposure to a potentially traumatic event (Criterion A), re-experiencing some aspect of the trauma (Criterion B), avoidance of

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stimuli associated with the event or numbing of emotional responsiveness (Criterion C), and increased arousal subsequent to the traumatic event (Criterion D). In addition, all of these symptoms must be present for more than one month and cause significant distress or impairment (APA 2000).

The research on trauma and PTSD among the general population of youth has been sparse and methodologically limited. For example, trauma research using samples of youth often has not adequately differentiated mere event exposure from exposure that meets the diagnostic classification as a Criterion A trauma exposure. As such, empirical articles on assessment of PTSD among community sample of youth can sometimes present conflicted and confusing findings regarding the nature of trauma exposure and the consequences, such as PTSD (see Margolin and Gordis 2000, 2004). To what extent research on trauma and PTSD among juvenile justice-involved youth has similar methodological issues has yet to be determined.

With the increasing documentation of trauma among youth in the juvenile justice system, accurately assessing trauma and related PTSD symptoms has become paramount. The interest in trauma assessment has been consistently growing over the last 15–20 years, particularly related to community or child welfare youth populations (Strand et al. 2005).

Research on trauma exposure among community samples of youth provides some insight into trauma among youth in the juvenile justice system. These studies suggest that exposure to a traumatic event is far more prevalent than PTSD diagnoses, that this is particularly so among inner-city and low-income youth, and that the majority of exposure in these communities stems from witnessing or experiencing violence (Bell and Jenkins 1993; Berman et al. 1996; Costello et al. 2002; Silva et al. 2000). However, to date there has been no known formal review of the research studies that examines trauma among juvenile offenders. This includes evaluating the overall study methods employed, particularly research design, measurement, and data collection procedures. This book chapter helps to fill that gap.

The following critical appraisal of the methods and major findings is of the empirical research on trauma exposure and PTSD prevalence among youth in the juvenile justice system. More specifically, it provides a review and critical analysis of the methods used in prior studies including the current measures and standards used to assess trauma and PTSD in juvenile justice settings. This study builds on the works of Strand et al. (2005), as well as others, by offering a comprehensive review of how trauma exposure and PTSD is operationalized and studied in juvenile justice settings.

The current research in this area offers far-ranging yet limited results concerning prevalence, symptom presentations (i.e., frequency and severity), and PTSD as outcome. Identifying the strengths and limitations of the current methods used to assess trauma and PTSD among youth in the juvenile justice system can be used to develop or improve research and assessment and intervention strategies of youth in the juvenile justice system. The information in this book chapter provides a summary and critique of the prior literature and offers recommendation for planning rigorous research studies in this area.

This chapter is organized as follows: It begins with a comparative review of the major findings and methods used in the empirical research on trauma and PTSD among youth involved in the juvenile justice system. The section that follows offers a critical appraisal of these studies for their methodological rigor. This chapter ends with recommendations for future research in this area designed to improve assessment and intervention strategies with youth with histories of trauma in the juvenile justice system.

Methods

Selection Criteria

This section reviews the major findings and methods of research on trauma exposure and PTSD among juvenile justice involved youth. The research studies included in this review were

the result of a comprehensive literature search conducted in December 2009. The criteria for inclusion included: (1) a quantitative empirical study that examined *both* trauma and PTSD using samples of incarcerated youth, (2) the empirical studies needed to be published in a peer-reviewed empirical journal and be published recently within the past two decades (1990–2010).

Using these selection criteria, a total of 12 articles that met these criteria were included in this review. Of these 12 articles, most were conducted in the USA (75%, *n*=75) and published between the years 2000 and 2008 (67%, *n*=8).

Methods Review: Summary of Major Findings

Review of Results Across Studies

An overview of the major findings of the studies included in the review can be found in Tables 32.1 and 32.2. As a collective, these studies comprise a

scant but growing body of evidence that documents the prevalence of trauma and PTSD among youth in the juvenile justice system. Overall, youth in the juvenile justice system were found to have higher prevalence rates of trauma exposure and PTSD than community samples of youth (e.g., Dixon et al. 2004; Steiner et al. 1997). Studies have found gender differences in trauma but show mixed results as to whether exposure to trauma and PTSD symptoms are higher for female juvenile offenders as compared to their male counterparts (e.g., Ariga et al. 2008; Brosky and Lally 2004; Cauffman et al. 1998). Older youth compared to younger youth were found to be at a higher risk of violence exposure (Abram et al. 2004).

Youth with PTSD had exposure to violence as either a victim or witness to violence that occurred in the home or community. The major types of trauma linked to PTSD were psychological trauma, physical abuse, sexual abuse, and neglect. Higher levels of PTSD symptoms were more common among youth who also reported other less severe types of stressors, particularly related

Table 32.1 Themes of major findings across studies: trauma and PTSD correlates

Trauma and stress		Well-being		Other individual level and social environmental characteristics
Trauma	Life events stressors	PTSD	Psychological and behavioral well-being	Youth characteristics
<i>Location</i>	<i>Family factors</i>	<i>Diagnosis</i>	<i>Psychological well-being</i>	<i>Individual level factors</i>
Family violence	Adverse parenting	PTSD symptoms	Psychological distress	Gender
Community violence	Worries about family	PTSD diagnosis	Perceptions of safety	Age
<i>Direct or indirect</i>	Parental substance abuse		Mental health problems	<i>Social/environmental factors</i>
Victim			Comorbidity w/PTSD	Juvenile justice placement
Witness	Family dysfunction		Conduct disorder	
<i>Major subtypes</i>			Suicide risk	
Psychological trauma			<i>Behavioral well-being</i>	
Physical abuse			Abnormal eating	
Sexual abuse			Runaway episodes	
Neglect			Self-restraint	
Physical assault			Delinquency	
			Drug and alcohol use	

Table 32.2 Major findings of empirical studies that examined trauma and PTSD among youth in the juvenile justice system (1994–2009)

Author/s (Year)	Major findings
Abram et al. (2004)	The majority of juvenile detainees (92.5%) reported experiencing one or more traumas. About half of juvenile detainees with PTSD reported witnessing violence as the precipitating trauma. Significantly, more males (93.2%) than females (84.0%) reported at least one traumatic experience. Older youth (14 or older) compared to younger youth (aged 10–13 years) were significantly more likely to report traumatic experiences. There were no significant differences in overall prevalence among different racial ethnic group of juvenile detainees
Ariga et al. (2008)	One third (33%) of Japanese female juvenile detainees were diagnosed with PTSD and the majority (77%) had been exposed to trauma. The juveniles with PTSD showed a significantly high psychiatric comorbidity. PTSD symptoms were also significantly associated with depression, adverse parenting, and abnormal eating
Brosky and Lally (2004)	The most common traumatic events among the sample of court-referred adolescents were sexual and physical abuse. Female adolescents (75%) compared to male adolescents (51.3%) had significantly higher rates of trauma. Females also were more likely to be victims of physical abuse (38.2%) and sexual abuse (27.6%) compared to male adolescents (15.8, 1.3%)
Burton et al. (1994)	One quarter (25%) of a sample of serious juvenile offenders met DSM-III-R criteria for PTSD diagnosis. PTSD symptoms also were found to significantly correlate with exposure to violence and family dysfunction
Cauffman et al. (1998)	Female compared to male juveniles had a higher rate of PTSD. A Higher level of distress and lower level of self-restraint were found in female juveniles who were diagnosed with PTSD compared to male juveniles
Dixon et al. (2004)	Rates of PTSD were higher for female juvenile offenders compared to female juvenile nonoffenders
Erwin et al. (2000)	All of the incarcerated adolescent males witnessing violence. The majority (92%) also reported exposure to unsafe situations and feeling unsafe in all environments. Self-report measures compared to clinician-administered interviews yielded higher PTSD rates
Ford et al. (2008)	One in five youth (19%) juvenile offenders in pretrial detention had a complete or partial PTSD diagnosis. Approximately 61% reported psychological trauma. Types of trauma, such as physical abuse, domestic violence, and neglect were significantly correlated with risk of suicide and drug and alcohol use. The risk of PTSD was not associated with gender, age, and ethnicity
Kerig et al. (2008)	Females compared to male juvenile detainees reported higher scores on interpersonal trauma exposure and symptoms of simple and complex PTSD. PTSD mediated the relationship between trauma and mental health problems among the youth, especially among females
Ruchkin et al. (2007)	Of the sample of Russian juvenile detainees, approximately 42% met partial criteria and 25% met full <i>DSM-IV</i> criteria for PTSD. The most common type of trauma reported was exposure to violence (being a victim or witness). Higher rates of PTSD were associated with higher rates of psychiatric comorbidity among juvenile detainees
Steiner et al. (1997)	Incarcerated male offenders had higher PTSD rates than other adolescent community samples and county probation camps. PTSD showed elevated levels of distress and other psychiatric symptoms
Thompson et al. (2007)	Youth in emergency shelters and in juvenile detention centers had high levels of trauma-related symptoms. Higher levels of PTSD symptoms among incarcerated youth included worries about family, greater number of runaway episodes, and living with a father who abused alcohol/drugs. In comparison, higher levels of PTSD symptoms among youth in emergency shelters were predicted by having worries about the family relationships

to family dysfunction, such as parental substance use and family problems (e.g., Ford et al. 2008; Ruchkin et al. 2007; Thompson et al. 2007).

The literature suggests that Trauma and PTSD are correlated to adverse well-being, particularly psychological and behavioral well-being. For

example, psychological distress, including perceptions of safety were found to be associated with trauma and PTSD among these youth (Erwin et al. 2000; Ford et al. 2008; Thompson et al. 2007). In particular, Erwin et al. (2000) found that male juvenile offenders who reported traumatic

experiences and PTSD symptoms were more likely to report feeling unsafe in all environments.

Moreover, PTSD symptoms also were often significantly associated with other adverse effects on psychological and behavioral well-being. For example, Ariga et al. (2008) found that female offenders with PTSD showed significantly higher levels of psychiatric and adverse behavioral symptoms, including conduct disorder, substance use disorder, and depression. Similarly, Ford et al. (2008) also found a correlation between PTSD and suicidal ideation and drug and alcohol use.

Preliminary evidence also suggests that PTSD may have a mediating function between trauma exposure and mental health problems. For example, in a sample of 289 male and female juvenile detainees, Kerig et al. (2008) found that PTSD mediated the relationship between trauma and mental health problems, particularly for female offenders. As a collective, these findings suggest that trauma exposure and PTSD are commonplace and associated with a host of other psychosocial problems.

In summary, these findings support a relationship between trauma and PTSD among juvenile justice-involved youth and important psychological and behavioral correlates. However, these conclusions should be viewed cautiously based on the methods used across studies. A review of the methods of these collective studies related to research designs, sampling strategies, data collection procedures, variables and measures, and data analysis are reviewed next and in that order, respectively. However, a limitation of this current review is that it was a qualitative descriptive review, as opposed to a meta-analysis.

Review of Methods Across Studies

Research Designs

As illustrated in Table 32.3, all 12 quantitative studies used cross-sectional research designs. As for sampling strategies, only three (25%) of the studies used some type of probability (simple or stratified random) sampling to select participants (Abram et al. 2004; Ariga et al. 2008; Steiner et al. 1997). Only four of the 12 studies (33%)

used comparison or control groups in which juvenile offenders were compared with nonoffenders (Cauffman et al. 1998; Dixon et al. 2004; Steiner et al. 1997; Thompson et al. 2007).

The geographic locations of the studies were international in scope. Most of the studies (75%, $n=9$) were conducted in the USA and included different geographic regions that included the East Coast (New York, Connecticut, Massachusetts, Washington, DC), West Coast (California) and the Midwest (Cook County, Illinois). Three of the studies (25%) were conducted in other countries, which included Japan (Ariga et al. 2008), Russia (Ruchkin et al. 2007), and Australia (Dixon et al. 2004).

The specific study settings also varied. Half of the studies ($n=6$) were conducted in juvenile detention or other juvenile justice settings. The locations of the juvenile detention centers included Cook County, Illinois (Abram et al. 2004), Connecticut (Ford et al. 2008), Western New York (Thompson et al. 2007), the Arkhangelsk region of Northern Russia (Ruchkin et al. 2007), Sydney, Australia (Dixon et al. 2004), and Japan (Ariga et al. 2008).

In addition, juvenile offenders also were recruited from study settings, particularly from secure juvenile treatment facilities, which were mostly detention centers. These detention centers were located in diverse regions, such as the Boston, Massachusetts area (Erwin et al. 2000), the Los Angeles County Department of Probation in California (Burton et al. 1994), the California Youth Authority-Ventura School (Steiner et al. 1997), O.H. Close School (Cauffman et al. 1998), and the Child Guidance Clinic of the Superior Court of the District of Columbia (Brosky and Lally 2004).

Sample Description

The size and the characteristics of the participants varied widely across studies. As shown in Table 32.3, the samples of the studies ranged between 51 and 898 participants. The ages of the samples ranged from 10 to 18 years old across studies. In regards to gender, most of the studies (58%; $n=7$) recruited samples of either male or female juvenile offenders only. Four studies

Table 32.3 Major findings of empirical studies that examined trauma and PTSD among youth in the juvenile justice system (1994–2009)

Author/s (Year)*	Research design	Study setting	Trauma (%)	PTSD (%)	Sample size	Sample description	Measures	Data collection	Data analysis
Abram et al. (2004)	Cross-sectional single group design, probability (stratified random) sampling	Detention center, Cook County Illinois; data from epidemiological longitudinal study (1995–1998)	92.5	11.2	898	Juvenile detainees aged 10–18, 59% males, 41% females, African American ($n=247$), Hispanic ($n=177$), Caucasian ($n=107$)	Diagnostic interview schedule for children-IV (DISC-IV)	Structured clinical interviews	Poisson regression models
Ariga et al. (2008)	Cross-sectional single group design, probability random sampling of 181 juvenile offenders	Juvenile detention center in Japan (2004–2006)	77	33	64	Japanese female juvenile detainees aged 16–19 ($M=17.2\%$, $SD=1.0$)	Mini-international neuropsychiatric interview (MINI-KID) (Japanese version) Traumatic event checklist-clinician-administered PTSD scale for DSM-IV (CAPS)	Structured clinical interviews (raters were trained to administer measures)	ANOVA, logistic and multiple regression
Brosky and Lally (2004)	Cross-sectional comparison group design, non-probability sampling	Child guidance clinic of superior court, District of Columbia (1998)	75 (females) 51.3 (males)	21.1 (females) 7.9 (males)	152	Juvenile victims and offenders aged 12–18; referred by court for a psychiatric evaluation (76=females, 76=males), 91% ($n=69$) African American; 2.6% ($n=2$) Hispanic, 6.6% ($n=5$) unknown	Compiled checklist for the incidence of trauma, PTSD (using DSM-IV criteria), and dissociative symptoms	Case record review (archival records)	Chi-square
Burton et al. (1994)	Cross-sectional single group design, non-probability sampling	Secure camp setting in Los Angeles County Probation Department (year not reported)	75	24	91	Adjudicated juvenile offenders; 100% males, aged 13–18 ($M=16$, $SD=1.0$); 40% African American, 40% Hispanic, 10% Caucasian, 7% Asian, and 3% other	Trauma questionnaire and PTSD symptom checklist (self-report measure)	Self-report questionnaire, case record review (arrest records and probation reports)	ANOVA, stepwise multiple regression analysis

<p>Cauffman et al. (1998)</p>	<p>Cross-sectional comparison group design, non-probability sampling</p>	<p>California youth authority (CYA) school setting (1996 and 1997)</p>	<p>76</p>	<p>65.3</p>	<p>189</p>	<p>96 incarcerated female offenders, aged 13–22, ($M = 17.2$, $SD = 1.8$) (23.3% Caucasian, 21% African American, 28.9% Hispanic, Asian 12.2%, 20.2% other) Comparison group: 93 incarcerated adolescent males aged 13–18 ($M = 16.6\%$, $SD = 1.2$); 37.6% African American, 26.9% Hispanic; 30.2% Caucasian, 5.4% other</p>	<p>Traumatic experiences questionnaire; PTSD module of the revised diagnostic psychiatric interview- DSM-III-R criteria</p>	<p>Semistructured clinical interviews (15–45 min) (used two independent raters)</p>	<p>ANOVA</p>
<p>Dixon et al. (2004)</p>	<p>Cross-sectional comparison group design matched on age and SES, non-probability sampling</p>	<p>State female juvenile detention center and five public school (Sydney, Australia) (year not reported)</p>	<p>70</p>	<p>37</p>	<p>200</p>	<p>100 female juvenile offenders, average age 16.5 ($SD = 1.2$); aboriginal (48%) or white (33%), other (19%) Comparison: 100 female high school students mean age 16.4 ($SD = 1.2$); aboriginal (5%) or white (63%), other (32%)</p>	<p>The PTSD traumatic events component of the K-SADS-PL (self-report measures)</p>	<p>Juvenile justice files; assessment interview and self-reports</p>	<p>Chi-square, t-tests, logistic regression</p>
<p>Erwin et al. (2000)</p>	<p>Cross-sectional single group design, non-probability sampling</p>	<p>Seven secure care facilities near Boston, MA area (year not reported)</p>	<p>100</p>	<p>23</p>	<p>51</p>	<p>Incarcerated male adolescents; mean age 17.5 years ($SD = 1.5$); 57% Caucasian, 28% African American, 12% Hispanic</p>	<p>Exposure to community violence scale-adapted version (self-report), PTSD checklist (self-report), clinician-administered PTSD scale for children and adolescents (CAPS-CA)</p>	<p>Battery of self-report instruments and semistructured interviews by trained researchers</p>	<p>Descriptive analysis</p>

(continued)

Table 32.3 (continued)

Author/s (Year)*	Research design	Study setting	Trauma (%)	PTSD (%)	Sample size	Sample description	Measures	Data collection	Data analysis
Ford et al. (2008)	Cross-sectional single group design; all juveniles sampled during a 24–72 h period	Connecticut pretrial juvenile detention centers (January–September 2005)	61	5	264	Juvenile detainees 10–17 years old (192 males, 72 females); 27% Caucasian, 43% black, 30% Latino	Traumatic experiences screening instrument (TESI) (self-report), UCLA PTSD reaction index (PTSD-RI) (self-report)	Self-report screen at the time of intake (24–72 h of admission)	Logistic regression, ANOVA
Kerig et al. (2008)	Cross-sectional single group design, non-probability sampling	Juvenile detention centers in Midwestern USA (January–July 2007)	24.1 (females) 21- (males)	45- (females) 26- (males)	289	Juvenile detainees (199 male and 90 female juveniles); aged 10–17 years old; European American (69%) or African American (22%), Latino (4%), and other (6%)	The UCLA posttraumatic stress disorder index for DSM-IV adolescent version, clinician-administered PTSD scale for children and adolescents (CAPS-CA)	Interview conducted by trained clinician, self-report measures that used cross-sectional data collection	<i>t</i> -Tests, SEM
Ruchkin et al. (2007)	Cross-sectional single group design, non-probability sampling	Juvenile detention center in northern Russia (spring and winter, 1999)	96	25	370	Russian male juvenile delinquents aged 14–19 ($M = 16.4$, $SD = 0.9$) (only subsample of 289 youthful offenders completed the self-report portion of the study)	PTSD module of Semistructured clinical interview for PTSD (K-SADS-PL) Child posttraumatic stress reaction index (CPTS-RI) (self-report); survey of exposure to community violence (self-report)	Semistructured psychiatric interview (conducted by psychiatrists), translation of measures into Russian, self-report measures (interviewers were blind to the results of the self-report measures)	Chi-square, ANOVA

Steiner et al. (1997)	Cross-sectional comparison group design, partial probability sampling (25% randomly selected; 75% referred-psychiatric evaluation); comparison group-convenience sample	O.H. close school in Stockton, CA (year not reported); comparison group from a local high school district in CA suburban area	50	31.7	164	85 incarcerated adolescent males aged 13–20 ($M=16.6$, $SD=1.2$); 37.6% African American, 26.9% Hispanic, 30.1% Caucasian, 5.4% other; comparison group of 79 male high school students from a previous study (average age 16, $SD=1.4$); 72% Caucasian	PTSD module of the psychiatric diagnostic interview-revised	Semistructured clinical interviews, case record reviews (clinical and field case files)	Chi-square, correlation, ANOVA; MANCOVA, Waller-Duncan K ratios
Thompson et al. (2007)	Cross-sectional comparison group design, non-probability sampling	Midsized urban detention centers and agencies in Western New York area (1999–2001)	Not reported	23	277	$n=121$ detention (M age =16 years, $SD=1.5$), 56.2% female; 40% black; 37.2% white, 5% Latino, 17.2% other; comparison group, $n=156$ emergency youth shelter (age $M=16$, $SD=2.4$); 55.8% female; 48.7% black; 39.7% white, 9% Latino, 2.5% other	Trauma symptom checklist for children (TSCC); posttraumatic stress, symptoms (PTS)	Self-report questionnaires	t -Tests, correlation, regression analysis

(33%) sampled male juvenile offenders only (Burton et al. 1994; Erwin et al. 2000; Ruchkin et al. 2007; Steiner et al. 1997), whereas three studies (25%) sampled female juvenile offenders only (Ariga et al. 2008; Cauffman et al. 1998; Dixon et al. 2004). Only five of the studies (42%) used samples that included both male and female juvenile offenders (Abram et al. 2004; Brosky and Lally 2004; Cauffman et al. 1998; Ford et al. 2008; Kerig et al. 2008).

Data Collection Procedures

Data collection procedures varied across studies (see Table 32.2). These included clinician-administered interviews, self-report surveys and questionnaires, and case records reviews. The most common methods to assess trauma and PTSD were using structured or semistructured interviews by trained researchers or clinicians (e.g., Abram et al. 2004; Ariga et al. 2008; Brosky and Lally 2004; Cauffman et al. 1998; Kerig et al. 2008; Ruchkin et al. 2007). Several

of the studies used self-report measures (Burton et al. 1994; Erwin et al. 2000; Kerig et al. 2008; Steiner et al. 1997).

Variables and Measures

Table 32.4 provides a detailed description of measures of trauma exposure and PTSD used across studies. As illustrated, all 12 studies included measures for determining trauma exposure and PTSD. Most of the studies (58%; *n*=7) included measures that were consistent with the DSM criteria for trauma and PTSD (e.g., Ariga et al. 2008; Brosky and Lally 2004; Burton et al. 1994; Cauffman et al. 1998; Erwin et al. 2000; Kerig et al. 2008; Steiner et al. 1997).

Five studies used the DSM-IV module (MINI-kid) that was developed to screen 23 Axis-I DSM-IV disorders in order to measure trauma exposure (Ariga et al. 2008), and posttraumatic disorder that may have occurred as a result of exposure to traumatic events among the youth (Ariga et al. 2008; Brosky and Lally 2004; Burton

Table 32.4 Description of measures for trauma and PTSD among youth in the juvenile justice system

Author/s (Year)	Measure/s description and psychometric properties
Abram et al. (2004)	Trauma and PTSD measure <i>Diagnostic Interview Schedule for Children (DISC-IV)</i> : Based on <i>DSM-IV</i> criteria, the PTSD module assesses for eight traumatic experiences. Participants then identify the event that was most difficult in their lifetime and past year PTSD diagnosis for the “most difficult” trauma. Reliability and validity statistics are yet to be adequately established on this newly developed version of the DISC-IV
Ariga et al. (2008)	Trauma measure <i>The traumatic event checklist of the Clinician-Administered PTSD Scale for DSM-IV (CAPS; Blake et al. 1995)</i> was used to obtain the subjects’ trauma history. The subjects were asked whether they had experienced any of the 12 possible traumatic events on the list and whether they had experienced any trauma in addition to those on the list. Onset, frequency, and duration of traumatic stressors are also measured PTSD measure <i>Clinician-Administered PTSD Scale for DSM-IV (CAPS)</i> : CAPS score only for the subjects who fulfilled the criteria of PTSD, as determined using the MINI-kid (See below). The CAPS structured interview was used to measure the 17 symptoms of PTSD listed in DSM-IV and five other associated symptoms/features. CAPS assesses Criterion A events, current and/or lifetime PTSD diagnosis, frequency/intensity of each symptom, social/occupational functional impairment resulting from these symptoms, and overall PTSD severity <i>Mini-International Neuropsychiatric Interview (MINI-kid)</i> : psychiatric diagnosis was determined using the Japanese version of the mini international neuropsychiatric interview for children and adolescents (MINI-kid) which was developed from MINI for children and adolescents. Generally used to screen 23 Axis-I DSM-IV disorders. For most modules of MINI, two to four screening questions are used to rule out the diagnosis when answered negatively. Positive responses to screening questions warrant further investigation for other diagnostic criteria

(continued)

Table 32.4 (continued)

Author/s (Year)	Measure/s description and psychometric properties
Brosky and Lally (2004)	<p>Trauma measure</p> <p>The incidence of trauma was assessed from a compiled checklist of trauma types</p> <p><i>PTSD measure</i></p> <p>PTSD was measured using DSM-IV criteria. A list of primary dissociative symptoms (based on Putnam 1997) was also assessed. A “yes,” “no,” or “not reported” category was checked for each variable on each checklist</p>
Burton et al. (1994)	<p>Trauma measure</p> <p>Trauma was determined using the Symptom Checklist (Foy et al. 1984) in order to measure the number and severity of a wide range of psychological symptoms in which the authors used to determine the diagnosis for partial and full PTSD according to DSM-III-R criteria</p> <p><i>PTSD measure</i></p> <p>Used 21 of 43 items that are characteristic of PTSD based on the DSM-III-R. The scale provides a continuous measure of symptom severity on the separate PTSD diagnostic categories found in DSM-III-R (category B “persistent re-experiencing,” category C “avoidance of stimuli associated with the trauma or numbing of general responsiveness,” and category D “persistent increased arousal”) as well as on the overall PTSD symptoms</p>
Cauffman et al. (1998)	<p>Trauma questionnaire/measure</p> <p>Traumatic experiences were recorded based on the response to three questions: “Have you ever been badly hurt or in danger of being hurt?”; “Have you ever been raped or in danger of being raped?”; “Have you ever seen someone severely injured or killed (in person—not in the movies or on TV)?” No information was provided regarding the selection or creation of these questions. Additional experiences were coded into one of ten categories based on the PTSD measure</p> <p><i>PTSD measure</i></p> <p><i>Revised Diagnostic Psychiatric Interview</i>: (DSM-III-R criteria). The PTSD module of the revised <i>Psychiatric Diagnostic Interview</i> includes 27 questions. There were three groups of questions: Group A is assessment of intrusive thoughts and nightmares, Group B consists of questions that assess subjective experience of the trauma, and Group C includes questions about cognitive and behavioral responses about the trauma</p>
Dixon et al. (2004)	<p>Trauma measure</p> <p><i>The PTSD Traumatic Events component of the K-SADS-PL</i> was used to elicit the participants’ trauma histories. Participants were asked if they had ever experienced any of ten possible traumatic events, as well as whether they had experienced any additional traumas to those on the list</p> <p><i>PTSD measure</i></p> <p><i>The PTSD Traumatic Events component of the K-SADS-PL</i>: Semistructured interview that utilizes a flexible yet systematic inquiry and incorporates probes that can be adjusted for developmental level. According to the authors, test–retest reliabilities are in the good to excellent range (0.67–1.00) for all reported mood disorders, and concurrent validity and interrater agreement was reported also high in the range of 93–100%. Test–retest reliability coefficient that was reported about PTSD (Kaufman et al. 1997) showed that test–retest reliability was in the range of 0.63–0.67</p>
Erwin et al. (2000)	<p>Trauma measure</p> <p><i>Exposure to Community Violence Scale (Adapted Version)</i>: The authors adapted the measure for this study. Self-report measure (33 items). Assesses number of exposures to potentially traumatic events on a five-point Likert scale. Participants could also indicate that they do not know whether or not they were exposed to the stressor. The investigators reported an α coefficient of 0.91 for the adapted version in the present study</p> <p><i>PTSD measure</i></p> <p><i>Clinician-Administered PTSD Scale for Children and Adolescents (CAPS-CA)</i>: Semistructured interview that evaluates self-report of exposure to potential Criterion A events in PTSD diagnosis. CAPS-CA consists of standardized prompt questions, supplementary follow-up questions and behaviorally anchored five-point rating scales. Alpha for CAPS-CA subscales was reported as follows: 0.81, for re-experiencing, 0.75 for numbing and avoidance; and 0.79 for arousal</p> <p><i>PTSD Checklist</i>: A self-report scale that reports number of symptoms endorsed with DSM-IV criteria for PTSD. Diagnoses derived from the possible symptoms were compared with diagnosis of PTSD by the semistructured interview CAPS-CA</p>

(continued)

Table 32.4 (continued)

Author/s (Year)	Measure/s description and psychometric properties
Ford et al. (2008)	<p>Trauma measure</p> <p><i>Traumatic Experiences Screening Instrument (TESI)</i>: A computer-assisted version of a self-report questionnaire that asks about several behaviorally anchored specific events within seven categories: (a) accident/illness/disaster, (b) physical abuse/interpersonal violence, (c) witnessed family violence, (d) witnessed community violence, (e) sexual abuse, (f) emotional abuse, and (g) traumatic loss</p> <p>PTSD measure</p> <p><i>UCLA PTSD Reaction Index (PTSD-RI)</i>: Self-report questionnaire assessing PTSD symptom severity in the past 30 days. Test–retest reliability over a 7-day period is 0.87 (intraclass correlation), internal consistency is >0.85 (Cronbach’s α), and convergent validity coefficients of 0.70 and 0.82 were found in relationship to standardized structured interviews for PTSD</p>
Kerig et al. (2008)	<p>Trauma measure</p> <p><i>UCLA Posttraumatic Stress Disorder Index for DSM-IV Adolescent Version</i>: Is a well-validated measure used to screen for exposure to traumatic events and symptoms of PTSD in youth. The first set of questions asks youth whether or not they have been exposed to 13 specific traumatic events. The number of events endorsed is summed to create a total trauma exposure score, and a total interpersonal trauma index is calculated separately for those traumas involving direct victimization by other persons</p> <p>PTSD measure</p> <p>The next set of questions on the PTSD-I inquire as to which of the events endorsed the youth considers to be most distressing, and whether in relation to that event the youth experienced subjective reactions consistent with DSM-IV Criterion A. This criterion requires that the event be appraised by the individual as involving “actual or threatened death or serious injury, or a threat to the physical integrity of self or others” and be associated with reactions of “intense fear, helplessness, or horror” or, in children, “disorganized or agitated behavior” (American Psychiatric Association 2000, p. 467). Only events that satisfy both of these conditions meet the DSM-IV definition of trauma. A Total PTSD score is calculated as a sum of all Criterion B, C, and D symptoms endorsed. Responses to the questions are presented in a Likert scale format ranging from 0=none of the time to 4=most of the time. In addition, seven questions (two supplementary questions from the UCLA-I, and five questions from the CAPS-CA) were used to assess complex trauma. Specifically these questions assessed the frequency of associated features of PTSD including guilt, dissociation, and impaired relationships with others</p>
Ruchkin et al. (2007)	<p>Trauma measure</p> <p><i>Survey of Exposure to Community Violence</i>: In addition to the PTSD module of the K-SADS-PL and the semistructured Clinical Interview for PTSD module Survey that is reported below, the following instrument was used to assess exposure to community violence: this is a checklist of experiencing or witnessing eight types of violence. Chronbach’s α reported as 0.65 for experiencing, and 0.76 for witnessing</p> <p>PTSD measure</p> <p><i>PTSD module of the K-SADS-PL</i>: This module consists of a list of potentially traumatic events; if there is evidence of past trauma, 5 PTSD screen items are asked. When any are answered “yes,” 14 additional items inquire about re-experiencing, persistent avoidance, and increased arousal, as well as functional impairment</p> <p><i>Child Posttraumatic Stress Reaction Index (CPTS-RI)</i>: Twenty-item scale assessing PTSD in children and adolescents. Chronbach’s α reported as 0.81 in this study</p>
Steiner et al. (1997)	<p>Trauma measure</p> <p>Trauma was measured using the diagnostic criteria for PTSD only. No report about trauma history/events or exposure</p> <p>PTSD measure</p> <p><i>Semistructured Clinical Interview for PTSD</i>: Contains 27 questions grouped into cardinal, social, and auxiliary questions. Diagnosis is based on DSM-III criteria, and subjects grouped into three categories PTSD positive (full criteria met), PTSD partial (some criteria met), and PTSD negative (no criteria were met). Interview has shown acceptable reliability and validity in extensive testing. Subset of this sample was rated by two psychiatrists. Interrater correlation=0.63 ($p<0.05$) for this study. Reliability for three categories was <i>Cohen’s Kappa</i>=0.50 ($p<0.05$)</p>

(continued)

Table 32.4 (continued)

Author/s (Year)	Measure/s description and psychometric properties
Thompson et al. (2007)	<p>Trauma measure</p> <p>No report of a trauma history or events. Researchers reported instead family characteristics of the subject as their independent variable. The variable was evaluated using the Family Functioning Scale (FFS; Tavitian et al. 1987). The FFS consists of 40 items that measure five dimensions of family functioning: positive family affect (e.g., “People in my family listen when I speak”), rituals (e.g., “We pay attention to traditions in my family”), worries (e.g., “I worry when I disagree with the opinions of other family members”), conflicts (e.g., “People in my family yell at each other”), and communication (e.g., “When I have questions about personal relationships, I talk with my family member”). Respondents rate items on a 7-point scale (1=<i>never</i> to 7=<i>always</i>) and items are summed for the five subscales and a total score. Internal consistency reliability ranges from $\alpha=0.90$ for positive family affect to $\alpha=0.74$ for family conflict (Tavitian et al. 1987)</p> <p>PTSD measure</p> <p><i>Trauma Symptom Checklist for Children</i> (TSCC): The TSCC defines posttraumatic stress (PTS) as “intrusive thoughts, sensations, and memories of painful past events; nightmares; fears; and cognitive avoidance of painful feelings” (Briere 1996, p. 2). The TSCC scale includes ten items that are rated on a 4-point scale (0=<i>never</i> to 3=<i>almost all of the time</i>). Internal consistency reliability for this subscale is high ($\alpha=0.86$). Transformed scores of 60–65 are suggestive of difficulty with trauma symptoms; scores greater than 65 are considered clinically significant symptomatology</p>

et al. 1994; Cauffman et al. 1998; Erwin et al. 2000; Kerig et al. 2008). Only one of the published studies used the most current version of the Diagnostic Interview Schedule for Children, version IV (DISC-IV; Abram et al. 2004).

The majority of the studies used clinician administered or self-report measures with moderate to good psychometric properties (see Table 32.3). Two of the research studies (17%) used the PTSD Traumatic Events component of the Semistructured Clinical Interview for PTSD (K-SADS-PL) to measure trauma exposure and PTSD among juvenile justice-involved youth (Ford et al. 2008; Ruchkin et al. 2007). One study also combined the use of K-SADS-PL with the self-report Traumatic Experiences Screening Instrument (TESI), and the UCLA PTSD Reaction Index (PTSD-RI) (Ford et al. 2008). Only one of the studies used the self-report Trauma Symptom Checklist for Children Posttraumatic Stress Symptoms (TSC-CPTS) with a juvenile justice population (Thompson et al. 2007).

Data Analysis

To test study hypotheses, the studies ($n=11$) used a combination differential or cumulative indexes for trauma. The use of inferential statistics across

studies ranged from a combination of bivariate analysis to multivariate analyses. Studies that used bivariate analysis included chi-square analysis, independent *t*-tests, and correlation analysis (Ariga et al. 2008; Brosky and Lally 2004; Cauffman et al. 1998; Dixon et al. 2004; Ford et al. 2008; Kerig et al. 2008; Ruchkin et al. 2007; Steiner et al. 1997; Thompson et al. 2007). Studies that used multivariate analysis included analysis of variance (ANOVA and MANCOVA), logistic and linear regression (e.g., Abram et al. 2004; Ariga et al. 2008; Burton et al. 1994; Steiner et al. 1997). Kerig et al. (2008) used structural equation modeling to test an analytic model in which PTSD was hypothesized to mediate the relationship between interpersonal trauma and mental health problems.

Discussion: Critical Appraisal and Recommendations for Future Research

Critical Appraisal

The purpose of this chapter was to review the methods and major findings of the research studies on trauma exposure and PTSD among juvenile

justice-involved youth. This information can be used to assist with planning future studies that examine PTSD among juvenile justice-involved youth that incorporate rigorous research designs. For this review, 12 empirical research studies met the selection criteria for studies that examined trauma and PTSD among juvenile justice-involved youth.

As reviewed earlier, the literature on trauma exposure and PTSD among youth in the juvenile justice system indicates a far greater prevalence of witnessing and experiencing trauma events as compared to samples of community youth (Abram et al. 2004; Arroyo 2001; Brosky and Lally 2004; Burton et al. 1994). Although these studies differed in their sample sizes and geographic scope, as a collective body of work they represent diverse samples of juvenile justice-involved youth from across the USA as well as other countries, such as Australia, Japan, and Russia. These preliminary findings suggest that the prevalence of trauma exposure and PTSD are markedly higher than community rates (Abram et al. 2004). Consistent with studies of community samples of youth, the prevalence of trauma exposure (upward of 93%) was higher than the prevalence of PTSD (between 11.2 and 65%) among juvenile offenders (Abram et al. 2004; Cauffman et al. 1998).

Overall, these findings suggest that not all youth exposed to trauma will develop PTSD. However, many youth exposed to trauma do develop PTSD and/or have other comorbid psychosocial problems, including suicidality, substance abuse, and co-occurring psychiatric conditions, such as conduct disorder, anxiety, and depression. Despite these, preliminary research in this area is still in its infancy and results are inconclusive as they relate to trauma and PTSD estimates, risk factors, consequences and correlates of trauma and PTSD among juvenile justice-involved youth. However, these findings are at best preliminary based on methodological limitations found within studies and inconsistent methods used across studies. A critique of these methods within and across studies follows.

Of the 12 research studies, the estimates of trauma and PTSD varied widely. These differences

can be attributed to differences in the research design, including the study settings, sampling strategies, variables, measurement, and data collection procedures used.

Research Design and Sampling Strategies

The studies were limited by their use of cross-sectional designs and small to moderate sample sizes (e.g., Abram et al. 2004; Ariga et al. 2008; Burton et al. 1994; Cauffman et al. 1998; Steiner et al. 1997). Another limitation of the studies was the common use of non-probability sampling strategies. Therefore, bias in sampling strategies may limit confidence in the results and making cross case comparisons across studies.

Another limitation of the combined studies was the use of single group research designs with no control or comparison group. Only one study (Steiner et al. 1997) compared a comparison group of incarcerated youth with a convenience sample of high school students (Steiner et al. 1997). Therefore, the lack of research that used control groups makes it difficult to draw conclusive results or make causal inferences about the relationship of trauma and/or PTSD with other potential risk factors or consequences. For example, the major finding of one study that PTSD mediates the relationship between trauma and mental health problems is compromised not only by the use of cross-sectional data but also by the lack of a control or comparison group (Kerig et al. 2008).

Representativeness

Another major limitation was the use of nonrepresentative samples. Most studies were of juvenile offenders residing in detention centers located in the USA metropolitan locations, such as New York, Boston, or Chicago. Therefore, at best these findings are not generalizable to youth in the juvenile justice system from other geographic locations, such as the southern or western rural areas of the USA or other countries.

Measures and Data Collection Procedures

Perhaps the most salient difference across studies is the use of different measures and data collection procedures. For example, differences in

trauma exposure and PTSD estimates for clinician administered interview schedules and self-report surveys were found (e.g., Erwin et al. 2000). In fact, the frequency of trauma among the juvenile justice samples varied widely with percentages between 24 and 93% among juvenile offenders. An interesting finding was that despite the high rates of trauma, PTSD rates were not as common. PTSD diagnosis varied widely between 11 and 65% among the sample of juvenile justice youth in which different measures and methods of administration were used (e.g., self-report vs. clinician administered interviews) (Abram et al. 2004; Brosky and Lally 2004; Cauffman et al. 1998).

The difference in trauma and PTSD estimates found between studies that used trained observers versus self-report methods are consistent with Strand et al. (2005) review of trauma assessment among community samples of youth. Similarly, we found that in many cases self-report measures are just as or more psychometrically sound than clinician administered interview measures (Strand et al. 2005).

Additionally, while most studies used one-on-one interview and self-report questionnaires, some studies reported using retrospective case record reviews (e.g., Brosky and Lally 2004; Dixon et al. 2004). In this respect, the information from the archival records may be subject to variations in reporting and adversely affect the study results. Brosky and Lally (2004) highlighted some of the limitations of retrospective data from court records. These records often may not include important demographic data and may have minimal information on how an assessment of trauma was determined. In addition, some researchers used a combination of self-report questionnaires and case record reviews collected at different points in time (e.g., Steiner et al. 1997). Discrepancies may arise in the description and assessment of traumatic events and subsequent PTSD responses.

Similarly, there are some limitations to the use of self-report measures that must be noted. Since incarcerated juveniles commonly have school difficulties, including dropping out of school, their level of reading and writing abilities may have impacted their responses. Therefore, using

currently enrolled high school students as a comparison group compromises their parity as a comparison group. Another factor that also may have affected the results is the physical environment in which the data collection took place. Physical variables such as the research setting conditions, the time of the day, the testing room, and distractions that may have occurred in secured facilities or outside of the secured facilities, also may have affected the results.

Data Analysis

The studies also were limited by mostly examining objective measurement of trauma, grouping traumas together for data analysis purposes (e.g., combining community and family violence), and not examining the differential effects of specific types of trauma or the age, gender, and racial/ethnic differences. One study published after 2004 by Ariga et al. (2008) does investigate specific PTSD symptom presentations based on specific trauma exposures. They found that violence exposure was related to worse Criterion D symptom outcomes and cumulative outcomes on Criteria B+C+D. However, Ariga and colleagues collapsed violence exposure into one undistinguishable group and do not look at the effects of specific violence exposures on PTSD symptom outcomes.

Recommendations for Future Research

A review of the literature suggests that there is a high prevalence of trauma and PTSD among juvenile justice youth and related situational, psychological, and behavioral factors (see Tables 32.1 and 32.2). It is important to build on this body of research to gain a better understanding of the correlates and consequences of trauma and PTSD among this vulnerable population of juvenile justice youth.

Future research can build upon the preliminary evidence found in this body of research. For example, future research can identify the types of trauma related to PTSD, potential mental health and behavior correlates, and the influence of youth and environmental characteristics

(see Tables 32.1 and 32.2). More specifically, future studies should identify the types of trauma, such as being a victim and/or witness to family and/or community violence, which include physical abuse, sexual abuse, psychological abuse, and neglect. Additionally, future studies should examine how other significant life events' stressors, such as family problems are related to trauma and psychological and behavioral correlates, such as suicide risk or delinquency.

Identifying how individual level and social/environmental factors impact risk or consequences also are important to pursue in order to develop culturally competent services that address gender, age, and race/ethnicity. For example, understanding how boys or girls are more at risk for certain types of trauma or how their psychological or behavioral consequences may vary is important for assessment, prevention, and intervention efforts. Future studies can examine the direct and/or moderating effects of gender, age, and juvenile justice placement on PTSD and other mental health and behavioral symptoms.

We also need additional clinical research that examines the treatment of trauma exposure and PTSD in juvenile justice settings. There is some research on effective trauma treatment modalities for adolescents in the community (e.g., Steiner et al. 1997; Saxe et al. 2007); however, there have been a limited number of treatment studies conducted with justice-involved youth.

For example, one promising treatment modality used in juvenile justice settings is Trauma Affect Regulation: Guide for Education and Therapy (TARGET). TARGET teaches skills targeting distress management, impulsivity, and interpersonal difficulties. This treatment focuses on therapy and psychoeducation geared toward managing externalizing behaviors that are the sequelae of trauma exposure (Ford et al. 2007). It is clear, however, that much more attention needs to be paid to establishing empirically supported assessment and treatment for trauma exposure in justice-involved youth.

In terms of research methods, future studies that examine trauma and PTSD among juvenile justice-involved youth should include longitudinal designs and comparison groups of nonjuvenile justice-involved youth. The studies should also

include representative samples of youth that adequately represent the age, race/ethnicity, and gender of youth from diverse regional locations. Study designs should include matched comparison samples from the community. The use of multiple sources of data to triangulate results, which includes youth self-report, case records, and clinician-administered surveys is warranted.

The use of self-report measures is also recommended. Prior studies have found benefits to the use of self-report measures for trauma assessment in the juvenile justice system. Evidence also suggests that there is little difference in rates of PTSD based on whether juvenile offenders are given a self-report measure versus an interview by a trained clinician at the time of assessment (Spaccarelli et al. 1995). Ford et al. (2008) also found that juvenile offenders have been shown to understand and respond validly to such measures, without bias in reporting trauma exposure. Given the restrictive nature of the setting, self-report can be administered quickly, efficiently, and rather inexpensively. Many of the measures used, such as the Trauma Symptoms Checklist for Children and the PTSD Reaction Index, also are reliable and valid.

The use of self-report measures also meets the recommendation by Strand et al. (2005) that an effective assessment measure must be: (1) psychometrically sound and able to be further tested, (2) user friendly and accessible, and (3) inexpensive (compared to clinician-administered interviews). The question remains to be answered, however, as to why there are such variations in the prevalence rates based on the type of measures used (i.e., self-report vs. clinician administered).

Methodological limitations about the measurement of trauma found in this review were consistent with prior trauma research community samples of youth (Margolin and Gordis 2000). Future studies can avoid these pitfalls by: (1) gathering data on the subjective views of participants about their experience of trauma, (2) examining number, frequency, intensity and duration of trauma exposure, and the age at which it occurred, and (3) examining age, gender, race/ethnicity on the risk and consequences of trauma and PTSD among juvenile justice-involved youth.

Another area where there is a research gap is meta-analysis studies of the existing literature. Meta-analysis studies are situated at the top of the evidence-based hierarchy because of the use of statistical analyses of the effect sizes of multiple studies' results to draw conclusions (Littell et al. 2008). Meta-analysis studies would provide much needed information to make practice or policy decisions that target the risk factors and consequences of trauma and treatment effects among youth involved in the juvenile justice system at a time of system reform efforts.

Meta-analysis studies would provide a systematic review of the literature that statistically combines several study results that share a common research hypothesis related to trauma and/or treatment among juvenile justice-involved youth. "Meta-analysis studies are known for applying a set of statistical methods from combining quantitative results from multiple studies to produce an overall statistical summary (or effect size) of empirical knowledge on a topic" (Littell et al. 2008, p. 1). Generally, meta-analysis studies are considered the most rigorous of research designs and are classified at the top of the evidence-based hierarchy as "best evidence." This type of reliable information can then be used by practitioners and policymakers to consult to help inform practice and policy decisions in a time of intense efforts at juvenile justice reform (Rubin 2008). Therefore, as research evidence continues to accumulate in this area, the use of meta-analyses to examine causal effects related to the impact of trauma on mental and behavioral well-being or treatment intervention effectiveness with juvenile justice population are warranted and strongly encouraged.

Conclusions

In conclusion, the body of research reviewed makes an important contribution to our understanding of trauma among juvenile justice populations. Based on this review, we have offered a critical appraisal and recommendations for future empirical studies on trauma and PTSD among youth in the juvenile justice system. Continued research in this area is imperative for improving practices

with this vulnerable population of youth who often are not only misunderstood, but misdiagnosed. The information garnered from research in this area can be used to inform the development or improvement of assessment and intervention efforts for this population. Future research in this area also can be used to develop reform policy and programming that strikes a balance in the justice system that addresses juveniles' accountability for their offenses, but also treatment when they have been victims.

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Juvenile delinquency in the USA presents a challenging and often controversial issue. In 2007, an estimated 2.18 million juveniles were arrested accounting for 16% of all violent crime arrests and 26% of all property crime arrests. Of these arrests, 19% were processed by law enforcement agencies and were released, 70% were referred to juvenile courts and 9% to criminal courts. A persistent concern has been the disproportionate number of minority youths involved in violent crimes (51% African American) and property crimes (32% African American). Indeed, African American juveniles were more than ten times as likely to be involved in robberies as white youth (Puzzanchera 2009).

Another group that merits attention is the disproportionate number of juveniles with disabilities in the juvenile system. Specifically, in the fall of 2007, 5,912,586 students ages 6–21 received services under Individuals with Disabilities Education Act (IDEA) representing 8.96% of the school age population. Almost half of the students with disabilities (2,563,665; 43.35%)

received services under the label of specific learning disabilities; students with emotional/behavioral disorder (E/BD) represented less than 10% of the special education population (438,867; 7.4%; Data Accountability Center 2009). In contrast, though prevalence estimates of incarcerated youth with disabilities vary considerably, reports place rates as high as 90% (Morris and Morris 2006; Quinn et al. 2005).

In addition, concerns have been voiced on recidivism rates for this population as well as the adequacy of educational services provided while incarcerated (Katsiyannis and Murry 2000; Morrison and Epps 2002). The issue of educational interventions is particularly important because of the prescriptive nature of federal legislative mandates (Individuals with Disabilities Education Act and Section 504 of the Rehabilitation Act of 1973) regarding the right of these individuals to a free appropriate public education (FAPE) (Maccini et al. 2006; Nelson et al. 2004; Twomey 2008).

Consequently, given the disproportionate representation of youth with disabilities in the juvenile system and the inadequacy of services provide during incarceration, further examination of issues associated with this population is warranted. First, we provide an overview of legal considerations regarding the right to an appropriate education for incarcerated youth with disabilities. Second, we examine the psychological characteristics of children with learning disabilities and/or emotional disorders which are associated with atypical social development and which

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place these children at higher-than-normal risk for delinquency. Third, we discuss influences on delinquency with a particular emphasis on recidivism among juveniles with disabilities. Fourth, we review evidence-based interventions involving transition (e.g., self-determination), academic interventions (e.g., Project LEAD), mental health interventions (e.g., multisystemic therapy), and post-release interventions (e.g., wraparound services). Fifth, we conclude our chapter with recent research studies on disabilities and delinquency. The information provided portrays a group of juveniles who are particularly at risk not only for delinquency but also for recidivism; a group disproportionately represented in the juvenile system and yet underserved despite federal legislative mandates; and a group of juveniles that educational, correctional, and community systems must provide for the implementation of prevention (schools, intervention (juvenile facility), and post-release (schools, community) strategies.

Legal Perspective: IDEA and Incarcerated Youth

The Individuals with Disabilities Education Act of 2004 has been instrumental in affording students with disabilities access to educational opportunities by ensuring a FAPE and related services. Qualified students with disabilities receive services which are (a) provided at public expense, under public supervision and direction; (b) meet the state educational standards; and (c) are provided in conformity with an individualized education program (IEP) (§ 300.17). While IDEA has been credited with allowing students with disabilities to achieve an unprecedented access to educational services, outcomes for students with disabilities have been subject to criticism and intense scrutiny. For example, in 2002–2003, only 51.9% of the students ages 14 and older with disabilities graduated with a regular high school diploma (43.5% in 1993–1994), and 33.6% exited school by dropping out (45.1% in 1993–1994) (U.S. Department of Education 2008). Further, students with E/BD fared the worst among students with disabilities; only 35.4% graduated with

a standard high school diploma and 55.9% dropped out of school (U.S. Department of Education 2008). Students with E/BD typically require more intensive special education services than students with other disabilities. For example, of the 438,867 identified students with E/BD in 2007, only 61% were served in inclusive settings as compared to 79% of students with other disabilities. In summary, students with E/BD have a history of outcomes including lower grades, more disciplinary exclusions than students with other disabilities and drop out at a rate twice of that of their nondisabled peers (Bradley et al. 2008).

Students with disabilities, particularly those with LD and/or E/BD as stated earlier, are also prone to juvenile delinquency. Estimated prevalence rates of those with disabilities vary across agencies ranging from single-digit percentages to over 90% of the incarcerated juvenile population (Morris and Morris 2006). Quinn et al. (2005) reported an average of 33.4% of incarcerated youth receiving special education services with prevalence rates in some states as high as 77.5%. Further, according to the Data Accountability Center (2009), among students with disabilities ages 6–21, the percentage of students with E/BD (1.99%) in correctional facilities is about four times the rate for all students with disabilities (0.39%). The highest percentage (6.17%) of students with E/BD in correctional facilities has been reported by Florida and the lowest, 0.58%, was reported by Massachusetts and North Carolina. Finally, children with E/BD are three times more likely than those without E/BD to be arrested before leaving school and 73% of those who drop out of school are arrested within 5 years (Bradley et al. 2008). Incarcerated students with disabilities are entitled to specific protections under IDEA and Section 504 to ensure that they are afforded an appropriate education based on an individualized education plan (*Alexander s. v. Boyd* 1995; Katsiyannis and Murry 2000). This requirement does not apply to students ages 18 through 21 who in the last educational placement prior to their incarceration in an adult correctional facility were not identified as being a child with a disability and did not have an IEP [20 U.S.C. § 1412(a)(1)(B)(ii)].

Despite the prevalence rates of incarcerated youth with disabilities and federal statutes mandating the provision of a FAPE, special education services received by incarcerated juveniles with disabilities generally do not meet IDEA requirements. Persistent concerns include (a) availability of services, special education teachers, and related services; (b) adequate levels of instructional time; and (c) performing evaluations for eligibility (Twomey 2008). A study of southern correctional facilities, for example, revealed that only 30% of eligible juveniles with disabilities received though almost 70% of children in correctional facilities qualified for services under the IDEA (Morrison and Epps 2002). These concerns have resulted in numerous class actions (over 30 since 1975) questioning the adequacy of services provided. These court cases often linger for years, end in settlements, and often result in wide range of reforms (Twomey 2008). Specifically, in *Johnson v. Upchurch*, juveniles with disabilities challenged the lack of special education services at the Catalina Mountain Juvenile Institution in Arizona. A settlement was reached 7 years later with extensive reforms across. Similarly, in *Andre H. v. Sobol*, juveniles with disabilities eligible for services under IDEA claimed that New York City's Spofford Juvenile Detention Center failed to conduct screening activities, convene multidisciplinary team meetings, or obtain records from schools. Seven years later a settlement was reached requiring that the detention home fully implement IDEA provisions regarding evaluation, placement, and service delivery.

In 1987 in *Smith v. Wheaton*, plaintiffs filed a brief concerning the educational needs of incarcerated youth with disabilities in long-term facility rather than in temporary detention (see *Andre H. v. Sobol*). Specifically, the plaintiffs argued that the Connecticut Department of Children and Youth Services, failed to meet evaluation timelines, involve parents in decision making, or adequately provide special education services to those deemed eligible. Plaintiffs also alleged that parents were not involved in educational decision making or provide related services such as counseling or occupational therapy. Finally, *Alexander*

v. Boyd (1995) involved juveniles who were temporarily placed at the Reception and Evaluation Center as well as those in long-term facilities. They claimed that conditions of confinement were deplorable (e.g., food, shelter, sanitation, living space, health care, recreation, programs, classification, discipline, and personal safety); also, the facility often failed to evaluate juveniles suspected of a disability or develop and implement an IEPs according to IDEA. The problem was exacerbated by the reluctance of school district officials to forward a juvenile's school records to the juvenile facility and the requirement by the Department of Juvenile Justice (DJJ) for two IEPs (one for the short-term facility and one for the long term). The court ruled that school records did not necessitate prior parental consent (as erroneously thought by SC school district officials) and the requirement for the development of an interim IEP was deemed unnecessary. In the Absence of those two barriers, DJJ was obligated to comply fully with federal legislation regarding educational services to qualified individuals with disabilities.

Psychological Vulnerabilities of Children with Disabilities

Before considering more closely the psychological and social influences on juvenile delinquency and recidivism, we examine the psychological characteristics of children with disabilities which are known to affect social development. We examine first the major emotional challenges that children face as they move into late childhood and adolescence; we then consider the ways in which children with learning and/or emotional disabilities are at risk for atypical social development, including antisocial behavior.

Interpersonal theorists (Sullivan 1953; Buhrmeiser 1996) view the central social task of late childhood as the development of close and satisfying relationships with same-sex peers. Such relationships, according to Sullivan, depend on the child's ability to "develop a real sensitivity to what matters to another person" (p. 245). A Sullivanian theoretical framework suggests that difficulties in

friendship formation have adverse developmental consequences. For Sullivan, difficulties in being able to form satisfying peer relationships in pre-adolescence presage problems in adolescence both with respect to loneliness, failure to develop healthy relationships with the opposite sex, and problems in maintaining self-respect (p. 309) as well as antisocial behavior. According to more recent attachment theorists (Maysless and Scharf 2007; Cooper et al. 1998), the ability to form meaningful attachments to peers is critical to later development, with implications for both social and academic functioning.

Identity theorists (Erikson 1963; Côté 2009) view the central task of adolescence as the development of a coherent identity or self-concept, an organized answer to the question “Who am I?” Social psychologists view the self-concept as a theory that we have about our self (Epstein 1973). As a theory, an accurate and integrated self-concept enables the individual to organize his or her experiences: to make good predictions about his or her behavior, minimize anxiety, and find satisfaction in activities. From this perspective, healthy identity development in adolescence depends on early childhood successes (in work and play), a supportive family environment, and successful peer relationships.

From each of these theoretical perspectives, children with learning disorders and/or emotional and behavioral disorders are at heightened risk for social developmental complications. At least one half of children who qualify for special education services under the IDEA meet the criteria for specific learning disabilities (LD) or E/BD (Cortiella 2009; Data Accountability Center 2009). Children identified as LD and/or E/BD share two important psychological/behavioral characteristics, each of which is known to interfere with normal social development in late childhood and adolescence.

First, there are problems in social cognition, the ability to make inferences about other’s feelings, thoughts and expectations. For example, Tur-Kaspa and Bryan (1993) found that children with LD were less able than typical peers to identify possible solutions to social problems. Henry and Reed (1995) identified deficits in

conversational skills such as turn-taking, requesting clarification and recognizing different points of view. Such weaknesses in social cognition have clear implications for the development of later behavioral problems. For example, it is well established that children with externalizing or acting out disorders are more likely than typical children to have difficulty in interpreting social situations, particularly situations in which negative outcomes are tied to ambiguous intentions (Dodge and Crick 1990; Lansford et al. 2006; Steinberg 2011). In fact, as early as elementary school age there is a significant relationship between the ability to make inferences about others’ thoughts, motives, and intentions and one’s prosocial or antisocial behavior (see Barrett and Yarrow 1977; Dodge 1980).

The second major characteristic is a history of academic failures. While the reasons for having academic problems may differ for children with LD versus E/BD (see Patterson et al. 1989, for a discussion of academic problems among children with behavioral problems), a pattern of frequent school failure and loss of confidence in one’s academic abilities is typical of children with special needs. Recent studies implicate attention deficit/hyperactivity in both academic and externalizing disorders (Patterson et al. 2000). A mediating factor in this relationship may be poor self-regulation; specifically, difficulty in controlling levels of arousal and delaying gratification (see Dodge and Pettit 2003). Regardless of the specific causes of the learning difficulties, repeated academic failures interfere with the development of a healthy view of one’s self (Steinberg 2011) and when combined with relational failures, increase the likelihood of antisocial behavior (Patterson et al. 1989).

In summary, from a developmental perspective, children with special needs and in particular those with learning or emotional/behavioral disorders are vulnerable to antisocial behavior. Difficulties in forming successful relationships and problems in constructing a coherent and positive self-concept are a source of anxiety and frustration. Under these conditions, young people may develop atypical means to reduce anxiety and organize their experiences, including antisocial and even pathological behavior (Sullivan, pp. 304–306).

Delinquency, Recidivism, and Youth with Disabilities

Factors Associated with Repeat Offending

Age at first arrest has been generally found to be one of the strongest predictors of recidivism (Barrett et al. 2006, 2010). A number of family characteristics are associated with timing of first offense. For example, youth with foster care experience are four times more likely to be early starting delinquents than youth with no foster care experience. Also, youth with a family member convicted of a felony are two times more likely to be early starting delinquents than youth with no family felony (Alltucker et al. 2006). In fact, Farrington et al. (2001), examining three generations of families, found that 8% of the families accounted for 43% of all juvenile arrests. Family criminal history and family dynamics have also been associated with recidivism (Gendreau et al. 1996). Cottle et al. (2001) conducted a meta-analysis of 23 published recidivism studies conducted between 1983 and 2000. In their analysis, offense history was the strongest predictor of reoffending. Other relatively strong predictors included family problems, ineffective use of leisure time, and a delinquent peer group. Hoeve et al. (2009) investigated the relationship between parenting practices and trajectories of antisocial behavior through a meta-analysis of 161 manuscripts. They found that neglectful parenting was associated with more serious delinquency. Father's absence has also been found to predict repeat offending (Barrett et al. 2010).

Psychosocial variables appear also to be related to recidivism. In a study of youth in a Midwestern correctional facility, Katsiyannis et al. (2004) paired psychosocial variables with background variables to investigate the contributions of these factors to the prediction of recidivism. Psychosocial variables included alcohol abuse, depression, levels of parent and peer attachment, and personality traits. The subjects for this study included 299 adolescent males incarcerated from July 1998 to July 1999. Follow-up data

on recidivists were collected in 1999–2000, 2000–2001, and 2001–2002. Findings differentiating recidivists from non-recidivists were consistent with earlier studies regarding age at first commitment and parole violation. In addition, two personality variables, cognitive structuring and “succorance” (seeks support and protection) improved the prediction of recidivism, even with age of commitment, educational achievement and measures of psychopathology accounted for. Loeber et al. (2007) in their longitudinal study of high-risk children from ages 7 to 20 compared the psychological profiles of behavioral “desisters” versus behavioral “persisters.” Youth who had engaged in moderate/severe delinquency in early adolescence only were classified as desisters while those whose behavior remained seriously antisocial into later adolescence were classified as persisters. Desisters showed lower levels of interpersonal withdrawal, engaged less frequently in heavy drinking, and scored lower on a measure of antisocial personality than persisters.

There are also well-established gender differences in recidivism with males more likely than females to engage in repeat offending (Barrett et al. 2010). There is evidence also for race differences in repeat offending with higher recidivism among African Americans (Barrett et al. 2010; Gavazzi et al. 2008). African American youth face life challenges and academic problems that are to some extent culture specific, including limited economic opportunity, family conflict, and stress accentuated by racism (Myner et al. 1998).

Finally, students with disabilities, typically exhibit academic deficits, factors which have been found to be associated not only with delinquency but also with recidivism (Archwamety and Katsiyannis 1998, 2000). Related literature indicates that students with disabilities also are more likely to drop out of school and be incarcerated than their same-age peers (Doren et al. 1996). Studies also show that delinquents tend to score lower than non-delinquents across academic measures (Davis et al. 1991); individuals with violent felonies (e.g., assault and battery, manslaughter, rape, and arson) have more severe

deficits in basic skills (e.g., reading and math) than individuals with property felonies, misdemeanors, and status offenses (Beebe and Mueller 1993); and dropouts are 3.5 times more likely to be arrested than graduates (U.S. Department of Education 1994).

An emerging body of research has been focusing on the link between achievement and recidivism. Specifically, Katsiyannis and Archwamety (1997) examined the records of 147 recidivists and 147 non-recidivists males from a Midwestern juvenile correctional facility. Their findings were consistent with previous research showing age of first offense and first commitment differentiated recidivists and non-recidivists. Additional discriminating factors included deficits in basic skills, special education background, along with gang affiliation, and length of stay at the facility. Similarly, the examination of records of 238 female delinquents (including 96 recidivist females) indicated that age at first offense and first commitment differentiated recidivists from non-recidivists. Additional discriminating factors included deficits in basic math skills along with gang affiliation, abuse, location of residence, and length of stay at the facility (Archwamety and Katsiyannis 1998).

Intervention Strategies

The most significant crime reduction effort may be the one that prevents a juvenile's first arrest from leading to a series of costly interactions with the criminal justice system. Given the higher rate of recidivism by juveniles who were referred to the juvenile justice system at an earlier age, juvenile justice system and schools may need to develop partnerships to find alternative ways of corrections than simply putting them into the juvenile system so that first-time offenders have a chance to correct them in schools or another arranged setting (Vacca 2008). It is necessary to provide additional services to repeat offenders (e.g., academic interventions, family, and mental health services) as generally services provided are inadequate (see Morrison and Epps 2002; Nelson et al. 2004).

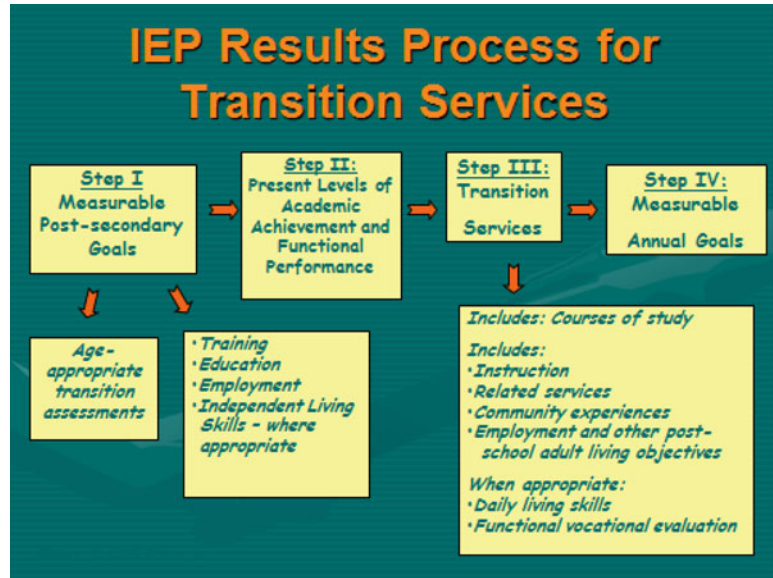
Several intervention strategies have some evidence of effectiveness in reducing delinquent behaviors with the general juvenile population and may be used with youth with disabilities. Unfortunately, youth with disabilities in the juvenile justice system often do not receive adequate education that adheres to special education transition policies and regulations (Nelson et al. 2004). Reentry outcomes for formerly incarcerated youth with disabilities are very poor compared to those for peers without disabilities (Bullis et al. 2004). Additional strategies that are more applicable to delinquents with disabilities have been suggested. A brief discussion of each of these strategies is provided in the following sections.

Transition Services

The Individuals with Disabilities Education Improvement Act (IDEIA) of 2004a, b requires that the student individual educational program (IEP) include a statement of transition service needs at age 14 and a statement of needed transition services at age 16, earlier if appropriate. A transition service is defined as "a coordinated set of activities for a child with a disability that (A) is designed to be within a results-oriented process, that is focused on improving the academic and functional achievement of the child with a disability to facilitate the child's movement from school to post-school activities, including post-secondary education, vocational education, integrated employment (including supported employment), continuing and adult education, adult services, independent living, or community participation; (B) is based on the individual child's needs, taking into account the child's strengths, preferences, and interests; and (C) includes instruction-related services, community experiences, the development of employment and other post-school adult living objectives, and when appropriate, acquisition of daily living skills and functional vocational evaluation." (20 U.S.C. 1401(34))

Researchers have found that that most adolescents who engage in more serious offending begin their delinquent activities before the age of

Fig. 33.1 IEP results process for transition services



15 (Wiesner and Windle 2004). Many of these individuals are placed in the juvenile correction facilities and therefore miss the opportunity to receive the benefits of transition services from school. There is a need to develop preventive strategies that target students with disabilities who fall in these higher-risk groups at an earlier age than 15. Schools may consider to start transition services before age 15 so that students develop a meaningful future vision for their adult life early enough to reduce the chance of getting into trouble with the law due to a lack of future vision. Research in transition practices has suggested that getting student and family to be involved in the educational process greatly enhances student transition outcomes and therefore reduces adverse behaviors. Based on IDEA's definition of transition, a logical sequence of transition planning has been suggested that includes the following steps:

- Step 1. Start from student assessment
- Step 2. Obtain student and family future vision
- Step 3. Identify adult life areas (e.g., employment, postsecondary education, etc.) pertaining to future vision

- Step 4. Specify future outcomes appropriate for the student in each of the identified areas
- Step 5. Plan action steps, assign responsibilities, and set timelines for schools, student, family, and agencies
- Step 6. Integrate planned transition activities into the IEP

O'Leary (2008) proposed a process for integrating transition planning in the IEP process so that the student's educational program is based on the student's future. Figure 33.1 describes the sequential steps in this process. Schools are encouraged to engage in this process as early as possible with students with disabilities who are at a high risk for juvenile delinquency to plan meaningful education for them. When students find that their education is relevant to their future, they are more likely to engage in learning rather than engaging in criminal behaviors.

For a better connection between transition services and student education to reduce delinquency, it may be a good idea to combine transition service intervention with some other intervention strategies to maximize academic

achievement (Gunter and Denny 1998). For example, positive peer culture (PPC) can be used as a means of helping delinquents to develop healthy social interactions by utilizing the positive power of peer influence (Laufenberg 1987). Social skill training is another strategy to help juvenile offenders develop the necessary skills that facilitate academic engagement (Lewis and Sugai 1999). Pearson et al. (2002), in reporting findings from meta-analyses on research studies on the effectiveness of behavioral and cognitive behavioral interventions, found cognitive behavioral interventions to be associated with reduced rates of recidivism. It should be noted, however, that the effectiveness of social skills interventions is highly dependent on context, with interventions less successful when high-risk youth are grouped together (Poulin et al. 1999).

Self-Determination Skills Training

Self-determination is “a combination of skills, knowledge, and beliefs that enable a person to engage in goal-directed, self-regulated, autonomous behavior.” (Field et al. 1998) (p. 2). Self-determination characteristics include choice-making, decision-making, problem-solving, goal-setting and attainment skills, self-management, self-advocacy, self-efficacy, self-awareness, and self-knowledge (Wehmeyer and Schwartz 1997). Research has indicated that adolescents with self-determined characteristics are less likely to drop out of school or become a truant (Zhang and Law 2005) and enjoy better transition outcomes in adult life areas such as employment and independent living (Wehmeyer and Palmer 2003). Houchins (2002) suggested that self-determination instruction be provided to incarcerated youth with disabilities because these individuals lack specific self-determination skills, including appropriate social skills, problem-solving skills, adequate verbal and nonverbal communication skills, self-awareness, and adequate level of self-control.

Given the link between self-determination and individual success incarcerated youth with

disabilities should be offered self-determination instruction. Numerous curricula are available to serve this purpose. These curricula focus on the major skills associated with self-determination and identify strategies to help students with disabilities enhance these skills. Field et al. (1998) identified 35 curricula that were designed for this purpose; whereas Test et al. (2000) found 60 curricula and 675 other resources. Some of the popular self-determination instructional materials are summarized in Table 33.1. Schools and correctional facilities can infuse the self-determination skills covered in these curricula into content instruction or adopt a stand-alone self-determination curriculum. To choose the right curriculum, strategies provided by Test et al. (2000) in choosing a self-determination curriculum can be used as a guide. Test et al. (2000) suggest considering the following questions when choosing a curriculum: Are the materials age appropriate? Are they designed for mild, moderate, or severe disabilities? What types of materials are provided? Are lesson plans well developed? Were the materials field tested? Is there an assessment tool? What are the costs?

Self-determination must not only be facilitated by the educational and juvenile correctional systems, but also within the family structure. Recent research studies have found that the majority of families with a child with a disability do not engage in activities that foster self-determination skills (Zhang et al. 2002, 2005). Part of the reasons for families' lack of engagement in self-determination fostering activities has to do with their lack of information and directions. Efforts have to be made to provide directions for families to engage in recommended practices. Zhang et al. (2002) recommend that families use practices described in the instrument of their study to foster children's self-determination skills. To help their child to be more self-determined, families should include their child in making decisions that affect the whole family. Parents can allow and encourage their children to make basic decisions that directly affect the students themselves, and encourage their child to perform household chores that are within their capabilities (Harrison et al. 1997).

Table 33.1 A summary of popular self-determination instructional materials

Citations	Major focuses	Targeted population	Major features	Availability
Martin et al. (1996)	<p>Self-awareness</p> <p>Personal self-advocacy</p> <p>Goal setting</p> <p>Self-efficacy</p> <p>Self-evaluation</p> <p>Person-centered planning</p> <p>Making choices and decisions</p> <p>Employment</p> <p>Education</p> <p>Housing and daily living</p> <p>Personal</p> <p>Community</p>	<p><i>Ages</i></p> <p>Middle/junior/high school, adapted to upper elementary <i>Students</i></p> <p>Noncategorical, mild or moderate learning disabilities, or developmental disabilities, adaptations may be made for students who cannot read or write</p>	<p>Assessment tool, instructional tool</p> <p>Replicable worksheets or masters, consumable written materials, awareness-building video, instructional video, guide with background and overview, guide with directions for facilitating, illustrations representing the crucial steps</p>	<p>Sopris West, Inc.</p> <p>1-800-547-6747</p> <p>Price: \$120.00</p>
Kurland et al. (1994)	<p>Self-awareness</p> <p>Personal self-advocacy</p> <p>Goal setting</p> <p>System self-advocacy</p> <p>Self-evaluation</p> <p>Person-centered planning</p> <p>Employment</p> <p>Education</p> <p>Housing and daily living</p> <p>Personal</p> <p>Community</p> <p>Making choices and decisions</p>	<p><i>Ages</i></p> <p>Senior high school <i>Students</i></p> <p>Without disabilities, with mild or moderate behavioral or emotional disabilities</p> <p><i>Other</i></p> <p>Families</p>	<p>Instructional tool</p> <p>Replicable worksheets or masters, Instructional Video, Guide with background and overview, guide with directions for facilitating, three-ring binder</p>	<p>James Stanfield Publishing Co.</p> <p>1-800-421-6534</p> <p>Price: \$149.00</p>
Halpern et al. (2000)	<p>Self-awareness</p> <p>Self-efficacy</p> <p>Goal setting</p> <p>Self-evaluation</p> <p>Adjustment</p> <p>Person-centered planning</p> <p>Making choices and decisions</p> <p>Employment</p> <p>Education</p> <p>Housing and daily living</p> <p>Community</p>	<p><i>Ages</i></p> <p>Senior high school, 18–21 years old <i>Students</i></p> <p>Without disabilities, noncategorical, at risk</p> <p><i>Other</i></p> <p>Families</p>	<p>Instructional tool, Assessment tool</p> <p>Replicable worksheets or masters, consumable written materials, awareness-building video, instructional video, activity cards, games, guide with background and overview, guide with directions for facilitating</p>	<p>Pro-ed Publishing</p> <p>1-800-897-3202</p> <p>Price: \$169.00</p>

(continued)

Table 33.1 (continued)

Citations	Major focuses	Targeted population	Major features	Availability
Field et al. (1996)	Self-awareness	<i>Ages</i>	Instructional tool, Assessment tool Replicable worksheets or masters, consumable written materials, overheads, guide with background and overview, guide with directions for facilitating, a pre-post assessment tool	Pro-Ed Publishing Company 1-800-897-3202 Price: \$98.00
	Personal self-advocacy	Middle/junior/senior high school, 18–21 years old		
	Goal setting	<i>Students</i>		
	Self-evaluation	Without disabilities,		
	Adjustment	Noncategorical		
	Employment	<i>Other</i>		
	Housing and daily living	Families, friends		
	Personal			
	Community			
	Conflict resolution and negotiations			
Kurland et al. (1994)	Person-centered planning	<i>Ages</i>	Instructional tool Guide with background and overview, guide with directions for facilitating, consumable written materials, soft-sided book	ARC National Headquarters U.S. Dept. of Education, Office of Educational Research and Improvement, Educational Resources Information Center 888-368-8009 Price: \$37.75
	Personal self-advocacy	Senior high school, ages 13–21, middle/junior high school		
	System self-advocacy	<i>Students</i>		
	Self-efficacy	With mild or moderate		
	Employment	cognitive developmental		
	Self-evaluation	disabilities, with mild or		
	Education	moderate learning disabilities		
	Housing and daily living	or developmental disabilities		
	Self-awareness			
	Making choices and decisions			
Marshall et al. (1999)	Goal setting	<i>Ages</i>	Assessment tool, instructional tool Replicable worksheets or masters, instructional video, guide with background and overview, guide with directions for facilitating	Sopris West, Inc. 1-800-547-6747 Price: \$95.00
	Personal	Middle/junior/senior high school		
	Community	<i>Students</i>		
	Self-efficacy	Noncategorical, without		
	Goal setting	disabilities		
	Self-evaluation			
	Adjustment			
	Making choices			
	Employment			
	Education			
Housing and daily living				
Personal				
Community				

Brolin (1992)

Self-awareness
 Personal self-advocacy
 Goal setting
 Making choices
 Employment
 Education
 Housing and daily living
 Personal
 Community

Ages
 Middle/junior/senior high school, 18–21 years old
Students
 Noncategorical, at risk
Other
 Adults

Assessment tool, instructional tool
 Replicable worksheets or masters, games, guide with background and overview, guide with directions for facilitating, ten three-ring binders

Council for Exceptional Children
 888-232-7733
 Price: \$30.00

Harris (1993)

Self-awareness
 Adjustment
 Goal setting
 Self-evaluation
 Making choices and decisions
 Employment
 Personal

Ages
 Senior high school
Students
 Not specified

Instructional tool, assessment tool
 Guide with background and review, guide with directions for facilitating, many art lesson ideas, awareness-building video that shows various artists taking about self-determination, three-ring binder

VSA Educational Services, US Dept. of Education, Office of Educational Research and Improvement, Educational Resources Information Center, Washington, DC
 202-401-2000
 Price: n/a

Academic Interventions

Unfortunately, students with disabilities are likely to receive inadequate academic interventions while incarcerated (Nelson et al. 2004). In addition, there are few research studies regarding the effectiveness of instructional strategies for students in juvenile facilities (Maccini et al. 2006). Nonetheless, the limited number of empirical studies examining the effect of academic interventions with incarcerated youth (e.g., direct instruction) have resulted in improved academic gains (Malmgren and Leone 2000). Successful academic remediation and school success have resulted in reduced rates of recidivism with juvenile delinquents (Archwamety and Katsiyannis 2000). Katsiyannis and Archwamety (1999) investigated the effects of academic “progress” on incarcerated youth. Subjects of the study included 549 delinquent males committed to a state correctional facility. The researchers examined these delinquents’ academic achievement by implementing a pre- and posttest using the Woodcock Johnson Tests of Achievement Revised (WJ-ACH). Findings indicate that improvement in academic achievement in the areas of writing, science, and math, as well as completion of a general equivalency diploma program was strongly associated with longer survival times outside of prison, particularly for women. In another study with 505 delinquent males committed to a state correctional facility, Archwamety and Katsiyannis (2000) found that those with poor academic achievement were twice as likely to be recidivists or parole violators. Hence, improving academic achievement of juvenile offenders is a strategy to reduce juvenile delinquency.

Some effective school-based strategies include programs that (a) result in building the capacity of the school to initiate and to sustain innovation, (b) clarify and communicate expectations about behaviors (e.g., rules and consistent enforcement), and (c) focus on comprehensive and ongoing instructional programs that emphasize social competency skills. Williams (1996) reported reduced rates of recidivism as the result of implementing “Project LEAD.” This project targets

individuals with deficient functional literacy levels and provides a minimum of 15 h of instruction weekly, which includes a minimum of 5 h of computer-assisted instruction (CAI) and 10 h of classroom instruction, life-skills sessions and individual academic tutoring (Drakeford 2002). Brunner (1993) also noted that recidivism rates could be reduced by as much as 20% by implementing evidence-based reading programs. “Team Child,” a program in Florida, designed to provide civil legal representation for high-risk delinquents to improve their access to needed education programs, mental health services, and family services has been effective in reducing the arrest rate (reduction rates ranged from 11 to 23%) for repeat offenders (Norrbin et al. 2004).

Check & Connect

Check & Connect is a model designed to promote student engagement, support regular attendance, and improve the likelihood of school completion Lehr and Sinclair (2004). Research findings from this model show significant evidence of treatment effects. In one study, 9% of the students who had received the intervention through ninth grade dropped out of school compared to 30% of the students who only received the services in seventh and eighth grade. Forty-six percent of the students who received the services through ninth grade were on track to graduate in 4 years, while only 20% of other students were on track (Thurlow et al. 2002). Studies also show that *Check & Connect* is successful in preventing truancy among students with disabilities.

The *Check & Connect* model was initially developed with input from individuals directly involved with youth placed at high risk for school failure. These included general education teachers, special education teachers and support staff, the parents and students themselves, and a team of researchers. An important person in this model is the monitor/mentor, who is responsible for facilitating a student’s connection with school and learning. The monitor’s primary goal is to promote regular school participation and to keep education a salient issue for students, parents, and teachers. Key features of this model include relationship building, routine monitoring, individualized and

timely intervention, long-term commitment, problem-solving, and affiliation with school and learning (Check & Connect 2010).

Mental Health and Juvenile Delinquents

Prevalence rates of mental disorders for youth in the juvenile justice system is as high as 60%. Programs that are structured and intensive and those that emphasize social skill development and focus on behavior changes are effective in reducing juvenile delinquency and recidivism rates (Altschuler 1998). Further, interventions that address risk factors across multiple settings such as family, school, and community have higher levels of success (National Mental Health Association 2004; also see Chaps. 19, 21, and 23). Examples of evidence-based practices include Multisystemic Therapy, Functional Behavior Therapy, Cognitive Behavior Therapy, and Multidimensional Treatment Foster Care (National Mental Health Association 2004).

Multisystemic therapy, an intensive, multimodal, family-based treatment approach which generally results in a 70% reduction in rearrest rates (Henggeler et al. 1998); Functional family therapy is a brief, family-centered approach for youth ages 11–18 at risk for conduct disorder, oppositional defiant disorder, disruptive behavior disorder, delinquency, violence and substance abuse. In one study youth receiving this therapy had a 25% 1-year rearrest rate compared to 45–70% for youth without the therapy (Alexander et al. 2000). Cognitive-behavior therapy, an approach that involves teaching youth about the thought-emotion-behavior link and working with them to modify their thinking patterns in order to improve behavior has also been shown to greatly reduce recidivism rates (Lipsey et al. 2001). Finally, multidimensional treatment foster care, an alternative to group or residential treatment, incarceration or hospitalization with foster families trained and closely supervised to provide a structured and therapeutic living environment, has also been shown to be an effective intervention. In a recent study, multidimensional treatment foster care, youth involved in this type of foster

care experienced 60% less time in jail and had significantly lower arrest rates than youth not receiving this support (Chamberlain et al. 2007).

Post-release Interventions

It is also necessary to complement investigations implemented during incarceration with post-release interventions. A 5-year longitudinal study (Bullis et al. 2002) that examined the facility-to-community transition of 531 youths released from the Oregon juvenile correctional system indicated that youths who were in school or work 6 months after release were still involved in these activities at 12 months and did not return to the correctional facility. Post-incarceration interventions that have promising results are those that employ intensive aftercare services that include wraparound service coordination along with an emphasis on school and work.

Family Interventions

As indicated by prior research, juveniles from families with drug use and other criminal histories are at a higher risk of committing offenses and recidivism. It seems that there is a need to provide counseling and intervention services to these families so that parents/guardians do not impact their children negatively. This process may be accomplished through collaboration among schools, community not-for-profit agencies, local government agencies, and faith-based organizations. A specific approach that has proven effective is family empowerment intervention, a family systems intervention delivered in the home by well-trained, nontherapists (Cervenka et al. 1996). This intervention consists of three weekly family visits for 10 weeks, monthly phone contacts, a standard protocol for further interventions, and an extensive service linkage component (Cervenka et al. 1996). Another example is “Team Child” in Florida that facilitates access to education programs, mental health services, and family services, thus reducing recidivism rates among high-risk juvenile offenders (Norrbin et al. 2004).

Finally, programs that consider background risk factors (e.g., pre-incarceration), therapeutic and academic interventions (during incarceration), and transition supports can help these adolescents in making good decisions (Bullis et al. 2002; Malmgren and Leone 2000).

Wraparound Services

Wraparound services are individualized and needs driven planning and services that are designed to divert youth from more serious court involvement and to reduce recidivism among those with prior adjudications. Proponents of this model believe that juvenile delinquency is caused by multiple factors and effective treatment should be comprehensive. The wraparound services approach is comprehensive with joint efforts from individuals in the community who have a significant impact on the youth's life. According to The Community Resources Cooperative (1993), the approach relies on 13 core tasks. Some essential tasks include forming a wraparound team of significant individuals, identifying existing and creative services that meet the youth's needs, providing services and evaluating progress, and developing transition plans and long-term follow-up.

There is evidence that wraparound services reduce out-of-home placements. Carney and Buttell (2003) conducted an evaluation study to examine the effectiveness of the wraparound services model by comparing this model to conventional services. Participants in the study included 141 youth who were ordered by courts to participate in community-based treatment programs for delinquent youth. These youth were divided into the treatment and control groups, each of which took a pretest and a posttest. Both groups were assessed three times at 6-, 12-, and 18-month after treatment. Results indicated that juveniles who received wraparound services were less likely to engage in subsequent at-risk and delinquent behavior (e.g., did not miss school unexcused, get expelled or suspended from school, run away from home, or get picked up by the police) than the youth who received the juvenile court conventional services.

Recent Research on Disabilities and Delinquency

In our own research on delinquency (Barrett et al. 2006, 2010; Zhang et al. 2011, in press) we have had the opportunity to examine the delinquency histories of youth with and without disabilities. Data for our studies come from the South Carolina Department of Juvenile Justice (SCDJJ) Management Information System. The entire sample includes 100,955 juvenile offenders all born between 1981 and 1988. Our sample of children with disabilities was drawn from the larger sample. All who had disabilities and who were African Americans or European Americans have been included in the study; there are a total of 5,016 juveniles meeting these criteria.

For our studies, information about the juvenile's disability status was obtained by SCDJJ case workers at intake. The practice at SCDJJ is for information to be obtained by SCDJJ from parents and/or guardians; however, when possible, confirmation from school records is obtained. In addition, for the purpose of matching individuals with disabilities to individuals without disabilities, 5,016 juveniles without disabilities were randomly selected from the larger sample. SCDJJ assigns all offenses severity ratings: offenses are categorized as status offenses (e.g., truancy, running away), misdemeanor offenses (e.g., simple assault and battery, criminal domestic violence), nonviolent felonies (e.g., grand larceny, carrying a weapon on school grounds), and violent felonies (e.g., assault and battery of a high and aggravated nature, sexual assault, armed robbery). For analysis purposes, we further classified offenses into two levels: Level 1 included status and misdemeanor offenses and Level 2 included felonies.

The data analysis addressed two major issues. First, we were interested in how offenders with disabilities differed from those without disabilities at their first referral. We considered differences on demographic variables (gender, ethnicity, family income, family history, and drug use). We also compared the two comparison groups on variables measuring severity of offense. Finally, we compared the two groups on total

number of referrals, total number of adjudications, total number of commitments, total number of probations, length of first commitment, and age at first referral.

The second question was whether the two comparison groups differed in their risk for recidivism. The method used was proportional hazards regression analysis, also termed Cox regression (Singer and Willett 2003). This analysis technique has been used previously to examine the likelihood of and timing of recidivism (e.g., Zhang et al. 2007, 2010; Barrett et al. 2010). In proportional hazards regression analysis, recidivism (repeated offense) is predicted by time, adjusting when necessary for other entry characteristics of the students. This analysis allowed us to examine not only the relative risks for recidivism but the timing of second offenses for those with and without disabilities.

Results of our analyses indicate very interesting differences between delinquents with and without disabilities. The two groups differed significantly on all five demographic variables. First, the percentage of African Americans was higher in the group of offenders with disabilities than those without disabilities (59% vs. 52%). Second, the percentage of male offenders was higher in the group of offenders with disabilities (82% vs. 64%). Third, the percentage of individuals that had family criminal history was higher for the group of offenders with disabilities than for youth in the reference group (59% vs. 52%). Fourth, the percentage of offenders with disabilities from low-income families (<\$15,000) was greater for youth with disabilities (55% vs. 43%). Finally, the percentage of self-reported drug use was lower for the offenders with disabilities (45% vs. 57%).

In addition offenders with disabilities were referred to DJJ approximately twice as often as offenders in the reference group (4.27 vs. 2.16 referrals on average) and had more adjudications and probations. However, offenders with disabilities had on average a smaller number of commitments per individual (1.27 vs. 1.37). Offenders with disabilities were committed to SCDJJ custody for significantly longer times than offenders without disabilities (7.98 months vs. 5.42 months) and were significantly younger at the time of their

first referral (13.44 years vs. 14.49 years). In addition, among those who were referred a third time to SCDJJ, there were almost three times more individuals with disabilities than without disabilities (3,245 vs. 1,248). Also, offenders with disabilities were referred for more severe offenses than offenders in the reference group at all three referrals. The percentages of felonies among offenders with disabilities were 28.89, 29.85, and 31.65 at the first, second, and third referrals, respectively. In contrast, in the comparison group the corresponding percentages of felonies were 19.58, 20.31, and 24.68.

Finally, there were significant differences in the risk for and timing of recidivism. The average length of time between first and second referral was approximately 2.75 years for offenders with disabilities; for other offenders the average was 7 years. There were also differences in likelihood of a second referral. For those offenders with disabilities, about 82% had a second referral while for offenders without disabilities the percentage was about 44%. Among the offenders with a second referral, those with disabilities were more likely to be referred for a third time; the percentages were 79% for those with disabilities and 56% for those without). In addition to special education status, other variables were predictive of juvenile recidivism. The findings were as follows: (a) African Americans were more likely to have a second offense than European Americans, (b) those who were younger at the first referral were more likely to recidivate with the rate of recidivism expected to decrease by 5.5% for each additional year in age at first referral with other variables held constant, (c) those with a family criminal history background were more likely to recidivate, and (d) offenders from families with low incomes were at greater risk for second offense.

These findings indicate important differences in delinquency histories for youth with and without disabilities. Youth with disabilities experience more serious delinquency problems than those without disabilities. They commit more offenses, commit more felonies, are more likely to recidivate, recidivate more quickly, and experience longer incarcerations than those without disabilities. There is no question that this group of young people deserves particular attention, both before

delinquency occurs and if and when there is an arrest. We suggest that a promising line of research is the investigation of different profiles and patterns of behavior for juvenile offenders with disabilities. That is, it seems reasonable to assume that among youth with disabilities, there are those who are at greater or lesser risk for serious involvement with the criminal justice system. We have begun to examine this issue. In a recent study (Zhang et al. *in press*), we have used a technique called latent class analysis model and identified three different subgroups of youth with disabilities, each showing a different pattern of recidivism. Subgroups differed in gender, ethnicity, family income, drug use, and criminal history in the family. Such an approach seems to be particularly appropriate in light of the fact that children with special needs are not a monolithic group and like all children show great variation in their individual strengths and vulnerabilities.

Conclusion

This brief overview of issues related to juvenile delinquents with disabilities indicates that there are serious challenges for both educational and correctional institutions. Juveniles with disabilities not only are disproportionately represented in correctional facilities, they are also prone to be incarcerated at an earlier age, are more likely to be repeat offenders, and experience shorter length of time between first and second referral. Further such children are less likely to receive special education and related services as mandated by the IDEA. It is our collective responsibility as researchers to better understand this population so that we may develop effective prevention/intervention strategies for families, schools, and the state agencies that serve them.

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Candace A. Mulcahy and Peter E. Leone

Introduction

With few exceptions, youth in juvenile corrections in the USA do not receive education services commensurate with those received by youth who are not incarcerated. Education services in many juvenile correctional facilities fail to meet minimal standards associated with quality education programs and they fail to use evidence-based practices. In spite of a history of school failure and educational disabilities, youth in juvenile corrections are capable of learning new skills and leaving juvenile corrections more competent and capable than when they entered (Leone et al. 2005). This chapter examines the association between education attainment and successful life experiences of adults, reviews the current status of education services for youth in juvenile corrections, and describes administrative structures and instructional practices associated with quality education services for youth.

Providing quality education for incarcerated youth is a challenge for facility administrators, teachers, and state policymakers. Providing quality

education for all children and youth, including those who are court-involved, is a public responsibility. In fact, youth in juvenile corrections are protected in the same manner as their public school peers under federal laws, including the Individuals with Disabilities Education Act (IDEA 2005), as well as the No Child Left Behind Act (NCLB 2002) and corresponding state statutes and regulations. Furthermore, every state has education regulations that mandate public education for a specified age range, generally children between the ages of 6 and 16. Students in juvenile corrections are not exempted from compulsory education laws. However, across the nation, priorities in juvenile delinquency facilities tend to be focused on security and punitive measures, rather than on education as a key component of rehabilitation. Students in juvenile corrections tend to be the neediest and least academically proficient of all of our nation's students. Unfortunately, these youth often experience a long history of mediocre and interrupted education services prior to incarceration, and subsequently receive substandard academic and transition-related instruction while incarcerated.

In recent years, our nation's education system has failed to maintain its leadership on international measures of student proficiency in math, science, and literacy. Particularly, in high poverty neighborhoods in urban and rural settings, schools are not adequately preparing children and youth for civic engagement and postsecondary education. If the USA is to remain a world leader in medicine, technology, and business, it is critical that all of our nation's children and youth receive

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high-quality education services (National Academies of Science 2007). Currently, the USA falls short regarding children's well-being in and out of school. In a recent international survey, the USA fared among the worst of 21 industrialized nations on indicators of child well-being (UNICEF 2007). Furthermore, 19% of children in the USA live in poverty while 41% live in low-income families (Wright et al. 2010). Academically, US 15-year-olds ranked 21st among developed nations on the 2006 Program for International Student Assessment (PISA) science assessment and 25th on the PISA math assessment (Baldi et al. 2007). On the 2006 Progress in International Reading Literacy Study (PIRLS), US fourth graders were outperformed by children in ten participating jurisdictions (i.e., nations and subnational entities) (Baer et al. 2007). Perhaps the most critical factor in the US performance on academic and child welfare indicators is that approximately one in six US public school students attend a high-poverty school. Poverty, weak family social controls, disorganized neighborhoods, and poor academic performance are risk factors for juvenile delinquency (Sampson and Laub 1994; Wasserman et al. 2003). Failing to meet the needs of our most vulnerable children is a critical societal issue; these children eventually become adults without the appropriate tools to become productive members of society.

Proficiency in reading and math are critical to personal independence and professional competency in successful adults. In order to find and maintain a job in the twenty-first century, adults require at least some postsecondary education. Further, on measures of health, income, civic engagement, and employment, adults who have higher levels of literacy or have completed more years of formal schooling perform better than those with less schooling (Bureau of Labor Statistics 2009; Crissey 2009; Kutner et al. 2007; National Poverty Center 2007). The least literate adults in the USA experience a host of negative outcomes, including poverty, unemployment, and limited educational opportunities (Kutner et al. 2007). In addition, these individuals are disproportionately members of minority groups and have disabilities. Illiteracy rates among incarcerated

adults are higher than the least literate population of nonincarcerated adults (Greenberg et al. 2007). In addition, 43% of incarcerated adults have a high school diploma or GED when they enter prison; only 19% earn a high school diploma or GED while incarcerated (Greenberg et al. 2007).

Poor educational achievement, school dropout, poverty, and involvement in the criminal justice system also have intergenerational consequences. Researchers have found that parents' (particularly mothers') education level was a strong predictor in the short-term of inappropriate behaviors, school failure, and occupational aspirations of their children (Davis-Kean 2005; Petit et al. 2009) and in the long-term, of their adult children's occupational success (Dubow et al. 2009). Other factors also contribute to school exclusion and subsequent delinquency among certain youth. Felson and Staff (2006) found that adolescents' strong attachment to parents and teachers contributed to a decreased risk of delinquency. Conversely, adolescents in complicated and distressing family and home situations are more apt to engage in risk behavior. Additionally, children and youth whose family members are court-involved are more likely to be involved with law enforcement and delinquency themselves (Aaron and Dallaire 2010; Wildeman and Western 2010).

School policies and practices also contribute to the exclusion of youth and subsequent contact with the juvenile delinquency system (Christle et al. 2005; Farmer 2010). Several studies have documented high rates of disciplinary action, including suspension and expulsion among students with disabilities and minority students, in public schools (Gregory et al. 2010; Losen and Skiba 2010; Krezmien et al. 2006). Ineffective discipline policies and practices in public schools contribute to high rates of truancy, suspensions, and expulsions among minority students and students with disabilities (Zhang et al. 2004). High rates of dropout are also reported among youth with disabilities, particularly students with emotional and behavioral disorders, and minority students. Once a student leaves school prior to graduation, there is an increased risk of involvement in the juvenile delinquency system.

Harsh penalties for minor disciplinary infractions and referring students to the police and the juvenile courts for disciplinary infractions are examples of practices that are typically ineffective for addressing behavior problems, and often lead to a phenomenon of “pushing out” a troubled or troubling student from the school environment. This process involving exclusion from school and subsequent referral to the juvenile courts is frequently referred to as the “school to prison pipeline.” Incarcerated youth have disproportionately experienced a history of school exclusion (Sedlak and McPherson 2010a). For example, in a study of all students incarcerated in a single juvenile facility over the course of a year ($N=555$), researchers found that 64% of the students were held back at least one grade over the course of their academic careers (Krezmien et al. 2012). In addition, 85% of the students had been suspended and more than 51% had been expelled from their schools prior to their incarceration. Once in the juvenile delinquency system, if high-quality education services are not a key component of a comprehensive service delivery model, the youth faces multiplied risks upon return to the community. Education is widely seen as the vehicle through which youth previously involved in delinquent activities can reconnect to jobs and their communities. In fact, research shows reduced rates of recidivism among previously incarcerated youth who found jobs or returned to school after release (Bullis et al. 2004). Unfortunately, juvenile delinquency programs often provide inferior educational opportunities.

Status of Education Services in Juvenile Corrections

Quality education services for incarcerated youth are critical for stopping the cycle of criminality, improving outcomes for these youth, and improving the social, educational, and economic status of our nation. To better understand the unique needs of students in the juvenile delinquency system, it is important to understand the multiple influences that have contributed to the problem, including inadequate systems of education for incarcerated youth that exist in many jurisdictions today.

Youth in juvenile corrections have significant academic deficits compared to their public school peers. National estimates indicate that students with disabilities represent between 30 and 50% of students in juvenile delinquency facilities, three to five times the average in public schools (Quinn et al. 2005). Among incarcerated youth, the mean standardized reading achievement score is approximately one standard deviation below the mean of the general school-aged population (Harris et al. 2009; Krezmien et al. 2008). Math performance is also subpar among incarcerated youth (Krezmien et al. 2008). Results of a national survey indicated that 21% of incarcerated youth were not enrolled in school at the time of incarceration. Additionally, nearly half functioned below grade level (Sedlak and McPherson 2010b). Given the serious academic needs of incarcerated youth, education in juvenile corrections should be a priority. Unfortunately, education programs in many juvenile corrections facilities across the nation fail to meet the most basic academic needs of incarcerated students.

Over the last 35 years, youth advocates and the US Department of Justice have investigated, filed complaints, and brought class-action cases against facilities and states with regard to the adequacy of education services and supports for incarcerated youth (Leone and Meisel 1997; National Center on Education, Disability, and Juvenile Justice 2005). Examples can be found around the country, as well as in rural (e.g., Plankinton, SD), suburban (e.g., Baltimore County, MD), and urban (e.g., Detroit, MI) settings. Some of the most egregious cases included schools in juvenile corrections that frequently canceled classes, used packets of worksheets as a primary means of “instruction,” failed to provide grade-appropriate instructional materials and texts, employed unqualified teachers, provided credits for work not commensurate with the public school curriculum, and failed to provide instruction and support for students eligible for special education (EDJJ 2009). Among other things, these complaints and subsequent settlements shed light on inadequate services and supports. For example, legal advocates challenging education practices in juvenile corrections have cited missing records, lengthy delays in transferring records, and missing

academic credits. Litigation challenging inadequate practices has resulted in court orders and settlement agreements with specific timelines for prompt transfer of records from public schools to juvenile corrections and timely transmittal of records to new placements (*Alexander S. v. Boyd* 1995; Leone and Meisel 1997). Many cases have reached settlement and substantial compliance with terms of the settlement; however, in some cases, once legal oversight is removed, critical issues return. Among other things, these complaints and subsequent settlements provide insight into inadequate services and supports.

The most recent census of youth in residential custody for delinquency showed that 94,875 children under age 21 were held in 3,257 publically and privately operated facilities throughout the USA (Livsey et al. 2009). Youth are held in detention centers, staff-secure residential facilities, camps, and state training schools. Among the 52 separate juvenile systems in the USA (including Washington, DC, and Puerto Rico) vast differences exist in the conditions of confinement, the administrative structures, and the organization of education programs within states.

In an analysis of education policies among state-level juvenile corrections systems in the 50 states and Washington, DC, the authors found considerable variability and inconsistencies in state regulations (Leone and Mulcahy 2006). While some states had extensive regulatory language concerning the education of incarcerated youth, others had little to no language. For instance, in Virginia, detailed language is provided on the transfer of educational records from the most recent school of record to the juvenile facility upon intake. On the other hand, in New York, the only reference to transfer of records for students who are incarcerated refers to forwarding records to a receiving school upon release from the facility. Some states have very little regulatory language concerning education in juvenile corrections (e.g., Vermont), while others list a continuum of required educational services (e.g., Wisconsin). With little consistency and parity in the juvenile code when compared to public school law, there is little doubt that students who are incarcerated will receive an education that is inferior to their public school peers.

Furthermore, the administrative arrangements for education and special education services vary greatly from state to state (Leone and Mulcahy 2006). In 26% of states, including Maryland, Arkansas, and Florida, the state department of education is responsible for educating incarcerated youth. In Connecticut and Georgia, like 12% of the states, an independent school district exists within the juvenile corrections system. In other states (46%), the education is the responsibility of the state department of juvenile services. These states include Idaho, Michigan, and Nebraska. Other administrative arrangements include contracting with local school districts or administration by state departments of corrections (16%). Whatever the administrative arrangement, it is imperative that the state leaders have a clear understanding of the unique needs of youth in juvenile corrections, as well as evidence-based instructional strategies and tools to teach them.

In addition to the lack of consistency in policy and administrative arrangements related to education in juvenile corrections, a lack of consistent, rigorous accreditation exists (Gagnon et al. 2007). Some facilities and programs earn accreditation through organizations such as Middle States Association of Colleges and Schools or the American Corrections Association, but in some instances those accrediting bodies often fail to actually visit facilities, review policies and practices, and observe classrooms and instructional activities (Price 2010). In other facilities, education programs do not meet existing standards of state education agencies. For example, a federal investigation of the Alexander Youth Services Center, a 140 bed intake and commitment facility, found that youths received no education for weeks after their arrival and that the education program failed to meet the State Standards for Accreditation of Arkansas Public Schools (*United States v. Arkansas*).

Funding mechanisms often hinder the ability to provide high-quality education services for incarcerated youth (Leone and Mulcahy 2006). Funding for education programs in juvenile corrections is often far less than per pupil spending in public schools. In many jurisdictions, there is no cost center in agency budgets for juvenile corrections education. In many cases, there is no

way to discern exactly how much money is spent on education programs. While positive examples exist (e.g., Ferris School in Delaware), education programs in juvenile corrections typically have fewer financial and other resources than their public school counterparts (Leone and Mulcahy 2006).

Educators and administrators in juvenile corrections schools face a multitude of challenges. First, very few studies that might document evidence-based instructional practices have been conducted over the past 50 years in juvenile corrections (Krezmien and Mulcahy 2008; Leone et al. 2005). While teaching strategies found to be successful in public schools might also be effective in juvenile corrections, there are important considerations unique to this environment that need to be examined. For example, the nature of short-term detention facilities and long-term commitment facilities are such that the students represent a highly transient population. Court dates and available space dictate a student's start and end dates in correctional education; those dates often change due to administrative influences as well as student behavior. In addition, accessing educational records from previous institutions, including public schools, can be a tedious process. Access to the school records of youth in juvenile corrections presents many of the same problems as those experienced by youth in foster care (Leone et al. 1986; Leone and Weinberg 2010). Delays in acquiring educational records can impede the provision of appropriate education programs for individual youths. In some facilities, students are taught in classes based on their housing assignment rather than grade or ability level. There may be a vast range of ages and school experience represented in one housing unit (Sedlak and McPherson 2010a). Consequently, students of a variety of ages and educational backgrounds may be in the same classes. Therefore, teachers have the difficult task of developing and implementing instructional lessons and units that address the needs of learners with a wide range of abilities and a classroom roster that is constantly changing.

Other facility-level challenges exist that impede the delivery of high-quality education services. These include poor physical facilities,

overload of cases in the courts, inadequately trained teachers and support staff, and lack of coordinated transition services. In many states, bed space is limited in long-term facilities. Therefore, youth are often held in detention facilities pending placement in a commitment, or long-term facility. Despite the fact that these youth have been adjudicated, they continue to receive education services alongside detained youth who typically have shorter stays. Instructional space is inadequate in some facilities where cafeterias or gymnasiums are also used as classrooms. In other cases, the designated classroom space is overcrowded or barely accessible. When available classroom space is not easy to navigate without moving furniture and other equipment or has inadequate lighting the message to teachers and students is that education is a low priority in juvenile corrections. In other cases, a backlog in the courts leads to extended detention stays. These administrative issues contribute to the transiency where some youth enter and leave in a few days or weeks while others stay for months. These factors further compound the challenge of delivering high-quality education services.

Teachers in juvenile corrections tend to lack credentials for highly qualified status, as defined by the federal government (NCLB 2002). Even if a juvenile corrections teacher holds a professional certification, staffing needs often require that teachers provide instruction out of their certification areas. In many facilities, teacher salaries are not commensurate with compensation in local public schools; further, teachers and support staff in juvenile corrections often lack training and experience with dealing with incarcerated youth.

While education services within many facilities are inadequate, the process of transition of youth back to their communities is no better. Many youth leave facilities without the skills and supports necessary to be successful in school and the community. Although Title I, Part D of NCLB (2002) is aimed at protecting youth attempting to return to their neighborhood school, a host of roadblocks hinder their reentry (Brock and Keegan 2007). Public school policies often prohibit students from returning after incarceration

(Mayer 2005 or make it extremely difficult to do so (DeFur et al. 2000)). In some cases, students must attend a transition program prior to, or instead of, returning to their previous school. Students who were previously incarcerated often lack credits to be placed in classes with their age-appropriate peers. In other instances, credits are not transferrable from the facility education program to the public school, which hinders a youth's ability to stay on track for graduation. In many facilities, youth are encouraged to get a GED rather than a high school diploma. Although this may be a viable option for some students, it should not be treated as a blanket policy for all incarcerated youth. Students who are on track to graduate with a high school diploma prior to incarceration should be provided with the necessary supports to progress toward the degree during and after incarceration.

A recent project involving youth exiting the Cook County Juvenile Detention Center highlights the significant barriers experienced by youth and their parents to reenroll in school after juvenile court involvement (Wojcik et al. 2008). In spite of court orders requiring that they attend school, youths were regularly denied reentry into their home school. Frequently, they were not removed from the rolls of the Cook County Detention Center School, and parents were not informed about the paperwork needed to reenroll their children in their home schools. Advocates were told that students received no academic credits for their academic work at the detention school unless they were enrolled for a full semester.

In addition to barriers to returning to school, youth often lack other critical supports to be successful in the community. Services and supports are often fragmented, and provided through a variety of agencies and organizations (Leone and Weinberg 2010). A lack of streamlined transition services contributes to the failure of previously incarcerated youth to be successful in the community (Brock and Keegan 2007). The transition of youth back into the community following incarceration is a critical phase in ensuring that youth do not continue to engage in delinquent or criminal activity. Professionals involved with the

youth during every stage of the juvenile justice system maintain or increase the supervision and support after release. Aftercare is one of the only ways to ensure that a youth is taking advantage of opportunities for education, workforce development, and employment. It is also critical to reinforce the skills acquired in corrections programs and to ensure continuity of care and services for youth with disabilities.¹

To this point, we have shown that education represents one of the best opportunities for youth involved in the juvenile court system to become reconnected to their schools and communities following release from juvenile facilities. We have also shown that services for incarcerated youth frequently are inadequate. In the section that follows, we describe a framework for education services in juvenile corrections that increases the likelihood that youth will receive services and support essential to their development as independent and employed adults, thus "ensuring that they learn."

Promoting Achievement in Juvenile Corrections: Ensuring that They Learn

Developing a system that adequately addresses the education needs of children and youth in the delinquency system involves fundamentally examining the ways in which systems and agencies operate and changing them as appropriate. Addressing the concerns noted earlier will require an examination of (a) the legislative and policy framework supporting current practices, (b) the organization and delivery of education services in juvenile corrections, and (c) the transition of youth from incarceration to the community.

All children and adolescents incarcerated in juvenile corrections are typically entitled to the same education services and supports as youth attending public schools in their respective states.

¹See Altschuler, D. M., et al. (1999, July). *Reintegration, supervised release, and intensive aftercare*. OJJDP Juv. Just. Bull. Washington, DC: Office of Juvenile Justice & Delinquency Prevention; Altschuler & Armstrong, *supra* note 242.

This includes both basic instruction and for eligible students, special education services and supports. NCLB, designed to boost achievement and accountability in public schools in the USA, applies to correctional settings with some adjustments for size of student population and length of stay. The 2005 reauthorization of the IDEA maintained some and added new provisions to the law to improve educational services to children with disabilities, including those who are incarcerated in juvenile facilities and, with some exceptions, those in adult facilities. Students in corrections are also entitled to the protections and supports associated with the Americans with Disability Act (ADA) and Section 504 of the Vocational Rehabilitation Act of 1973.

State and local jurisdictions operating correctional facilities need to ensure that they create and maintain school stability for these children and youth. This includes ensuring that they are immediately enrolled in school when placed in a correctional facility, that their records transfer promptly, and that their education program reflects their current standing and credits earned in prior placements. While these practices are common professional practices for youth in the free world, too often they are the exception in corrections. Collaborative agreements between agencies with explicit timelines for transfer of records, enrollment, and collaborative activities are necessary, but not sufficient for students to receive services to which they are entitled. We believe that states need to develop explicit statements of policy and corresponding regulations related to students' education rights while incarcerated. Similarly, sustainable funding mechanisms based on the number of youth needing services are essential if past practices, which failed to deliver services, are to be eliminated. Legislation and corresponding regulations and policies can set the stage for programs, but the design of the program, appropriate curriculum materials, the availability of highly qualified teachers, and well-trained support staff are essential components of programs.

Programs need to be designed around students' academic needs while acknowledging that

at times attendance might be interrupted by court appearances, medical services, and behavioral health needs. Those appearances and services should be coordinated with the school schedule to minimize interruption with the school day. The length of the school day and school year should correspond to state requirements for amount of instructional time in public schools. Similarly, courses available to students should enable them to maintain pace with instruction their peers in the public schools are receiving. For students with substantial academic needs and who may have missed a considerable amount of schooling and for students with short stays (e.g., detention), an instructional program with an emphasis on literacy and numeracy might be most appropriate (Salinger 2010; Leone et al. 2010).

Students eligible for special education services should have their individualized education programs (IEPs) implemented. Typically, this requires that a school-based team meet with the student and his/her parent or guardian to review or update an existing document within 30 days of placement. Updates should be made based on individual need and not on availability of services in the facility. For students with extended stays, a balanced program of remedial academic support and grade-appropriate curriculum should be provided. Students whom teachers, support staff, or others suspect of having an educational disability should be referred for assessment and possible eligibility for services.

In small facilities and detention centers, providing a full range of academic options for students presents a challenge. While all facilities should have fully certified teachers in core subjects, such as mathematics, social studies, English, and science, on occasion facilities will have to utilize distance education, a part-time instructor, or software to ensure that students are able to continue their coursework in subjects, such as trigonometry or a foreign language. An essential element, which is difficult to quantify, is attracting and retaining teachers who are passionate about teaching youth in correctional facilities (Domenici and Forman 2011). Highly motivated teachers who expect much from their students can transform the

climate and quality of instruction in juvenile corrections. Grouping students for instruction is another important consideration. Typically, this will also be a function of the size of the facility and the average length of stay. Preferred practice is to group students by age or grade within subject areas. For very small facilities with just a few teachers on staff, this may be impractical. In these settings, individualized instruction for each student can provide necessary instructional services.

Regular assessment of student performance is another essential element of instructional programs designed to ensure that incarcerated children and youth learn. Beyond assessment of academic skills at intake or shortly thereafter using appropriate screening and diagnostic measures, on-going assessment is essential to document student progress and to determine if students are making adequate gains and instructional practices are effective. This assessment and subsequent instructional supports could occur as part of a tiered instructional model, similar to what is being implemented in many schools (Duffy 2007).

In addition to a scheduled instructional day, incarcerated students benefit from activities such as homework and study sessions, tutoring, and after-school programs. For students incarcerated for an extended period of time, stability and opportunity in a well-designed supplemental education program provide great motivation to catch up academically. For example, institution-wide literacy programs with dedicated leisure reading time on living units can help transform juvenile institutions into settings where education matters. Finally, while a discussion of behavioral health is beyond the scope of this chapter, children with serious and chronic mental health needs, including alcohol and other drug dependency, require services and supports that complement their education.

If the educational outcomes for students in juvenile corrections matter, they must be assessed. Regular performance data must be available and reviewed. The most efficient way for this to happen is for school, probation, and juvenile and family court databases to be linked and school data automatically uploaded to the other agencies. Although assessments and

reviews of individual student performance is a critical part of system reform, analysis of the performance of groups of vulnerable students in the aggregate provides information about interventions and supports needed and whether those in place are achieving their intended goals. If they are not, other interventions must be implemented.

Collaboration and effective communication among education, juvenile corrections, and behavioral health staff within the institution is critical, as are formal links between agencies in the community and those serving youth behind the fence. When agencies develop individually tailored interventions and supports, significant collaboration and communication is essential. When youth leave facilities, local education agencies should anticipate and prepare for their return. Plans should be in place and juvenile probation and school-based staff should make the youth's successful transition a high priority.

Does any state or regional agency provide high-quality education services to incarcerated children, the most academically deficient youth in the USA? While the data are not all in and the careful evaluation research is not available, several jurisdictions—following settlements of class actions against them—have developed programs that appear to be providing quality education services. The Ferris School in Wilmington serves youth committed by the juvenile courts and is operated by the Delaware Department of Services for Children, Youth, and their Families. Since 1997 it has operated an education program for 80 youth that is considered by many as a model for education services for incarcerated youth (Ferris School for Boys 2010). The Ferris School education program includes instruction in core academic areas as well as a fine arts program. Ferris also has a mentoring program that provides consistent tutoring and support from a caring, non-family adult each week. The program also includes therapeutic interventions and a 6-week transition program as youth prepare to reenter their communities.

Another education program making great strides to provide high-quality services is the Maya Angelou Academy at New Beginnings, the long-term secure facility for youth from the

District of Columbia. Maya Angelou, operated by a public charter school, has received high marks from an external evaluator brought into assess the status of compliance with a 20-year-old settlement agreement (*Jerry M. v. D.C.*). The external reviewer (Kramer-Brooks) described the Maya Angelou Academy as a national model and one of the best juvenile corrections education programs in the country (Domenici and Forman 2011). Like the Ferris School, the Maya Angelou Academy provides instruction in core subjects as well as the arts. Maya Angelou also provides instruction in several vocational areas. Both the Ferris School and Maya Angelou are staffed by skilled and dedicated professionals who believe strongly that they can make a change in the lives of their students.

This chapter reviewed education services for incarcerated youth. Quality education is critically important to the well-being of our country, cultivating successful adults who make positive contributions to society. Given the academic needs of juveniles in corrections, with few exceptions, the quality and availability of education services for youth who are detained or committed by the courts is abysmal. The evidence indicates that children in the delinquency system receive inadequate education services and consequently inadequate preparation for adulthood and post-secondary education. The situation in most jurisdictions is such that most individuals reading this chapter would not permit their own children to experience similar services in a public or private school. The responsibility for rectifying the dismal academic experiences of incarcerated youth rests with professionals and policymakers in child welfare, education, mental health, juvenile justice, and the juvenile courts.

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Over the last decade, there has been increasing recognition by researchers and policymakers of the serious problem of antisocial and criminal behavior committed by adolescent females (Pepler et al. 2005; Prescott 1998; Putallaz and Bierman 2004). This is largely due to a recent increase in the prevalence of arrest rates among this population. According to the most recent data, females make up 30% of all juvenile arrests (Puzzanchera 2009), which is nearly a 50% increase from the 1 in 5 rate of the early 1990s (Snyder 2008). The poor outcomes associated with girls' offending behavior are significant, and include behaviors such as ongoing engagement in criminal offending, drug use, adolescent childbearing, and mental health problems (Chamberlain et al. 2007; Kerr et al. 2009; Miller-Johnson et al. 1998; Underwood et al. 1996; Teplin et al. 2002). It is therefore of high public health significance to better understand the characteristics and outcomes of female juvenile offenders, and to develop and rigorously test intervention approaches for these young women.

This chapter is divided into three sections that focus on the characteristics and intervention needs of female juvenile offenders. We begin by describing the characteristics of females in the juvenile justice system, including a description of offending rates, childhood traumatic experiences, and co-occurring problems with mental health and substance use. Next, we describe female juvenile offenders' trajectories and outcomes. We conclude by describing their intervention needs and summarizing the findings from efficacious intervention programs targeting female juvenile offenders.

Characteristics of Female Juvenile Offenders

Demographic Characteristics

Approximately 2.1 million arrests of juveniles (individuals under age 18) occurred in the USA during 2008, with females representing 30% of these cases (Puzzanchera 2009). Just over one quarter of arrested juveniles were under age 15 years at the time of arrest, with the majority of arrests involving 15–17 year olds (Puzzanchera 2009). The racial composition of juvenile offenders is primarily white (78%), with blacks (16%), Asian/Pacific Islanders (5%), and American Indians (1%) being the next largest racial groups represented in the juvenile justice system (Puzzanchera 2009). Overall, demographic characteristics in the juvenile offender population are similar for males and females.

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However, significant racial disparities exist when arrests are examined by offense type and in relation to general population rates. For example, of all juvenile arrests for violent crimes in 2008, 52% involved black youth; and for all property crime arrests, 33% involved black youth (Puzzanchera 2009). Further, the Violent Crime Index arrest rate (i.e., arrests per 100,000 juveniles in the racial group) in 2008 for black juveniles (926) was five times the rate for white juveniles. The racial disparity has increased since 2004, to its current rate of 5 to 1. This increase was largely the result of an increase in the black rate while the white rate declined (+24% vs. -3%, respectively; Puzzanchera 2009).

Prevalence Rates of Offending

In 2008, law enforcement agencies in the USA made 629,800 arrests of females under the age of 18 (Puzzanchera 2009). Female juvenile offenders accounted for 17% of juvenile Violent Crime Index arrests, 36% of juvenile Property Crime Index arrests, and 15% of juvenile drug abuse arrests (Puzzanchera 2009). Although males still outnumber females in the juvenile justice system, the proportion of female offenders entering the juvenile justice system is growing. For example, between 1999 and 2008, juvenile arrests for robbery increased by 38% for females but only 24% for males. Simple assault and disorderly conduct rates increased by 12 and 18%, respectively, for females, but declined by 6 and 5%, respectively, for males (Puzzanchera 2009). Adolescent females were most commonly arrested for property crimes, with 20% of the female juvenile arrests falling into this category. This was followed closely by general nontraffic, nonindex offenses (16%), nonindex assaults (13%), disorderly conduct (11%), runaway charges (10%), liquor law violations, (8%), curfew and loitering offenses (7%), drug abuse violations (5%), and violent crimes (3%) (Snyder 2008).

When examining trends in the types of offending behavior, female juvenile offenders' arrest rates rose between 1999 and 2008 for a number

of offenses, including simple assault charges, vandalism, property crimes, larceny/theft, DUIs, and disorderly conduct. In contrast, male juvenile offender arrest rates in each of these areas *declined* across the same period (Puzzanchera 2009). In addition, even in areas where female juvenile offending declined across this period (e.g., burglary, aggravated assaults, and liquor law violations), male juvenile offending decreased by a greater extent (Puzzanchera 2009). Together, these statistics indicate that females are entering the juvenile justice system for a variety of offense types in increasing numbers, and that communities and families are faced with new challenges of providing services for female juvenile offenders within systems that had previously treated primarily male populations.

A variety of explanations has been proposed to explain these changes in prevalence rates, including increased opportunity and motivation for females to offend. However, increasing evidence suggests that females' increasing rates of involvement in the juvenile justice system are the result of recent policy and enforcement changes. Steffensmeier et al. (2005) have identified four interrelated policy shifts related to these trends, including the targeting of more minor forms of lawbreaking, the inclusion of violence occurring between intimates and in home settings, discouragement of the former practice of differing legal standards between the sexes, and relabeling of minor offenses for "girl's protection"; each of these policy changes increases the likelihood that juvenile females will be more likely to be arrested than they were prior to these policy changes, but has little impact on arrest rates for males.

Childhood Trauma and Maltreatment

Numerous individual-level and family-level risk factors have been associated with the development of delinquency in females, with childhood trauma and maltreatment commonly identified as a highly predictive risk factor (Leve and Chamberlain 2004; Silverthorn and Frick 1999; Widom 1989). Retrospective and prospective

studies have shown that girls with delinquency problems tend to come from families with high levels of dysfunction and instability (Henggeler et al. 1987; Lewis et al. 1991; Smith 2004), and tend to exhibit comorbid mental health symptoms that are hypothesized to be related to their childhood maltreatment and trauma experiences (Teplin et al. 2002). For example, studies of girls in the juvenile justice system have shown rates of childhood maltreatment as high as 80% (Smith et al. 2006), with female juvenile offenders showing significantly higher rates of interpersonal trauma and PTSD symptoms than male juvenile offenders (Kerig et al. 2009). Related, in a prospective longitudinal study, McCord (1983) found that childhood maltreatment was a strong predictor of later offending. This finding has been supported in subsequent studies (Maxfield and Widom 1996; Smith and Thornberry 1995; Widom and White 1997), suggesting that effects of abusive parenting practices can extend into adolescence. For example, Herrenkohl et al. (1998) found that childhood maltreatment was strongly related to early school drop-out, early pregnancy, substance abuse, and assaultive behavior. Further, Widom and White (1997) found that abused and neglected females were at risk for arrest as adults and for receiving comorbid diagnoses. The negative effects of child maltreatment in adulthood have been found to manifest through a wide array of psychological problems, including adult criminal behavior, risky sexual behavior, and involvement in violent and nonviolent crimes (Smith et al. 2006; Widom and White 1997).

In addition to a direct link between childhood family trauma and the development of conduct problems and juvenile offending in females, research suggests a number of potential indirect, mediated, and moderated links between early trauma experiences and the development of later conduct problems. One of the identified mediators is parenting practices, where it has been suggested that trauma exposure exacerbates the development of coercive family processes between the youth and the parent, which then leads to offending behavior. Traumatized children

might be more emotionally over-reactive and more likely to engage in coercive and noncompliant behaviors (Snyder et al. 1997), which may in turn lead to higher levels of parental reactivity and harsh parental responses (Lytton 1990), and to subsequent engagement in delinquent behavior. An alternative mediating hypothesis posits that the effects of a traumatic event may lead directly to characteristics that are shared with a diagnosis of conduct problems, such as lack of empathy, impulsivity, anger, acting-out, and resistance to treatment. These behavioral responses may then lead to a diagnosis of and engagement in conduct problem behavior (Greenwald 2002). Another possibility is that childhood trauma experiences have interactive effects on later offending by exacerbating the negative outcomes typically associated with conduct problems. For example, females in the juvenile justice system with *greater* childhood trauma have been shown to have significantly more arrests and greater involvement in risky sexual behavior compared to females in the juvenile justice system with *lower* childhood trauma (Smith et al. 2006).

Although the mechanisms underlying associations between childhood maltreatment and trauma and subsequent female juvenile offending have not been fully identified, their coexistence and debilitating outcomes have been well documented (Smith et al. 2005; Widom and White 1997); this work suggests that females with childhood maltreatment and trauma who are arrested at a young age are at particularly high risk for experiencing ongoing problems related to antisocial behavior, including chronic delinquency, reoffending, and chronic involvement in the juvenile justice system (Chamberlain et al. 2007; Leve and Chamberlain 2004) in adolescence, with continuing problems into adulthood (Moffitt et al. 2001). These findings have been recognized by researchers, clinicians, and policy makers, who have highlighted the particular need to develop gender-informed programming to treat trauma and delinquency problems among girls who are at high risk for developing antisocial behavior and criminal involvement (e.g., Hipwell and Loeber 2006).

Co-occurring Mental Health and Substance Use Problems

As discussed above, once identified in the juvenile justice system, many female offenders present a constellation of problem behaviors with overlapping risk factors and high rates of co-occurring psychopathology. In particular, females in the juvenile justice system have high rates of substance use, mental disorders (such as depression, suicidality, PTSD, and ADHD), and victimization (Abrantes et al. 2005; Kerig et al. 2009; Vermeiren et al. 2006). Indicative of the high rates of comorbidity, in one study, approximately 15–42% of the incarcerated youths were found to have major affective disorders, such as bipolar and depression (Pliszka et al. 2000). Teplin et al. (2002) found that two-thirds of the juvenile female offenders met diagnostic criteria and had one or more psychiatric disorders. In particular, co-occurrence of substance use and disruptive disorders (e.g., oppositional defiant disorder and conduct disorder) was the most common set of disorders among youths in juvenile justice facilities (Teplin et al. 2002), and 60–87% of delinquent females were at high risk for drug abuse (Prescott 1998).

The most commonly referred explanations for the high co-occurrence are the shared risk factor model or recent biopsychosocial models (Hussey et al. 2008). These models posit that individual and environmental risk characteristics interact with social and family experiences, leading children with at-risk backgrounds to an early deviant developmental trajectory, which further triggers biosocial–ecological stressors and subsequent delinquent behaviors (Lahey et al. 1999). Growing evidence suggests that the high co-occurrence of delinquent behaviors with mental health problems seems to be more salient among delinquent females as compared to delinquent males (Abrantes et al. 2005; Odgers et al. 2005; Timmons-Mitchell, et al. 1997). Further, studies have indicated that delinquent females are more likely to have emotional and behavioral problems and to be more often referred to mental health services than their male counterparts (Dembo et al. 1993). The clinical implications of this

research suggest that high rates of co-occurring problems may lead to additional challenges in treating female juvenile offenders relative to the treatment approaches used for males in the juvenile justice system.

Trajectories and Consequences of Delinquency in Females

Trajectories

Despite the significant increase in the number and proportion of females in the juvenile justice systems in recent years (Snyder 2008), most studies on delinquency trajectories, delinquency outcomes, and factors associated with persistence and desistance in delinquency are based primarily on males. Thus, considerably less is known about developmental patterns of female juvenile offenders' delinquent behaviors and their long-term adjustment (Colman et al. 2009).

Previous research on males suggests that a considerable proportion of delinquent boys continue to engage in criminal activity as adults. Eggleston and Laub's (2002) review of criminal offending across the life course found that on average, over half of the juvenile delinquent boys committed adult crimes. Studies focusing exclusively on males who were released from juvenile justice facilities tend to report even greater degrees of continuity of delinquent behavior, with over 80% of participants classified as adult offenders (e.g., Ezell and Cohen 2005). Limited evidence suggests that females also show continuity of delinquent behavior into adulthood (e.g., Piquero et al. 2005; Piquero and Buka 2002), with studies indicating that a majority of the girls involved in juvenile justice facilities continue to offend in adulthood. For instance, Benda et al. (2001) found that almost 75% of girls released from the Arkansas Serious Offender Program were involved in the state's adult correctional system within 2 years.

Consistent with findings from studies of delinquent males (e.g., Sampson and Laub 2003), recent studies have also found significant heterogeneity and intra-individual change in offending

trajectories over time among delinquent females. Using data on girls aged 16–28 who were released from juvenile justice facilities, Colman et al. (2009) found multiple trajectories including (a) rare/nonoffenders, who were never or rarely arrested as young adults; (b) low chronics, who offended at a modest and gradually decreasing rate; (c) low risers, whose rates of criminal participation were modest in late adolescence but increased sharply throughout early adulthood, eventually exceeding all other groups; and (d) high chronics, who offended at high rates into their early twenties and then steadily decreased throughout early adulthood. In addition, they found that the vast majority of females who were incarcerated as juveniles became involved in the adult criminal justice system prior to their 28th birthday: in the 12-year period following their release from a juvenile justice facility, 81% were rearrested, 69% were convicted, and 34% were incarcerated as an adult. Females who were in the low-rising and high chronic offending group (14% of the sample) had an average of 13–18 arrests.

Some of the differences between males and females in the developmental patterns of delinquent trajectories merit further discussion. While differences between males and females in the age of onset of delinquency is more pronounced for serious or aggressive types of delinquency, some nonviolent delinquent behaviors, such as drug and alcohol-related offenses, indicate fewer gender differences. Developmentally, typical disruptive behaviors of preschool boys and girls evolve over time in gender-dependent ways. Girls are less likely than boys to be physically aggressive in general, but they are more likely than boys to direct their aggression toward family members, same-sex peers, and romantic partners in adolescence (Pepler et al. 2005; Underwood 2003), suggesting that the trajectories of delinquent behavior begin to diverge during this developmental period. Furthermore, some studies have suggested that while similar risk factors influence the development of delinquent behavior for boys and girls, the onset of delinquent behavior in girls is delayed by the more stringent social controls imposed on them before adolescence (Silverthorn and Frick

1999). Silverthorn et al. (2001) found that adolescent-onset females more closely resembled early-onset males than adolescent-onset males in terms of their early risk exposures. Late-onset females tend to exhibit constellations of risk similar to those of early-onset males (White and Piquero 2004), and continuity of offending behavior for such girls may be stronger than among their male counterparts (Cauffman 2008).

Research also suggests that female juvenile offenders are at risk for poor adult relationships, early pregnancy, and for transmitting a myriad of problems to their offspring. For example, data from a prospective longitudinal study of adolescent girls who were elevated on antisocial behavior or delinquency found that at age 21, compared to their delinquent male counterparts, females who were delinquent as adolescents were 2.6 times more likely to have cohabited with more than one partner, were more likely to abuse or be abused by their partner, and were 2.8 times more likely to have become a parent. In this study, nearly one third of girls with conduct disorders had become mothers by age 21 (Moffitt et al. 2001). Further, these young women had high rates of public service utilization during the young adult transition and were 2.4 times more likely than their delinquent male counterparts to receive social welfare assistance from multiple government sources (Moffitt et al. 2001). In a 10-year follow-up study, Capaldi (1991) found that mothers who had their first child by age 20 were twice as likely to have children with early starting delinquency (prior to age 14; 35% vs. 18%) compared to mothers who had their first child after age 20, suggesting associations between early motherhood and child involvement in the correctional system. In another study, 53% of delinquent mothers had their children removed from their custody or had given up their children, and 27% of delinquent mothers were unable to safely care for their children without assistance from welfare or other state services (Lewis et al. 1991). Together, these findings highlight the possible intergenerational transmission of problem behaviors associated with females' involvement in the juvenile justice system.

Long-Term Consequences of Female Juvenile Offending

Compared to nondelinquent girls, delinquent adolescent females are more likely as adults to suffer from a variety of problems, including a wide range of physical health problems, clinical symptoms of mental illness, reliance on social assistance, and violence by, as well as toward, partners (Moffitt et al. 2001). Based on a review of 20 studies on the adult lives of juvenile delinquent females, Pajer (1998) similarly argued that these females tend to have higher mortality rates, a variety of psychiatric problems, dysfunctional and violence relationships, poor educational achievement, and thus less stable work histories than among nondelinquent girls (Pajer 1998). Supporting this conclusion, Giordano et al. (2004) found that only about 17% of the incarcerated adolescent females in the Ohio Serious Offender Study graduated from high school. Subsequently, these young women had lower occupational status, more frequent job changes, and greater reliance on welfare than nonoffender females (Pulkkinen and Pitkanen 1993). They were also more likely to marry people who were involved in crime (Moffitt et al. 2001). Sampson et al. (2006) argued that adult responsibilities such as marriage and child rearing serve as turning points and lead to desistance from crime for males. However, the opposite may be true for females. That is, partnering with an antisocial mate reinforces antisocial behavior throughout adulthood, and women's marital relationships with antisocial males are often characterized as conflictual, violent, and instable. In these relationships, women are often victims as well as perpetrators of partner violence (Moffitt, et al. 2001). This problem is often compounded by their early child rearing tendencies (Moffitt et al. 2001). Young delinquent mothers often face limited social, emotional, and financial support and suffer from compromised parenting skills (Stack et al. 2005), which places their children at increased risk of repeating their parent's offending footsteps. These findings suggest that the consequences of juvenile delinquency may be more detrimental and have long-term implications for females than for males.

Intervention and Treatment Implications

Efficacious Interventions for Female Juvenile Offenders

In the last decade, awareness has increased among service providers that interventions are needed for female juvenile offenders because, as described above, they present unique services challenges that male-oriented intervention programs may not be particularly well suited to address. Despite the differing treatment needs for male and female juvenile offenders, a recent review of interventions for disruptive and delinquent girls indicated that this body of research is "extremely limited" (Hipwell and Loeber 2006, p. 221). Conversely, numerous programs have demonstrated efficacy for male juvenile offenders (see Boxer and Goldstein *in press* and Guerra and Williams *in press*, for additional details about effective programs for male juvenile offenders). For females, however, Hipwell and Loeber could identify only 11 studies that were published prior to October 2005 that had a sample size large enough to detect potential medium-to-large intervention effects on delinquency in girls ages 6–17 (i.e., a minimum sample size of 26 females per group). Of these 11 studies, only 5 used a randomized controlled trial (RCT) design, and only three of these five focused on the adolescent period from ages 13–18 (Borduin et al. 1995; Guerra and Slaby 1990; Leve et al. 2005). As is described in the Hipwell and Loeber review, the Leve et al. study was the only RCT in the group designed specifically to address female delinquency, although three of the non-RCT studies designed specifically for females showed promise in reducing delinquency (Ross and McKay 1976; Walsh et al. 2002; Whitmore et al. 2000). Our review of the published literature since October 2005 did not reveal any additional RCT studies focused on female delinquency during the adolescent period. Therefore, we focus the next section on the three RCT trials for adolescent females that have demonstrated efficacy.

In the first trial, Borduin et al. (1995) studied 57 females and 119 males who were referred by

the juvenile justice system for severe antisocial behavior, including two or more arrests and completion of at least one previous detention sentence lasting a minimum of 4 weeks. The study aimed to examine the long-term effects of multisystemic therapy (MST) versus individual therapy on the prevention of criminal behavior and violent offending using an RCT design. As described by Borduin and colleagues, the MST approach employs a present-focused, action-oriented, individualized model that directly addresses intrapersonal (e.g., cognitive) and systematic (e.g., family, peer, school) factors known to be associated with adolescent antisocial behavior. Additional details about the MST program components are discussed in Boxer and Goldstein ([in press](#)) and Guerra and Williams ([in press](#)).

In the Borduin et al. (1995) study, MST intervention sessions generally took place in the family's home, with approximately 24 h of services provided. The results indicated that MST was more effective than individual therapy in improving immediate posttreatment youth behavior problems, increasing family cohesion and adaptability, and increasing observed supportiveness and decreasing observed conflict-hostility. Further, juvenile justice records collected as part of a 4-year follow-up indicated a significant intervention effect on rearrest rates. This study suggests that the MST model may be an effective intervention for female juvenile offenders, although specific intervention modifications were not made for females, and the data were analyzed jointly across genders, making it difficult to make definitive conclusions about the intervention needs and outcomes specific to females.

In the second trial identified in the Hipwell and Loeber (2006) review, Guerra and Slaby (1990) describe the results of an RCT with 60 female and 60 male adolescent offenders who were incarcerated for aggression offenses and randomized into either a cognitive mediation training program, an attention control group, or a no-treatment control group. The cognitive mediation training program consisted of small discussion groups ranging from 10 to 14 youths (with approximately equal numbers of males and females), who met once per week for 1 h during

the regular school day in the correctional facility. The focus of the discussions was on increasing the youths' social problem-solving skills in the following areas: attending to relevant and nonhostile cues when defining a social problem and setting a goal; seeking additional information; generating a variety of responses and consequences; and prioritizing potential responses in terms of the effectiveness in providing goal-directed, legal, and nonviolent outcomes. In addition, the sessions aimed to modify the youths' beliefs around the legitimacy and effectiveness of aggression and to improve the youths' cognitive self-control. This program is similar in philosophy to the social-cognitive-behavioral interventions described in Boxer and Goldstein ([in press](#)) as effective for male juvenile offenders.

Compared to participants in the two control groups, youth in Guerra and Slaby's (1990) cognitive mediation training program showed increased skills in solving social problems, decreased endorsement of beliefs supporting aggression, and decreased aggressive, impulsive, and inflexible behaviors, as rated by staff. No significant differences were identified in the effects of the intervention by gender, and males and females received the same set of intervention services. This study suggests that social cognitive-focused interventions may provide benefits to female juvenile offenders, although no significant effects of the intervention were found on recidivism rates in this study.

The third efficacious intervention trial described in the Hipwell and Loeber review consisted of an RCT comparing the efficacy of Multidimensional Treatment Foster Care (MTFC; Chamberlain 2003) to services as usual (Group Care) for adolescent females in the juvenile justice system who were referred for out-of-home care. In contrast to the two RCTs described above, the targeted population for MTFC entirely comprised female juvenile offenders. Results of this study and several follow-up analyses have shown that MTFC improved a host of delinquency-related outcomes at 12- and 24-month follow-up assessments. Specifically, compared to youth in the control condition, the MTFC females had significantly lower recidivism rates, spent fewer

days in locked settings, had fewer delinquent peers, and spent more time in school and doing homework in follow-up assessments (Chamberlain et al. 2007; Leve and Chamberlain 2005a, b, 2007; Leve et al. 2005). In addition, girls assigned to MTFC had fewer subsequent pregnancies (Kerr et al. 2009). Although the two other programs described in the Hipwell and Loeber review have demonstrated efficacy in reducing delinquency rates in mixed-gender adolescent samples (Borduin et al. 1995; Guerra and Slaby 1990), we are not aware of any program other than MTFC with demonstrated efficacy within an RCT specific to female juvenile offenders. As such, it is the focus for the remainder of our review on interventions for female juvenile offenders.

The Primary Components of the MTFC Intervention

The MTFC model involves placing youths individually in well-trained and supervised foster homes. Close consultation, training, and support of the foster parents form the cornerstone of the MTFC model. Foster parents receive state certification after 20 h of preservice orientation. Program Supervisors with small caseloads (ten families each) maintain daily contact with MTFC parents to collect data on youth adjustment and to provide ongoing consultation, support, and crisis intervention. The basic components of MTFC include the following: (a) daily (M–F) telephone contact with MTFC parents using the parent daily report checklist (PDR; Chamberlain and Reid 1987); (b) weekly foster parent group meetings led by the Program Supervisor focused on supervision, training in parenting practices, and support; (c) an individualized behavior management program implemented daily in the home by the foster parent; (d) individual therapy for the youth; (e) individual skills training/coaching for the youth; (f) family therapy (for biological/adoptive/relative family of the youth) focused on parent management strategies; (g) close monitoring of school attendance, performance, and homework completion; (h) case management to coordinate the

MTFC, family, peer, and school settings; (i) 24-h on-call staff availability to MTFC and biological parents; and (j) psychiatric consultation as needed. The MTFC intervention embodies a strong focus on strength-building and positive reinforcement, and specific service treatment services are tailored to the child's age and developmental level. The MTFC team consists of a Program Supervisor (who is the clinical lead), the treatment foster parents, family and individual therapists, a skills trainer, and a foster parent recruiter/trainer. Additional information on the basic MTFC model is described in detail elsewhere (Boxer and Goldstein *in press*; Chamberlain 2003).

As noted in other chapters in this volume (Boxer and Goldstein *in press*), the MTFC model has received national attention as a cost-effective alternative to residential care. The results of a series of independent cost-benefit analyses from the Washington State Public Policy group (Aos et al. 2001), and findings from RCTs have led MTFC to be selected as one of ten evidence-based National Model Programs (The Blueprints Programs; Elliott 1998) by the Office of Juvenile Justice and Delinquency Prevention and as one of nine National Exemplary Safe, Disciplined, and Drug Free Schools model programs. The MTFC model was also highlighted in two US Surgeon's General reports (US Department of Health and Human Services [USDHHS], 2000a, b) and was selected by the Center for Substance Abuse Prevention and the Office of Juvenile Justice and Delinquency Prevention as an Exemplary I program for Strengthening America's Families (Chamberlain 1998). In addition, it was selected in 2009 by the Coalition for Evidence-Based Policy as meeting "top tier" evidence of effectiveness (<http://www.toptierevidence.org>).

Additional Foci of Interventions for Females with Delinquency Histories

Leve et al. (2011) describe specific adaptations to the MTFC intervention program for delinquent adolescent females, each of which focuses on additional training for parents, therapists, and youth on new strategies and protocols relevant

for the female juvenile offenders. The female-focused intervention components include five adaptations, each of which has been implemented in the MTFC program for girls, described above. These adaptations included (a) providing offending adolescent females with reinforcement and sanctions for coping with and avoiding social/relational aggression; (b) helping girls develop peer relationship building skills, such as initiating conversations and modulating their level of self-disclosure to fit the situation; (c) working with girls to develop and practice strategies for emotional regulation such as early recognition of their feelings of distress and problem-solving coping mechanisms; (d) helping girls understand their personal risks for drug use, including priority setting using motivational interviewing and provision of incentives for abstinence from drug use monitored through random urinalysis; and (e) teaching girls strategies to avoid and deal with sexually risky and coercive situations. Each of these adaptations is described below.

Avoiding Relational Aggression

Although relational aggression has been shown to negatively impact interpersonal relationships for both boys and girls, during childhood and adolescence, females tend to rely more frequently than males on strategies that include behaviors such as ignoring exclusion, gossip, and disdainful facial expressions (Underwood 2003). Relational aggression leads to peer rejection, depression, and isolation, and these negative effects appear to be stronger for females than for males (Crick et al. 1999). Accordingly, one female-specific intervention component for girls at risk for problems with delinquency is to provide training for parents (or foster parents) of girls to identify and intervene with relationally aggressive behaviors that are often subtle and may not appear to be serious (e.g., rolling of the eyes). Once parents, foster parents, and other adults in the females' caregiving circle can identify such behaviors, behavior management plans can be developed and implemented to reinforce females for abstaining from such tactics and to teach them strategies for how to cope with being on the receiving end of peer relational aggression.

Building Peer Relationship Skills

A second female-specific intervention approach is to include a focus on building peer relationship skills. Our prior research and clinical experience with girls in the juvenile justice system suggested that they typically lacked relationships with close female peers, preferring instead to associate with older, delinquent male peers. To address this intervention need in adolescent girls at risk for delinquency, peer relationship skills are taught by a therapist or skills coach. A treatment plan that identifies specific skills based on the girl's individual needs is developed. For example, girls can be provided with reinforcement for practicing the targeted skills first in the community, then in the home/foster home, and then at school with her peers. Effective reinforcement strategies include earning daily points that translate into increases in privileges and material rewards.

Improving Emotion Regulation

As described above, research has linked experiences of childhood maltreatment with deficits in modulating emotions and regulating affective responses (Camras et al. 1988). Such deficits of emotional dysregulation include difficulty controlling behaviors in the face of emotional distress and deficits in the functional use of emotions as a source of information (Gratz et al. 2008). As such, a potentially useful adaptation for adolescent females at risk for offending is a two-step process that includes (a) helping girls increase their awareness of situations that provoke negative emotions, and (b) teaching them strategies for controlling their immediate impulses and behaviors. Parents, foster parents, and therapists are taught to work together to positively reinforce girls for identifying their emotional states and for developing and practicing coping strategies that helped them modulate their level of emotional arousal and responses in difficult situations. The major principle behind this approach is to teach and practice the "rule" that major life decisions or actions that could result in significant long-lasting changes should never be made when one is upset or agitated. This principle emphasizes teaching adolescent females to control their behaviors when experiencing negative emotions

rather than to focus on controlling the occurrence of the negative emotions themselves (Gratz and Roemer 2008).

Reducing Substance Use

As noted above, adolescent females with delinquency problems often use and abuse drugs and alcohol. In a sample of female juvenile offenders, the majority had serious problems with substance use, with 12-month prevalence rates of 46% for marijuana and 77% for alcohol. The use of hard substances in the prior 12-months was also high: methamphetamine (29%), cocaine or crack (13%), hallucinogens (7%), and ecstasy (5%) (Leve et al. 2011). Given these high prevalence rates, in MTFC intervention described above, modifications for females included motivational interviews designed to assess the offender's desire to change and to calibrate her view of where her substance use patterns stacked up relative to other people of a similar age. The goal of this type of approach is to help females develop concrete personal goals, including an assessment of where the youth was in terms of "readiness to change" and to provide support and encouragement for moving further along the continuum toward abstinence from substance use. An individual therapist helps the girl identify her personal goals, and a skills coach helps to set up opportunities toward achieving those goals. Parents/foster parents and skills coaches reinforce progress with points and verbal affirmations. In addition, random urinalysis tests can be given if there was a suspicion of use (e.g., missed classes at school); the offender can earn a reward for each negative test and can be given consequences such as restricted free time and lower privilege levels for positive tests.

Avoiding Risky Sexual Encounters

As described above, numerous studies have found that juvenile female offenders often present with a cluster of problem behaviors that includes delinquency in co-occurrence with risky sexual behavior and teenage pregnancy (Ary et al. 1999; Huizinga et al. 1993). Prior work confirms that girls in the juvenile justice system are at high risk for engagement in risky sexual

behavior, and typically have false knowledge about pregnancy and sexually transmitted diseases (Leve and Chamberlain 2005b). For example, in a baseline assessment with females in the juvenile justice system, 46% had 3 or more partners in the past year, 40% of the sample reported having had sex with a stranger/someone known less than 24 h in the past year, and yet over one-third never or rarely used safe sex practices. Intervention services for adolescent females at risk for engaging in risky sexual behavior might gain increased efficacy by providing female juvenile offenders with information on dating, sexual behavior norms, and HIV-prevention behaviors. Interventions employed in the MTFC trial described above include teaching girls strategies for being sexually responsible, including specific training on decision making, identification and awareness of sexual coercion, and refusal skills. Role play exercises are conducted using the "Virtual Date" DVD (Northwest Media 2002) as a stimulus for discussion, which depicts key decision moments in a practice date.

Incorporating these five additions to the MTFC model for females in the juvenile justice system is a first step in customizing intervention approaches to address the needs that are explicated in the research on the development and outcomes of female delinquency. Meditational analyses would help to clarify whether specific treatment components resulted in the intended positive short-term effects, and follow-up studies would determine if positive changes persisted over time. Even though these studies would be complex and costly to conduct, the need for such research is obvious given the growing segment of the adolescent female population that is engaged in serious delinquency and the clear documentation of the public health impact of the devastating effects of female delinquency.

Conclusions and Future Directions

As discussed in this chapter, the complexity and seriousness of problems faced by female adolescent offenders is intense and therefore the interventions that are designed to treat this population

likely need to be multifaceted and intensive to have a significant impact. Although significant progress has been made in increasing the understanding of the development of antisocial behavior and delinquency in females and interventions, such as MTFC, have been shown to produce a number of positive effects that extend into follow-up, as noted in Boxer and Goldstein (in press), there is still much work to be done.

Specifically, additional research is needed that links specific treatment components to various symptoms and constellations of problems so that intervention services can be tailored to address individual needs. In addition, because female delinquency often leads to devastating and long-term problems for both the female and her offspring, it is imperative that preventive interventions are developed and tested that target girls who are at-risk for developing such serious and chronic problems, but who have not yet entered the juvenile justice system. One such prevention approach is being examined for 11-year-old girls in foster care (Chamberlain et al. 2006). In that study, girls in foster care ($n = 100$) were recruited during their final year of elementary school in an effort to prevent internalizing and externalizing problems during the transition to middle school to help prevent more serious, long-term outcomes such as delinquency, substance use, and high-risk sexual behavior that often develop during middle school in children with maltreatment histories. Foster girls were randomly assigned to an intervention (enhanced foster care services) or control (foster care services as usual) condition. For families in the intervention condition, a summer intervention component was employed that consisted of two parallel components (both led by paraprofessionals): a six-session, group-based intervention for the girls and a six-session, group-based intervention for the foster parents. Follow-up intervention services (i.e., ongoing training and support) were provided to the intervention foster parents and girls throughout the 1st year of middle school. A preliminary examination of the efficacy of the summer intervention indicated short-term intervention effects on the reduction of externalizing and internalizing problems for girls in the intervention condition

(Smith et al. 2011), and long-term follow-up analyses are presently underway. In summary, although the developmental histories and outcomes for female juvenile offenders are quite bleak, a handful of interventions have begun to show efficacy in improving outcomes for this population. Given the increasing number of adolescent females involved in the juvenile justice system, additional development and evaluation of intervention programs for this highly traumatized and comorbid population could serve to improve outcomes for females with delinquency problems, and to prevent their entry into juvenile justice in the first place.

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Wesley G. Jennings and J. Mitchell Miller

Introduction

Gangs and gang members have become a common phenomenon within US communities, as regularly illustrated in official national gang population survey estimates, crime attributable to gangs, and the popular culture, for example, the History Channel contemporary crime documentary “Gangland” (National Drug Intelligence Center 2009). Gangs are generally defined as having more than three members, identifying symbols, a name, a certain amount of stability, some type of organization, and higher amounts of criminal involvement (Howell et al. 2009). Gangs constitute an institutionally and culturally embedded social problem and are a serious form of delinquency facilitating transition into adult criminality. The mere presence of gangs is detrimental to local communities and, especially, schools wherein a gang presence is positively correlated with drug crime, bullying, truancy, and violence. This chapter surveys current statistics and research concerning the number, frequency, location, and severity of gang members

and gang-related crime with attention to the age, race, gender, and education of gang members. We also observe the prominent role of gang theories in shaping both understanding and address of gang problems as well as the evolution of criminology. Specific examples of well-known gangs are also provided as illustrations.

Statistics on Gangs and Gang Members

Recent estimates suggest as many as one million gang members are present within the USA (FBI 2009). These gang members belong to over 20,000 different prison, motorcycle, and street gangs throughout the country. Although about 150,000 of these gang members were incarcerated, 900,000 gang members were estimated to be living in the community. Furthermore, on average, 13% of the US jail population was estimated to be a gang member (Ruddell et al. 2006). Comparatively, in 2005, the estimate of gang members in the USA was significantly lower at 800,000 members (National Drug Intelligence Center 2009).

Within the different jurisdictions throughout the USA in 2008, 58% of law enforcement agencies reported some type of gang activity. This percentage increased from 2004 in which only 45% of the agencies reported gangs within their jurisdictions. In addition, 36% of principals when surveyed stated that gangs were a problem within their communities (Gottfredson and Gottfredson 2001).

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Frequency of Gang Involvement and Gang-Related Crime

According to the National Threat Assessment in 2009, gangs are responsible for 80% of the crime in numerous communities (National Drug Intelligence Center 2009). From 2001 to 2008, there were about 41,000 arrests resulting in over 16,500 convictions for gang-related crimes by the FBI Violent Gang Safe Street Task Force. In 2008 alone, the task force arrested about 8,000 individuals for gang crimes and convicted about 2,000 of them (FBI 2009).

Age

The number of youth gang members (under 24 years old) was slightly lower than the general gang population. In 2007, about 790,000 youths were active gang members and belonged to 27,000 different gangs. Over 3,500 law enforcement jurisdictions reported youth gang problems, which is about 33% of the total jurisdictions in the USA. This estimate is significantly higher than in 2001 when the percentage of areas with gang problems was 25 (Egley and O'Donnell 2009). The amount of youth gangs in 2000 was 24,500, and the gang member population was approximated at 770,000, which was actually 8% lower than the population in 1999 (Egley 2002). However, American-Indian communities experienced significantly fewer youth gang members in 2000. Only 16% of the communities reported more than 50 gang members with 750 being the most in any location. In general, 23% of the communities had youth gang involvement (Major and Egley 2002).

Older youth tend to be more involved in gang activity than younger adolescents. For example, out of 9,000 youth surveyed, 3% were gang members by age 14, and 8% had become a gang member by 17 years old (Snyder and Sickmund 2006; Howell et al. 2009). Furthermore, secondary schools reported more gang involvement than middle schools (Gottfredson and Gottfredson 2001). About 75% of the gang members in

American-Indian communities were juveniles with 25% being under 15 years old (Major and Egley 2002). The percentage of juvenile gang participants decreased from 50% of the youth gang population in 1996 to 37% in 1999, which demonstrates that young adult gang members are becoming more prevalent.

Race

Law enforcement agencies estimated that about 85–90% of all gang members are either Hispanic or African-American (Esbensen 2000; Covey et al. 1997). Most female gangs are either Hispanic or African-American as well (Moore and Hagedorn 2001). School principals also were more likely to report gang problems in schools with higher Hispanic populations (Gottfredson and Gottfredson 2001). According to the National Youth Gang Center (2009) statistics, 49% of gang members were Hispanic, 35% were African-American, and 9% were Caucasian. These percentages have not varied much since 1999 when 47% of the youth gang members were Hispanic, 31% were African-American, 13% were Caucasian, 7% were Asian, and 2% were other (Egley 2002). Hispanic and African-American youth are even more likely to join a gang by age 17 with 12% enlisting as opposed to 7% of Caucasian youth (Snyder and Sickmund 2006). However, in American-Indian communities, almost 78% of the gang members were American-Indian, Alaska Native, or Aleut. Only 12% of the other gang members in these areas were Hispanic, 7% were Caucasian, 2% were Asian, and 2% were African-American.

Gender

Recent statistics and literature indicate that female participation in gangs has grown significantly and law enforcement has begun to recognize their increased involvement (Esbensen and Deschenes 1998). As far back as 1993, 10–50% of gang members were estimated to be female (Bjerrergaard and Smith 1993). A self-report

survey of 5,000 participants reported that 14% of males and 8% of females were gang members, which is about a 2:1 ratio (Esbensen and Deschenes 1998). Similar studies have also found this 2:1 ratio of self-reported gang membership as recent as 2008 (Gottfredson and Gottfredson 2001; Snyder and Sickmund 2006; Esbensen et al. 2008). Surveys of females in various cities have resulted in self-reports of anywhere from 8 to 38% of the participants stating that they were a member of a gang (Moore and Hagedorn 2001). In high-risk neighborhoods, as many as 30% of girls and 33% of boys report that they are members of gangs (National Drug Intelligence Center 2009).

Even though female gang membership is higher than previously thought, gangs are still predominantly male (Esbensen 2000). In 2000, the National Youth Gang Center indicated that 94% of gang members were male with only 6% being female. This statistic has remained consistent through 2007 (National Youth Gang Center 2009). Furthermore, 82% of jurisdictions reported mostly male gang members, and merely 2% of the jurisdictions reported as having mostly female members (Egley 2002). In American-Indian communities, 80% of the gang members were male and 82% of the gangs had members of both genders. Only 10% of the gangs were predominantly female (Major and Egley 2002).

Education

Many gang members have little education and are not as committed to their schooling as non-gang members (National Drug Intelligence Center 2009; Howell et al. 2009; Esbensen 2000). In a survey of students, 10% reported that they were members of a gang. By using a more narrow definition of gang membership, only 5% met the criteria for being an actual gang member in the same study (Esbensen and Deschenes 1998). In concordance, about 5% of principals declared that they had gang-related problems in their schools (Gottfredson and Gottfredson 2001). The parents of many gang members also had limited educations, and some did not finish high school. Approximately 29% of

gang members had a father with less than a high school education, and 24% had a mother that did not finish high school. In contrast, about 14% of fathers and 13% of mothers of non-gang members had less than a high school education (Esbensen and Deschenes 1998).

Geographical Distribution of Gangs

Gangs originally began to form in the 1970s in large cities. Since that time, gang members have migrated and permeated throughout the USA and have begun causing problems within rural areas as well. By the 1990s, law enforcement agencies reported gang activity within every region of the USA. The most notable increases in gang reporting have occurred around large cities such as Los Angeles, Chicago, and New York City in the east and southeast regions (National Drug Intelligence Center 2009). In 2008, the USA was divided into seven geographical regions. The three regions with the highest reported rates of gang activity by law enforcement agencies were the Pacific with 74%, the Southeast with 68%, and the Southwest with 63%. The two lowest reported regions were New England with 39% and the Central with 52%. Illinois is the state with the highest per capita rate of gang members with 8–11 members per 1,000 people. California, Nevada, Colorado, and New Mexico had the second highest per capita rate with 6–7 gang members per 1,000 individuals. Twenty-one states had less than one gang member per 1,000 inhabitants (National Drug Intelligence Center 2009). From 1993 to 2003, 66% of rural, 56% of suburban, and 50% of urban victims perceived their attacker to be a non-gang member (Harrell 2005).

The geographical distribution of gang members is often confused with gang growth, an understandable, though often erroneous, conclusion when gang activity appears in new places. The confusion is really about the differences between growth, which refers to an increase in number of members, and migration, which refers to the spatial extension of gangs. Gang migration, once thought to be a function of drug sales

franchising by more organized, national level gangs, is thought to largely be the result of familial good intent to remove gang involved youth to distant, often rural locations from the typical urban underclass gang environments.

Age

Typically smaller, rural cities and counties report younger gang members, while adult gang members are active more in larger cities (National Youth Gang Center 2009). However, big cities still have the most juvenile and young adult gang activity. In 2007, 15% of the law enforcement agencies in small counties, 35% in small cities, 50% in suburban counties, and 86% in large cities reported youth gang activity. In general, 60% of youth gangs and 80% of young gang members reside in large cities and suburban counties. However, rural counties had the largest increase in youth gangs and gang members in 2007 (Egley and O'Donnell 2009).

Race

Racial composition of gang members depends highly on the location of the gang. For example, the majority of gang members in small areas such as Will County and Pocatello were Caucasian. Gangs closer to the border of Mexico and the USA such as Las Cruces and Phoenix were predominantly Hispanic. Big cities such as Milwaukee and Philadelphia had mostly African-American gang members (Esbensen and Deschenes 1998). In general, African-American gangs were mostly in the Northeast and Midwestern regions, Mexican gangs were in the Southwest, and Puerto Rican gang members resided in New York (Moore and Hagedorn 2001). Law enforcement officers reported the race of gang members in large cities from 2004 to 2006 to be 47% Hispanic, 38% African-American, 8% Caucasian, and 7% other. However, in rural counties, the racial composition was 44% African-American, 32% Hispanic, 17% Caucasian, and 8% other. As the area measured became smaller, the Hispanic gang

member population tended to decrease, while the other three race categories increased (National Youth Gang Center 2009).

Gender

Female gang members are more frequently located in smaller, more rural areas (Moore and Hagedorn 2001). For instance, in Torrance, California, the female gang population was 45%, whereas only 25% of the gang members were female in Philadelphia (Esbensen and Deschenes 1998). According to the National Youth Gang Center (2009), law enforcement agencies declared that 16% of larger cities, 13% of suburban cities, 18% of smaller cities, and 13% of rural counties had more than half of the gangs in their area with female members.

Education

Recently, the percentage of students reporting gang activity in their schools has been increasing. From 2003 to 2005, there was a 17% increase in suburban students and a 33% increase in rural students stating that gang members were attending their schools (National Drug Intelligence Center 2009). Furthermore, principals in urban areas were more likely to believe gang problems were present in their schools (Gottfredson and Gottfredson 2001). In 2005, 36% of students in urban, 21% in suburban, and 16% in rural areas reported that gang members were active in their schools (National Drug Intelligence Center 2009).

Severity of Gang-Related Crime

As gangs expand into new territories outside of the inner city, conflicts arise between members of different gangs which increases the number of homicides and drive-by shootings in suburban areas (Hagedorn 1988). The FBI has even allocated resources to control some of the most violent gangs. Gang crimes can be anything ranging from murder and armed robbery to drug transactions

and identity theft, but gun-related crimes have been increasing. In fact, a little over 94% of homicides committed by gangs utilized a gun. The most popular drugs exchanged by gang members are marijuana and forms of cocaine (National Drug Intelligence Center 2009).

Corrections officials have also had problems with gang-related violence inside their prisons and jails and commonly designate gang members as “security threat groups.” For example, gang member inmates have almost three times the amount of serious rule infractions within prisons than do non-gang members. Furthermore, gang members are also more likely to assault other inmates in jails (Ruddell et al. 2006). In general, victims of violent crimes from 1998 to 2003 believed that 6% of the perpetrators were gang members. This included 12% of aggravated assault, 10% of robberies, 6% of simple assaults, and 4% of rapes. In 2003, 7% of all homicides and 10% of homicides involving a firearm were perpetrated by gang members (Harrell 2005). Unfortunately, law enforcement agencies have reported that gang-related crime has been increasing. From 2005 to 2006, 54% of agencies reported an increase in aggravated assaults, 53% in drug sales, 46% in robberies, 38% in thefts, 36% in burglaries, and 30% in auto thefts (National Youth Gang Center 2009).

In sum, gangs and gang membership have been increasing and migrating to new areas during recent years (National Drug Intelligence Center 2009). Youth gang members have been growing along with the amount of females, Hispanics, and students participating in gangs (National Youth Gang Center 2009). Although gangs are still mostly concentrated in large cities, rural counties presently have had the largest increases in youth and student gang populations (Egley and O’Donnell 2009; National Drug Intelligence Center 2009). Furthermore, smaller counties and cities also represent higher populations of females and Caucasians (Esbensen and Deschenes 1998). Finally, gang-related crimes have also increased recently with law enforcement reporting 30–50% more serious gang offenses in 1 year (National Youth Gang Center 2009). However, law enforcement agencies typically do

not report “gang-related” crimes especially for non-violent offenses, which make the collection of comprehensive, reliable statistics on gang activity difficult for researchers to obtain and analyze (National Youth Gang Center 2009).

Gang Theories and Research

Theories about gangs address both gangs per se and broader-related social issues. Much of theoretical criminology is derived from depictions of delinquent behavior by youth gangs. Subculture, strain, opportunity, and conflict theories of crime and delinquency are based on gang-derived data. Leading criminological axioms, such as *delinquency is learned through interaction with others* and *most often occurs in a group context*, also derive from gang research.

Gang research has been influential in paradigmatic shifts in sociological and criminological research methodology. Early gang research helped to solidify ethnography as normative social science as researchers prior to the 1970s generally followed the “Chicago School” fieldwork model (e.g., Shaw 1930; Shaw and McKay 1942). Viewed almost categorically as delinquent, youth gangs were also considered primary groups (Cooley 1909) and unique types of collectives (Asbury 1927) to be explored firsthand via observational and interview techniques. Such techniques facilitated understanding of the processes of gang development, behavior, and member desistance.

Quantitative research, particularly survey-based designs, is also frequently employed to examine gang topics (e.g., Morash 1983; Fagan 1989; Spergel 1989; Gibson et al. 2009). Such efforts often focus on the predictors of gangs and ganging (Glueck and Glueck 1950; Klein 1971) and have produced a wealth of new information on the prevalence, composition, and criminality of gangs. Objections to quantitative gang research center on the value of the data.

Applied gang research has been important for criminal justice policy. This is not surprising given that some of the major theories were framed during the 1950s and 1960s in studies sponsored by

federal grants specifying social control objectives (Miller 1974). Gang theories of this period highlighted what most considered a timely problem of unprecedented proportion: juvenile delinquency. Rebellious youth associated with the emergence of the rock and roll era presented a new and highly visible threat to formal authority. Gangs, easily identified through their grouping and symbolism, were quickly stereotyped and came to epitomize this threat. Policing gangs, glorified today on crime fighting television programs, has actually been a long-running law enforcement theme. Accordingly, there is a lingering, and largely justified, tendency to define gangs as socially problematic in public safety terms (Spergel and Curry 1990). Social control is thus an important theme throughout the history of gang research, one that continues in this current era of anti-gang initiatives ranging from the well-known national GREAT (gang resistance) program to gang suppression efforts through multi-jurisdictional task forces.

Theoretical Perspectives

The problems presented by gangs have embedded them as primary research foci in criminology and criminal justice science. Gang research in both of these newer disciplines unquestionably arose out of a sociological tradition (Miller and Rush 1996). Whereas sociology's impression was evident as early as the 1930s (Asbury 1927; Thrasher 1927; Bolitho 1930), the applied criminological literature overlooked gangs. The 1949 edition of *The Encyclopedia of Criminology*, for instance, contained no entry under the heading "gang."

Although sociologists had previously noted that delinquency habitually occurred in group contexts, Thrasher's *The Gang: A Study of 1303 Gangs in Chicago* (1928) is frequently considered to be the catalyst for several groundbreaking theories. He observed that gangs were (1) interstitial, (2) concentrated in lower class neighborhoods, (3) responsive to a lack of conventional employment opportunities, (4) composed of young males lacking skills to compete for jobs,

and (5) a process by which delinquents were socialized into adult crime.

Thrasher's innovative conceptualization of *interstitial* merits brief comment. This descriptive term was used in reference to the transitory and peripheral character of gangs who emerged in socially disorganized areas to replace order where there is little, although they seldom lasted more than a few years (Thrasher 1927:22). The gang was more than a fleeting gathering of similarly circumstanced individuals but less than a permanent organization. Members, then usually immigrants, were only marginally incorporated into broader American culture and were typically between childhood and adulthood. Gang process was interstitial as well, wavering along a continuum from planning to spontaneity. Three decades later, instability was stressed again by the labeling of the youth gang as a "near-group" (Yablonsky 1959), an idea that remains influential in contemporary explications (Taylor 1990).

Other early statements addressing gang formation and behavior have received less attention. Furfey (1928) hypothesized that gang cohesiveness was positively correlated with class and confirmed Thrasher's observation that gangs were concentrated in slum areas. Asbury (1927) focused on ethnicity and culture to describe the diversity of gangs in New York as early as the late 1920s. Quite differently, Bolitho (1930) submitted that ganging was a form of psychosis, an issue recently raised in an integrated model fusing "kind of person" and "kind of group" (Thornberry et al. 1993). Ganging was similarly treated as a vehicle by which sociopaths vented hostility and anger (Yablonsky 1962; Short and Stodtbeck 1965). Psychological explanations of ganging are readily dismissed as passé in spite of repeated testimony by gang members that their acts of violence result from "just losing my head," that is, a temporary inability to reason (Currie 1991).

Street Corner Society (Whyte 1943) addressed lower class Italian and Puerto Rican lifestyles and is frequently cited in discussions of gang theory. Its lasting relevance is due to the care afforded the relationship between social forces effecting minorities in depressed urban areas and conventionality rather than delinquent behavior

by youth gangs per se. Although the racial and ethnic compositions of gangs continue to change, they have long been an overwhelmingly minority phenomenon (Moore 1985). As one gang theorist notes: “To be white is to be an outsider to gang members” (Hagedorn 1990:253).

Tally’s Corner, a notable work by Elliot Liebow, appeared in 1967 and further placed gangs in a black and urban context. Gangs had become such a hot topic in academia that Dale Hardman published an article that same year titled “Historical Perspectives on Gang Research.” Surprisingly, this sharp rise of interest in gangs was less affected by racial concerns as by an emerging theoretical order accenting the relationship between culture, class, and delinquency.

Subculture and Gangs

Subcultural theories dominated the study of gangs during the 1950s and 1960s. They stress that some environments are characterized by atypical, criminogenic value, and normative systems, making deviant behavior more or less normal for those within the subculture. The subculture has been described in relation to the dominant culture with great clarity:

A subculture implies that there are value judgments or a social value system which is apart from and a part of a larger or central value system. From the viewpoint of this larger dominant culture, the values of the subculture set the latter apart and prevent total integration, occasionally causing open or covert conflicts.

Wolfgang and Ferracuti 1967:99

The subculture enables, via interaction with the subgroup, individual benefit that may be material, such as profits from drug sales, or psychological through increased self-esteem and social status (Miller 2008). These latter intangible advantages foster greater group cohesion and make the differences in value systems of the subculture and the larger society pronounced. Rejection of some societal standards and norms (particularly ones beneficial to and representative of the dominant order) becomes a defining characteristic of a subculture and necessarily results in cultural conflict (Vetter and Silverman 1980).

Criminology and criminal justice text authors often begin discussion of the culture–crime relationship with *Delinquent Boys: The Culture of the Gang* (Cohen 1955) wherein a general theory of subcultures is presented through extraction and characterization of the properties of gangs. Observation of the existing literature revealed that boys from the bottom end of the socioeconomic scale shared difficulty in conforming to the dominant society that largely rejected them. This difficulty is partially explained by differing degrees of drive and ambition that affect individual responsibility, and also by social structural constraints largely beyond their control.

Working-class youth experience a socialization process that devalues success in the classroom, deferred pleasure and satisfaction, long-range planning, and the cultivation of etiquette mandatory for survival in business and social arenas. Rather than participate in “wholesome” leisure activity, they opt for activities typified by physical aggression. Overall, the learning experience of lower class males leaves them ill-prepared to compete in a world gauged by a *middle-class measuring rod* (Cohen 1955:129). Deficiencies are most noticeable in the classroom, where working-class youth are frequently overshadowed and belittled by their middle class counterparts. Turning to membership in a delinquent gang is but a normal adaptation to status frustration resulting from clashing cultures.

Whereas a strict chronological listing of subcultural theories would move from Cohen (1955) to Miller (1958); Cloward and Ohlin’s (1960) theory of delinquency is naturally paired with Cohen. Their major work, *Delinquency and Opportunity: A Theory of Delinquent Gangs* (1960), also acknowledges the relationship between behavior and status frustration (Merton 1938).

Cloward and Ohlin further Cohen’s hypothesis through a detailed accounting of both subculture emergence and the traits of defiant outgroups via a typology of gangs. Often considered an opportunity theory, the basic premises are (1) limited and blocked economic aspirations lead to frustration and negative self-esteem, and (2) these frustrations move youth to form gangs that vary in type. In short, lower class teenagers realize that

they have little chance for future success through the use of conventional standards and consequently resort to membership in one of three gang types. The ratio of conventional and criminal values to which a juvenile is consistently exposed accounts for the differences in the character of the gangs.

The Cloward–Ohlin gang typology is a hierarchy in terms of the amount of prestige associated with affiliation. At the top is the criminal gang whose activities revolve around stealing. Theft and other deviant acts serve to positively reinforce the mutual codependence between the juvenile and the group. Not all have the skills and composure to integrate into criminal gangs which screen potential members for certain abilities and willingness to conform to a code of values necessary to the unit's success. Mandatory criteria include self-control, solidarity to the group, and desire to cultivate one's criminal ability. Those strained youth who are precluded from gangs that primarily steal congregate around violent behavior such as fighting, arson, and serious vandalism. Termed a "conflict subculture" (Cloward and Ohlin 1960:171), this type of gang results from an absence of adult role models involved in gainful criminal behavior.

Some youth are neither violent nor successful in criminal endeavors. Having failed in both conventional and multiple deviant sectors of society, they retreat into a third type of gang is characterized by drug use (Cloward and Ohlin 1960:183). Members of this relatively unorganized gang resort to drugs as an escape from failure resulting from differential access to both legitimate and illegitimate opportunities, but also deficient familial and community support. A lack of interest by adults in the future success or failure of their sons and other young males in the neighborhood symbolizes rejection, the adaptation to which is "exploration of nonconformist alternatives" (Cloward and Ohlin 1960:86).

Unlike Cohen or Cloward and Ohlin, Walter B. Miller developed a theory that concentrated directly on culture. In an article titled *Lower Class Culture as a Generating Milieu of Gang Delinquency* (1958), he argued the existence of a distinct and observable lower class culture.

Unlike the middle class emphasis on conventional values, the lower class has defining *focal concerns* that include (1) trouble, (2) toughness, (3) smartness, (4) excitement, (5) fate, and (6) autonomy.

These concerns foster the formation of street corner gangs while undermining conventional values. "Smartness," for example, is a skill that warrants respect in the lower class culture. This refers to the ability to con someone in real-life situations, rather than formal knowledge that is relatively inapplicable and even resented in poorer areas. A belief in "fate" discourages the work ethic, undermines prudence and minimizes hope for self-improvement, all of which encourage risk-taking. "Excitement" rationalizes otherwise senseless acts of gang violence. "Trouble," however, is perhaps the most defining of the focal concerns: you do not decide to do something or not on the basis of rightness or wrongness (i.e., morality), but rather on the basis of expediency, hassles, and practical consequences. Decisions not to commit certain acts center on whether the commission is likely to get you into trouble.

The theory rests on the supposition that deviance is normal and to be expected in segments of the lower class where culturally specified focal concerns make conformity to criminal behavior as natural as acceptance of conventional mores for the middle class. Juveniles accepting a preponderance of these "practices which comprise essential elements of the total life pattern of lower class culture automatically violate legal norms," typically in a gang setting (Miller 1958:167).

Other Perspectives

By the 1960s, a number of closely related social movements (including the civil rights movement, anti-Vietnam protest, and the counterculture) were under way. In varying degrees, they expressed the same themes: distrust and defiance of authority which was perceived to be used by elite factions to create and maintain hierarchy and exploitation of the weak. Criminology was profoundly affected by the spirit of the times. Its attention shifted from the construction of theory

and the explanation of crime to opposing the oppressiveness of the criminal justice system.

As bandwagon shifts to the political left transpired, labeling theory replaced subculture as the leading theory (Bookin-Weiner and Horowitz 1983). The main thrust of labeling theory was that crime and delinquency are definitions and labels that are assigned to persons and events by operatives of the justice system. Explaining crime and delinquency, then, is explaining the way in which the labeling process works, and how it singles out certain people for labeling and not others. In its more extreme formulations, labeling theory was not concerned with the explanation of the behavior we call crime and delinquency because criminals and delinquents were not assumed to differ very much in their behavior from other people. Rather, the real difference is said to be the degree of vulnerability to the labeling activities of the criminal justice system.

During this period of interest in labeling, theoretically oriented research on gangs languished but did not disappear. More moderate versions of labeling theory propelled some research (e.g., research on gang behavior and emphasis on the role of official processing and labeling in the development of that behavior), but the leading cause of crime and delinquency was considered the criminal justice system itself (Werthman 1967; Werthman and Piliavin 1967). Specifically, criminal and delinquent behavior was portrayed as responsive to social inequality and class oppression.

Much of the fashionable literature of the period, not only on gangs but also on social problems generally, was not only indifferent to subcultural theory but also was actively opposed to it. This literature included works such as Chambliss' *The Saints and the Roughnecks* Chambliss (1973) that emphasized a "conflict" perspective which viewed the subcultural theories as conservative. Social control was deemed reactionary because crime and delinquency were direct, reasonable, and even justifiable adaptations to injustice. Gangs in this view, then, were perceived as victims. Some went so far as to portray them as political revolutionaries (Frye 1973).

The rise of social control/bonding theory (e.g., Hirschi 1969) did not accelerate gang research

either, though seemingly well-suited to do so (Bookin-Weiner and Horowitz 1983). The central elements of attachment to others, degrees of commitment to conventionality, daily routine, and belief in a moral order speak to why gangs exist and have implications for their actions. Ensuing research interests nonetheless moved towards macro-level determinants of crime and further away from culture and group behavior. Consequently, gangs were largely ignored until the mid-1980s when they were seriously connected with drug and violence problems of epidemic proportions (Curry and Spergel 1988). Specifically, the crack cocaine epidemic was heavily facilitated by gangs and unprecedented moral outcry against gangs, anti-gang legislation and enforcement attention resulted.

Gangs in Chicago

Although gangs are pervasive throughout the USA, we focus on the city of Chicago's gangs due to the rich and well-documented history of research with this population. Gangs began to emerge in the city of Chicago soon after the end of the Civil War. These early gangs were predominantly immigrant groups of Eastern Europeans, Poles, and Italians (Thrasher 1927). It was not until the 1930s when the constant migration of Mexicans and African-Americans to Chicago fostered the growth of the more modern day gangs, specifically the Devil's Disciples, P-Stones, Vice Lords, and the Latin Kings (Dawley 1992).

Following the city's construction of over 50 high-rise public housing projects, gangs such as the Conservative Vice Lords, the Gangsta Disciples, and the Black P. Stones began to feud over control of the public housing projects and drug trafficking jurisdictional "rights" (Cureton 2009). These gang wars paved the way for the emergence of "super gangs" with 1,000 or more members who were fairly structured and organized gangs that controlled large areas within the city of Chicago. This post-WWII era in Chicago also witnessed a substantial immigration of Mexican and Latino workers into the city, and a number of these immigrants began to

form gangs that were equal in their level of violence to their African-American gang counterparts (Spergel 2007).

Recent estimates suggest that the Black Gangster Disciple Nation, the Latin Disciples, the Latin Kings, and the Vice Lords each had a total membership near 20,000 members. Furthermore, Block and Block (1993) reported that in a 4-year period (1987–1990) these four gangs were responsible for nearly 70% of Chicago's gang-related crimes and more than half of the gang-related homicides. Most recently, Chicago's gang problem has moved outside the inner city and into the suburbs as a result of gentrification and the destruction of the high-rise public housing projects. Some examples of these new and emerging gangs include the Four Corner Hustlers and the Maniac Latin Disciples (Chicago Crime Commission 2009).

Conclusion

Theoretical explanations of gangs address the reasons they form and why they tend to be delinquent and criminal which, in turn, yield implications for gang policy. Unfortunately, gangs have become so socially embedded in American society that policy answers are not clear. While both suppression/law enforcement and social programming/intervention initiatives have been claimed successful, gangs persist and continue to grow in numbers and spread to new areas. A cultural approach lends credence to control initiatives now necessary in many urban areas, but policing gangs can be counterproductive as proactive enforcement strategies too often provide the conflict necessary to unify and reify gangs.

Subcultural theories are typically characterized by sociological criminologists as ideological reinforcement for selective law enforcement, in this case, the targeting of minority youth. Because the culture of gangs today clearly encourages crime, there is little doubt that police key on symbols, signals, and other visible indicators of gang activity. However, this is a matter of police responding to a problem where it is most apparent and not necessarily a reflection of a polarized

ideological position wherein cultural awareness is a means to biased ends. As evidenced almost weekly on *Gangland* and similar television programs, many gangs, particularly the more violent ones (as illustrated in the city of Chicago) are composed of newly arrived and illegal immigrants. To the degree that many gangs self-segregate, any proactive policing of them might be considered racial profiling—a perspective calling into question the over-reach of the concept. Regardless, it is evident that the immigration-gangs nexus will be a major focus for both academe and the criminal justice system over the next few decades.

Author Bios

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Juvenile Forensic Psychology and Psychiatry: The Movement Toward Data-Based Innovations

37

Thomas J. Dishion

The face of forensic psychology and psychiatry is changing, notably as it is applied to children and adolescents. As suggested in the material in this handbook, there is heightened potential to improve criminal detection practices and use experimental design to test the effectiveness of correctional and treatment services. Unfortunately, there is less evidence of efforts to improve organizational communication (e.g., schools, correctional facilities, police, probation offices) to facilitate tracking and service provisions for children and adolescents within and across geographical boundaries. Scientific advances in genetics, experimental longitudinal designs, neuroimaging, informatics, and intervention science are core to continued innovation in forensic psychology and psychiatry.

Professional Practices: The Need for Transdisciplinary Training

Individuals at the forefront of forensic psychology and psychiatry commonly work in professional teams that tend to lack overlapping expertise. Criminal detection and apprehension teams are minimally concerned with developmental

psychology and the behavior patterns of children and adolescents. Similarly, expert consultants, such as psychologists and psychiatrists, may not appreciate the here-and-now demands of criminal investigations and corrections strategies and policies. Transdisciplinary training would lead to a new genre of professionals with a broader array of skills related to detection, accumulation of evidence, trial procedures, corrections, and treatment. To accelerate this general upgrade of transdisciplinary knowledge relevant to forensic psychology and psychiatry, expertise must be enhanced in the areas of research design and randomization, assessment-based decision making, and data systems and informatics.

Research Design and Randomization

Every day thousands of children and adolescents are sentenced to correctional protocols, preventive interventions, and treatment programs. Rarely are correctional procedures, however, randomly assigned to children and adolescents. Recently improved methods of collecting longitudinal data on daily, weekly, monthly, and yearly intervention outcomes (e.g., arrests, free time with peers, school attendance, behavior in correctional settings) would enhance the identification of more effective and economically viable correction programs. Given our professional, collective ignorance about the relative effectiveness of diversion, probation, and correctional

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placements, randomized assignment is more ethical than not. Thus, the juvenile justice field would benefit if juvenile jurisdiction were to randomly assign youth with comparable offenses to service and intervention options that are roughly equivalent and to collect data about relevant outcomes, such as rearrest, future victimization, and other dimensions of public harm.

Assessment-Based Decision Making

Considerable work has been done during the past 50 years in the behavioral sciences that suggests clinicians' fallibility when making decisions, judgments, and predictions regarding client behavior (Cronbach and Meehl 1955; Edwards 1954). That said, there is a clear need in forensics work involving children and adolescents to use assessment tools that are well developed, valid, and reliable and that are practicable for intake workers, corrections facilities, probation officers, and criminal investigation teams. One must remember that the propensity to commit crime or repeat criminal acts is a measurable phenomenon at all phases of the forensics process. As such, wisely chosen assessments could be used to guide decision making about the best remedial intervention for youth with respect to containment, treatment, and prevention.

Data Systems and Informatics

In many states it is nearly impossible to trace an individual youth and his or her behavior from one county to another—yet we know that the highest risk youth are often the most mobile. Statewide systems and even national data bases that share similar behavior definitions, detailed histories of crimes, and evidence such as DNA would significantly improve detection of the guilty and minimize prosecution of the innocent. Improving the capacity of information systems is clearly the next step to more effectively ensure that the right people are identified and deterred and then assigned to empirically supported interventions that reduce the likelihood of reoffending.

Development and Ecology

There is a scientific basis for attempting to understand why some individuals are more likely to commit crimes and why some communities have higher prevalence rates of serious crime. It is not possible to simply identify personality traits or DNA structures that contribute to the likelihood of committing serious versus trivial crimes. The best science reveals that genetic and temperament characteristics interact with one's environment to increase the likelihood of criminal behavior (Caspi et al. 2002). Exploring and understanding this body of research and systematically applying its findings to juvenile forensic psychology and psychiatry likely would contribute to reduced community prevalence of victimization and perpetration of crime (Biglan et al. 2004). Three empirically based principles relevant to forensic juvenile psychology are addressed in the following sections: early onset and chronicity, peer contagion and severity, and the centrality of families.

Early Onset and Chronicity

Several chapters in this book acknowledge the well-documented link between age of onset and the chronicity and seriousness of juvenile offending. Several groups of behavioral scientists have focused on various aspects of the problem of early onset. Some time ago, Patterson and colleagues noted that boys who initiated antisocial behavior in childhood were the most likely to initiate their criminal careers in early adolescence. Early adolescence arrest, in turn, predicted chronicity and frequency of offending (Patterson et al. 1991). This finding was extended to the articulation of an early- versus late-started model by several criminological researchers (Moffitt 1993; Patterson 1995; Patterson et al. 1992; Patterson and Yoerger 2002). Early onset is also prognostic of violent offending (Chap. 15) and as one would suspect, portends severe sanctions and juvenile justice costs (Chap. 7). Early-onset sexual offending is associated with an extended duration of offending and multiple victims (Chap. 25). The relation-

ship between early onset and severity is ubiquitous and is of special significance when considering the costs and benefits of early intervention, especially those that are empirically supported. Preventing a trajectory of early-onset criminality could substantially offset costs associated with treatment and criminal containment, and in turn result in reduced incidence of victimization. From this point of view, it is unwise to ignore childhood involvement in and early-adolescence engagement in antisocial behavior and sexual offending.

Peer Contagion and Severity

One of the strongest predictors of escalating problem behavior in adolescence is gang involvement (Dishion et al. 2010; Klein 2006; Robins and Hill 1966). Associating with criminal and antisocial peers is not simply a correlate of child and adolescent problem behavior; there is considerable evidence that it is a cause. Peer contagion can be observed by simply watching videotaped deviancy training interactions among youth who competitively discuss and laugh about their deviant exploits (Dishion et al. 2004; Patterson et al. 2000). More alarming is the possibility that prevention and treatment services that aggregate antisocial youth actually exacerbate the very problem behavior targeted (Dishion et al. 1999; Dodge et al. 2006). Seen from this empirical perspective, it is possible that a good proportion of our community efforts to treat, reduce, and prevent serious offending inadvertently worsens the problem. For example, group homes that aggregate offenders, group programs for sexual offenders, and even juvenile justice institutions may provide the very context for motivating and polishing the skills of more serious offenders. Alternative strategies do exist for effectively responding to child and adolescent crime, and they are summarized later in this chapter.

The Centrality of Families

Longitudinal studies of the emergence of criminal behavior in children and adolescents have revealed that approximately 50% of the

crime in any community is committed by 5% of the families (Farrington et al. 1990; Thornberry and Krohn 2003). Although genetic effects relevant to antisocial behavior have been identified, it appears that the strongest formulation is one in which genetic and temperament variables together moderate the relationship between pathogenic environments and later serious antisocial behavior (Caspi et al. 2002). A family-centered approach has substantial empirical support in terms of preventing crime and treating antisocial behavior as it unfolds in community settings. As such, it is imperative to carefully consider the implementation of these interventions.

Empirically Supported Intervention Principles

An emphasis on identifying empirically based programs has emerged during the past 10 years of research on treatment and prevention strategies for children and adolescents (Weisz and Kazdin 2010). This research has articulated the details of intervention strategies that have demonstrated effectiveness in randomized trials that used adequate controls and data analytic procedures. Identifying successful programs, however, should eventually give way to identifying empirically supported intervention principles that can be implemented in a variety of forensics settings, such as probation, detention, and diversion programs. Of critical importance is that ownership of the strategy becomes a collective enterprise that involves the practitioner and the researcher. Unfortunately, there are many hurdles to implementing empirically supported interventions in real-world settings, especially those that involve delivering interventions and services with fidelity (Domitrovich et al. 2008; Forgatch et al. 2005). The chapters in this book identify several empirically supported programs that translate to two basic intervention principles that are especially important for the future design of effective prevention and treatment of criminal behavior in juveniles. The first is to support the training to prepare professionals to implement interventions competently. The second is to collect ongoing

data about fidelity to ensure accountability and to provide supportive feedback to maintain high levels of fidelity.

Family-Centered Interventions

Chapters 19 and 20 discuss the effectiveness of early interventions with families to prevent early-onset antisocial behavior, and describe the need to provide treatment for the offending adolescent. The principles of effective family-centered interventions are many, but the common denominator is a concerted focus on improving family management practices and reducing coercive interaction strategies during family conflict. Coercive interactions among family members lead to escalations that in the short run can transform an argument into a fight and in the long run turn relatively trivial problem behaviors into more serious forms of antisocial conduct. Although coercive interactions are a way of life for many families, they often go unnoticed as being problematic (Patterson 1982). Coercion and conflict can ultimately lead to parents disengaging from the parenting role and reducing efforts to monitor and manage the increasingly problematic adolescent (Dishion and McMahon 1998). Effective family-centered intervention strategies work to promote monitoring and positive behavior support in families, reduce coercion, and maintain involvement of the adult caregivers in the life of their child or adolescent. Given the high co-occurrence of criminal behavior in families and the effectiveness of the programs that target parenting, family-centered services should be central to every probation and juvenile corrections treatment center.

Self-Regulation and Control

Another branch of intervention research discussed in this book (Chaps. 19 and 21) involves cognitive-behavioral strategies for helping children and adolescents effectively cope with peer and family contexts that promote criminal offending. A focus on self-regulation and self-control is

consistent with major criminological theories (Hirschi 2004). It is also true that many of the children and adolescents who come into contact with forensic and correction facilities have experienced trauma and correlated mental health problems (Chap. 12). Empirically supported interventions that target self-regulation and self-control are certainly warranted and potentially helpful for reducing mental health problems and future criminal behavior. The vast armamentarium of cognitive behavioral interventions forms the core of empirically based practices (Weisz and Kazdin 2010) and also addresses child and adolescent regulation of behavior, cognition, and emotion.

Treatment Foster Care

Many of the children and adolescents who become involved with correctional systems come from families disrupted by divorce, substance abuse, trauma, or imprisonment of parents. Historically, the solution has been to place offending adolescents who have marginal family support into juvenile detention facilities. Over time this practice evolved to the use of group homes where trained “group home parents” provide care and socialization for offending adolescents. A more recent alternative, developed by Chamberlain and colleagues (Chamberlain 1994; Chamberlain and Reid 1998), is the treatment foster care model, which empowers treatment care-giving adults with strong behavior management practices and provides direct support for youth to develop improved self-regulation. This model has shown clear results in terms of reduced criminal activity and chronicity, compared with the group home model. The principle underlying the effectiveness of treatment foster care is not different from the principles that describe the effectiveness of family-centered interventions and interventions that focus on self-regulation. It emphasizes reducing peer aggregation and peer contagion, increasing adult caregiver monitoring of youths’ daily activities, providing positive support for high-risk youths’ positive behavior, and reducing coercive interactions in youths’

daily lives. This multidimensional approach is actually less costly than residential institutional care or group home care (Chamberlain and Reid 1998). Other advantages include youths continuing to attend public school and continuing to be a member of the mainstream community. This overall strategy reduces the problems associated with transiting back to the community from a juvenile justice institution.

Intervention Quality Management

As professionals in the field of forensic psychology and psychiatry become familiar with and progress toward the accurate identification of empirically supported intervention principles, they must be supported and empowered to implement the services effectively. Educators and mental health treatment professionals are increasingly aware of the need for monitoring and feedback among those working with challenging youth to improve and maintain intervention effectiveness. Similarly, forensic and correctional psychology would benefit from brief, periodic performance measures for professionals working with children. These measures would assess their ongoing ability to implement empirically supported intervention principles and maintain fidelity to the model. This well-recognized strategy requires supervisor training in data-based decision making, as well as supervisory consultation and knowledge of effective intervention practices.

Summary and Conclusions

This book attests to the massive growth of scientific knowledge that forms the foundation of effective forensic psychology for children and adolescents. The key point when investigating, sentencing, and treating the juvenile offender is to be aware that they are not mature adult human beings. Increasing evidence suggests continued developmental growth and self-regulation vis-à-vis the prefrontal cortex and myelination of the adolescent brain (Dahl 2004; Spear 2000). An apt metaphor is that the adolescent is now able to

drive the car but lacks the judgment to use the brakes and the gas pedal. In this sense, we should give pause to simply treating youthful offenders as adult criminals. Given this core developmental principle, it becomes clear that much of this field should be tightly linked to advances in the science of intervention and child development. As well, the quick adoption of empirically supported intervention principles in conjunction with randomized evaluation studies will speed up the process of innovation in forensic psychology. Central to the mission of solid decision making to benefit children, adolescents, and communities is the need to improve the use of assessments for designing interventions and accurately detecting criminal behavior and histories. With a more concerted professional collaboration among disciplines, one can imagine a time when we can accurately detect the pattern of offending, assess the ecological circumstances, and adapt and tailor interventions to meet the specific needs of the offending youth and reduce victimization in the community.

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