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Sabrina Brauneis

The Relationship of Body Weight and Skepticism towards Advertising

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Sabrina Brauneis

The Relationship of Body Weight and Skepticism towards Advertising

Foreword by Prof. Dr. Ralf Terlutter

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Foreword

The dissertation submitted by Dr. Sabrina Brauneis explores the relationship between body weight (conceptualized and measured here using the Body Mass Index (BMI)) and skepticism towards advertising. Within this relationship, the thesis examines the role of self-esteem, gender and education. Moreover, the dissertation analyzes the aforementioned correlation with regard to different product types (healthy and unhealthy food products, appetite suppressant, non-food product as control), different seasons (summer versus winter), as well as different advertising models (regular weight versus overweight advertising models).

This thesis deals with a subject matter, which unequivocally bears great significance for both theory and practice. Obesity and the increasing overweight of the population represent one of society's central challenges today, not only in Austria, but also worldwide. Overweight frequently has harmful consequences, both for the individual (in terms of health and social issues), and for society as a whole, for instance due to increased costs occurring in the health care system as a consequence of diseases caused by obesity.

Skepticism towards advertising is regarded as an important prerequisite for the ability to deal competently with advertising messages. Advertisements often promote unhealthy food products (high calorific food products, e.g. sweets), exaggerating – true to the nature of advertising – the product benefits, without mentioning the disadvantages of the product. If overweight individuals were to exhibit lower levels of skepticism towards advertising – and theory-driven approaches indicate that this is indeed the case –, it is precisely the group of overweight persons, who would be particularly vulnerable to the numerous advertisements for unhealthy food products.

In addition to an extensive theoretical review of the topic, Ms. Brauneis presents the results of four studies, which are based on two different sets of data. The results are interesting and are proffered in a clear and tangible manner. Beyond any question, with her dissertation, Ms. Brauneis has made a valuable contribution to the development of research and to the advancement of knowledge. She has successfully added to an in-depth understanding of the development of skepticism towards advertising, both in her theoretical deliberations and through her empirical studies.

Ms. Brauneis has dealt with a challenging subject area and has demonstrated that body weight represents a relevant factor for the skepticism of women towards advertising, which has hitherto been neglected. It is my hope and my sincere wish that this dissertation will gain a high level of attention.

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Preface

I have written the present thesis as part of my university/research assistant occupation at the Department of Marketing and International Management.

First, I would like to thank my supervisor and the head of department Prof. Dr. Ralf Terlutter for suggesting the interesting topic of my thesis and for his support and understanding during the whole process of the compilation of the thesis.

Furthermore, I would like to express my gratitude for the personal and professional support of my second evaluator, Prof. Dr. Sonja Grabner-Kräuter. She has always generously spared time and shared her own opinions with me.

Moreover, I would like to thank the department. I particularly thank my colleagues Johanna Röttl, who always listened and made working on my thesis fun, Manuela Pirker, who always had good advice, and Sonja Bidmon, who always encouraged me.

During my time as a research assistant, I had the chance to spend three weeks as a visiting scholar at the Auckland University of Technology, New Zealand. At this point, I would like to thank Andrew Parsons, head of the Marketing, Advertising, Retailing and Sales Department, for inviting and hosting me, as well as the rest of the department for welcoming and collaborating with me. Martin Waiguny, in particular, dedicated a lot of his time to support me in my research (from the beginning of my scientific career as a Master's student), but also made my time as a visiting scholar unforgettable. Many thanks for that.

I also want to thank my interviewers, who recruited participants for the studies, as well as the participants, who were essential for this thesis.

Moreover, special thanks is dedicated to the institutions that have supported the thesis financially (Verein zur Förderung der Wirtschaftswissenschaften, Stipendium zur Förderung wissenschaftlicher Arbeiten, Forschungsrat: Förderung eines Forschungsaufenthaltes).

Finally, yet importantly, I want to thank my friends, my family and my boyfriend for the unconditional love and support during every single phase of my thesis. Thank you, Manfred Brauneis, for listening; thank you, Ulrike Brauneis, for cooking; thank you, Alexander Brauneis, for giving me advice on more than one occasion; thank you, Kristin Brauneis, for traveling with me; and finally, thank you, Florian Weisskircher, for being there and always believing in me. I would not have made it this far without all of you.

Sabrina Brauneis

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List of Abbreviations

ANOVA	Analysis of Variance
B	Regression coefficient
BMI	Body Mass Index
CDT	Cognitive Dissonance Theory
CI	Confidence interval
e.g.	exempli gratia (for example)
etc.	et cetera (and so on/forth)
F	F-value
M	Mean value
m	Bootstrap samples
n	Sample size
p	p-value
t	t-value
SCT	Social Comparison Theory
US	United States (of America)
USA	United States of America
WHO	World Health Organization

1 Introduction

Skepticism towards advertising is regarded as an important prerequisite for competence in dealing with advertising messages (Mangleburg & Bristol, 1998; Obermiller, Spangenberg, & MacLachlan, 2005; Obermiller & Spangenberg, 1998, 2000). It is defined as the consumer's negatively valenced attitude toward the motives of claims and claims made by advertisers (Boush, Friestad, & Rose, 1994; Obermiller & Spangenberg, 1998). High levels of skepticism towards advertising are generally regarded as something desirable, as they allow for a competent and critical approach to and evaluation of advertising messages, which often exaggerate a product's benefits, while at the same time concealing its detriments. Consumers with a higher level of skepticism towards advertising tend to be more critical towards advertising messages and tend to believe them to a lesser extent (Boush et al., 1994; Mangleburg & Bristol, 1998; Obermiller et al., 2005; Obermiller & Spangenberg, 1998).

Looking at the media landscape nowadays, advertising is omnipresent on the radio, TV, billboards or the Internet and the exposure has been increasing over the past decades (Statistik Austria, 2014). In particular, advertisements for low-nutrient and high-calorie food and beverages dominate the advertisement landscape (Byrd-Bredbenner & Grasso, 2000; Warren, Wicks, LeBlanc Wicks, Fosu, & Chung, 2008). Low levels of skepticism towards advertising might lead to a higher believability of advertising messages and a higher probability of buying and consuming those advertised low-nutrient and high-calorie products (Bates, Burton, Howlett, & Huggins, 2009; Harris, Bargh, & Brownell, 2009). Eventually, this could lead to weight gain by consumers and might increase the already high numbers of overweight and obese people (Bates et al., 2009; Harris et al., 2009; Seiders & Petty, 2004). This (possible) development emphasizes the importance of the research on factors influencing skepticism towards advertising in general and towards advertising of specific products.

During the past decades, research has analyzed many variables that influence skepticism towards advertising, such as age (Boush et al., 1994; Obermiller &

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Spangenberg, 2000), gender (Obermiller & Spangenberg, 2000; Orth, Malkewitz, & Bee, 2010) or self-esteem (Boush et al., 1994).

Research has revealed that especially children show lower levels of skepticism towards advertising and the skeptical attitude towards advertising increases with age (Boush et al., 1994; Obermiller & Spangenberg, 2000). Also, gender influences the levels of skepticism towards advertising. Studies have shown that women in general show lower levels of skepticism (Obermiller & Spangenberg, 2000; Orth et al., 2010). Moreover, research has shown that self-esteem is positively related to skepticism towards advertising (Boush et al., 1994), meaning that the higher the self-esteem of a person, the higher the skepticism towards advertising can be.

This research area might be interesting in combination with the field of research concerning body weight and self-esteem. In a meta-analysis Miller and Downey (1999) found out that body weight is negatively related to self-esteem. Overweight people tend to have lower levels of self-esteem and normal weight people tend to have higher levels of self-esteem (Miller & Downey, 1999).

Combining these two research results, the relation of body weight and self-esteem, and self-esteem and skepticism towards advertising, might pose the question whether there is a direct connection between body weight and skepticism towards advertising and which role self-esteem might play.

Another fact, supporting this posed question, is the conveyance of beauty and body ideals across the media and advertising landscape. Studies have shown that especially young female adolescents and women adopt these beauty and weight ideals and put themselves under pressure to conform with the beauty ideals (Fernandez & Pritchard, 2012; Hargreaves & Tiggemann, 2004; Hargreaves & Tiggemann, 2003; Kemp, Bui, & Grier, 2011; Smeesters & Mandel, 2006). In a qualitative analysis (interviews with 15 women) the author discovered that women exposed to the societal pressure of the thin ideal start to believe advertising messages, except when they have a higher self-esteem and when they are of normal weight (Brauneis, 2012). Moreover, results indicated that overweight women with a low level of self-esteem showed the lowest lev-

els of skepticism towards advertising. These findings yielded by the qualitative interviews add a reason why this relationship is interesting and deserves further investigation. Therefore, the author poses the question whether body weight directly influences skepticism towards advertising and analyzes the role of self-esteem and gender in this relationship.

Furthermore, studies have shown that education is a crucial factor for the development of skepticism towards advertising (Mangleburg & Bristol, 1998; Obermiller & Spangenberg, 2000). Therefore, a section in this thesis is dedicated to exploring the educational background of the participants (male and female) and combines this with the relation of body weight, self-esteem and skepticism towards advertising.

Since the media landscape is dominated by low-nutrient and high-calorie products (Byrd-Bredbenner & Grasso, 2000; Warren et al., 2008), it might be interesting to investigate whether different products (such as non-food related goods) exert a different influence on the relation of body weight, self-esteem and skepticism towards the specific product(s). The importance of this examination might also be supported by the fact that different product categories cause different skepticism levels towards the product and the advertisement (Buck, Chaudhuri, Georgson, & Kowta, 1995). Therefore, an investigation appears to be promising.

The relation of body weight, self-esteem and skepticism towards advertising can be influenced by external factors, especially by the seasonality of the advertisements. Unfortunately, little research has been conducted in this field to date, but some studies have shown differences in the frequencies of specific product category advertisements over the seasons (Snyder, Milici, Mitchell, & Proctor, 1997), as well as changes in the food intake and in physical activity (Capita & Alonso-Calleja, 2005; Hull, Hester, & Fields, 2006; Ma et al., 2006; Tucker & Gilliland, 2007). A varying exposure to unhealthy product groups over time and a variation of food intake and physical activity might also change the relationship of body weight, self-esteem and skepticism towards advertising and might therefore serve as an interesting subject of a survey.

Last, the advertising landscape is dominated by slim models promoting low-nutrient and high-calorie products (Fernandez & Pritchard, 2012; Hargreaves & Tiggemann, 2004; Hargreaves & Tiggemann, 2003). Recent studies have focused on how different model sizes influence the self-esteem of (female) consumers (Grabe, Ward, & Hyde, 2008; Murnen, Smolak, Mills, & Good, 2003; Thompson & Stice, 2001), but have entirely ignored the body weight as well as the skepticism towards the advertisements. Therefore, as a final research area, the aim of the thesis is to investigate the influence of the model size on the relation of body weight, self-esteem and skepticism towards advertisements.

1.1 Research Purpose and Objectives

This thesis focuses on the nature of the connection of body weight, self-esteem and skepticism towards advertising in general and towards different products. Moreover, moderators such as gender and education as well as other influencing factors such as specific products, seasons and model sizes are investigated.

First, a combination of the research areas body weight/self-esteem and self-esteem/skepticism towards advertising might be of interest, since these three variables are connected indirectly. Based on the Self-Esteem Theory (Cast & Burke, 2002; Rosenberg & Pearlin, 1978; Rosenberg, Schooler, & Schoenbach, 1989) and the Social Cognitive Theory (Bandura, 1994), research in this area might detect a direct effect. On the one hand, people internalize the societal ideal and want to conform with this ideal (Klaczynski, Goold & Mudry, 2004; Owen & Spencer, 2013; Yamamiya, Cash, Melnyk, Posavac & Posavac, 2005). Due to the rising numbers of overweight and obese people (EPHA, 2013; US Census, 2015; WHO, 2012), real body sizes and ideal body sizes diverge widely. Overweight people might feel more pressure and feel that the wish to look like the beauty ideal might be unattainable. This strong desire to match this ideal might affect the skepticism towards advertising, since advertising is showing the desired beauty ideal. Being skeptical towards advertising that supports the beauty and slim ideal would contrast with the own internalized ideal. Furthermore, among overweight people this effect might even occur to a

higher extent since they do not match the slim ideal and therefore, the wish to conform to the ideal might be even greater, and the level of skepticism towards advertising even lower. On the other hand, the qualitative interviews (Brauneis, 2012) suggest the assumption of a direct connection of body weight and skepticism towards advertising. Moreover, studies have shown that gender and education affect the levels of the three variables (Boush et al., 1994; Obermiller et al., 2005; Obermiller & Spangenberg, 2000) and are consequently central to further analyses. The following research question 1 (RQ 1) is proposed:

RQ1	What is the nature of the connection of body weight, self-esteem and skepticism towards advertising in general? Which roles do body weight and self-esteem play regarding skepticism towards advertising? How do gender and education affect the interplay of these three variables?

Second, based on the Cognitive Dissonance Theory (Festinger, 1957, 1978) and the Self-Esteem Theory (Cast & Burke, 2002; Rosenberg & Pearlin, 1978; Rosenberg et al., 1989), it is assumed that the level of skepticism and the relationship between body weight, self-esteem and skepticism will vary depending on the specific product people see in an advertisement. As mentioned above, various product categories are considered more or less skeptically than others (Buck et al., 1995). Therefore, products from various product categories should be investigated, in order to detect the nature of the relationship. The following research question is posed:

RQ2	How do different products influence the relationship of body weight, self-esteem and skepticism towards specific products?

Third, seasonal advertising (Snyder et al., 1997) and seasonal changes in physical activity and food intake (Capita & Alonso-Calleja, 2005; Hull et al., 2006; Ma et al., 2006; Tucker & Gilliland, 2007) might also affect the relationship of body weight, self-esteem and skepticism towards advertising as briefly outlined in the previous section. Based on the Social Comparison Theory (Festinger, 1954), the assumption can be suggested different seasons affect

the skepticism towards advertising and the relationship since advertising communicates a different beauty ideal and in different intensity over the course of a year. Therefore, the seasons lend a further focus to the research and the following research question is investigated:

RQ3	How do seasons affect the relationship of body weight, self-esteem and skepticism towards advertising?

Fourth and last, based on the Cognitive Dissonance Theory (Festinger, 1957, 1978) and the Social Comparison Theory (Festinger, 1954) the thesis dedicates one section to the question whether differently sized models promoting specific products influence the skepticism level towards the advertisement for specific products and the relation of body weight, self-esteem and skepticism towards advertisements for specific products. The assumption is suggested due to the research finding that a positive social comparison supports higher levels of skepticism (Frisén & Holmqvist, 2010; Holmqvist & Frisén, 2012). A comparison with a slim model or with an overweight model might lead to different outcomes in terms of skepticism towards the advertisement for specific products. As a result, the following research question is placed:

RQ4	What kinds of effect do differently sized models promoting different products have on the relationship of body weight and skepticism towards advertisements for specific products?

This research is considered important for two main reasons. First, the number of overweight people is high, especially in Western society. For instance, sixty-two percent of the American population is overweight and 26% of this group suffers from obesity (US Census, 2015). Excessive weight and obesity are equally important issues for the European population (WHO, 2015a). According to figures released by the European Public Health Alliance (EPHA, 2013), the EU 25 countries show lower rates of affected people than the United States, but still present an alarming percentage of about 40%. The high prevalence of excessive weight and obesity causes negative health issues. Besides the higher risk of diseases like diabetes and cancer, the mortality rate increases

with a higher weight. Overweight people not only suffer from long-term problems but face short-term issues as well. Stigmatization and social rejection affect overweight people more often than people of normal weight (Bell & Marshall, 2003; Puhl & Heuer, 2010). Given that a large and continuously increasing number of people is affected by overweight, researchers as well as public institutions would clearly benefit from an improved understanding of the possible influence of body weight on skepticism towards advertising.

Second, the most popular category of advertised products consists of high-calorie, low-nutrition food as well as beverages, especially soft drinks (Byrd-Bredbenner & Grasso, 2000; Warren et al., 2008). A study (Harris et al., 2009) demonstrated that the exposure to advertisements promoting food leads to a higher consumption of food, which is especially relevant for high-calorie and low-nutrition food, since this is the product category most advertised (Byrd-Bredbenner & Grasso, 2000; Speers, Harris, & Schwartz, 2011). Therefore, high levels of skepticism towards advertising seem to be especially relevant for overweight people. If overweight people show less skepticism towards advertisements, then they are in danger of being susceptible to these messages to an even higher extent than normal weight individuals are. Furthermore, a lower level of skepticism towards advertising might cause higher consumption and would thus support additional weight gain.

By exploring the effect of body weight on skepticism towards advertising and the roles of self-esteem and gender, this thesis contributes to the existing literature in several ways and is relevant for researchers, public policy makers and consumers. The study contributes to the explanation of the development of skepticism towards advertising on an individual level by analyzing body weight as a possible additional influencing factor. The studies can also raise public policy makers' awareness that overweight people might be a specifically vulnerable group to advertising, if increased body weight is indeed related to lower skepticism towards advertising. The results of this study might be especially interesting for women, as they could be most affected. This is important, as women often do not only make decisions for themselves but also for their families. If they are more easily influenced by advertising, this would impact all of society (Bates et al., 2009). Furthermore, the other research questions could

shed light on which products might cause lower skepticism levels as well as in which season differences might occur and may consequently serve as a foundation for regulations of product categories in certain seasons. Last, this thesis could offer implications regarding how to change this connection, if the differently sized models influence the level of skepticism towards advertising/specific products and could further provide implications for public institutions to combat this influence.

1.2 Epistemological Approach of Research

The theory of science is divided into three different areas, which can be considered as the basis of the research process of the present thesis (Foscht & Swoboda, 2005; Kroeber-Riel & Weinberg, 2003). The three areas are:

1. Context of Discovery
2. Context of Justification
3. Context of Utilization

In the context of discovery the main challenge is to clarify what leads to scientific propositions (Foscht & Swoboda, 2005; Kroeber-Riel & Weinberg, 2003). Meanwhile, the context of justifications focuses on how propositions and hypotheses can be founded and justified (Foscht & Swoboda, 2005; Kroeber-Riel & Weinberg, 2003). The third area, the context of utilization, gives implications and suggestions for implementations for the findings of the tested propositions and hypotheses (Foscht & Swoboda, 2005; Kroeber-Riel & Weinberg, 2003).

First, the context of discovery depends on the researcher's behavior, which is mainly dependent on the epistemological approach the researcher chooses to follow (Kroeber-Riel & Weinberg, 2003). In the present thesis, the positivistic approach, as well as critical rationalism, best reflect the procedure followed.

Positivism is a philosophy of science that claims that information (an expected outcome or finding) can only be the result of an experiment (Halfpenny, 1992). While the classical approach proceeds on the assumption that these findings can only be derived from the fields of mathematics and logic, current research

(at least during the last 50 years) also uses the positivistic approach for questions pertaining to the social world (Smith, 1996). Furthermore, critical rationalism (Popper, 1989), which constitutes a development of the positivistic approach, can also be considered as a basis of the following research approach. Popper assumes, like representatives of positivism, that hypotheses have to be derived from theories, observations of reality and preexisting empirical findings (inductive) and have to be tested in an empirical setting to falsify the assumptions (deductive) (Atteslander, 2010). The process of falsification is Popper's approach, since he represents the assumption that every theory can be falsified. In the case of a falsification the outcome should not be scrapped, but should be further investigated for alternative explanations (Popper, 1989).

This paper follows this approach of falsification, since hypotheses are derived from observations, findings of preexisting empirical research and theories. In the context of discovery the relationship of body weight, self-esteem and skepticism towards advertising should be investigated.

Second, the context of justification constitutes the foundation of the formulation of hypotheses (Kroeber-Riel & Weinberg, 2003). Based on theories and observations, hypotheses, which should be empirically testable, are derived. In this research, developmental and social psychological theories serve as the basis for the hypotheses. The Self-Esteem Theory, the Social Cognitive Theory, the Cognitive Dissonance Theory and the Social Comparison Theory are of particular importance. On the basis of these theories, hypotheses are formulated and tested in four empirical studies.

Third, the context of utilization focuses on the implications for the fields of practice. The findings of this thesis should contribute, as mentioned above, to the fields of public policy and public institutions such as the World Health Organization, as well as national and local governments. Furthermore, the findings should provide a basis for further research. Finally, the thesis should contribute to the wealth (in a psychological and philosophical sense) and the health of the current and future society.

In summary, the main focus of the thesis will lie in the context of discovery and justification. Based on theories, hypotheses will be formulated, which will be tested in empirical studies (self-administered questionnaire attended by interviewers). Founded on the results, implications for society, public institutions as well as the research fields are described.

1.3 Thesis Structure

The present thesis is divided into five main chapters. Following an introduction to the topic, the research purpose and the objectives including the main research questions are presented. Furthermore, the research of the present thesis is categorized into epistemological approaches and a brief insight to the research design is given. The first chapter ends with a description of the structure.

The second chapter defines the key constructs and provides an extended introduction to and further background on the topic. Body weight is defined and the measurement of overweight and obesity is presented. Moreover, factors influencing body weight are discussed and the stigmatization of overweight and obesity in Western society is addressed. The next subchapter defines self-esteem, gives an introduction of the development of self-esteem, and influencing factors and the measurement of the construct self-esteem are discussed. The final section of Chapter 2 focuses on the third key construct of the thesis: skepticism towards advertising. A definition is given, the development is described, influencing factors are presented, and the measurement of the construct is discussed.

The third chapter describes the theoretical framework of the thesis and is divided into four subchapters. The first subchapter describes the connection of body weight and self-esteem, presents studies focusing on this connection, and discusses the Self-Esteem Theory. Based on the theory and relevant studies, a hypothesis is derived. The second subchapter focuses on the relation of self-esteem and skepticism towards advertising. Also, studies are discussed and a hypothesis is presented. The third subchapter explains the connection of

body weight and skepticism towards advertising. Finally, a research question is postulated. The final subchapter focuses on influencing factors of the relation of body weight, self-esteem and skepticism towards advertising. Five different influencing factors are discussed. First, gender and education are the focus of this subchapter. Based on gender theories, hypotheses are posited. Second, specific products are at the center of the research. By means of the Cognitive Dissonance Theory, hypotheses are derived. Third, seasons are discussed as an influencing factor. Based on biological theories and the Social Comparison theory, hypotheses are placed. Last, the size of the model promoting specific products is investigated. Also, based on the Social Comparison Theory, hypotheses are posed.

The fourth chapter focuses on the empirical research and its results. It is divided into four subchapters. Each chapter focuses on one of the four central research questions. The first study, dealing with the relationship of body weight, self-esteem and skepticism towards advertising and the role of gender and education in this relation, is divided into a description of the study's design including method and measures, a results section (testing of the hypotheses), a discussion and implications and limitations section. Study 2 focuses on the question of the effect of specific products in the above-mentioned relationship, and the study design, results, discussion and implications and limitations are presented. The same applies to study 3, dealing with body weight, self-esteem and skepticism towards specific products in different seasons and study 4, discussing the effect of differently sized models promoting specific products on the relation of body weight, self-esteem and skepticism towards the specific advertisement.

Chapter 5, the last section of the thesis, provides a summary of the studies' findings. Furthermore, limitations are addressed. Last, implications for public institutions and research are described. The following figure offers a graphical overview of the structure of the thesis.

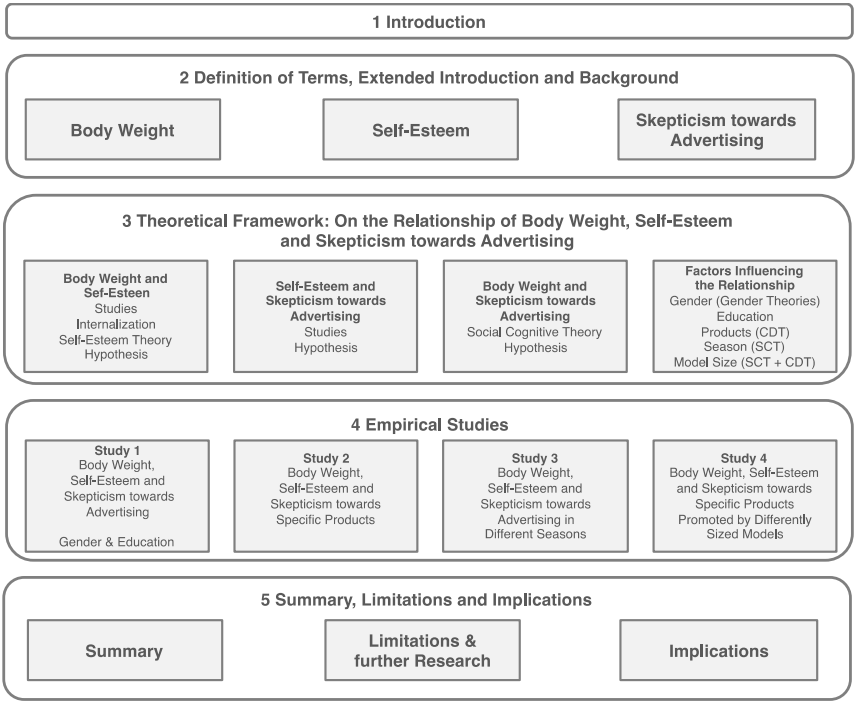

Figure 1 Structure of the thesis

2 Definition of Terms, Extended Introduction and Background

The following chapter focuses on the key factors of the present thesis. In order to guarantee a full understanding of all the variables, working definitions are given, influencing factors are discussed, and an extended background of the currency of the factors is presented.

2.1 Body Weight

In Western society and industrial countries, overweight and obesity is common among the population (Baum & Ruhm, 2009). Not only the United States of America are affected (US Census, 2015), as recent newspaper articles and studies show, but also countries in the European Union (WHO, 2013). The European Public Health Alliance's figures still state lower numbers for the EU 25 countries than for the United States (EPHA, 2013), but nevertheless show that 40% of the population suffers from overweight or obesity. The most recent studies by Statistik Austria (2006/2007) (Statistik Austria, 2015a) are alarming, showing that 43% of the male population is overweight and more than 12% is obese. Women show lower rates, but these are still disturbing. Almost 30% is overweight and 13% of the Austrian female population is obese. These numbers are disconcerting, but are not a recent phenomenon, since overweight and obesity numbers have been increasing continuously during recent years. The latest micro-census 1999 reveals that overweight is not only a disease, which affects adults, but also concerns adolescents. The following graph shows the people affected in Austria divided into gender, age and overweight/obesity groups.

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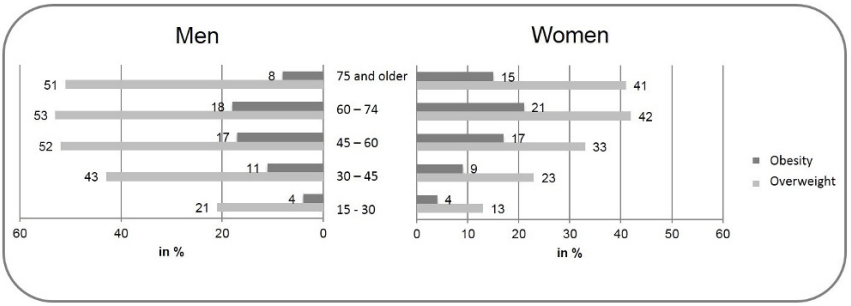

Figure 2 Overweight and obesity among the Austrian population (according to gender and age) (Statistik Austria, 2015a)

Health-related determinants can explain why numbers are continuously rising (Statistik Austria, 2015b). Physical activity is declining, since jobs mostly require sedentary occupation, and many recreational activities are preferably performed while seated. Low rates of exercising can help to explain increasing numbers of overweight and obesity (Statistik Austria, 2015c). Unbalanced nutrition can contribute additional reasons for rising numbers (Statistik Austria, 2015c).

The investigation of body weight in combination with self-esteem and skepticism towards advertising is of high importance due to the continuously rising numbers and is investigated further in this subchapter. First, a definition is given and the measurement of overweight and obesity is presented. Furthermore, reasons and influencing factors will be discussed and finally, the stigmatization of overweight and obesity in Western society is addressed to show further significance for investigating this topic.

2.1.1 Definition and Measurement of Overweight and Obesity

The World Health Organization (WHO) (2013) defines overweight and obesity as *"abnormal or excessive fat accumulation that may impair health".* The organization created a formula for the calculation of the Body Mass Index (BMI), in order to relate weight and height. These relations are categorized and are used to create classes to diagnose underweight, normal weight, overweight

and obesity. The BMI is given by the person's body weight in kilograms divided by the height in meters squared. The equation is the following:

$$BMI = \frac{\text{body weight in kilograms}}{\text{height in meters}^2}$$

Formula 1 Calculation Body Mass Index (BMI) (WHO, 2015a)

In order to interpret the result, the WHO created a list of ranges and a categorization of the person's body weight and height relation. BMIs below 18.5 reveal underweight, the range from 18.5 to 25 classifies normal weight, and 25 to 30 counts as overweight. Any result above 30 is rated as obese. The following table gives more detail on the categorization.

Category	BMI
underweight	< 18.5
very severly underweight severley underweight underweight	< 16 16-17 17 - 18.5
normal weight	18.5 - 25
overweight	> 25
obesity	> 30
obese class I (moderately obese) obese class II (severely obese) obese class III (very severly obese)	30-35 35-40 > 40

Table 1: Classification of BMI for adults (WHO, 2013)

The classification can be used for adolescents and adults as well as for both genders. Nevertheless, for interpretation purposes it should be considered that women in general have a higher percentage of fat in their bodies and are generally shorter than men. Furthermore, professional athletes with higher amounts of muscle than the average person, tend to weigh more, since muscles are heavier than fat. Considering these differences, the table can be used for a reliable classification (WHO, 2013). The table cannot be reliably applied

to children. It can be considered as a guideline for development, but during the process of growth of children a separate table for girls and boys, considering developmental deviations, should be taken into consideration (WHO, 2015b, 2015c). The method of the BMI is one of the most popular. Nevertheless, using this method for research also brings disadvantages. The misreporting of weight is a crucial problem in this context (Gil & Mora, 2011). Alternatively, the hip-waist ratio method can be used. This method requires measurements of the waist and the hips of a person, and relates the two to each other in order to categorize a body into one of several categories. It is quite similar to the BMI method and the results of the hip-waist ratio also correlate highly with the outcomes of the BMI method (Gil & Mora, 2011). Moreover, the skinfold thickness measurement is also widely known. In order to measure how much fat is stored between the skin and the muscle, the skin is pulled away from the body and is pinched using calipers. This method is very time-consuming and needs calipers and advanced skills in order to deliver reliable results. Therefore, this technique seems inappropriate for larger sample sizes (Burkhauser, Cawley, & Schmeiser, 2009; Burkhauser & Cawley, 2008). Another instrument is the Area Mass Index (AMI). Besides body weight and height, the physique of a person is also considered. Studies have found that slimmer people compared to heavier people have a bigger body surface area per one kilogram and therefore, need more energy. The additional information of the body physique is needed in order to calculate the energy needed for each kilogram. Since it is quite a new method, there is only an approximation formula to determine the weight category more precisely, but no specific table is provided to simply categorize people (Schlich, Schumm, & Schlich, 2010). Indeed, this method not only needs one additional piece of information, but also requires a costly algorithm in order to calculate the more accurate result. Still, the BMI method is reliable and, compared to the other methods mentioned above, serves as a quick and cheap instrument for gaining insight into this body weight topic. Presumably, therefore, it is one of the most popular and frequently used in the research of body weight. In the following, body weight and BMI will be used as synonymous terms, since body weight has to be considered in relation to body height, in order to classify overweight or normal weight, which affects the variables and the relationship discussed in the empirical sections.

2.1.2 Influencing Factors

In this chapter, factors influencing body weight are listed. Even though literature covering the last 20 years has been used, no claim of completeness regarding influencing factors can be made. Nevertheless, the aim is to create a model showing the influencing factors of body weight.

Klaczynski and his research group (Klaczynski et al., 2004) have already gathered causes for a certain level of body weight and build the following three different categories:

1. Internal causes
2. Physical causes
3. Social causes

Internal causes are predominantly controlled by personal decisions. According to the authors of the study a person is responsible for their own weight and can decide how much they engage in sports, and decide on the nutrition they consume (what is eaten and how much?). This category is also ruled by the attitude towards and the evaluation of the own body weight (Klaczynski et al., 2004). Physical causes are governed by medical and genetic mechanisms. Body weight is not only influenced by the genes, but also by diseases and the overall state of health. Also, hormones play an important role regarding body weight (Klaczynski et al., 2004). Last, social causes refer to environmental determinants. The social surroundings, such as parents and family, friends or society, influence a person's behavior regarding nutrition and sporting activity and also determine a certain ideal body weight (Klaczynski et al., 2004).

These reasons only shed light on a few aspects possibly influencing body weight. Therefore, further studies and literature are considered to determine a wider range of influencing factors.
After consulting various studies six main factors can be stated:

1. Demographical criteria
2. Social identity
3. Nutrition
4. Physical health

5. Biological factors
6. Media

First, demographical criteria influence body weight. Gender determines the weight to a high extent. Women tend to weigh less than men due to their generally lower height (Klimont, Ihle, Baldaszti, & Kytir, 2008). International and Austrian studies show that women are less affected by overweight in general. This is due to a higher body consciousness and a better knowledge of nutrition. Nevertheless, women are more preoccupied with being affected by overweight than men (Gil & Mora, 2011; Klimont, Ihle, Baldaszti, & Kytir, 2008; Paeratakul, White, Williamson, Ryan, & Bray, 2002; Statistik Austria, 2015a, 2015b). Age is another factor, which exerts a strong influence on body weight. Over the past decades, more and more elderly people have started to suffer from overweight and obesity. Studies also lead to the assumption of a positive correlation of age and body weight (Baum & Ruhm, 2009; Klimont et al., 2008; Salihu, Bonnema, & Alio, 2009; Statistik Austria, 2015a, 2015b). Education plays an important role regarding body weight. Highly educated people are less at risk of suffering from overweight and obesity due to a better knowledge of nutrition and health (Costa Font, Fabbri, & Gil, 2010; Gil & Mora, 2011; Klimont et al., 2008; Statistik Austria, 2015a, 2015b). Occupation as well as income impinge on body weight. A higher income allows higher expenditures on healthy food. This also correlates with the level of education, since a higher education implies a better knowledge of nutrition. Therefore, people with a higher salary are less likely to suffer from overweight. Moreover, unemployment also influences the body weight. Due to the lower income, generally less money is available (Drewnowski & Specter, 2004; Johansson, Böckerman, Kiiskinen, & Heliövaara, 2009; Klimont et al., 2008; Ramezani & Roeder, 1995). The civil status and the number of children affect the body weight indirectly. Male singles are more often affected by overweight since they do not watch their nutrition as much as female singles. Married people or people living in a partnership suffer more often from overweight. This may be caused by a greater degree of coziness and less pressure felt to look attractive for a potential partner (Baum & Ruhm, 2009; Gil & Mora, 2011; Ramezani & Roeder, 1995; Statistik Austria, 2015a, 2015b). The number of children living in a household affects the body weight indirectly. Children affect the nutrition of the entire family and

therefore influence the body weight of all family members (Baum & Ruhm, 2009; Gil & Mora, 2011; Ramezani & Roeder, 1995; Statistik Austria, 2015a, 2015b). Ethnicity has also an influence on body weight. On the one hand, the genomes affect the body weight, on the other hand, culture impacts nutritional behavior (Baum & Ruhm, 2009; Burkhauser et al., 2009). Also, ethnicity affects the body weight indirectly, since the origin has an impact on the education, income and occupation (Ogden et al., 2006). All of the above-mentioned influencing factors may only indirectly affect the body weight, but do impact attitudes, knowledge and behavior and thus eventually, they contribute to body weight changes (Tajfel, 1982; Tajfel & Turner, 1979).

Second, social identity affects body weight in various ways. In general, the social group a person belongs to determines norms and values. Criteria regarding the body and ideal body shapes are defined. If a person matches the ideals of a group, the person does not see the necessity for change and the group supports this (Tajfel, 1982; Tajfel & Turner, 1979). Depending on the group, norms concerning sports and nutrition are different and members of this group adopt these norms. Therefore, body weight might be affected, depending on the group affiliation (Costa Font et al., 2010; Fowler & Christakis, 2009). For instance, a study shows that the choice of a lunchtime companion affects the amount of food someone ingests. If the accompanying person is overweight, the person, whether they are of normal weight or overweight, will consume more food (Hammond, 2010). Furthermore, the group identification is responsible for the body weight. A sporting group identifies predominantly with healthy nutrition; groups with overweight members tend to identify with unhealthy and fatty food. This identification process often first happens during childhood, consolidates during adolescence and leads to virtually unalterable behavior in adulthood (Craeynest, Crombez, De Houwer, Deforche, & De Bourdeaudhuij, 2006).

Third, as previously mentioned, nutrition is a very important factor affecting body weight. Nutrition knowledge is the essential foundation of nutritional behavior. The knowledge is influenced by many variables. Generally, it can be said: the greater the nutrition knowledge, the healthier the nutritional behavior, the healthier a person is and the lower the person's risk of becoming over-

weight (Barry, Brescoll, Brownell, & Schlesinger, 2009; Bell & Marshall, 2003; Craeynest et al., 2006; Drewnowski & Specter, 2004; Hammond, 2010; Klimont et al., 2008; Ramezani & Roeder, 1995).

Fourth, physical health is very important for body weight. Diseases can cause weight loss as well as gain. Furthermore, the behavior supporting the state of health is as important as the concern for the own health, guaranteeing that measures are adopted not only when diseases occur but also that preventive measures are taken. Furthermore, the knowledge of substances influencing a person's health negatively, such as nicotine, alcohol or other substances causing addiction, clearly also affects body weight (Baum & Ruhm, 2009; Costa Font et al., 2010; Craeynest et al., 2006; Gil & Mora, 2011; Klimont et al., 2008; Statistik Austria, 2015a, 2015b).

Fifth, biological factors play an important role in determining the body weight. Genes inform the outer appearance, height and the basic weight (Barry et al., 2009; Klaczynski et al., 2004).

Sixth and last, the media has a significant influence on body weight. Society determines a body ideal, which people try to conform to, but cannot, since most of the ideals depicted in the media are unattainable due to vast amounts of editing (Dittmar & Howard, 2004; Katzmarzyk & Davis, 2001; Owen & Laurel-Seller, 2000; Thompson & Stice, 2001). Furthermore, the media/TV consumption indirectly influences the body weight. Often, the media consumption substitutes exercising, team sports, or meeting with friends. This development can be observed among children in particular, who might not change their behavior during adolescence or adulthood (Barry et al., 2009; Marshall, Biddle, Gorely, Cameron, & Murdey, 2004). In the following graph, all the influencing factors are depicted.

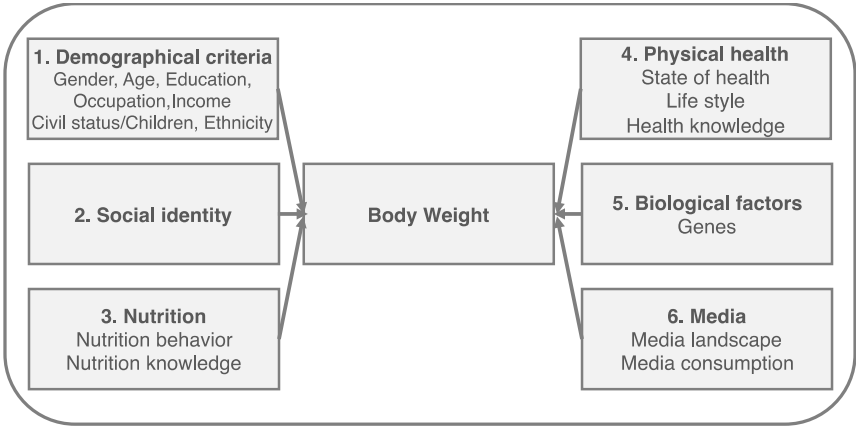

Figure 3: Influencing factors of body weight

All the above-mentioned determinants affect the body weight directly or indirectly, either to a higher or to a lower extent. It is impossible to determine a certain percentage of influence for each factor, since this is dependent on the individual. However, the collected factors are possible influencing variables and have to be taken into consideration when conducting research on overweight and obesity.

2.1.3 Stigmatization of Overweight and Obesity in Western Society

Every society creates norms and values for everyday occurrence in order to simplify life and to create a picture of the ideal society. Many norms are very useful, such as legislation or ways of behaving. These rules facilitate daily life and create a basis for society (Tversky & Kahneman, 1974). Other norms do not seem to be socially beneficial, since a mismatch results in the exclusion of various people from society. For instance, this is the case with outer appearance. Handicapped people but also overweight people seem to be excluded from societal life or at least treated differently. A study shows that especially people who look different, for example people from different cultural backgrounds, people in wheelchairs, people with malformations (especially in the face) and overweight people are affected most from being excluded from society, since they do not conform with the society's ideal (Wing & Jeffery, 1999).

Furthermore, the study reveals that all of the other groups mentioned above are rated as more positive than the group of overweight people. Overweight people were judged as the most impolite group and people attributed lower success rates to the overweight group (Wing & Jeffery, 1999). Other studies using children and adults as judges came to similar conclusions (Bell & Marshall, 2003; Crocker, Cornwell, & Major, 1993; Lerner & Korn, 1972).

The development of this ideal is shaped by the Western and individualistic culture. In this culture, people believe that achievements depend predominantly on the person himself/herself. Success in various areas such as academia, occupation or private life are a result of personal motivation to attain goals (Simmons & Rosenberg, 1971). Similar assumptions can also be found in other cultures, but in the individualistic society other influencing factors such as the surroundings (support from family, friends, etc.) or the economical background of a person are not considered (Klaczynski, 1991). The highly developed individualism and the issue of personal responsibility especially affect the lives of overweight people (Crandall et al., 2001; Crystal, Watanabe, & Chen, 2000). Media and society impart an ideal of slim, attractive and successful personalities, which is unattainable (Katzmarzyk & Davis, 2001; Owen & Laurel-Seller, 2000; Thompson & Stice, 2001). If a person fails to achieve this goal (ideal body), weakness and failure are attributed. Overweight people are depicted as unable to control their own body and consequently are connected to further failures in various areas of their lives such as in their professional lives (Crystal et al., 2000). The attribution and the negative associations are not only hardened in the mindset of society and the social environment, but also in the minds of the affected overweight people. This reinforces the assumptions and attributions of society and others (Bell & Marshall, 2003; Crandall et al., 2001; Thompson & Stice, 2001). People who think that overweight is a sign of personal failure, are frequently engaged in the development of social norms and beauty ideals. Others, who think that overweight could be caused by diseases, the social surrounding, genes or other factors, generally do not create prejudice, but also do not fight prejudice (Klaczynski et al., 2004). This behavior supports others in creating and disseminating their prejudices.

Age and attitude towards the social norms play an important role in the process of stigmatization. Young children adopt the societal ideals and try to conform to them and therefore keep them alive by living them. Elderly people care about other things more than beauty ideals, and therefore tend to be less critical and stigmatizing towards overweight people than younger people often are. A general critical attitude towards the ideal reduces the stigmatization and the criticism (Barry et al., 2009; Klaczynski, Daniel, & Keller, 2009). A study shows that, for instance, white women, who tend to adopt the ideal more often than Afro-American women, stigmatize overweight people more often (Hebl, King, & Perkins, 2009). Also, men do not stigmatize as much as women do, since they are less likely to adopt social norms (Hebl & Turchin, 2005).

Overweight does not only cause physical health problems, but also leads to social, emotional and psychological problems of affected people. Stigmatization controls lives; it can lead to negative situations, which are eventually avoided. Therefore, overweight people back down and try to integrate into groups of overweight (Lewis, Puymhroeck, & Education, 2008). The integration into a new group causes attitudinal changes as well as changes in norms and values. The rest of society still marginalizes the overweight society and this supports overweight people in their belief that they have made the right decision by integrating into their current group (Katzmarzyk & Davis, 2001; Owen & Spencer, 2013). This behavior only leads to a further separation of overweight and normal weight people. Even the fact that, especially in Western society, the proportion of overweight people now exceeds the share of normal weight people, does not reduce criticism and stigmatization. On the contrary, stigmatization happens on a daily basis. Therefore, overweight people try to conform to the norms and ideals, which are unattainable. This also affects the psychological well-being. Also, the fact that overweight people are less likely to get a job, since laziness is attributed to overweight people, affects the psyche of a person (Johansson et al., 2009). The experience of failure on a daily basis can lead to depression and other chronic psychic diseases (Bell & Marshall, 2003; Puhl & Heuer, 2010).

On the surface, weight reduction would seem to be easy – it only requires a person to eat fewer calories than the body needs (Etilé, 2007). However, this is

difficult to do, especially in Western society. Food is high in sugar and carbohydrates and generally, this type of food is cheap. As mentioned above, overweight can also be connected with a lower income, for example when people on a low income predominantly can only afford cheap food, which is high in calories. Moreover, the general tendency to include less sports in daily life also prevents a weight reduction. But the expectations of others regarding repeated failure at something can also prevent overweight people from losing weight (Sapp & Weng, 2007). Therefore, it can be concluded that stigmatization and negative attributions do not help in the struggle against overweight. On the contrary, they create psychological as well as physical discomforts and can also affect the self-esteem, which might affect society in the long run (Puhl & Heuer, 2010).

2.2 Self-Esteem

The media nowadays is ubiquitous and therefore it exerts an almost continuous influence (Statistik Austria, 2014). Over the past decades, many studies have focused on how media and the societal ideals such as the drive for thinness and slim bodies have influenced self-esteem and other body related psychological constructs (e.g. Fernandez & Pritchard, 2012; Grabe, Ward, & Hyde, 2008; Groesz, Levine, & Murnen, 2002; Hargreaves & Tiggemann, 2004; Hargreaves & Tiggemann, 2003; Jarry & Kossert, 2007; Park, 2005; Thompson & Stice, 2001; Yamamiya et al., 2005). Especially girls and young women feel the pressure of the media, the thin ideal and the drive for thinness, which is currently considered as the beauty ideal in Western society (Grabe et al., 2008; Groesz et al., 2002). The pressure affects the feelings one has about oneself, the body and the body image (Grabe et al., 2008; Groesz et al., 2002; Park, 2005; Yamamiya et al., 2005). Furthermore, it can affect the importance of the physical appearance, which eventually affects the self-esteem (Fernandez & Pritchard, 2012; Jarry & Kossert, 2007). Most studies have focused on body image, even though self-esteem can be affected too and has an impact on the life of adolescent girls in the long run. Therefore, research in this area is highly relevant.

2.2.1 Definition of Self-Esteem

Self-esteem is a well-researched construct, which is the focus of various disciplines and yields several controversial opinions about definitions and crucial areas to explain the construct (Bednar & Peterson, 1995). In the following, various theories acknowledged by research are presented in order to create a thorough definition of self-esteem within this thesis.

According to William James (1870; as quoted by Bednar & Peterson, 1995) the self is comprised of everything a person considers as part of the self ("part of me"). In case of an attack on parts of the self, a person feels debased. A deterioration only occurs, if parts are approached, which the person considers as parts of the self. This can vary from person to person, since the composition of the self is as individual as the person itself. In James' model three main parts shape the self-esteem (Bednar & Peterson, 1995):

1. Material self (e.g. body, clothes, family, house or car)
2. Social self (e.g. reputation, approval, appreciation or respect, mostly determined by others)
3. Spiritual self (e.g. appreciation of oneself)

The material self can grow, if a person owns many things, such as a car, a nice house, or has a beautiful face, or a slim body. According to James, this part of the self is mostly subjectively driven. In contrast, the social self is based on the opinion of others. People strengthen their social self by receiving appreciation, approval or respect from others, or if they are well regarded. This can occur both in the sphere of private life and in the working environment. The spiritual self can be positively influenced, if someone realizes that own ideas or discoveries last over time and affect another person. According to James, the strategy for gaining a high self-esteem lies in focusing on the parts that a person can individually influence and excludes unswayable parts of the self. A person has to find a balance between complete indifference and absolute importance of factors, which cannot be influenced in order to attain a stable sense of self-esteem.

In 1902 Charles H. Cooley (as quoted by Bhatti, Derezotes, Kim & Specht, 1989 and Bednar & Peterson, 1995) shaped the concept of the “looking-glass self”. According to this concept people define themselves according to the reaction of others. In order to guarantee high self-esteem, people adopt a behavior, which previously received positive reactions. Therefore, opinions and reactions of others continuously form self-esteem. Cooley determines a process of three steps influencing the self-esteem (in either a positive or a negative away):

1. Individual notion of how to present oneself in front of others
2. Individual interpretation how others reacted and how others evaluated the shown behavior
3. Personal reaction to the evaluation of others

The self-esteem adjustment depends to a large extent on the situation and also on the current mood.

In 1934 George Herbert Mead (as quoted by Bhatti et al., 1989 and Bednar & Peterson, 1995) extended the ideas of Cooley. According to Mead, self-esteem is based on the individual notion of how to present oneself in front of others. Therefore, self-esteem is determined by others and can be seen as a social-esteem, since in order to attain a high self-esteem the acknowledged social-esteem has to be achieved.

In contrast to Cooley and Mead, in 1951 Carl R. Rogers assumed that self-esteem is determined by own values and does not depend on the opinions of others. According to Rogers, an individual can attain a high self-esteem by being authentic in his or her social life and can be affected by others (as quoted by Bednar & Peterson, 1995).

Morris Rosenberg and Leonard Pearlin (Rosenberg & Pearlin, 1978) were the first researchers to combine these two contradictory theories. According to the authors, an individual determines the self-esteem himself/herself, but the definition depends on the evaluation of the self by others.

John P. Hewitt (Hewitt, 2002) extended Rosenberg's and Pearlin's theory and suggested that individuals determine their self-esteem depending on how much they accept certain groups and norms. Therefore, the evaluation and comparison process can result in different outcomes and can vary depending on the situation.

Summarizing the theories mentioned above, self-esteem is not only a construct influenced by oneself, but also by the social environment. It can be seen as a product of the community and environment, but is also created by the person him- or herself. In the following both factors, self-determination and heteronomy, are included in the construct self-esteem. The following definition applies to the thesis:

Self-esteem is "the positive or negative attitude towards oneself" (Rosenberg, Schooler, Schoenbach, & Rosenberg, 1995), which is based on the self and others. The levels of self-esteem can fluctuate in specific situations (Hewitt, 2002), nevertheless, people strive for high self-esteem levels and try to protect it and even increase the levels of self-esteem (Epstein, 1979).

2.2.2 Development of Self-Esteem

As mentioned in the above section, self-esteem is a construct that alters over time and needs to be acquired. In order to present this acquisition process in a clear and structured way, Erikson's psychosocial stages (1982) are used as guidance for the development of self-esteem. Also, on the basis of the psychosocial crises[1], changes in self-esteem levels can be described in detail. Moreover, studies focusing on self-esteem use this concept to categorize age groups (e.g. Fernandez & Pritchard, 2012; Jarry & Kossert, 2007).

According to Erikson (1982), every individual experiences certain stages and crises. The age ranges for the individual stages can vary from person to person

[1]Erikson uses the term crisis, since he believed that individuals have to overcome problems at every stage and therefore he deemed crisis to be an adequate term.

and have been, in recent years, subject to changes, since most of the stages actually take longer and therefore increase the ages for all the subsequent stages. The stages are:

1. Stage: Infancy; Crisis: Trust vs. mistrust (0 – 1.5 years)
2. Stage: Early Childhood; Crisis: Autonomy vs. shame (1.5 – 3 years)
3. Stage: Play Age; Crisis: Initiative vs. guilt (3 – 5 years)
4. Stage: School Age; Crisis: Industry vs. inferiority (5 – 12 years)
5. Stage: Adolescence; Crisis: Ego identity vs. role confusion (12 – 18 years)
6. Stage: Young Adult; Crisis: Intimacy vs. isolation (18 – 40 years)
7. Stage: Adulthood; Crisis: Generativity vs. stagnation (40 – 65 years)
8. Stage: Maturity; Crisis: Ego integrity vs. despair (from 65 years)

During the first stage, infancy, the child has not yet developed a sense of self and cannot differentiate. Therefore, the first stage can only impact the self-esteem by building trust or mistrust (Erikson, 1979; Marsh, Craven, & Debus, 1998). In the second stage, early childhood, the child starts to distinguish the self from others and has a certain self-concept. The child expresses this by claiming certain toys and wanting to possess certain things. Still depending on others, the child starts to be autonomous and can evaluate actions made by itself. A secure environment and support for autonomy create a solid foundation for a high self-esteem (Erikson, 1979; von Uslar, 2006).

The third stage, the play age, is dominated by self-evaluation. Not only physical abilities are at the center of the evaluation, but psychological factors also play an important role. Depending on the outcome of the evaluation (either positive or negative), the child can develop a positive or a negative view of itself. Parents can positively influence the development of the child's self-esteem by supporting their offspring to take initiatives (Erikson, 1979). During this stage, children do not have a high limit of tolerance and need to receive reception in order to develop a solid self-esteem. Since children cannot rank their actions, they can only evaluate themselves and decide whether they were successful or failed. Enduring failure can diminish the self-esteem and this should be avoided by parent's reception (von Uslar, 2006). During the fourth stage, school age, children start to compare themselves with other peers and are able to include

more than one person. Their comparisons are based on physical appearance, abilities and behavior. This is the first time that children base their self-esteem not only on their own evaluations, but also on the opinions of others. This can result in a strong decline of self-esteem. Therefore, parents should show children how to focus on positive aspects of the self (Marsh et al., 1998). This can lead to a stabilization of the self-esteem. In this stage, society and the media gain importance in the life of children and build a base for the self-esteem development. Ideals and norms are perceived and often adopted, but not challenged. If a child is able to adjust to this, it can result in a higher self-esteem level, since the child feels successful and adopted in the society it is living in (von Uslar, 2006). The fifth stage, adolescence, focuses on the development of the identity (Erikson, 1979). The confusion about the own identity causes a decline in the own self-esteem and can only be increased by the appreciation of others. Relationships and affiliations with groups are especially important to stop the decline. If an adolescent manages to be part of a group or enters the first relationship, this can increase the self-esteem. In case of failure, it drops again. In this stage, the self-esteem level is very volatile, since the adolescents have to gain a clear picture of who they are and what they want to be. Appreciation by parents is very important, so that teenagers are able to appreciate themselves (Rosenberg, 1965). During the sixth stage, young adulthood, the central crisis is about intimacy, with either friends or partners (Erikson, 1979). In this stage, young adults should be able to go through life events with a more or less stable self-esteem. A change of the self-esteem can be only caused by life-changing events (Rosenberg, 1965). The self-esteem is consolidated. The seventh stage, adulthood, does not affect the self-esteem anymore (Rosenberg, 1965). Adults are settled in their lives and focus on children, a professional career or on engaging socially (Erikson, 1979). The last stage, maturity, brings a decrease of the importance of the self-esteem. The self-esteem itself can remain stable, though it is very likely to decrease, but people still enjoy life by putting their focus on others rather than on themselves (von Uslar, 2006). The following figure summarizes the stages focusing on the development of self-esteem.

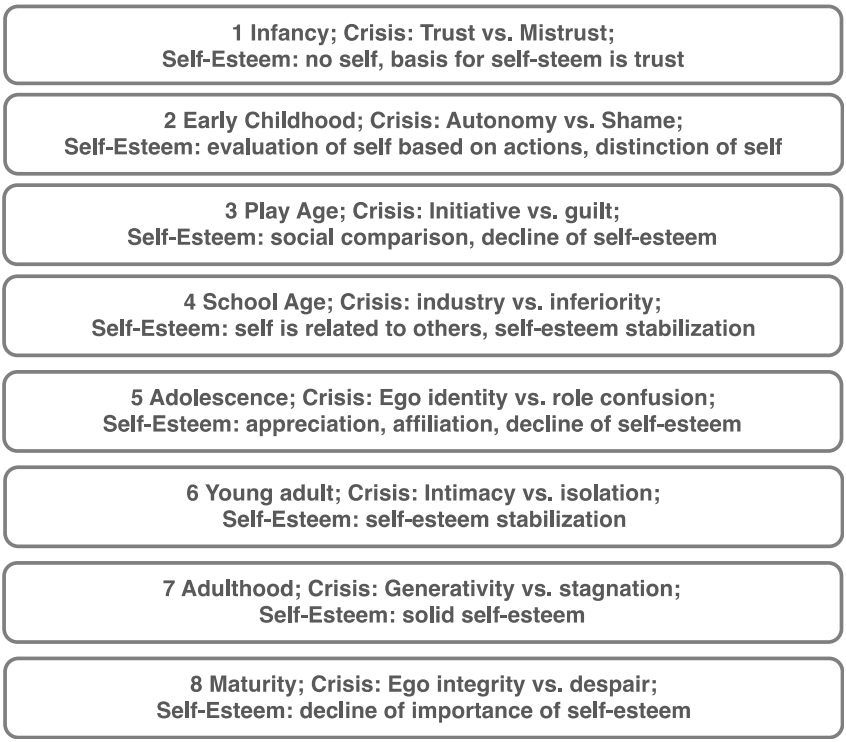

Figure 4: Psychosocial stages with a focus on self-esteem (Erikson, 1982)

2.2.3 Influencing Factors

Literature and studies from the last thirty years have been consulted to cover a broad range of influencing factors. A holistic list of influencing factors cannot be guaranteed. This part covers studies from the US, Europe, Asia and Australia. After gathering literature and studies, six key influencing factors can be listed:

1. Biological factors
2. Personal factors
3. Social environment
4. Cultural environment
5. Demographical criteria
6. Media

First, biological factors influence self-esteem. These predispositions are mainly unalterable, but can be developed further. Intelligence, physical appearance and the BMI are of high significance, especially in today's Western society. The physical appearance can determine the popularity and the integration into a social group. This, eventually, affects the self-esteem, since acceptance or rejection by others is a basic factor in the development of self-esteem (Coopersmith, 1967; Hymel et al., 1999). Also, the BMI and body weight define self-esteem. The genes and a certain body weight determine the body physique. If the physique and the body weight do not match the societal ideal, the person will not be accepted by the social group, which may result in a lower self-esteem (Bergstrom & Neighbors, 2006; Etilé, 2007; Fernandez & Pritchard, 2012; Franklin, Denyer, Steinbeck, Caterson, & Hill, 2006; Geller, Johnston, & Madsen, 1997; Klaczynski et al., 2004; Mendelson, White, & Mendelson, 1996; Mirza, Davis, & Yanovski, 2008; Rubinstein, 2006). Handicaps, of the mental and physical kind, impact the development of self-esteem and can also determine a certain level. Physical handicaps, which are seen instantly by others, can result in exclusion. Thus, the important social group and the acceptance of a social group are missing, which are crucial prerequisites for high self-esteem (Leary & Downs, 1995). To others, invisible handicaps can result in a lower self-esteem too, since the impairment can result in feelings of failure and a lower acceptance of the own body (Harrison, 1983). Biological factors lay the foundation of the development of self-esteem, since they determine social acceptance. Social acceptance is based on norms and values (Epstein, 1979), which are influenced by cultural backgrounds and will be discussed as an influencing factor at a later stage.

Second, personal factors are relevant for self-esteem. The personality of a person is unique and can face acceptance or rejection by others. An extroverted person is more likely to receive acceptance, since the outgoing personality helps to approach people. In contrast, feeling ashamed or worrying that they might be rejected hinders introverted people. A lack of appreciation and little contact to others might cause lower self-esteem levels. According to the personality model (Costa & McCrae, 1992), extraversion correlates with high self-esteem and high emotional stability. These attributes vary from culture to culture and are basically considered as desirable in an individualistic culture. In

collectivist cultures, other personality traits, such as prudency, support a development of a high self-esteem. Nevertheless, independently of cultural values, the personality is a highly important influencing factor of self-esteem (Francis & James, 1996; Rubinstein, 2006). Equally important for self-esteem are personal restrictions. During the age of puberty, teenagers are in a constant process of change. Skin impurities, the breaking of the voice, and physical changes are at the center of the attention, create insecurity, and can diminish the levels of self-esteem. A gain or a loss of weight during puberty also cause rejection by social groups and can affect self-esteem in the long run (Bergstrom & Neighbors, 2006; Etilé, 2007; Fernandez & Pritchard, 2012; Franklin et al., 2006; Geller et al., 1997; Klaczynski et al., 2004; Mendelson et al., 1996; Mirza et al., 2008; Rubinstein, 2006). Furthermore, psychological restrictions, be they permanent or short-lived, can affect self-esteem. Stuttering or depression can cause severe changes in the self-esteem levels, since they do not correspond to the norm and therefore result in social rejection (Yovetich, Leschied, & Flicht, 2000).

Third, the social environment is crucial for the development of self-esteem. The family is the most important factor in early stages and can affect the self-esteem essentially (Buri, Kirchner, & Walsh, 1987). Appreciation and respect are basics in the education about and for the development of self-esteem (Jacobs, 1983). A balance between expectations, explanations and self-initiative is important for the child in order to develop sufficient self-esteem and in order not to underestimate, but also not to overestimate himself/herself (Bednar & Peterson, 1995; Carlson, Uppal, & Prosser, 2000; Hughes, Cavell, & Grossman, 1997). During the next stage, friends and peers from school gain importance. Achievements in school and the acceptance of friends and social groups are very important for attaining high self-esteem (Hewitt, 2002). According to the Social Identity Theory (Tajfel, 1982; Tajfel & Turner, 1979), every individual seeks to belong, in order to be able to identify with and belong to someone/something. According to Coopersmith (1967), the role in this group is not the essential part for developing self-esteem, but essentially it is important to belong to the group and feel acceptance. In a next step, rank, status and authority become important for self-esteem (Bednar & Peterson, 1995). A higher self-esteem, already built up in family structures, simplifies the approach to-

wards and the acceptance of these groups, which supports high self-esteem and may even increase it. Conversely, receiving little appreciation from the family determines lower self-esteem rates and may cause higher barriers to enter a social group. Rejection and negative feedback result in a lower self-esteem. Therefore, family and friends are very important for the development of self-esteem (Hewitt, 2002). Academic achievements at school encourage people to develop high self-esteem. Praise from parents, teachers and probably others are the consequence, being promoters of high self-esteem (Covington, 1989; Heyman & Dweck, 1998; Jacobs, 1983). Furthermore, the partner and relationships influence self-esteem. This form of life matches the norms of Western society and therefore results in acceptance. In addition, the social and economic position influence self-esteem, since a high appreciation from others goes along with it. Also, sports and achievements in sport as well as the consequence of a slim and athletic body can affect self-esteem (Schmalz, Deane, Birch, & Davison, 2007; Slutzky & Simpkins, 2009). Again, this yields appreciation and acceptance from others.

Fourth, culture plays an important role for self-esteem. Culture affects a person, the family and the peer groups (Braun, 1983). Norms and values depend on the culture and build the foundation of what is appreciated and desirable. Therefore, self-esteem can vary in different cultures even if, for instance, a Japanese and a US-American student have the same grade in the same subject. In Japan, modesty is desirable and the individual is not as important as the group, therefore, the good achievement is not as important for the development of self-esteem. Whereas in Western society, the individual achievement is strongly connected to the self-esteem development (Hawkins, 1994; Hewitt, 2002; Klaczynski et al., 2004). Furthermore, the ethnical background is relevant for self-esteem. Studies have shown that Afro-American people have higher self-esteem compared to other ethnicities. The family and strong support from the family in particular create a solid foundation to be content with the own person and attain a higher self-esteem level (Gray-Little & Hafdahl, 2000; Hammond, 2010; Hebl et al., 2009; Hebl & Turchin, 2005; Kimm et al., 1997).

The fifth influencing factor comprises demographical criteria. Age is very important for self-esteem. As shown in the chapter before, self-esteem fluctuates

over the first decades, remains stable in young adulthood and adulthood, and at a certain age the importance of a high self-esteem decreases (Etilé, 2007; Hebl et al., 2009; Mendelson et al., 1996). Gender affects self-esteem, since traces of primary instincts among men to be strong and be self-confident still affect present society (Buss, 2004). Studies support this assumption (Francis & James, 1996; Franklin et al., 2006; Hebl et al., 2009; Hebl & Turchin, 2005; Mendelson et al., 1996; Phillips & de Man, 2010). Another explanation may be that men base their self-esteem on personal evaluation, whereas women focus on evaluations from others (Kling, Kristen, Hyde, Showers, & Buswell, 1999; Ponsoda, Abad, Francis, & Hills, 2008). Education is very important for high self-esteem. Education is highly deemed in many cultures and therefore brings along acceptance and appreciation. However, not only the fact of acceptance, but also the ability to reflect about actions can influence self-esteem. Furthermore, a higher level of education supports the pursuit of a desired career. This can also affect self-esteem levels (Geraty, 1983; Hewitt, 2002).

Finally, the sixth influencing factor is the media. Many studies show an influence of the media on self-esteem. The media transmit a societal ideal, which seems to be desirable but is hard to achieve. Not succeeding at attaining the societal ideal can result in low self-esteem (Fernandez & Pritchard, 2012; Gotlieb & Sarel, 1991; Hargreaves & Tiggemann, 2004; Klaczynski et al., 2004). The following figure summarizes the above-described influencing factors:

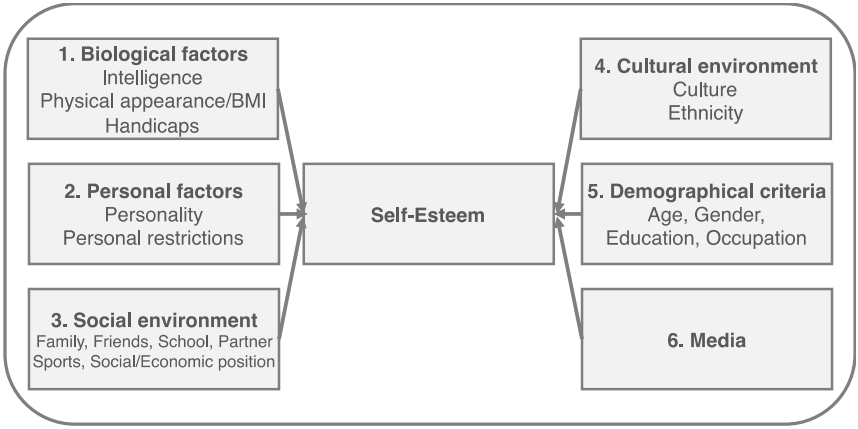

Figure 5: Influencing factors of self-esteem

It can be stated that the influencing factors are dependent upon each other and are in some places hard to separate. Furthermore, some of the factors are also caused by a lower self-esteem, therefore a one-directional influence cannot be assumed.

2.2.4 Measurement of the Construct Self-Esteem

The variety of influencing factors of self-esteem complicates the direct measurement of the construct self-esteem. The scientific community has come up with diverse ways to measure self-esteem. In the following, the three most common scales are presented.

First, the self-esteem scale of Rosenberg (1965) is an established scale in research. The scale consists of ten items and is very reliable (Cronbach's Alpha is from .80 to .87). Five items are positively coded and the others are reversed coded. Statements such as "On the whole, I am satisfied with myself" and "I am able to do things as well as most other people" are listed and people completing the scale are asked to agree or disagree on a five point Likert scale. The scale is a combination of self-evaluation and opinions about oneself and relations of a person to others. The fact that many authors have used this scale in their studies makes it an easily comparable scale. Moreover, the validity was

tested by a Canadian research group (Bagley, Bolitho, & Betrand, 1997). However, the scale has one flaw. The reverse coded items may change the answers of the probands and thus, might change the overall outcome of the scale. A study shows that an overall positive formulation results in a generally higher self-esteem than the original scale (Greenberger, Chen, Dmitrieva, & Farruggia, 2003). Nevertheless, the scale is well established and often used (Blascovich & Tomaka, 1991).

Second, another scale for measuring self-esteem was created by Coopersmith (1967). This scale is also widely used, but only practicable with samples willing to spend more time on the research, since this scale contains 50 items. The number of items guarantees a specific determination of self-esteem and the list is divided into four different categories: friends, parents, school and personal interests. According to these categories, a holistic self-image is created. Originally, the scale was developed for children and thus, is very easy to understand. In 1981, Coopersmith published a second revised scale containing only 25 items, which is used more often than the longer scale. This scale lists statements, which probands can agree or disagree with. However, other authors have criticized the scale, since only one out of two answer categories can be chosen (either yes or no or agree or disagree) (Blascovich & Tomaka, 1991). The answering format could potentially affect the outcome of the test (Bagley et al., 1997).

Third, the Texas Social Behavior Inventory (1974) is also a popular way to measure self-esteem (Helmreich, Stapp & Ervin, 1974). The scale consists of 32 items and measures self-esteem and social competency. Also, in 1974 the scale was split in order to guarantee an easier, quicker and more reliable measurement (Helmreich & Stapp, 1974). The scale is based on statements, which can be accepted or rejected on a scale from 0 to 4. The statements cover evaluations of oneself and the way others might see one. The reliability of the scale is ranked from .89 to .92 and therefore it is often used by the authors of other studies (Blascovich & Tomaka, 1991).
The three scales are widely used by US-American researchers as well as the scientific community as a whole. Nevertheless, even though the scales are reliable and have been validated, interpretations can only be made after reflect-

ing the outcomes. Since human beings answer these questions, mistakes can occur and have to be taken into consideration. The Rosenberg scale seems to be the simplest to reflect, since only ten items have to be checked.

2.3 Skepticism towards Advertising

Skepticism towards advertising is very important, especially nowadays. Since the number of media channels is confusingly high, the influence of the media and especially of advertising on people has increased over the past decades (Statistik Austria, 2014). Since skepticism towards advertising is a crucial prerequisite for processing advertising messages, the development in early years and over time is important (Mangleburg & Bristol, 1998; Obermiller et al., 2005; Obermiller & Spangenberg, 1998, 2000). Advertisements often depict their products as the best choice and conceal the negative aspects of the product (Boush et al., 1994; Obermiller & Spangenberg, 2000). Even though studies have shown that being honest with the customer can promote a positive attitude towards the product and may lower the skepticism levels (Crowley & Hoyer, 1994; Eisend, 2006, 2007), most marketers stick to the flawless presentation of their products, especially in the food advertising branch (Byrd-Bredbenner & Grasso, 2000; Warren et al., 2008). Therefore, competency in dealing with advertisements and the development of high skepticism towards advertising would be desirable, since it could affect the life style as well as the person's nutrition (Bates et al., 2009; Harris et al., 2009; Seiders & Petty, 2004). In the following subchapters, a definition of skepticism towards advertising is given, the development of the construct is described, and different ways of measurement of skepticism towards advertising are discussed.

2.3.1 Definition and Development of Skepticisim towards Advertising

The construct skepticism towards advertising is embedded in the research area of persuasion knowledge (Boush et al., 1994; Obermiller & Spangenberg, 2000; Wright, Friestad, & Boush, 2005). Knowledge about the persuasive intent of advertising and advertisement is a prerequisite in order to develop a

critical point of view and eventually, skepticism towards the advertisement (Robertson & Rossiter, 1974). According to Boush et al. (1994) skepticism towards advertising is multidimensional including the components disbelief in advertisers and mistrust in advertiser motives. An important prerequisite for skepticism towards advertising is the acquisition of cognitive skills accompanied by an understanding of the tactics that advertisers and marketers use to try to persuade the consumers (Roedder, 1981). Generally, from the time of understanding the tactics behind the persuasion of advertising claims, people develop a critical point of view. Therefore, Obermiller and Spangenberg (1998) define skepticism towards advertising as "the tendency toward disbelief in advertising claims". According to the authors, only some aspects of the advertisement message are mistrusted. Price information or retail location are widely accepted, whereas quality, durability or performance are questioned and are at the center of product scrutiny (Obermiller & Spangenberg, 1998). Overall, skepticism towards advertising remains stable over time and can be considered as one of the "overarching propositions that compose a consumer's implicit theory of how the marketplace operates" (Moore-Shay & Lutz, 1988). Outlining the definitions, the working definition of skepticism towards advertising for this paper is "the consumer's negatively valenced attitude toward the motives of claims and claims made by advertisers" (Boush et al., 1994; Obermiller & Spangenberg, 1998).

As mentioned above, certain prerequisites are needed in order to develop skepticism towards advertising. As in chapter 2.2.2 Development of Self-Esteem, the following section uses Erikson's psychosocial stages in order to determine stages in the cognitive development (prerequisite for skepticism towards advertising) of a person according to Piaget (1952, 1963). The first and the second stage form a base for intelligence and language (Piaget, 1952, 1963). Children are not able to reflect and think logically. Nevertheless, the process of thinking can be regarded as a foundation of skepticism towards advertising (Roedder, 1981; Valkenburg & Cantor, 2001). In the third stage, the child is still in the preoperational intelligence stage according to Piaget, but is already capable of speaking in full sentences and talking to others (Piaget, 1952, 1963). Children are not yet able to distinguish between the opinion of others and their own and, therefore, are not able to reflect about advertisers'

attempts of trying to persuade them and eventually develop skepticism towards that (Roedder, 1981; Valkenburg & Cantor, 2001). The fourth stage involves two steps of cognitive development. Slowly, the child can distinguish between own viewpoints and those of others, and can manipulate information mentally. This is the first milestone and a prerequisite for the development of skepticism towards advertising. This development leads to the concrete operational stage, which is predominantly situated around the age from 7 – 12 years. Children can now think logically and understand reversibility. They are able to perceive not only the most appealing and dominant stimulus in a situation. Even though children are able to distinguish between an advertisement and a program while watching TV, they are not able to perceive the marketers' or advertisers' intent to persuade them (Moscardelli & Liston-Heyes, 2005; Phillips & Stanton, 2004; Roedder, 1981; Roedder John, 1999; Valkenburg & Cantor, 2001). At this point of time children are able to formulate their own opinion, but cannot consider other viewpoints simultaneously and therefore are not aware of the persuasion attempt, unless they receive help and explanations from others (Brucks, Armstrong, & Goldberg, 1988; Tinson, 2009). Another fact, making the marketers' and advertisers' attempt harder to detect, is that children watch TV and advertisements with a lot of emotion. Since children are mostly driven by emotions and are only able to reflect external stimuli, or messages to be precise, to a certain point, they especially like advertisements, since they aim at the children's emotions and transfer happiness, joy and fun (Buck et al., 1995). In the fifth stage, the adolescent develops formal operational intelligence. Problem solving via metacognition is the key developmental factor during this stage and enables the development of skepticism towards advertising. Furthermore, the formal operational thinking qualifies for a more rational form of thinking rather than being emotionally driven (Buck et al., 1995). This fact is especially interesting for the development of skepticism towards advertising. Unlike the fourth stage, adolescents can rationally reflect the advertising message and build skepticism towards advertising. In the last three stages, young adult, adulthood and maturity, all prerequisites are provided in order to develop skepticism towards advertising. During these stages, other (influencing factors) are important and determine the levels of skepticism towards advertising, which are discussed in the next section. At the stage of young adults (18 – 40 years), some people may still be in the process of establishing and finishing prerequi-

sites for skepticism towards advertising, but most of the young adults have already finished the cognitive development in this regard. During the stage of adulthood (40 – 65 years), the skepticism towards advertising remains stable over time, as well as in the last stage of maturity (from 65 years), some people even become more critical than they used to be (Moore-Shay & Lutz, 1988;Phillips & Stanton, 2004). In the following figure, the eight stages focusing on the developing steps of skepticism towards advertising are summarized.

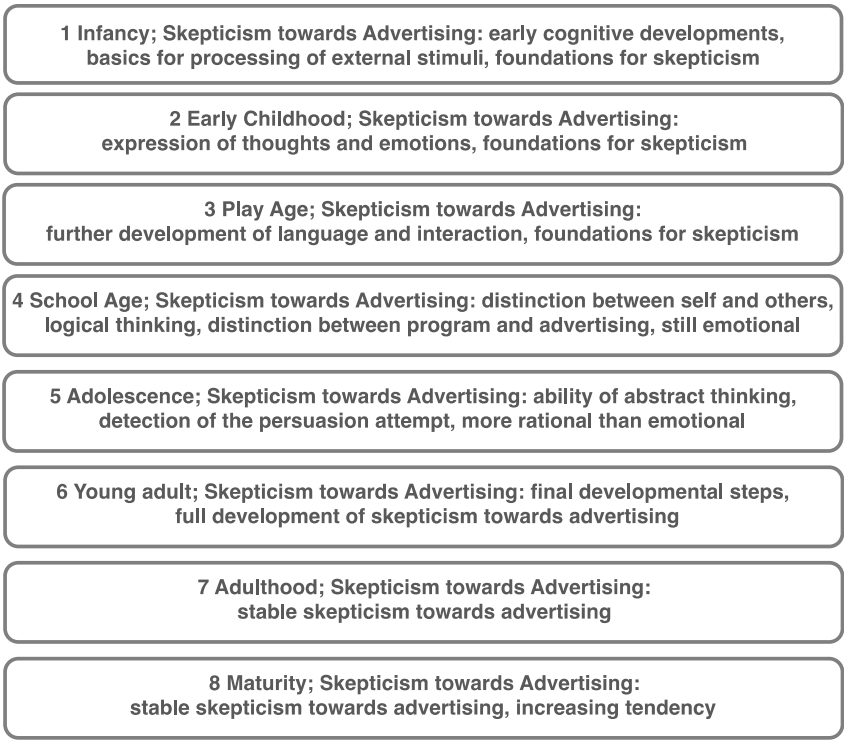

Figure 6: Psychosocial stages with the focus on skepticism towards advertising (Erikson, 1982)

2.3.2 Influencing Factors

Consulting literature from the past four decades, five factors influencing skepticism towards advertising can be listed. Again, there is no claim of completeness. The following influencing factors can be stated:

1. Demographical criteria
2. Personal factors
3. Social environment
4. Biological factors
5. Persuasion knowledge/Advertising literacy

First, demographical criteria influence the skeptical attitude towards advertising and advertisements. Age is one of the most influential factors of skepticism towards advertising. As already discussed in the previous subchapter, at the age from seven to twelve children develop logical thinking and can differentiate between their own opinions and those of others, but are not able to understand a persuasive attempt from the marketers' or advertisers' side (Moscardelli & Liston-Heyes, 2005; Roedder, 1981; Roedder John, 1999; Valkenburg & Cantor, 2001). The older a child becomes, the more competently it can deal with the persuasion, e.g. show skepticism towards advertising or the advertisement (Moscardelli & Liston-Heyes, 2005; Phillips & Stanton, 2004; Robertson & Rossiter, 1974; Roedder, 1981; Roedder John, 1999). Furthermore, gender has an impact on the level of skepticism towards advertising. A study (Buss & Schaninger, 1987) has shown differences in the intergenerational transfer of skepticism towards advertising by gender. The authors define "gender defined behaviors", which are not sex-related, but part of a socialization experience. Even though family roles and gender roles are changing, there is still a female majority occupied in doing the grocery shopping, even gift shopping (Bianchi, Milkie, Sayer, & Robinson, 2000; Solomon, 1996). By observing the behavior, girls adopt the mother's manner (Obermiller & Spangenberg, 2000). Another fact, contributing to different levels of skepticism towards advertising among men and women, may derive from a stronger orientation towards societal roles and ideals and a lower threshold for elaboration (Meyers-Levy & Sternthal, 1991; Meyers-Levy, 1988; Obermiller & Spangenberg, 1998). This can cause and result in lower skepticism levels among women compared to men (Prendergast,

Liu, & Poon, 2009). Moreover, education and income can affect the levels of skepticism towards advertising. The higher the education level, the higher the probable income and the more likely is the knowledge about the persuasive intent of marketers and advertisers (Phillips & Stanton, 2004; Prendergast et al., 2009; Roedder John, 1999; Valkenburg & Cantor, 2001).

Second, personal factors such as the personality, the general critical attitude a person has internalized or a person's self-esteem affect the levels of skepticism towards advertising. An extroverted person is more self-confident than an introverted person and can therefore question others' opinions more easily (Boush et al., 1994; Obermiller & Spangenberg, 1998). Moreover, the self-esteem level of a person determines skepticism towards advertising. A high sense of self-esteem decreases the need to look to others and their behavior in order to receive guidelines. Therefore, a person with high self-esteem can increase confidence in their own position and can show a higher level of skepticism towards advertising (Obermiller & Spangenberg, 1998; Rhodes & Wood, 1992). The general skepticism of a person, which is mainly influenced by the personality as well as self-esteem, impacts the specific skepticism towards advertising. If a person is generally not skeptical, it is unlikely that the person will show a high skepticism towards advertising and advertisement (Boush et al., 1994; Wright et al., 2005).

Third, the social environment determines the level of skepticism towards advertising. During childhood, the family shapes the (cognitive) abilities of a child and can therefore affect the skepticism towards advertising (Phillips & Stanton, 2004; Valkenburg & Cantor, 2001). The same influence applies to friends and the school (including teachers and the general environment at school). In order to belong, children adopt various attitudes and behaviors (Wright et al., 2005). Furthermore, partners play an important role in developing a certain skepticism level. People in relationships assimilate and adopt each other's opinions (Bush, Smith, & Martin, 1999). Therefore, this might also have an impact on the skepticism towards advertising level.

Fourth, intelligence can have an influence on skepticism towards advertising (Obermiller & Spangenberg, 1998; Rhodes & Wood, 1992). A more intelligent

person can discover a persuasive attempt more easily than a less intelligent person. The higher cognitive abilities make it easier to process the information and create an opinion (Obermiller & Spangenberg, 1998; Rhodes & Wood, 1992).

Fifth and last, persuasion knowledge and advertising literacy can also be considered as influencing factors. Whereas persuasion knowledge is more of a general construct and can also describe knowledge about persuasive attempts in many areas, advertising literacy targets the understanding of persuasive attempts in the advertising landscape. On the one hand, persuasion knowledge can influence the ability to detect the persuasion attempt of advertising or an advertisement and can therefore raise or lower the critical or negative attitude towards advertising or an advertisement (Brucks et al., 1988; Roedder, 1981; Roedder John, 1999; Valkenburg & Cantor, 2001). This is not only the case among children, but can also occur among adolescents and adults (Friestad & Wright, 1994), since the knowledge develops from a simplistic set of beliefs into a complex structure of implicit beliefs, varying from person to person (Wright et al., 2005). Therefore, persuasion knowledge seems to be a construct, possibly influencing the skepticism towards advertising over a lifetime. Advertising literacy, on the other hand, is the ability to recognize, evaluate and understand advertising (Malmelin, 2010). Therefore, it is a prerequisite but also an influencing variable over the entire lifespan. High levels of advertising literacy lead to the ability to deal competently with the messages of commercials (Spielvogel & Terlutter, 2013) and can lead to a higher level of skepticism towards advertising (Robertson & Rossiter, 1974; Roedder John, 1999).

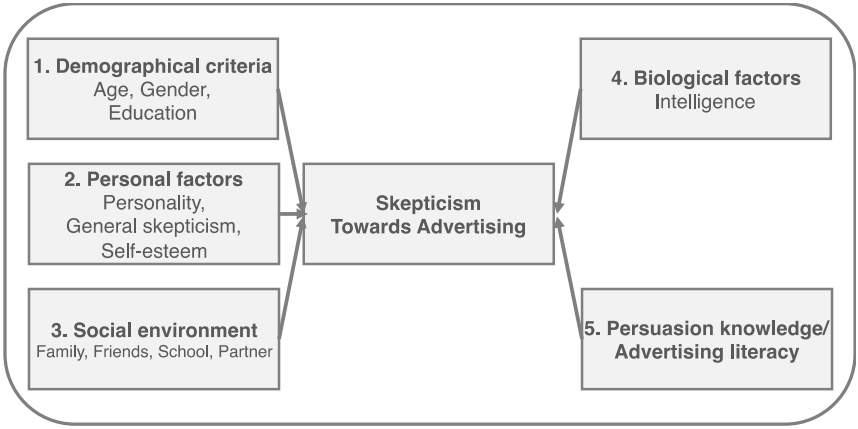

Figure 7: Influencing factors of skepticism towards advertising

The descriptions of the various influencing variables are overlapping and influence each other and the construct. Furthermore, the factors influencing skepticism towards advertising are hard to separate and the extent of the influence is difficult to assess.

2.3.3 Measurement of the Construct Skepticism towards Advertising

Like self-esteem, skepticism towards advertising is a construct, which cannot be measured directly or by asking one question. Therefore, the scientific community has created an operationalization means for skepticism towards advertising. First scales do not focus directly on skepticism towards advertising, but retrieve attitude towards advertising, and add items and questions gather information about the discrepancy between the viewers' and the advertisers' motives (Boush et al., 1994; Muehling, 1987; Sandage & Leckenby, 1980). Obermiller and Spangenberg (1998) developed a scale for skepticism towards advertising. The measure retrieves generalizable characteristics about advertising, rather than reactions to a specific ad or claim (Obermiller & Spangenberg, 1998). Furthermore, the authors describe the scale as a more limited (and specific) measure than other concepts such as attitudes towards advertising in general or attitudes towards marketing. The scale consists of nine items, which can be accepted or rejected using a five-point Likert scale. Items such as "We

can depend on getting the truth in most advertising" or "I feel I've been accurately informed after viewing most advertisements" deliver a general picture of skepticism towards advertising in general. The scale is validated and the Cronbach's Alpha ranges from .85 to .86, which can be regarded as very reliable (Obermiller & Spangenberg, 1998). Therefore, the scale is widely accepted and used in scientific research.

3 Theoretical Framework: On the Relationship of Body Weight, Self-Esteem and Skepticism towards Advertising

As put forward in the previous chapter, body weight, self-esteem and skepticism towards advertising share some influencing factors. These may be of special interest for further investigations, since they affect all three factors individually and therefore might cause changes in the relations of the three variables. Particularly, demographic criteria impact the three different variables. Age, gender and education seem to be the most important factors for the development of the constructs. In the studies underpinning the thesis, age is always restricted to a range of 20 – 50 years. According to the applied theory regarding the development of self-esteem and skepticism towards advertising, in this range people have stable levels of self-esteem and skepticism towards advertising and are not subject to developmental changes anymore or again (Franklin et al., 2006; Friestad & Wright, 1994; Moore-Shay & Lutz, 1988; Phillips & Stanton, 2004; Rosenberg, 1965). Gender and education are central to the research and are expected to emerge as the main influencing factors in this relationship. Furthermore, the umbrella term “social environment and media” includes factors, which impact all of the discussed constructs in particular ways. Body weight can be affected by the societal ideals and notions about the perfect body (Costa Font et al., 2010; Fernandez & Pritchard, 2012; Fowler & Christakis, 2009) and self-esteem might be influenced by a good or bad feeling, when (mis)matching the ideals (Fernandez & Pritchard, 2012; Gotlieb & Sarel, 1991; Hargreaves & Tiggemann, 2004; Hargreaves & Tiggemann, 2003; Klaczynski et al., 2004). Media can play an important role with regard to skepticism towards advertising due to the higher and ubiquitous penetration (Statistik Austria, 2014) and a resulting higher internalization of transmitted ideals (Wood-Barcalow, Tylka, & Augustus-Horvath, 2010). Therefore, the focus is put on differences transmitted by the media. First, the question is clarified whether and how different products influence the relationship of body weight, self-

S. Brauneis, *The Relationship of Body Weight and Skepticism towards Advertising*, Forschungsgruppe Konsum und Verhalten, DOI 10.1007/978-3-658-14861-4_3

esteem and skepticism towards advertising (Which product category does affect the relationship?). Second, the author seeks to establish whether the time/season of advertisements affects the relationship of the three constructs (Which time/season does affect the relationship?). Third and last, this research investigates if and how a potential influence can be lowered by using differently sized models in advertisements (What can be done to decrease an influence from the media on this relationship?). In the following subchapters, the individual connections of body weight/self-esteem, self-esteem/skepticism towards advertising, body weight/skepticism towards advertising and a mediating effect of self-esteem in the relationship of body weight and skepticism towards advertising is focus of the thesis. Subsequently, influencing factors of the relationships are discussed. Gender and education, products, season and model size are investigated. The following sections build hypotheses based on theoretical notions and serve as the base for the thesis' studies.

3.1 Body Weight and Self-Esteem

The direct connection of body weight and self-esteem has been the focus of many studies over recent decades. In the following section, the most important of these are listed chronologically. Subsequently, social norms and their internalization are presented. Next, the Self-Esteem Theory is discussed in detail in order to derive a hypothesis.

3.1.1 Studies of Body Weight and Self-Esteem

Study by Mendelson, White & Mendelson (1997)

Mendelson et al. (1997) conducted three different studies with different age groups in Canada. The participants were predominantly middle-class Caucasians and attended English-speaking public schools. All three studies focused on the connection between self-esteem, body-esteem and body weight. The first study focused on children at the age from 8 – 12 years, the second on the connection among children at the age of 14 and 15 years. The third study was a longitudinal study, investigating the connection of the variables over several

years based on the methods of the previous two studies. 379 children participated in study 1, ranging from 8 – 12 years of age (220 girls and 159 boys). Their relative body weight was calculated (actual body weight divided by the body weight appropriate for the age and the body height). The outcome showed a negative connection of body-esteem, self-esteem and body weight, but did not yield significant results. Study 2 used the same methods as study 1. In total, 85 teenagers (49 girls and 36 boys) participated. Generally, boys had higher self-esteem levels than girls. Moreover, the negative correlation of body weight and self-esteem increased and delivered significant results. Study 3 was a longitudinal study with two samples. The first sample was 8 to 10 years old at the first point of measurement and 10 to 12 years at the second, and the second sample was 11 to 13 years and 13 to 15 years, respectively. This study also delivered support for a significant relation between body weight and self-esteem.

Study by Geller, Johnston & Madsen (1999)

Geller, Johnston and Madsen (1999) related body shape, body weight and self-esteem and developed a scale based on their research. They conducted a survey with 110 female students (aged from 18 – 45 years) from Canada and asked them about attitudes and self-perception. The questionnaire included various aspects in order to determine self-esteem (e.g. relationships, body shape, body weight, academic competencies, personality, friendships, face, personal development and other competencies (other than academic)). The women had to tick important sources for their own self-esteem and rank them according to the importance they held in their lives. Furthermore, participants were asked about eating disorders, depression, social desirability, self-esteem according to Rosenberg, and their health. Results stated that almost half of the participating women listed body shape and body weight as the most or second most important attributes for their self-esteem. Generally, women who were unsatisfied with their body shape and weight revealed lower self-esteem levels.

Study by Miller & Downey (1999)

Miller and Downey (1999) conducted a meta-analysis based on studies conducted from 1970 – 1999, in order to calculate correlations for self-esteem and body weight. Generally, scales developed by Rosenberg or Coopersmith were

used and body weight was either measured with a set of scales or was self-reported. Gender distribution was often mixed, but the majority of the studies focused on women. A small number of studies focused on men exclusively. Moreover, the age range was broad and the probands' ethnicity was diverse. Calculations show a correlation of body weight and self-esteem of -.18, revealing a relatively low negative effect. However, the meta-analysis included an outlier of a South-African tribe. This tribe associates a high body weight with wealth and fertility and therefore calculations result in a strong positive correlation (r = .61), and this also affects the total correlation of self-esteem and body weight. A value excluding this study was not mentioned and therefore, only the value of -.18 can be referred to. Various correlation values regarding gender, age, ethnicity, social status and measurement method were discussed. Women always showed a higher negative correlation than men. Age also affected the correlation coefficient. During childhood a connection could be discovered, which became significant during the teenage years, and peaked at the age of 20 – 25 years. Ethnicity was also a determining factor. The correlation was higher among Caucasians than among any other ethnicity. A higher social status, such as a higher income, increases the correlation of body weight and self-esteem. Last, the method of measurement determined the strength of the correlation. Rosenberg's scale resulted in higher correlations (r= -.56) than Coopersmith's scale (r= -.30). In conclusion, all of the studies (except the South-African tribe study) support the negative correlation of self-esteem and body weight.

Study by Klaczynski, Goold & Mury (2004)

Klaczynski, Goold and Mury (2004) wanted to test whether the negative correlation of body weight and self-esteem can be detected in their sample. In total, 107 students (17 male and 90 female) from the US participated (mean age 19.23 years). Each participant reported body weight and height and filled out a questionnaire asking about self-esteem, body perception, reasons for overweight, attitude towards overweight, stereotypes of overweight, body ideal and attitude towards weight control. Furthermore, verbal skills were tested in order to retrieve global intelligence values. A correlation analysis showed that body weight and self-esteem correlated. Both variables also correlated with body

perception. Moreover, gender differences were detected. Women were more critical about themselves and consequently more critical of others.

Study by Mirza, Davis & Yanovski (2005)

Mirza, Davis and Yanowski (2005) conducted a survey about the connections of self-esteem, body perception and body weight in a Hispanic-American community. Children and adolescents (in total 113 people) aged from 10 – 18 years were surveyed in the US. Questions about current weight, desired weight and current and desired body shape were included in the questionnaire. The difference between the current and the desired weight/shape was defined as a score indicating dissatisfaction. Moreover, self-esteem was retrieved and body weight and body height were measured additionally. In total, more than 37% of the participants were overweight and 19% slightly overweight. The authors were able to determine a strong relation of body weight and self-esteem and a stronger desire for a slim body among girls.

Study by Franklin, Denyer, Steinbeck, Caterson & Hill (2006)

Franklin's research group (2006) conducted a survey in Australia with 2749 children aged from 9 – 14 years. They investigated the connection of self-esteem and overweight and surveyed the children with regard to self-perception, body perception, socioeconomic status, as well as measuring body weight and body height. Most of the participants (70%) were of normal weight, almost 20% were overweight and 10% were underweight. Mean comparison showed a decreasing self-esteem with higher body weight. This tendency was even stronger among girls than among boys. Also, social acceptance decreased with an increasing body weight, again more clearly evident among girls than among boys. Furthermore, the authors found a connection of body weight and body satisfaction. Results showed that even normal weight children were not satisfied with their bodies. Only underweight children showed satisfaction with their bodies.

3.1.2 Conclusion and Graphical Overview of the Studies

All studies support the assumption of a correlation of body weight and self-esteem. Furthermore, they show that a high body weight is connected to lower self-esteem levels. Moreover, the studies reveal an influence of age, gender, measurement method (scale used for retrieving self-esteem) and also consider whether the weight is measured on site or is self-reported. Nevertheless, all studies come to one conclusion: body weight and self-esteem are negatively correlated and overweight people have lower self-esteem levels. The following table summarizes the key points of the studies.

Authors	Title	Research questions	Method	Results
Mendelson, White & Mendelson, 1997	Self-Esteem and Body-Esteem: Effects of Gender, Age, and Weight	Is there a connection between self-esteem body-esteem, body weight, gender and age?	3 studies (Elementary school children, teenagers, longitudinal study) in Canada; Questions about self-esteem, measurement of body weight/height	Influence of gender, age and body weight on self-esteem and body-esteem
Geller, Johnston & Madsen, 1999	The Role of Shape and Weight in Self-Concept: The Shape and Weight Based Self-Esteem Inventory	Do body shape and weight impact self-esteem?	Survey of 110 female students in Canada; Questions about self-esteem, eating disorders, depression, social desirability, Rosenberg's self-esteem, health	Body shape and weight have a strong influence on self-esteem
Miller & Downey, 1999	A Meta-Analysis of Heavyweight and Self-Esteem	Which general effect does overweight have on self-esteem in 71 different studies?	Analysis of 71 studies; Calculations of correlations of self-esteem and overweight; Calculations of correlation coefficients	Negative correlation of self-esteem and body weight; Influencing factors: age, gender, ethnicity, income, measurement method
Klaczynski, Goold & Mudry, 2004	Culture, Obesity Stereotypes, Self-Esteem, and the „Thin Ideal": A Social Identity Perspective	Which connection do self-esteem and overweight have? Do negative overweight stereotypes, thin ideals, perceived reasons for overweight, control over overweight and body	Survey of 107 students in the US; Survey about body weight/height, stereotypes, ideals, reasons for overweight, control over overweight and body perception	Self-esteem and body weight correlate negatively; Connection depends on reasons for overweight
Mirza, Davis & Yanovski, 2005	Body dissatisfaction, self-esteem, and overweight among inner-city Hispanic children in adolescents	Which connection do body (dis)satisfaction, self-esteem and body weight have in a Hispanic population?	Survey of 113 children in the US with a Hispanic background; Questions about body weight, desired weight, self-esteem, body satisfaction, health status and nutritional behavior	Self-esteem and body weight correlate negatively; body satisfaction correlates with self-esteem and body weight
Franklin, Denyer, Steinbeck, Caterson & Hill, 2006	Obesity and Risk of Low Self-esteem: A Statewide Survey of Australian Children	Which connection do body weight and self-esteem have?	Survey of 2749 students (aged 9-14 years) in Australia; Questions about body weight/height, self-perception, body satisfaction and self-esteem	Negative connection of self-esteem and body weight; body satisfaction decreases with an increasing body weight; body satisfaction only among underweight participants

Table 2: Overview of the studies investigating the relationship of body weight and self-esteem

3.1.3 Social Norms and Internalization of Social Norms

“A norm is a construct that has widespread usage because it helps describe and explain human behavior” (Cialdini & Trost, 1998). Norms fulfill a regulating function in society (Cialdini & Trost, 1998). Mostly, norms in a society are laws. However, there are norms, which are passed on orally and can only be seen in the members’ behavior, such as social norms. Social norms are “rules and standards that are understood by members of a group”. These norms are mainly transmitted by social networks and are extensively adopted (Cialdini & Trost, 1998; Schultz, Nolan, Cialdini, Goldstein, & Griskevicius, 2007). This may be because groups are considered as a trustworthy source (Sherif, 1936). Research by Tversky and Kahneman (1974) showed that the group’s behavior provides a valuable heuristic and a simple foundation for decisions on how to act and behave. Therefore, people internalize social norms, in order to react quickly in line with the society’s norms (Tversky & Kahneman, 1974). Moreover, by accepting, internalizing and conforming to the social norms, people are accepted and can consequently belong to the community (Sherif, 1936).

Social norms for weight and appearance play an important role in today’s society, especially for women (Thompson & Stice, 2001), since they are highly valued attributes in Western society, associated with intelligence or success (Holmqvist Gattario, Frisén & Anderson-Fye, 2013). Therefore, many people strive for the beauty ideals, which are defined as the socially constructed notion that “physical attractiveness is one of women’s most important assets, and something all women should strive to achieve and maintain” (Baker-Sperry & Grauerholz, 2003). The media supports the striving for the ideal, since it predominantly portrays slim bodies (Strahan, Wilson, Cressman, & Buote, 2006), which only a low percentage of the female consumers has (Grabe et al., 2008). The ubiquitous body ideal in the media (Strahan et al., 2006) causes a body ideal internalization, which is defined as “the adoption of current body ideals as one’s personal standard of beauty” (Holmqvist Gattario et al., 2013). Consumers adopt this ideal in order to be accepted by the group and receive positive resonance with regard to their attitude (Groesz et al., 2002). This feedback and the current body weight often affect the self-esteem, which is especially im-

portant for the derivation of the next hypothesis as well as research question 1a.

3.1.4 Self-Esteem Theory

As already mentioned in the section 2.2 Self-Esteem, self-esteem is "the positive or negative attitude towards oneself" (Rosenberg et al., 1995). According to the Self-Esteem Theory, the attitude towards the self is stable over time, but can change due to situational influences, whereas the overall goal is to maintain or even raise the level of self-esteem (Cast & Burke, 2002; Heatherton & Polivy, 1991; Robins & Trzesniewski, 2005). Usually, children are capable of gaining self-esteem through different sources such as academic, athletic and social competencies, and physical appearance (Marsh 1990). According to the Self-Esteem Theory, failing at one or more of these categories leads to lower self-esteem. The extent of the decrease of the self-esteem level depends on the current basis of the self-esteem level and the compensation possibilities. Put simply, children stating a high self-esteem are more resistant and self-confident when compared with others, and are able to focus on their strengths in order to diminish their weaknesses (Cast & Burke, 2002). Children with a low level of self-esteem have a smaller source of self-confidence and therefore, are not able to concentrate on their positive traits and aspects. Consequently, failing in academic, athletic, social areas or outer appearance has a stronger impact on children with a low self-esteem level than on children with a high level of self-esteem (Cast & Burke, 2002; Marsh 1990; Rosenberg et al. 1989, 1995). Sources do not contribute equally to the self-esteem of a person. Depending on how much value a person places on specific attributes (e.g. physical appearance (especially body weight), social, academic or athletic competencies), the level of self-esteem may vary.

Society and the media are important factors in determining values and they are also important for the verification of individuals' identities and their level of compliance with society's ideals (Cast & Burke, 2002). The media provides ideals for physical appearance, especially regarding body shape, body weight and physical appearance. Physical appearance, including body weight, is instantly recognizable by others and is obviously one of the most important contributors to self-esteem. Individuals often adopt these ideals as a role model

function and incorporate the outer appearance and a low body weight as one of their highly ranked self-values (Bissell & Rask 2010; Park 2005). The pressure of society, the media and those individuals that have embraced the societal norms applied to persons not able or willing to look like society's ideal can lead to self-doubt (Bissell & Rask 2010). In most cases, people stigmatized by society already lack sources that encourage self-esteem, therefore they usually state a lower level of self-esteem and are more affected than people with a high level of self-esteem (Wilcox & Laird 2000). Even though individuals with a low self-esteem level have the chance to place more value on different traits, such as intelligence or social skills, they tend to match the societal role model due to the lack of self-esteem. In the case of failure, individuals with low self-esteem tend to be stigmatized by society once again and a vicious cycle starts (Rosenberg 1965).

3.1.5 Derivation of a Hypothesis

Miller and Downey's (1999) meta-analysis with data from more than 70 studies had indeed clearly demonstrated that individuals with higher body weight tend to have lower self-esteem. Lower self-esteem might also cause a greater degree of internalization of the societal ideals (Boush et al., 1994). Individuals often adopt these ideals as a role model function and incorporate the external appearance and low body weight as one of their highly ranked personal values (Bissell & Rask, 2010; Park, 2005). In addition, overweight people are more likely to be stigmatized by other members of society, which can further reduce self-esteem (Hebl & Turchin, 2005; Hebl, King & Perkins, 2009). Therefore, we hypothesize:

H_{1a}: Overweight people have lower self-esteem than people of normal weight.

The following graph depicts the connection graphically.

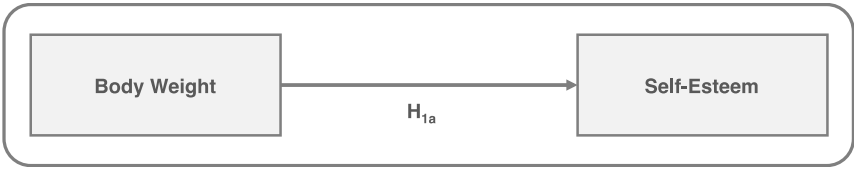

Figure 8: Hypothesis 1a: The connection of body weight and self-esteem

3.2 Self-Esteem and Skepticism towards Advertising

The connection of self-esteem and skepticism towards advertising has not been as intensively investigated as the connection of body weight and self-esteem. Two different research groups have focused on the influence of self-esteem on skepticism towards advertising. As before, in this section no claim of completeness is asserted. In this subchapter, the two studies of the research groups are presented and a conclusion is drawn, while a graphical overview of the studies is also given. In conclusion, a hypothesis is derived based on the studies' results and the Self-Esteem Theory.

3.2.1 Studies of Self-Esteem and Skepticism towards Advertising

Study by Boush, Friestad & Rose (1994)

Boush, Friestad and Rose (1994) conducted a longitudinal study with middle school students from the USA (aged from 12 - 14 years). In total 426 students filled out a questionnaire. The questionnaire was administered twice, in the first and last week of the school year. The intention was to gain an insight into change occurring over time and to be able to conduct a cross-sectional analysis by grade. The students had to answer questions about beliefs about advertiser tactics, attitudes toward television advertising and self-esteem and consumer susceptibility to interpersonal influence. Furthermore, they indicated gender, grade level and an approximate number of hours of television watched in a week. The main research questions were about the development of knowledge about advertiser tactics, the development of skepticism towards advertising, the relation of knowledge about advertiser tactics and skepticism to-

wards advertising, the relation of self-esteem and skepticism towards advertising and the connection of skepticism towards advertising and consumer susceptibility to interpersonal influence. Analyses have shown that the knowledge about advertiser tactics developed in time and students gained an understanding over the course of the school year. The skepticism towards advertisers' motives did not change over the school year. However, students' believability levels with regard to advertising decreased. Furthermore, the relation of skepticism towards advertising and knowledge about advertiser tactics was tested and resulted in a positive correlation. The same applied to self-esteem. The higher the self-esteem, the higher was the skepticism towards advertising. Moreover, the authors found a negative correlation of consumer susceptibility to interpersonal influence and skepticism towards advertising. Overall, the authors were able to find support for the assumptions that self-esteem and skepticism towards advertising are correlated positively and that a higher age results in higher skepticism towards advertising, since a better understanding of the advertiser tactics is given.

Study by Prendergast, Liu & Poon (2009)

Prendergast, Liu and Poon (2009) conducted a study with a structured questionnaire and surveyed 200 Hong Kong shoppers in mall intercept interviews. The authors sought to achieve a sample with a complete range of ages and occupations and this was reached by conducting interviews in three different malls in Hong Kong. The sample was random, but systematic. The study was conducted in English, so only English-speaking Hong Kong inhabitants could participate. In total, 15 product and service advertisements had to be evaluated with regards to the perception of the credibility by the participants. Furthermore, ten types of media were listed and probands were asked to give their opinion on the credibility of the different media. Skepticism towards advertising was retrieved and self-esteem and the influence of social desirability on the subject's responses were part of the questionnaire. Concluding, demographic data such as gender, age, education and income were recorded. The aim of the research was to identify credibility or a lack of credibility with regard to various types of products and services. Furthermore, the authors wanted to know, which media type was considered most serious and they also tested the relation of skepticism towards advertising and self-esteem in this research. The

authors assumed that the claims of weight-loss products would be perceived as less credible compared to any other products or services (such as cosmetics, health food, real estate, insurance, banking services or movies). Moreover, they claimed that the radio, broadcast and cable television were the most credible advertising media, whereas direct mail and the Internet are deemed to be the least credible. Last, they posed a positive relation between self-esteem and skepticism towards advertising and predicted social desirable responding as a control variable. Analyses supported the expected results. Weight-loss products were perceived as the least credible products. Also, radio and TV were considered as the most credible and Internet and direct mail were perceived as the least credible forms of media. Analyses showed an influence of gender, income and education on skepticism towards advertising. Furthermore, calculations revealed that self-esteem had a positive influence on skepticism towards advertising. Also, the assumption that participants would answer according to social desirability could be supported. This research group also found support for a positive relation of self-esteem and skepticism towards advertising.

3.2.2 Conclusion and Graphical Overview of the Studies

Indeed, only two studies can be found that focus on self-esteem and skepticism towards advertising, but both studies arrive at the same results, which state that a high self-esteem level leads to a higher level of skepticism towards advertising. The studies were conducted in two different cultures, the USA and Hong Kong (even though this part of China is more orientated to the West, it is nevertheless different to the Western culture), and still, this effect could be seen. Therefore, it might be interesting to conduct another survey in Europe and examine whether this connection is also present, for example, among the Austrian population. The following table summarizes the studies' main facts.

Authors	Title	Research questions	Method	Results
Boush, Friestad & Rose (1994)	**Adolescent Skepticism toward TV Advertising and Knowledge of Advertiser Tactics**	How do knowledge about advertiser tactics and skepticism towards advertising develop? How are knowledge about advertiser tactics, self-esteem and skepticism towards advertising related?	Study with 426 middle school students (aged 12-14 years); Questions about beliefs about advertiser tactics, attitudes toward television advertising, self-esteem and consumer susceptibility to interpersonal influence	Knowledge about advertiser tactics changes; skepticism towards advertising remains stable; knowledge about advertiser tactics and self-esteem are positively correlated
Prendergast, Liu & Poon (2009)	**A Hong Kong study of advertising credibility**	How credible are various product/service types? How credible are various media channels? How are self-esteem and skepticism towards advertising related?	Survey with 200 Hong Kong shoppers; Questions about the evaluation of the credibility of 15 products/services, various media channels, social desirability, self-esteem and skepticism towards advertising	Weight-loss products are the least credible compared to other products/services; Radio and TV are the most credible and the Internet and direct mail are the least credible media channels; Self-esteem and skepticism towards advertising are positively related

Table 3: Overview of the studies investigating the relationship of self-esteem and skepticism towards advertising

3.2.3 Derivation of a Hypothesis

As outlined in Chapter 2.3 Skepticism towards Advertising, skepticism towards advertising is a general tendency towards disbelief of advertising (Obermiller and Spangenberg 1998; Obermiller, Spangenberg and MacLachlan 2005), defined as the consumer's negatively valenced attitude toward the motives of and claims made by advertisers (Boush et al., 1994). According to the Self-Esteem Theory (Cast & Burke, 2002), a certain level of self-esteem is required, in order to develop skepticism towards advertising (Boush, Friestad and Rose 1994). People with low self-esteem tend to trust the judgments, opinions, ideas and views of others rather than their own and hence, people with a lower level of self-esteem tend to doubt advertising less and lack the self-confidence to challenge the advertiser's attempts of persuasion (Boush, Friestad and Rose 1994). Therefore, people with a low self-esteem are more likely to model the behavior of others and imitate society's norms. Thus, they accept norms shown in the media and therefore, might be less skeptical towards advertising than people with a higher level of self-esteem. The following hypothesis is posed and is depicted graphically in the following figure:

H_{2a}: People with a low level of self-esteem are less skeptical towards advertising than people with a high level of self-esteem.

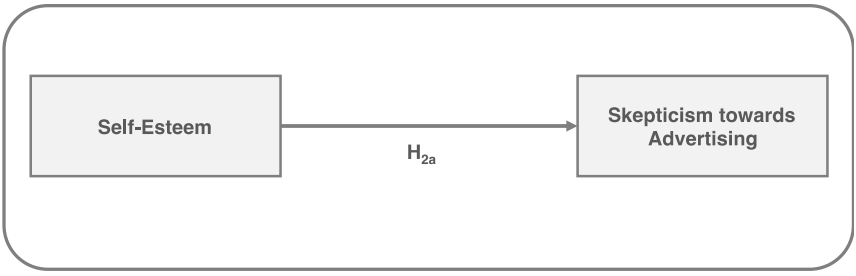

Figure 9: Hypothesis 2a: The connection of self-esteem and skepticism towards advertising

3.3 Body Weight, Skepticism towards Advertising and the Mediating Role of Self-Esteem

To date, the direct connection of body weight and skepticism towards advertising has not been the focus of any study (to the author's knowledge). Not only can the indirect effect of body weight and skepticism towards advertising via self-esteem be interesting, but the same also applies to the direct effect excluding self-esteem. Due to the slim beauty ideal prevalent in society (Dittmar & Howard, 2004; Fernandez & Pritchard, 2012), people might focus on the outer appearance in order to create self-esteem, rather than on other consequences. Therefore, body weight might be the crucial influencing factor for self-esteem and may be as important for skepticism towards advertising as self-esteem itself. In the following subchapter, the Social Cognitive Theory is discussed, since the theory as well as the previously mentioned social norms, body ideals as well as the internalization of those, form the basis for the upcoming research question and hypothesis.

3.3.1 Social Cognitive Theory

According to Bandura's Social Cognitive Theory (1994), people learn through observing and modeling the behavior of others. The process of learning starts in early childhood and is divided into two different stages, which are again subdivided into two processes each. The first stage has an observational character. First, attention is required in order to observe behaviors. The second step, retention, covers the cognitive part. The child needs to be able to observe behavior and conclude consequences, store this as a symbol and remember and access this memory at a certain point of time in the future. In the second stage, production and motivational processes build the two processes. Production means that the child is able to retrieve a symbolic representation of the observed behavior and reproduce it and apply it to the current situation. This causes reaction and leads to the motivational process. If the reaction is positive, the behavior will be reenacted, in case of negative feedback the behavior is unlikely to be repeated (Bandura, 1991; Bussey & Bandura, 1999). This behavior remains over time and can be observed among adolescents and adults

too. This means that adults also copy the behavior as well as social norms in a society in order to receive positive feedback (Bussey & Bandura, 1999). Therefore, the theory might also be crucial for the derivation of the hypothesis in the following chapter.

3.3.2 Derivation of a Research Question and a Hypothesis

From the 1960s onwards, media and society started to change the norms of the societal body ideal (Katzmarzyk & Davis, 2001; Wiseman, Gray, Mosimann, & Ahrens, 1992). Since the 1970s, a slim body is desirable as far as media and society are concerned (Katzmarzyk & Davis, 2001). Models depicted on covers of magazines, on TV, billboards, etc. are predominantly underweight (with regards to their BMI) and embody the societal ideal (Katzmarzyk & Davis, 2001). Nowadays, the slim ideal is established throughout gender and age groups (Grabe et al., 2008; Murnen et al., 2003; Park, 2005; Puhl & Boland, 2001; Tovée & Cornelissen, 2001). A study shows that children aged from 6 to 12 years are aware of the existing societal ideal, have adopted the slim ideal and even want to become like their highly appreciated role model in the media (Murnen et al., 2003). Even though boys and girls have internalized the ideals at similar levels, girls feel under much greater pressure than their male schoolmates. Even though the objectification of men in media has increased ("drive for muscularity"), the focus of the slim ideal still lies on the women. Therefore, girls start feeling pressure to look alike (Knauss, Paxton, & Alsaker, 2008). Furthermore, many studies with adults have shown that women internalize the ideal more often and more easily than men and therefore feel greater pressure to match the slim body and the physical attractiveness (Dittmar & Howard, 2004; Thompson & Stice, 2001; Yamamiya et al., 2005). The objectification of the female body in the media and advertising can cause more than merely a decrease in self-esteem. Studies report mental as well as physical changes (Dittmar, Halliwell, & Ive, 2006; Dittmar, 2009; Halliwell, Dittmar, & Howe, 2005; Holmqvist & Frisén, 2012; Percy & Lautman, 1994; Thompson & Stice, 2001). Mental diseases such as depression and eating disorders lead to physical changes such as weight losses or gains (Abraham, 2003; Mandal, 2010; Percy & Lautman, 1994). Women feel pressure to match the societal ideal, since an

accordance with a low body weight is linked to success in various areas of life, happiness and social acceptance (Holmqvist & Frisén, 2012). Furthermore, the pressure is boosted by the expectations of others. Men have high expectations with regard to women's bodies and physical appearance and this fact makes women feel even more pressure to correspond to the slim societal ideal (Hebl et al., 2009; Hebl & Turchin, 2005; Knauss et al., 2008). But men are also confronted by higher expectations in pursuit of an athletic and muscular body. A study has shown that this pressure is growing, but men are not as deeply affected as women (Hebl & Turchin, 2005).

As previously outlined in Chapter 2.2, self-esteem can be derived from different sources (academic, athletic and social competencies and physical appearance). In Western society, physical appearance (Bissell & Rask, 2010; Dittmar & Howard, 2004; Halliwell et al., 2005) as well as body weight are of considerable importance for people (Tovée & Cornelissen, 2001). Due to the high internalization of the societal ideals and norms, more value might be put on the physical appearance than on other sources in order to create and determine the own self-esteem. Regarding the studies by Fernandez and Pritchard (2012) and Wood-Barcalow, Tylka and Augustus-Horvath (2010), overweight people tend to a higher internalization of societal ideals and norms. This fact can support the assumption that overweight people put more value on the physical appearance, since they have adopted the societal norms, focusing on a slim and flawless physical appearance to a greater extent than normal weight people. Furthermore, the studies by Boush et al. (1994) and Prendergast et al. (2009) show a direct effect of self-esteem on skepticism towards advertising. Lower self-esteem levels cause lower levels of skepticism towards advertising. The value shift of sources of self-esteem (to physical appearance due to the internalization of societal ideals) might cause a general lower self-esteem level and therefore, lead to lower skepticism levels. Since the internalization might lead to an equation of self-esteem with physical appearance (e.g. body weight), a direct relation of body weight and skepticism towards advertising might be the case. According to Bandura's Social Cognitive Theory (1994), people observe others and depending on their self-esteem, the level of motivation to imitate the behavior of observed (especially attractive and powerful) people varies. There-

fore, people with low self-esteem are more likely to model the behavior of others and imitate society's norms. For instance, an overweight person who has internalized the societal ideals, puts much more value on the physical appearance and does not focus on other alternative sources for holding or raising the level of self-esteem. If this person is exposed to advertising, which reflects the internalized ideals, this might act as a trigger, diminishing the level of self-esteem due to the high body weight. Since the self-esteem is mainly derived from the physical appearance (e.g. body weight), the high body weight causes lower levels of skepticism towards advertising, rather than the low self-esteem itself. Therefore, the following research question is proposed, which can be seen in the following figure graphically:

RQ1a: Is there a direct connection between BMI and skepticism towards advertising? Do overweight people have lower levels of skepticism towards advertising than people of normal weight?

Figure 10: Research question 1a: The connection of body weight and skepticism towards advertising

As outlined above, people can draw their self-esteem from different sources. If a person acquires self-esteem primarily from their physical appearance, a higher BMI is likely to lead to less skepticism towards advertising. However, if a person draws self-esteem from other sources, such as social, athletic or academic competencies etc., instead of their physical appearance, self-esteem likely mediates the relationship between body weight and skepticism towards advertising. For instance, if a person has a high body weight, but still has high

self-esteem and may even feel comfortable with a high body weight, self-esteem may mediate the influence of body weight on skepticism towards advertising, because the presence of a higher self-esteem may be more important in determining the level of skepticism towards advertising than being overweight. In addition, high self-esteem can support doubts about the societal ideals and appearance norms often reflected in advertising, which contribute to a higher level of skepticism towards advertising (van den Berg et al. 2007; Holmqvist & Frisén 2012; Wood-Barcalow, Tylka & Augustus-Horvath 2010). Therefore, it is expected that self-esteem has a mediating influence on the relationship between BMI and skepticism towards advertising.

H_{3a}: Self-esteem mediates the relationship between BMI and skepticism towards advertising.

In the following figure, the mediating effect of self-esteem on the relation of body weight and skepticism towards advertising is depicted.

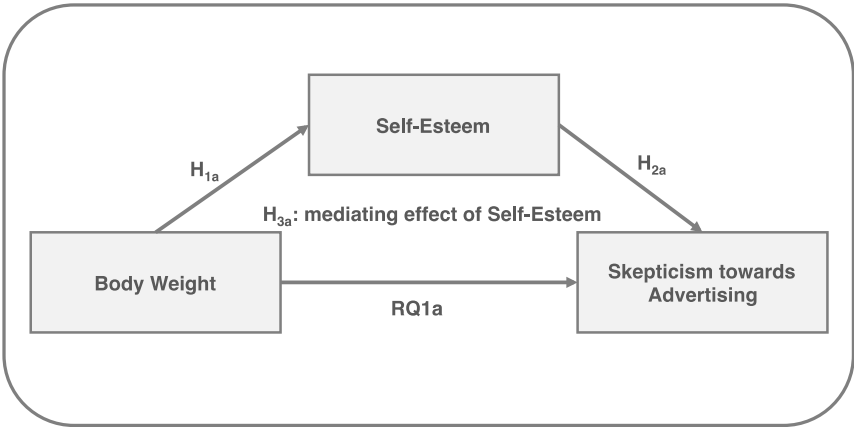

Figure 11: Hypothesis 3a: Mediating effect of self-esteem on the relation of body weight and skepticism towards advertising

3.4 Factors Influencing the Relationship

In the following section, demographic variables as well as differences transmitted by the media, such as different products (with different associations), different advertisements according to the seasons and different model sizes are discussed. In each subchapter, hypotheses are derived based on exclusively specific theoretical approaches.

3.4.1 Gender as a Moderator in the Mediating Relationship

Considering the results of the extended literature review concerning the influencing factors of the three key variables of this thesis, gender emerged as an important influencing factor. This section is dedicated to gender theories deriving from differences in gender regarding the relationship of body weight, self-esteem and skepticism towards advertising.

3.4.1.1 Gender Theories

Research in gender is vast and several major theories have emerged. The theories can be roughly divided into three different areas: biological, psychological and sociological. Biological theories discuss gender differences based on the biological roles men and women have regarding reproduction. Psychological theories cover intra-psychic processes, which possibly create gender differences. Last, sociological theories focus on sociostructural determinants causing a different gender development. The most important and most adequate theories are presented as a foundation for the upcoming hypotheses.

Biological Theories: Evolutionary Theory

In this thesis, only this one aspect of evolutionary differences of biological theories is considered, since it is deemed to be most relevant for the topic dealt with in this paper. Regarding the evolutionary theory, gender differences are ancestrally programed (Buss, 1995). Differences in terms of reproductive strategies and investment in the offspring have caused gender differences over

time and through adoption can still be seen in society today. Men did not have to contribute as much time to the reproduction process, and therefore, were able to have multiple partners. However, they were always exposed to the risk of raising and parenting a child, who is not their own. Therefore, they were cautious about donating too much time and limited the parenting to a minimum. Women, by contrast, had to carry the child and therefore invested much more time than men. Since the manner of reproduction has not changed over time, the roles in the reproduction have remained similar. Women adapted to their highly involved role in reproduction and preferred reliable long-term providers resulting in fewer sexual partners, whereas men attempted to maximize their chances of successful reproduction with numerous, young and physically attractive (suggesting high fertility) partners (Bussey & Bandura, 1999). Over time monogamous structures have become established in Western society. Nevertheless, some relics of the behavior can also be observed in today's society. A study by Buss and Schmitt (1993) shows that many men prefer physically attractive and young women as mating partners, whereas other characteristics, such as financial security or reliability, are more important for many women (Buss & Schmitt, 1993). This fact may be especially important for gender hypotheses.

Psychological Theories: Cognitive-Developmental Theory

According to Kohlberg's theory (1966), children's gender learning involves three stages: gender identity (the ability to label oneself as a girl or boy), gender stability (recognition that gender remains constant over time) and gender consistency (gender is invariant despite changes in dressing, activities or appearance). These three levels have to be achieved in order to be able to understand gender concepts. Children consider stereotypes in their surrounding in order to create stereotypic conceptions. As soon as they have reached gender constancy – the assumption that the own gender is irreversible and fixed – children try to achieve congruency with their observed gender conceptions. The pursuit of congruency leads to cognitive consonance, which is rewarding for the person and also enhances the probability of behaving consistently regarding the self-conception. Even though Kohlberg's theory has never been fully proven, other studies support gender-linked cognitive development. They have shown that children, even without having a notion about gender concep-

tion, prefer gender-linked activities and can distinguish between masculine and feminine (Bussey & Bandura, 1984, 1992). Moreover, they have shown that there is a difference between male and female cognitive development. This fact is also crucial for the following gender hypotheses.

Psychological Theories: Gender Schema Theory

The Gender Schema Theory (Martin & Halverson, 1981) is based on Kohlberg's Cognitive-Developmental Theory, but deviates in the assumption of the starting point of gender development. Martin and Halverson do not require all three stages of gender constancy, but deem the mastery of gender identity as a crucial achievement in order to begin gender schema development. The schema expands over time by observing social life and classifying gender-linked activities, interests, personality or social attributes. Once the schema is developed, children behave according to their observations and the social surrounding to match expectations and achieve, as in the Cognitive-Developmental Theory, cognitive consonance. Throughout life people behave gender-specifically and a gender-fixed thinking dominates life. Nevertheless, people also behave contradictorily, since various situations in life require variability in the required roles. For instance, a single male parent can be a hard-driving manager, but also a devoted father and homemaker. Changes in society have made variability in gender roles and looser boundaries of gender stereotypes necessary. However, relics of antecedent role distributions caused by psychological processes still remain in Western society, and these are responsible for a gender-related way of thinking and behaving. This will also be crucial for the following hypothesis section.

Both, the Cognitive-Developmental Theory and the Gender Schema Theory, focus on gender conception, but lack any explanation of how gender-linked conceptions are attained and lead to a conduct of gender-linked behavior. Nevertheless, the fact that children start to perceive gender roles affects their further way of thinking in adolescence and adulthood and therefore, might also affect the development of psychological constructs and the perception of advertising.

Sociological Theories: Objectification Theory

According to the Objectification Theory (Fredrickson & Roberts, 1997) objectification "occurs whenever a (woman's) body, body parts, or sexual functions are separated from her person, reduced to the status of mere instruments, or regarded as if they were capable of representing (her) the person" (Bartky, 1990). In today's society, objectification among women is more common than among men, therefore the authors focused on female objectification (Fredrickson & Roberts, 1997). The theory distinguishes between three different objectifying gazes. First, objectification can occur within interpersonal and social encounters. Again, women are gazed at more often than men (Hall, 1984). Second, visual media depicts interpersonal and social encounters, which can also cause sexual objectification, especially if the male person in advertisements is looking at the female counterpart. Third, the most insidious manner, according to the authors, is the objectification in visual media and the consequent encounter of society and the people. Due to the mass media's presence and the transmission of sexualized images, girls and women are highly exposed and therefore affected to some degree, regardless of their social contacts. An internalization of the objectified view of women to some extent is the consequence. The internalization can lead to psychological changes, which are discussed in the derivation of hypotheses section.

3.4.1.2 Derivation of Hypotheses

Women seem to be more concerned about their weight than men (Hebl et al., 2009; Hebl & Turchin, 2005; Knauss et al., 2008) and determine their self-esteem on the basis of their body weight to a higher extent than men do (Miller & Downey, 1999). This might be caused by biological reasons, as outlined in the previous section. According to the evolutionary theory, men emphasize women's physical appearance for the selection of mating partners, which might have caused a focus on the outer attributes of women in order to be more competitive when searching for adequate mating partners. Also, the psychological theories support a higher concern about weight among women. Children attain a certain gender concept of behavior and physical attributes and register which are appropriate for which gender. They learn by observing and if previous female generations show concerns about weight, they, especially the girls,

might adopt this way of thinking. Also, the objectification theory supports the assumptions of gender differences. Higher expectations and a greater exposure to gazes can cause a higher concern. Therefore, it might be possible that for women, physical appearance, especially body weight, is the major influencing factor for self-esteem. A continuous reminder by the media that outer appearance and a slim ideal are desirable might lead to an interaction effect of gender on the direct connection between body weight and skepticism towards advertising. This pressure, in particular, might affect overweight women. Since overweight people rely more on opinions and information delivered by others, overweight women may trust advertising messages even more than normal weight women may. Therefore, the research will also focus on the question whether overweight women show the lowest levels of skepticism towards advertising. The following research question is posed:

RQ1b: Is there an interaction effect of gender and BMI on skepticism towards advertising? Do overweight women show the lowest levels of skepticism towards advertising?

Previous research has demonstrated that gender plays an important role in the variables analyzed in the current thesis. Women are typically more concerned about their body weight and their external appearance than men (Hebl & Turchin. 2005; Hebl, King & Perkins, 2009; Knauss, Paxton, & Alsaker, 2008), which is explained by the Objectification Theory (Fredrickson & Roberts, 1997). In the media, the female body is often presented as an object, which can cause a shift in the mindset of men and women (Peter & Valkenburg, 2007). If women see that the media objectifies the female body, it might be that women in real life model that objectification and put their focus on appearance consciousness instead of other sources, such as achievements and academia. According to the theory, women are usually more concerned about their body and body weight than men. In addition, in the above-mentioned meta-analysis by Miller and Downey (1999), there is a higher correlation between BMI and self-esteem among women than among men. This leads to the assumption that body weight more strongly contributes to self-esteem among women than men, suggesting that gender and body weight have an interaction effect on self-esteem.

Again, the evolutionary theory also plays an important role due to the men's focus on the physical appearance of women when choosing mating partners. A higher preoccupation with body weight seems a logical consequence. Furthermore, gender roles and learning by observing other generations and people, regarding the psychological theories, contribute to the higher focus on physical appearance and body weight. Due to the greater concern about body weight and external appearance and the stronger relationship between BMI and self-esteem among women compared to men (Miller & Downey, 1999), overweight women will likely show lower levels of self-esteem than other groups (normal weight women and males). The following is expected:

H_{1b}: There is an interaction effect of gender x BMI on self-esteem. Overweight women have the lowest level of self-esteem.

In addition to the influence of gender on self-esteem, previous research has demonstrated that gender also has an impact on skepticism towards advertising. Women tend to have a more positive attitude towards advertising and lower levels of skepticism towards advertising than men (Costa Font et al., 2010; Gil & Mora, 2011; Mirza et al., 2008; Obermiller et al., 2005; Orth et al., 2010). This may be caused by biological, psychological and sociocultural developments. Biologically, women have always been responsible for raising the children. Today, women are mostly still engaged with child nurturing and therefore, are more involved, want to gather more information and therefore are more open to receiving information, including from the media landscape. This might cause a lower skeptical attitude towards advertising. Psychological theories suggest a learning of behaviors of mothers and other people and leading to a lower skepticism towards advertising (Obermiller & Spangenberg, 2000). The sociocultural aspect covers the Social Cognitive Theory, which was introduced in Chapter 3.3, suggesting an imitation of others and therefore probably causing a lower skeptical attitude towards advertising among women. The findings by Boush, Friestad and Rose (1994) that reveal that low self-esteem is connected to less skepticism and that women tend to be less skeptical towards advertising suggest that gender and self-esteem have an interaction effect on skepticism towards advertising. Women who have lower self-esteem show a

lower level of skepticism towards advertising compared to women who have high self-esteem, and men in general. The following hypothesis is posed:

H_{2b}: There is an interaction effect of gender x self-esteem on skepticism towards advertising. Women with a low level of self-esteem show the lowest level of skepticism towards advertising.

A final gender hypothesis is suggested based on the findings of Miller and Downey (1999). The negative correlation between self-esteem and BMI is stronger among women than among men. The stronger correlation indicates that females derive self-esteem to a higher extent from body weight than males (this, again, is drawn from the above-mentioned theories covering gender differences) and it thus suggests that the mediating influence of self-esteem in the relationship between BMI and skepticism towards advertising (as outlined in hypothesis H_{3a}) is stronger among women than among men. Hence, it is expected that gender will have a moderating role in the mediation effect of self-esteem in the relationship between BMI and skepticism towards advertising. The following hypothesis is suggested:

H_{3b}: There is a moderation of gender on the mediating effect of self-esteem in the relationship between BMI and skepticism towards advertising. The mediation is stronger among females than among males.

3.4.2 Education as a Moderator in the Mediating Relationship

The extended literature review has revealed that education can have an influencing effect on all three main variables discussed in this thesis. In order to integrate education into the previously presented mediating model, education is attributed a moderation function. Education can influence different paths in this model. First, the level of education can influence the connection of body weight and self-esteem, since a higher level of education can offer an additional source for a higher level of self-esteem (Cheung et al., 2011; Costa Font et

al., 2010; Gil & Mora, 2011; Klimont et al., 2008; Miller & Downey, 1999; Sobal & Stunkard, 1989). Last, in the case of a high educational level, a direct effect of body weight and skepticism towards advertising seems unlikely, since the predominant source of self-esteem may not be body weight, but a mixture of academic competencies, body weight and further sources self-esteem can be retrieved from. Lower educational levels might cause a value shift. Therefore, less educated people might place the focus on body weight for gaining self-esteem and consequently, a direct connection of body weight and skepticism might occur (Marsh, 1990). Thus, a moderation of education is suggested. Highly educated people, even if they are overweight, can gain self-esteem by focusing on their academic competencies and therefore, might be able to be more skeptical towards advertising. Meanwhile, less educated people might not have as many sources to attain high levels of self-esteem from and therefore show lower levels of skepticism towards advertising. The following hypothesis is posed:

H_{4a}: There is a moderation of education on the mediating effect of self-esteem in the relationship between BMI and skepticism towards advertising. The mediation is stronger among people with lower education levels than among people with higher education levels.

Moreover, this section on education integrates the previous chapter 3.4.1, which covers gender as a moderator. Gender seems to be a highly influential factor in the individual paths as well as in the model. Therefore, an effect of gender on the two groups of people with a stronger and weaker educational background might be plausible for similar reasons as given in the general model. As already shown in the previous chapter, women are more concerned about body weight and external appearance than men (Hebl & Turchin, 2005; Hebl, King & Perkins, 2009; Knauss, Paxton & Alsaker, 2008), which is explained by the Objectification Theory (Fredrickson & Roberts, 1997). Therefore, they might place more value on their body weight, determine body weight as a primary source for self-esteem, and show less skepticism towards advertising. Furthermore, the greater concern about the body weight (Hebl et al., 2009; Hebl & Turchin, 2005; Knauss et al., 2008) and the determination of self-

esteem based on the body weight (Miller & Downey, 1999), can ultimately cause a lower self-esteem level. Moreover, gender impacts the level of skepticism towards advertising. Women typically show a more positive attitude towards advertising and generally display lower levels of skepticism towards advertising than men (Costa Font et al., 2010; Gil & Mora, 2011; Mirza et al., 2008; Obermiller et al., 2005; Orth et al., 2010). Considering people with low levels of education and the three gender-influenced connections, a moderation of gender within the mediating effect of self-esteem in the relationship between BMI and skepticism is expected. Women with a low level of education might focus on their physical appearance in order to determine their self-esteem and their skepticism towards advertising and therefore, might be affected more strongly than men. Men might focus on other competencies. Due to the societal pressure to match the body ideal (Bissell & Rask, 2010; Klaczynski et al., 2004; Knauss et al., 2008; Puhl & Boland, 2001; Puhl & Heuer, 2010; Stankiewicz & Rosselli, 2008), women might focus on their outer appearance and therefore, the moderation might be higher among women than among men. The resulting hypothesis is presented:

H_{4b}: Considering people with low levels of education, there is a moderation of gender on the mediating effect of self-esteem in the relationship between BMI and skepticism towards advertising. The mediation is stronger among women than among men.

Considering people with high levels of education, the influences of gender on the individual relations might be expected, but due to the higher level of education, new sources such as academic competencies are offered and can be used as more important sources for self-esteem. Women can rely on other sources than on physical appearance and body weight similar to men (Sobal & Stunkard, 1989) and have a deeper knowledge of the tactics used in advertising and can be more critical towards the societal ideals presented in the media (Phillips & Stanton, 2004; Prendergast et al., 2009; Roedder John, 1999; Valkenburg & Cantor, 2001). Therefore, it is suggested that, if people with a high level of education are analyzed, no moderation of gender occurs and the

moderation is similar among women and men. The following hypothesis is posed:

H_{4c}: Considering people with high levels of education, there is no moderation of gender on the mediating effect of self-esteem in the relationship between BMI and skepticism towards advertising. The mediation is similar among women and men.

Since women are more affected and the preceding hypotheses suggest lower effects among men, the following two hypotheses cover only women and the relations of body weight, self-esteem and skepticism towards advertising among women with two different levels of education.

Considering women with low levels of education, a partial mediation of self-esteem on the relationship of BMI and skepticism towards advertising is expected. Women with low levels of education might be more likely to rely on their physical appearance and body weight in order to determine their self-esteem and this might eventually cause low levels of skepticism towards advertising. Furthermore, a partial mediation is expected, since it is possible that women with a low level of education treat body weight as equal to their self-esteem and therefore, a direct effect of body weight on skepticism towards advertising might occur. The subsequent hypothesis is suggested:

H_{4d}: There is a partial mediation of self-esteem on the relationship of BMI and skepticism towards advertising among women with low levels of education.

Regarding women with high levels of education, a complete mediation is anticipated, since women with high levels of education might have other sources (academic competencies, etc.) for determining their self-esteem level. The different source might lead to higher self-esteem and this might cause a higher level of skepticism towards advertising. A direct path from body weight to skepticism towards advertising is excluded due to the alternative source gaining

higher self-esteem. Therefore, a complete mediation is anticipated. The following hypothesis is posed:

H_{4e}: There is a complete mediation of self-esteem on the relationship of BMI and skepticism towards advertising among women with high levels of education.

3.4.3 Specific Products Influencing the Relation of Body Weight, Self-Esteem and Skepticism towards Advertising among Women

The previous sections focus on the roles of body weight, self-esteem, gender and education on skepticism towards advertising in general. However, studies have shown that advertisements for specific product categories are less believable and less persuasive than others (Atkin & Beltramini, 2007; Buck et al., 1995; Prendergast et al., 2009). For example, Buck et al. (1995) found out that the judgment of advertisements for specific product categories is ruled by either passion or reason, depending on a simple or complex information transfer as well as the processing effort of the information. Every single advertisement has to be processed. Advertisements for snacks or sweets are ruled by passion rather than by reason, since the products are usually cheap and people have usually already bought them before. Therefore, the complexity of processing an advertisement for snacks or sweets is lower and therefore, the effort to process it as well. The lower involvement leads to a higher persuasive effect of the advertisement for snacks or sweets. In contrast, the judgment of advertisements for technical equipment is ruled by reason rather than by emotions. This partly results from the higher price level of technical equipment, but also on the greater quantity of information, which has to be processed while seeing an advertisement. This might also be caused by the fact that people do not buy technical equipment (such as mobile phones or computers) as often as sweets or snacks. Therefore, the processing takes longer and also the effort for processing is higher and might cause a lower persuasive effect of advertisements for technical equipment. Another example is provided by the product category of pharmaceuticals. Advertisements for this product category are ruled by rea-

son, since people do not usually buy pharmaceuticals on a regular basis. Therefore, the processing takes longer and the effort for processing the information is higher. This leads to a lower persuasive effect of advertisements for pharmaceuticals. Buck et al. (1995) investigated many more product categories in order to determine which emotions rule advertisements in these categories, as well as how the processing of the information affects the level of persuasion. Buck et al. (1995) only focused on the persuasion level, but did not deliver results regarding skepticism towards advertising. Since skepticism towards advertising is part of the persuasion knowledge (Boush et al., 1994; Friestad & Wright, 1994; Obermiller et al., 2005), a specific advertisement for a product causing a higher or lower persuasion in a person, might also affect the level of skepticism towards the specific product. Therefore, it is assumed that the question of which product is shown in an advertisement is relevant for the skepticism level. Moreover, the product category might also exert differing levels of influence for different weight classes. Food related products might cause differences in the attitude towards the product and can cause different associations (e.g. body ideals) among the different weight groups. Spielvogel and Terlutter (2013) investigated the relation of body weight and body perception and advertising literacy among children and found an indirect influence of body weight on the advertising literacy (tested with food related products). But also other categories, such as pharmaceutical related product categories, can possibly influence the skepticism towards the specific product and cause differences among the weight groups (overweight and normal weight people) (Atkin & Beltramini, 2007). Based on the Cognitive Dissonance Theory, it is assumed that overweight people in particular, predominantly retrieving their self-esteem from their physical appearance and the body weight, might be affected by the product category (especially for products related to food and pharmaceutical products appealing to body weight). If an overweight person sees a food related product, associations with the own body weight and the societal body ideal might occur. A questioning of the message of the advertisement would consequently lead to a questioning of the societal ideal, which might be transmitted via the advertising. Since belief (belief in the societal norms) and behavior (questioning of the societal norms) lead to a dissonant situation, it is more likely that the societal ideals will not be questioned and the advertising will not be considered skeptically. Therefore, it is supposed that people with different

weight categories differ in their level of skepticism with regard to the promoted product type. The following section provides a deeper insight in the Cognitive Dissonance Theory, and based on that theory, hypotheses are derived.

3.4.3.1 Cognitive Dissonance Theory

In order to describe the Theory of Cognitive Dissonance (Festinger, 1957 & 1978), the terms dissonance and consonance have to be explained. Dissonance and consonance relate to cognitions. On the one hand, there are opinions, knowledge or beliefs of others or the environment/society and on the other hand, there is knowledge of one's own feelings, actions and behaviors. If there are opinions, beliefs or an item of knowledge, which do not fit together or are not consistent, the situation is perceived as dissonant. In the case of congruency of beliefs, opinions or items of knowledge, the situation is deemed to be consonant. From a psychological perspective, dissonance is considered as an uncomfortable state and therefore, in order to ease the imbalance and the psychological tension between beliefs and behaviors, some change in the way of thinking or acting has to take place (Festinger, 1957 & 1978). The stronger the psychological discomfort is, the higher is the motivation for eliminating or reducing the tension. Festinger determines three ways of easing the psychological tension:

1. Rationalization
2. Avoidance
3. Ignorance

First, the process of rationalization causes either a change of beliefs or behavior in order to ease the dissonance and is considered to be a highly cognitive process. Furthermore, the help of others is needed. Rationalization requires the approval of others and as long as others do not support the revision of beliefs or behaviors, the first option for easing dissonance cannot work. Second, the process of avoiding is deemed easier with regard to the required cognitive capacity and leads to an avoidance of a certain behavior linked to a certain belief. Nevertheless, this can be also difficult, since most people are in touch with

society and other people, who may persist in bringing up the avoided issues and confront the person, who wanted to reduce or eliminate the tension through avoidance. Therefore, most people opt for the third choice: ignorance. Ignorance does not cause any change, neither in beliefs nor in behavior. Simply ignoring the own beliefs in this specific situation relieves dissonance. In order to explain the congruency and mismatch of his theory, Festinger used the example of a smoker. A person who smokes, knows that smoking is harmful and injurious to the health, but continues to smoke due to the pleasure of smoking and probably also due to the need to smoke. This person also feels psychological tensions, e.g. cognitive dissonance. The person has three different ways of easing the dissonant situation. First, rationalization can reduce or eliminate the tensions. The person can start thinking about people who never fell ill, even though they smoked throughout their whole life. Other smokers might give support to this rationalization and the person, smoking cigarettes, would have found a way of easing the tension. Another rationalization option would be to change the behavior, e.g. to quit smoking. The person knows smoking is unhealthy and therefore does not smoke cigarettes anymore. In both cases the cognitive dissonance is reduced or eliminated. But there are two more options for the person who smokes. Following the second path, the person could attempt to avoid information about the topic of smoking and how harmful cigarettes are. This may seem very difficult, since that particular person is in contact with others, is a member of society and may easily be confronted with issues related to smoking cigarettes or other questions regarding the health related context of smoking cigarettes. Therefore, realistically, this option does not promise to be successful. However, if a smoker is only among smokers, avoiding health related information related to smoking cigarettes might be possible. The third and final option for reducing or eliminating cognitive dissonance is ignoring. The smoker knows about the harm smoke and smoking cigarettes can cause to the body and health of the smoker and of others in the vicinity, too. In order to reduce the psychological discomfort, this information is simply ignored. While smoking, the person focuses on the joy of smoking, on the taste and probably also on the satisfaction of needs. The tensions are eased and the cognitive dissonance is gone. Even though a person can develop strategies to reduce cognitive dissonance, there are cases in which the dissonance is never eliminated, only reduced, but will pop up again

at a certain point of time, as in the previously mentioned example of the smoking person.

3.4.3.2 Derivation of Hypotheses

This section derives hypotheses for four different product categories: non-food related, food related (healthy and unhealthy) and pharmaceutical related. These four categories have been chosen, because they cover a broad range of different product categories, as well as having been tested with regards to the influence on the persuasion level and the skepticism towards advertising level of consumers in other studies (Buck et al., 1995; Prendergast et al., 2009). Buck et al. (1995) tested all four categories, naming them phones (in this thesis smartphone), drinks (in this thesis bottled water), candy (in this thesis chocolate bar) and pharmaceuticals (in this thesis appetite suppressant). Also, Prendergast et al. (2009) used three of the four product categories in their study, since the Hong Kong Consumer Council considered them as important categories. They named them food and beverages (in this thesis bottled water and chocolate bar) and weight-loss products (in this thesis appetite suppressant). Unfortunately, they did not investigate the smartphone, but since it was considered in the study of Buck et al. (1995), this category was included in the study's design. The non-food related product (smartphone) serves as a neutral product, not affecting and activating societal norms regarding the body ideal (Fernandez & Pritchard, 2012), but still activating the generally higher trust overweight people have in opinions of others and of society (Fernandez & Pritchard, 2012; Klaczynski et al., 2009; Knauss et al., 2008). The food related products (healthy: bottled water, unhealthy: chocolate bar) should activate the internalized body ideals. As bottled water can be considered as healthy and can be seen as positive with regard to health, it should lead to a consonant situation and activate skepticism towards the promoted product among overweight and normal weight women. The chocolate bar is unhealthy and harmful and does not benefit achieving the slim body promoted by the societal ideals. Therefore, this might cause a dissonant situation among overweight women and lead to different skepticism levels towards the promoted product among normal weight and overweight women. The fourth product category, a pharma-

ceutical related product (appetite suppressant), is chosen in order to see whether an advertisement for this category might also affect normal weight people, who would also like to conform to the body ideal.

Furthermore, this section only focuses on women, since previous deliberations and the completed literature reviews support the assumptions that women are predominantly affected, and men from different weight groups might show differences in their behavior in just a few cases. Generally, overweight women have a higher tendency to internalize societal ideals regarding body shape and body weight, since they trust others more and rely more on the opinions of others than on their own opinions compared to women of normal weight (Fernandez & Pritchard, 2012). Therefore, it can be assumed that overweight women believe in societal norms towards body ideals more than normal weight women (Fernandez & Pritchard, 2012; Klaczynski et al., 2004; Knauss et al., 2008). When overweight women see advertising or advertisements related to food or body (weight), they tend to believe in the message more than normal weight women. Therefore, a lower level of skepticism towards the advertisement of specific products among overweight women is expected. This does not mean that every overweight woman believes in every ad claim and every normal weight woman does not believe in it, but there is a higher tendency to assume that overweight women are more likely to be less skeptical and normal weight women are more likely to be more skeptical (Obermiller & Spangenberg, 1998). Considering various products and applying the Cognitive Dissonance Theory might cause differences in the relation of body weight, self-esteem and skepticism towards the specific product. In this section, the mediation of self-esteem on the relation of body weight and skepticism towards the specific product is considered. Regarding the non-food related product, the smartphone, no mediation is expected. The smartphone is not food related and does not affect the societal norms towards the body ideal (the beliefs according to the Cognitive Dissonance Theory). Therefore, on the one hand, women might not be reminded of their body weight and on the other hand, might not combine it with their level of self-esteem, which consequently does not affect the skepticism towards the smartphone. A critical view (the behavior according to the Cognitive Dissonance Theory) of the advertisement would not result in a dissonant situation, since the beliefs regarding the societal norms are not addressed.

Furthermore, a direct effect of body weight on the skepticism level towards the advertisement of the smartphone is unlikely, as the self-esteem is not addressed and therefore, the assumption that most of the self-esteem is drawn from the body weight, causing a direct connection, cannot be supported in this specific case. The following hypothesis is suggested:

H_{5a}: There is no mediation of self-esteem on the relation of body weight and skepticism towards the advertisement for a smartphone.

The following figure gives a summary of the process of the Cognitive Dissonance Theory regarding the non-food related product (smartphone).

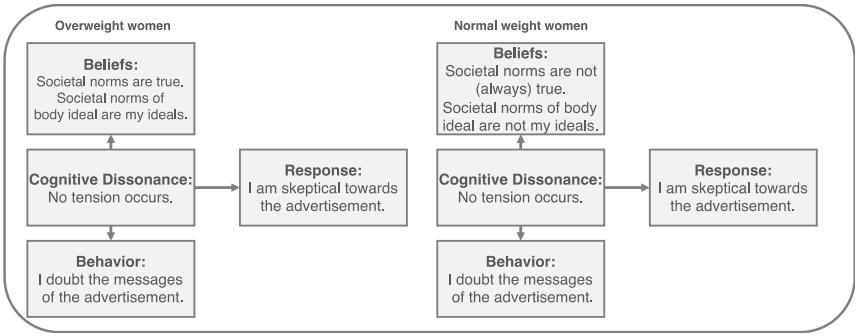

Figure 12: Process of the Cognitive Dissonance Theory: Smartphone

Considering the food related and healthy product, the bottled water, there is also no mediation expected. Bottled water does not affect the societal norms and therefore, the same applies as with the smartphone. The beliefs (societal norms) are consistent with the behavior (critical attitude towards the advertisement), and this should affect neither body weight nor self-esteem nor skepticism towards the advertisement. The subsequent hypothesis is posed:

H_{5b}: There is no mediation of self-esteem on the relation of body weight and skepticism towards the advertisement for bottled water.

The graph depicts the suggested process of the Cognitive Dissonance theory regarding the bottled water.

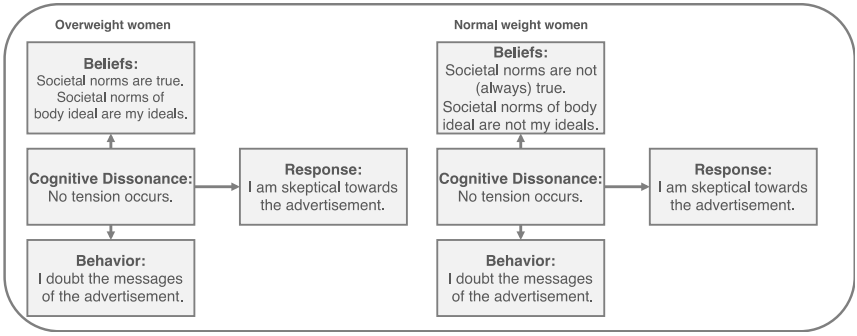

Figure 13: Process of the Cognitive Dissonance Theory: Bottled Water

The advertisement of the chocolate bar results in a partial mediation of self-esteem on body weight and skepticism towards the advertisement of the chocolate bar. Furthermore, it is suggested that overweight and normal weight women differ in their level of skepticism towards the advertisement of the chocolate bar. Seeing the food related product recalls society's body ideals, which women have internalized. This can, on the one hand, affect the body weight, and on the other hand it can affect the self-esteem and eventually the skepticism towards the advertisement. A questioning of the advertisement would precipitate a dissonant situation and to dissolve dissonance, overweight women are less skeptical towards the advertisement for the chocolate bar than normal weight women. The direct connection of body weight and skepticism towards advertising might be addressed, too. Therefore, a partial mediation is suggested. Due to the recall of the body ideals, the self-esteem might be completely retrieved from the body weight, which might result in a lower level of skepticism towards the advertisement of the chocolate bar among overweight women. Overweight women trust others more due to a lower level of self-esteem as well as due to the higher internalization of the societal norms regarding body ideals (Fernandez & Pritchard, 2012), even though they know the chocolate bar might be unhealthy. Ignoring the fact of harmful effects and the unhealthiness of the chocolate bar can dissolve the dissonance. Normal weight women do not put as much value on the opinion of others and know, just as overweight women do, that a chocolate bar is an unhealthy choice, and they can be critical towards the advertisement due to their lower internalization of societal norms and their higher confidence in their own opinion. Therefore, dif-

ferent levels of skepticism towards the advertisement of the chocolate bar among normal weight and overweight women are expected. The following hypotheses are stated:

H_{5c1}: There is a partial mediation of self-esteem on the relation of body weight and skepticism towards the advertisement for a chocolate bar.

H_{5c2}: Overweight women show a lower level of skepticism towards the advertisement for the food related product considered to be unhealthy (chocolate bar) than normal weight women.

In the upcoming figure the process of the Cognitive Dissonance Theory is depicted in relation to the chocolate bar.

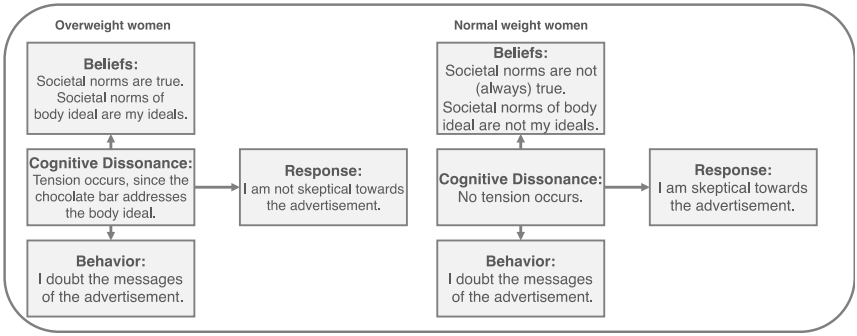

Figure 14: Process of the Cognitive Dissonance Theory: Chocolate bar

Considering the advertisement of the pharmaceutical product, an appetite suppressant, a complete mediation of self-esteem on the relationship of body weight and skepticism towards advertising is predicted. Furthermore, no differences between normal weight and overweight women regarding their levels of skepticism towards the advertisement of an appetite suppressant are suggested. The appetite suppressant will cause a dissonant situation, since overweight women remember their body ideals as provided by society, which can affect the self-esteem. A high level of skepticism towards advertising and critical view of the advertisement (behavior) would clash with the societal norms media and advertising shape (beliefs). Therefore, overweight women are less skeptical

towards the advertisement for the appetite suppressant. But, as studies have shown, normal weight women are also dissatisfied with their body shape and weight (Bearman, Presnell, Martinez, & Stice, 2006; Etilé, 2007; Hobbs, Broder, Pope, & Rowe, 2006; Mirza et al., 2008; van den Berg et al., 2007), and they may see a chance of losing a few kilos with that specific product. This might only affect normal weight women with a lower level of self-esteem and not normal weight women with a high level of self-esteem. Since normal weight women with a high level of self-esteem can draw their self-esteem out of other competencies, a complete mediation is predicted. Furthermore, similar results in the levels of skepticism towards the advertisement of the appetite suppressant among normal weight and overweight women are expected. The following hypotheses are posed:

H_{5d1}: There is a complete mediation of self-esteem on the relation of body weight and skepticism towards the advertisement for an appetite suppressant.

H_{5d2}: Overweight and normal weight women show similar levels of skepticism towards the advertisement for the pharmaceutical related product (appetite suppressant).

The next graph shows the process of the Cognitive Dissonant Theory regarding the appetite suppressant.

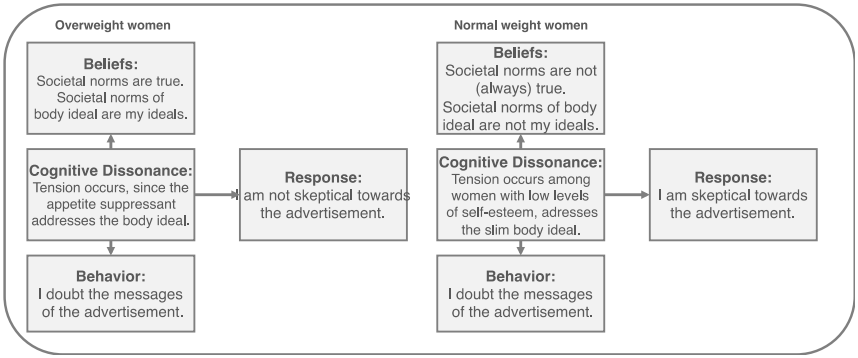

Figure 15: The process of the Cognitive Dissonance Theory: Appetite Suppressant

3.4.4 Season as an Influencing Factor of the Relation of Body Weight, Self-Esteem and Skepticism towards Advertising among Women

Changes in two main factors, social and physical factors, support the assumption of a difference of the relation of body weight, self-esteem and skepticism towards advertising. Even though research on the influence of seasons on advertising is very scarce, some studies were identified and have been considered for further derivations of hypotheses.

First, considering the media landscape and the advertisements shown in the media, it is possible to observe differences in promoted products in various seasons (Adams, Simpson, & White, 2011; Snyder et al., 1997). Predominantly, children are the center of the research, but advertising to the general public has also been at the focus of research groups (Adams et al., 2011). Some researchers therefore decided to investigate adults. For example, Adams et al. (2011) investigated women's magazines in the United Kingdom for the quantity of advertisements. Results show that the numbers of advertisements for food were lowest in spring, increased in summer, peaked in fall and declined in winter. Furthermore, the authors categorized the advertisements and concluded that advertisements for food and drinks high in fat and/or sugar peaked in summer and fall. This was especially the case in lifestyle and beauty magazines. Moreover, almost one third of the advertisements were devoted to advertisements for unhealthy food. An over-representation of unhealthy foods in women's magazines can be seen. Studies have shown that adults are also affected by changes in seasonal advertisements with regard to their eating behavior (Harris et al., 2009). Considering the results of Adams et al. (2011), a significant influence of the highly prevalent advertisements of food and drinks high in fat and/or sugar on the eating behavior is likely. The same applies to advertisements on TV (Byrd-Bredbenner & Grasso, 2000). Generally, there are more advertisements promoting food and drinks high in fat and/or sugar during summer than in the winter months (Adams et al., 2011). In summer, these advertisements promote the positive and healthy effects of the products, and highlight their contribution to gaining a perfect beach body (Willis & Knobloch-Westerwick, 2014). The same applies to the spring advertisements, even though the amount of advertisements peaks in summer. In winter there are less

advertisements focusing on the beach body and a slim body ideal (Willis & Knobloch-Westerwick, 2014). Therefore, it can be concluded that the presence of the slim body ideal seems to be more present in spring and summer than during the fall or winter months. In conclusion, the higher presence of slim models and the slim body ideals (including a greater amount of weight loss messages) might focus on the societal ideal and strengthen the idea of the ideal slim body during the warmer seasons (e.g. spring and summer).

Second, physical factors can also affect the relation of body weight, self-esteem and skepticism towards advertising. Studies have shown that seasons change the physical activity of people and the amount of food intake (Baker & Kirschenbaum, 1998; Capita & Alonso-Calleja, 2005; Hull et al., 2006; Klesges, Klem, & Bene, 1989; Ma et al., 2006; Tucker & Gilliland, 2007; Yanovski et al., 2000). Due to lower temperatures, indoor activities are preferred and therefore, people engage less in sports. Moreover, since the weather is colder and more time is spent at home, it is more likely that people will eat more. Less physical activity and a higher amount of food intake often leads to a higher body weight over the winter season. Furthermore, the greater amount of festivities (such as Christmas and Christmas parties as well as Thanksgiving in the Anglo-American regions) during winter can also lead to instances of overindulgence (Hull et al., 2006; Ma et al., 2006; Yanovski et al., 2000). People spend time together and this usually increases the amount of food intake (Hammond, 2010). In addition, facts from evolution can still have an impact on the eating and physical behavior. Winter used to be a hard season in terms of food supply and balanced diet, therefore people ate everything they could, especially high-caloric food, in order to be able to survive a hard winter (Leonard & Thomas, 1989). This might still be present in the genes or might be driven by the will to survive, even though, in Western society, a scarcity of food in winter is unlikely to occur (Leonard & Thomas, 1989).

These two areas might provide reasons explaining why women might show differences in the relations of body weight, self-esteem and skepticism towards advertising in the seasons of summer and winter. Summer was chosen since the pressure to match to the societal ideal might be especially strong in summer due to higher numbers of advertisements showing slim bodies and product

for weight loss. Winter was chosen due the greater amount of festivities and the lower physical activity rates in this period of time. This may weaken the pressure to correspond with the societal ideal. The following sections give an overview of the Social Comparison Theory and the heuristics. Based on these two concepts, hypotheses regarding seasons influencing the relation of body weight, self-esteem and skepticism towards advertising are derived.

3.4.4.1 Social Comparison Theory

Festinger's Social Comparison Theory (1954) deals with the psychological processes people go through when conducting comparisons to objects or other people in their surroundings. The theory (Festinger, 1954) states that a person has an intrinsic drive for social comparison in order to evaluate their own person in comparison with other objects or persons. In his paper, "A Theory of Social Comparison Processes", Festinger developed the nine main principles of the Theory. First, humans have a drive to evaluate their abilities and opinions. The evaluation is based on objective means, such as norms given by society. Second, in the case of the absence of objective means, other people are considered in order to compare the own opinions and abilities. Third, people are more likely to compare themselves to other persons, but not objective means, if they are similar. So, the greater the difference between two persons, the less likely is a comparison. On the contrary, people compare themselves to objective norms, independently of the level of divergence. Therefore, comparisons to societal norms and rules are probable among all people. Fourth, generally people strive for a better outcome of the social comparison, which is mostly the case with abilities and not with opinions. This means that people want to be better than other persons are, when they draw a comparison (e.g. who can run faster). Fifth, Festinger considers abilities as given, whereas opinions can be changed. This might also affect the outcome of the social comparison. Sixth, the termination of the social comparison process is accompanied by either "hostility" or "derogation". A continued social comparison could lead to an unpleasant outcome and therefore, it is aborted. This is probably not the case in a comparison with a person situated below the comparing person. However, in the case of a comparison with a person above the comparing person, a termination of the social comparison makes sense, since otherwise the outcome is

negative. Therefore, people above the comparing person are set as “incomparable” and are not central to the social comparison process, unless they are part of the societal norm. Seventh, factors increasing the importance of a particular group as a comparison group for a particular ability or opinion lead to a greater pressure toward uniformity regarding the opinion or ability. This means that societal norms are very important comparison targets, therefore, people strive for uniformity. Eighth, persons, who are very divergent from oneself and perceived as very divergent, are less likely to be the object of a social comparison. This does not apply to social norms and ideals. Last, Festinger assumes that when there is a range of opinions or abilities in a group, pressure to change the own opinion is lower on those, who are close to the mode of the group, than on those, who differ from the group mode. People close to the mode have stronger tendencies to change the positions of others and weaker tendencies to change their own position. As mentioned above, people strive to compare themselves to targets in the environment, such as family or friends. However, most of the time, the role models of society are the primary objects for social comparison. Due to the ubiquity of the media nowadays, slim models in advertising and the media are the most common comparison targets (Hollow, 2012; Holmqvist & Frisén, 2012; Lindner, Tantleff-Dunn, & Jentsch, 2012; Stice, Spangler, & Agras, 2001; Strahan et al., 2006). Depending on the comparison target, the outcome can be negative or positive (Festinger, 1954; Strahan et al., 2006; Tylka & Sabik, 2010). Therefore, Festinger and also Wills (1981; 1991) distinguish between upward and downward social comparison. A downward comparison is a means of self-evaluation. If a person considers another person or group to be worse off and compares themselves with that person or group in order to feel better, it is defined as a downward comparison. The person would come to a positive outcome. An upward comparison would consequently lead to a lower self-regard and therefore, should not be performed. However, this is not the case. Individuals compare themselves unconsciously with individuals or groups perceived as superior to themselves, in order to create a positive way of thinking of the group. A comparison with the superior groups connects the group with the person doing the comparison. People want to believe that they are part of the group and want to emphasize the similarities they have in common with the group that they deem as superior. An upward comparison with the slim ideal of today’s society might evoke a negative outcome, but might also

lead to a positive way of thinking, since comparing people might evoke a shared group feeling.

3.4.4.2 Heuristics

Tversky and Kahneman (1974) discussed the idea of judgment under uncertainty. The authors state that people make decisions based on heuristics. Due to a vast amount of available information, especially in our times, people gather only as much information as they think is necessary in order to make decisions, because they are not able to collect all the information regarding one particular issue (Tversky & Kahneman, 1974). Most of the time very little information is gathered and the decisions are "based on beliefs concerning the likelihood of uncertain events" (Tversky & Kahneman, 1974). Judgments and decisions are based on three different heuristics:

1. Representativeness
2. Anchoring
3. Availability

Representativeness is the heuristic of the probability of events depending on how much they match with prototypes. People make decisions based on prototypes and classify people/objects/etc. based on the stored stereotype. For example, judging from the physical appearance and the outfit, people could determine a certain professional group, such as, e.g., waiters or chimney sweeps. Anchoring describes the fact that external influences, which people perceive unconsciously, determine a certain decision or judgment, even though they are irrelevant for a given situation. For example, if two people are asked to estimate the number of marbles in a bowl and the number 160 is written somewhere nearby. The number 160 is used as an anchor to determine the number of marbles. Availability depicts a base for judgments and decisions in cases when there is no further information. People consider facts that are available and have been memorized recently. This information (often gathered from the media) serves as a rule of thumb in order to make difficult decisions easier. For example, a person remembers a celebrity's name more easily than a politician's name, since celebrity names are often combined with pictures, whereas politician's names are not shown alongside their pictures as frequently.

3.4.4.3 Derivation of Hypotheses

As mentioned before, advertising is adapted to the seasons. In summer, the focus on the slim body ideal dominates the advertising landscape, whereas in the winter months not as much advertising is seen in the media on weight loss products or products promoted by models matching the slim body ideal of society (Adams et al., 2011; Snyder et al., 1997; Willis & Knobloch-Westerwick, 2014). Also, the fact that in winter statistics state lower physical activity rates and higher calorie intakes might be partly caused by the different manner of advertising (Baker & Kirschenbaum, 1998; Capita & Alonso-Calleja, 2005; Hull et al., 2006; Klesges et al., 1989; Ma et al., 2006; Tucker & Gilliland, 2007; Yanovski et al., 2000). This might be the first indication that the seasons or the variations of advertising over the seasons might affect the relation of body weight, self-esteem and skepticism towards advertising. Integrating the Social Comparison Theory by Festinger as well as the heuristics people use to make decisions, a moderation of winter and summer on the relation is assumed. The Social Comparison Theory assumes that people naturally tend to compare themselves either with persons or with social norms. In this case, the societal norms regarding body ideals such as a slim body are regarded as the social norms. These norms are considered as a very important target for social comparisons among all people. Even though social comparisons concluding in a negative outcome should not happen according to Festinger, he also suggested that a comparison with social norms leading to a negative outcome might be the case. This is a psychological process that happens in order to detect similarities with the group and create a feeling of belonging to the group. Since women internalize societal ideals to a greater extent than men do (Bissell & Rask, 2010; Dittmar & Howard, 2004; Fernandez & Pritchard, 2012; Halliwell et al., 2005), they have a stronger feeling of belonging to the specific group that has the internalized norms. Therefore, as before, this part of the thesis only considers women. The higher pressure and higher prevalence of the slim body ideal in the advertising landscape in summer months might cause differences in self-esteem levels and the influence of body weight and self-esteem on skepticism towards advertising. A higher pressure can lead to a higher probability that body weight is used as the primary source of self-esteem and that there is a direct connection to skepticism towards advertising. This pressure

predominantly occurs in summer and is weaker in the winter months. Therefore, a moderation of the season on the relation of body weight, self-esteem and skepticism towards advertising is suggested. Furthermore, the heuristics support this assumption. In order to determine the self-esteem level and the skepticism towards advertising level heuristics are executed unconsciously. Social norms regarding the body are connected with the slim ideal (representativeness). The slim ideals are used as an example of how a body should look (anchoring) and since it is always in the media, it is always on the minds (availability). This helps to internalize the slim body ideal, especially in summer (due to the higher number of advertisements promoting the slim body ideal), and can affect the self-esteem level and furthermore, the level of skepticism towards advertising. Therefore, the following hypothesis is posed:

H_{6a}: There is a moderation of the season on the mediating effect of self-esteem in the relationship between BMI and skepticism towards advertising among women.

In order to investigate the moderation of the seasons on the mediation further, two additional hypotheses are derived. Different mediations are expected in different seasons. In summer, more body related advertisements are shown (Willis & Knobloch-Westerwick, 2014). Permanently seeing slimmer models can lead to an adjustment of the body ideal of the society and a higher internalization of the slimmer ideal (Owen & Spencer, 2013). This might occur during summer. During winter, a less intensive confrontation with the body ideal takes place (Willis & Knobloch-Westerwick, 2014). This fact can have an impact on the mediation of self-esteem on the relation of body weight and skepticism towards advertising. In summer, the idealized advertising image is slimmer and shown more often and therefore, the standard of comparison changes to a slimmer version (Richins, 1991). In conclusion, the self-esteem might be fully drawn from the body weight, since the pressure is higher (due to the higher occurrence of the slim body ideal) to match this ideal and alternative sources are not the focus of self-esteem (Marsh, 1990). Therefore, in summer, a partial mediation of self-esteem on the relation of body weight and skepticism towards advertising is suggested. Conversely, in the winter months, the pressure to cor-

respond to the societal slim ideal is lower, since the prevalence of the slim advertising image is lower (Richins, 1991) and might consequently not put as much pressure on women (Dittmar & Howard, 2004; Fernandez & Pritchard, 2012) as in the summer. Therefore, sources other than body weight can be important for self-esteem (Marsh, 1990). A complete mediation of self-esteem on the relation of body weight and skepticism towards advertising is suggested in winter. The subsequent hypotheses are stated:

H_{6b}: There is a partial mediation of self-esteem on the relation of body weight and skepticism towards advertising among women in summer.

H_{6c}: There is a complete mediation of self-esteem on the relation of body weight and skepticism towards advertising among women in winter.

Lastly, women of normal weight and overweight women differ in their levels of internalization of societal ideals in general (Bissell & Rask, 2010; Dittmar & Howard, 2004; Fernandez & Pritchard, 2012; Halliwell et al., 2005). Seasons and the accompanying changes in advertisements, as well as the prevalence of the slim ideal can regulate the internalization of societal ideals among normal weight and overweight women. Since the pressure to correspond to the society ideal is weaker in winter than in summer (due to the lower prevalence of weight loss products and slim models promoting these products), an interaction of the season and body weight on the level of skepticism towards advertising is expected. In winter, advertisements are not as body-focused as in summer (Adams et al., 2011; Snyder et al., 1997; Willis & Knobloch-Westerwick, 2014). Therefore the pressure to match the societal ideal in winter might be weaker on women in general than in summer. Normal weight women might feel better about their current body weight and their body shape (Dittmar & Howard, 2004; Fernandez & Pritchard, 2012) and therefore, might be able to be more critical towards advertising. Overweight women, meanwhile, might feel a constant pressure to correspond to the ideal (Dittmar & Howard, 2004; Fernandez & Pritchard, 2012), even though it might be lower in winter than in summer. Due to the perceived pressure, overweight women might still have a stronger wish to belong to the groups and adopt the opinion of the group as well as of

the advertisement (Festinger, 1954) and consequently show lower levels of skepticism towards advertising than normal weight women. In summer, a higher influence of the slim ideal can cause lower skepticism levels among normal weight women and those who are overweight. The pressure exerted by the societal ideal might affect women of normal weight almost as negatively as overweight women and therefore, result in similar levels of skepticism towards advertising among normal weight and overweight women. Thus, normal weight and overweight women might have similar levels of skepticism towards advertising in summer. This can be supported by the above-mentioned theories. First, this assumption is based on the heuristics (Tversky & Kahneman, 1974). Current social norms are internalized (Dittmar & Howard, 2004; Fernandez & Pritchard, 2012; Halliwell et al., 2005) and connected with the slim ideal, which are permanently shown in the media (representativeness). The slim bodies portrayed are used as the ideal example (anchoring) and the number of advertisements together with the stability of the thin ideal receive a fixed place in the minds of women (availability). Also, the Social Comparison Theory (Festinger, 1954) suggests that there might be a difference between winter and summer among the two groups. Women compare themselves to a different slim ideal in summer and winter (Richins, 1991). Since the summer ideal is slimmer, fitter and more prevalent in the mindset (Willis & Knobloch-Westerwick, 2014), the comparison is an upward comparison and creates the wish to belong to the group and be less critical towards the groups, which consequently leads to a lower skepticism level towards advertising among both groups in summer. In winter, the comparison remains an upward comparison for overweight women, since the ideal is still prevalent in the minds of overweight women (Dittmar & Howard, 2004; Fernandez & Pritchard, 2012). Therefore, lower skepticism levels towards advertising are expected. Normal weight women might feel less pressure (Dittmar & Howard, 2004; Fernandez & Pritchard, 2012) and are therefore able to show higher skepticism levels towards advertising. The following hypothesis is posed:

H_{6d}: There is an interaction of body weight x season on the skepticism towards advertising level among women. In winter, overweight women have lower levels of skepticism towards advertising than normal weight women. In summer,

overweight and normal weight women show similar levels of skepticism towards the advertising.

3.4.5 The Size of the Model Influencing the Relation of Body Weight and Skepricism towards Specific Products among Women

Many studies have shown that thin models promoting products cause lower self-esteem and lower body image levels (Grabe et al., 2008; Murnen et al., 2003; Thompson & Stice, 2001). Grabe et al. (2009) conducted a meta-analysis with more than 75 studies and tested the role of the media in body image concerns among women. They found out that there is a connection between media exposure, women's body dissatisfaction, internalization of the thin ideal, and eating behaviors and beliefs. They discovered that media exposure had an important role, especially for the internalization of the thin ideal. This means that the exposure to slim models leads to a higher internalization of the societal norms and a more pronounced wish to correspond to these norms. Furthermore, it leads to greater body dissatisfaction. Thompson and Stice (2001) have conducted various experiments over the past decades and have always come to the same conclusions: a higher internalization of the slim societal ideal leads to a lower body image and to a higher risk of developing an eating disorder. Since media communicate the positive benefits of thinness, such as social acceptance, more people strive for the societal ideal. Their studies also found that behavior, especially among women. Unfortunately, this ideal is virtually unattainable for most women and therefore, causes body dissatisfaction. This influence is already visible among children. Murnen et al. (2003) conducted an experiment with children and tested whether the exposure of objectified models in pictures caused the internalization of media images and changed body esteem. Children, especially girls, like the models and internalized their look, but at the same time their body esteem decreased, since they were aware that they do not look like them. This influence on children, especially girls, is alarming. Therefore, some studies have focused on the question whether an average sized model impacts self-esteem and body image as much as a slim model does. Indeed, studies have found out that the consumer's body image levels increased when watching averaged sized models (Died-

richs, Lee, & Kelly, 2011; Diedrichs & Lee, 2011; Groesz et al., 2002). Groesz et al. (2002) conducted a meta-analysis with 25 studies and investigated changes in body image after viewing differently sized models. Results showed that body image was significantly more positive after viewing average size or plus size models than thin models. Hüttl and Gierl (2012) were able to establish the same for self-esteem. They found out that self-esteem increases with the size of the depicted model (Hüttl & Gierl, 2012). Furthermore, other studies have focused on the effect of differently sized models on the attitude towards the advertisement and the purchase intention (Martin, Veer, & Pervan, 2007; Martin, Wentzel, & Tomczak, 2008; Martin & Xavier, 2010). Authors have discovered that people looking at average sized models have a lower positive attitude towards the advertisement than when they see a slim model, although the average sized model is perceived as more attractive than a slim model (Bian & Foxall, 2014). This is also dependent on the product type. An average sized or overweight model promoting a healthy product lowers the attitude towards the advertisement compared to a slim model in an advertisement for a healthy product. However, results show that an advertisement for an unhealthy product does not result in huge differences in the attitude towards the advertisement levels when differently sized models are used (Martin & Xavier, 2010). Based on these research findings and the previously presented Cognitive Dissonance Theory (Festinger, 1957), as well as the Social Comparison Theory (Festinger, 1954), hypotheses regarding body weight, self-esteem and skepticism towards advertisements with two differently sized models promoting two different products are posed. As in chapter 3.4.3, different products are chosen. One product is a smartphone (non-food related product) and the other is a chocolate bar (food related unhealthy product). The products were chosen for similar reasons as in Study 2, except for extended reasons due to the combination with the different model sizes. A slim[2] model was chosen, matching the media's ideals. This size was chosen, because people are used to seeing slim models in advertising due to their high prevalence (Fernandez & Pritchard, 2012; Hargreaves & Tiggemann, 2004; Hargreaves & Tiggemann, 2003), but mostly for comparison reasons. Furthermore, an overweight model was chosen. Since studies have shown that self-esteem (Hüttl & Gierl, 2012) and body image

[2] In this thesis the expression slim in combination with models is used as an expression for the commonly shown size of society's definition of the ideal body.

(Groesz et al., 2002) increase with the model size, an overweight model was chosen in order to guarantee changes in the perception among overweight participants. Therefore, four different advertisements serve as the foundation for the following hypotheses. As in the sections described above, only women are analyzed due to their higher concern about body weight and greater effects of self-esteem changes when watching slim models (Fernandez & Pritchard, 2012; Hüttl & Gierl, 2012; Martin et al., 2007).

Considering the previously stated results and Festinger's theories, a partial mediation of self-esteem on the relation of body weight and skepticism towards the advertisement for the smartphone promoted by a slim model is expected. First, regarding the Cognitive Dissonance Theory, no mediation can be expected. Since a non-food related product is shown, no associations towards the ideal of a slim body (belief) can be assumed among overweight or among normal weight women. A critical view towards the advertisement (behavior) cannot result in a dissonant situation, since beliefs (the ideal of the slim body) and behavior (high level of skepticism towards the advertisement) are not in conflict. Second, the Social Comparison Theory suggests the opposite. Since social comparisons are primarily based on body weight, the outcome of the comparison with the slim model can affect the level of skepticism towards the advertisement for the smartphone. A normal weight woman seeing a slim model starts a social comparison on almost the same level. The outcome might be positive and a positive feeling about oneself affects the level of self-esteem and ultimately, the ability to be skeptical towards advertising (Frisén & Holmqvist, 2010; Holmqvist & Frisén, 2012). Therefore, normal weight women should have high levels of skepticism towards the advertisement for the smartphone promoted by the slim model. Considering overweight women seeing a slim model in an advertisement, the theory suggests an upward comparison. This upward comparison is done due to the desire to detect similarities and to be part of this media ideal. The feeling of being part leads to an acceptance of the messages of the advertisement coming from the group and therefore, to a lower level of skepticism towards the advertisement. Thus, overweight women seeing a slim model promoting a smartphone have low levels of skepticism towards the advertisement. Considering an overweight woman with a high level of self-esteem, a higher level of skepticism towards the advertisement is ex-

pected; therefore, a mediation effect is suggested. Furthermore, due to the different outcomes of the social comparison among normal weight (predominantly positive) and overweight women (predominantly negative), it is suggested that overweight women have lower levels of skepticism towards the advertisement for the smartphone promoted by a slim model than normal weight women. The following hypotheses are suggested:

H_{7a1}: There is a partial mediation of self-esteem on the relation of body weight and skepticism towards the advertisement for the smartphone promoted by a slim model.

H_{7a2}: Overweight women show a lower level of skepticism towards the advertisement for the non-food related product (smartphone) with a normal weight model than normal weight women.

Regarding the advertisement for the smartphone promoted by an overweight model, the following is suggested. Based on the Cognitive Dissonance Theory, no differences between normal weight and overweight women are expected, since no dissonant situation is caused due to the product. Considering the Social Comparison Theory, the same processes among normal weight and overweight women are suggested, resulting in no mediation of self-esteem and the same levels of skepticism towards the advertisement for the smartphone promoted by an overweight model. Since both weight groups process a downward (or at least on the same level) social comparison, this results in a high level of self-esteem and can cause higher levels of skepticism towards the advertisement of the smartphone promoted by an overweight model. The pressure of matching societal ideals is lower and the consumer can therefore be more critical towards the advertisement. Therefore, no mediation of self-esteem on the relation of body weight and skepticism towards the advertisement for the smartphone presented by an overweight model is suggested. The following hypothesis is posed:

H_{7b}: There is no mediation of self-esteem on the relation of body weight and skepticism towards the advertisement for the smartphone promoted by an overweight model.

Considering the advertisement with the chocolate bar promoted by the slim model, the Cognitive Dissonance Theory would suggest a difference between normal weight and overweight women regarding their level of skepticism towards the advertisement, since the chocolate bar recalls society's body ideal (beliefs), internalized especially by overweight women. Any questioning of the advertisement (behavior) would cause a dissonant situation. In order to dissolve the dissonance, overweight women show lower skepticism towards the advertisement with the slim model than normal weight women. Regarding the Social Comparison Theory, the same as described above is suggested. Overweight women show lower levels of skepticism towards the advertisement when seeing a slim model promoting a chocolate bar than normal weight women. Overweight women go through an upward social comparison, which eventually affects the self-esteem negatively. In order to be part of the group, they show lower levels of skepticism towards the advertisement (Wills, 1981). Meanwhile, normal weight women compare themselves in a downward (or on the same level) social comparison, so they can show higher levels of skepticism towards the advertisement with the slim model since their self-esteem is positively influenced. Therefore, a higher skepticism level among normal weight women than among overweight women towards the advertisement for the chocolate bar presented by a slim model is expected. Furthermore, a partial mediation is suggested. The chocolate bar and the slim model might trigger associations towards the slim ideal of society and as a consequence self-esteem is predominantly drawn from body weight. A direct connection of body weight to skepticism towards the advertisement could be the result. Therefore, the following hypotheses are proposed:

H_{7c1}: There is a partial mediation of self-esteem on the relation of body weight and skepticism towards the advertisement for the chocolate bar promoted by a slim model.

H_{7c2}: Overweight women show a lower level of skepticism towards the advertisement for the food related product (chocolate bar) with a normal weight model than normal weight women.

Regarding the advertisement for the chocolate bar promoted by an overweight model, the Cognitive Dissonance Theory might suggest a difference between overweight and normal weight women. As already explained above, the product might bring up the societal slim ideal, which overweight women in particular have internalized (belief). In the case of doubting the advertisement (behavior), overweight women would doubt the ideals. This would cause a dissonant situation. In order to ease the tension, the easiest way would be the lowered skeptical attitude towards the advertisement. Therefore, a difference between normal weight and overweight women would be expected. But, according to the Social Comparison Theory, normal weight and overweight women pass through the same process (downward social comparison or at least on the same level), and therefore there should be no differences in the levels of skepticism towards the advertisement. Since the personal comparison with the model might be more important in that process, no differences are suggested. Therefore, no mediation of self-esteem on the relation of body weight and skepticism towards the advertisement for the chocolate bar promoted by the overweight model is suggested. The pressure of corresponding to the societal ideal is lower for overweight women, thus self-esteem is not affected to the same extent as it would be with a normal weight model. The subsequent hypothesis is suggested:

H_{7d}: There is no mediation of self-esteem on the relation of body weight and skepticism towards the advertisement for the chocolate bar promoted by an overweight model.

3.5 Summary of the Derived Hypotheses

In the following graph all previously derived hypotheses are summarized and related to the respective presented studies.

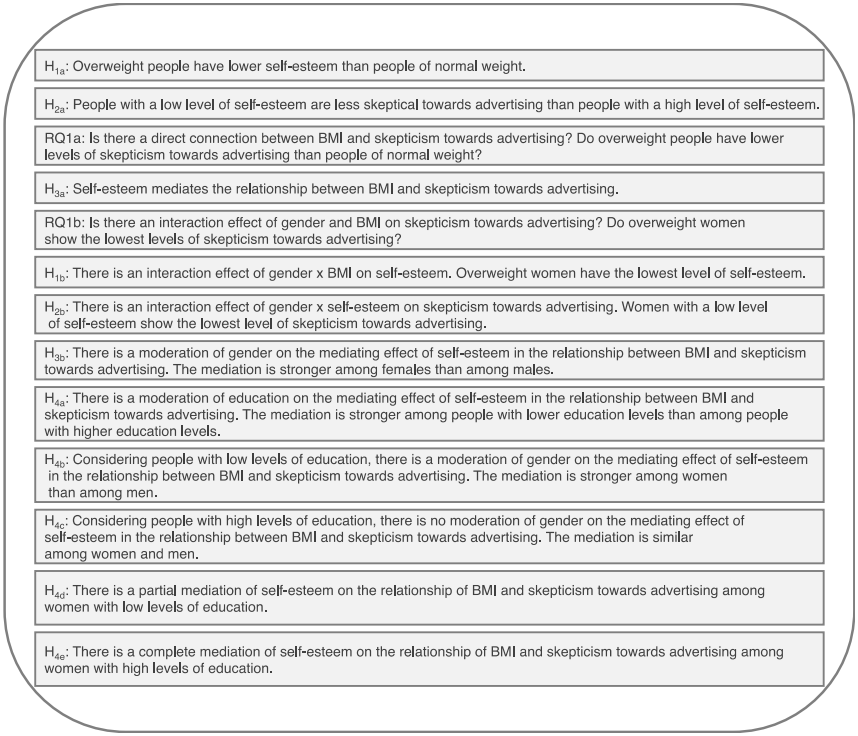

Figure 16: Summary of the derived hypotheses – Study 1

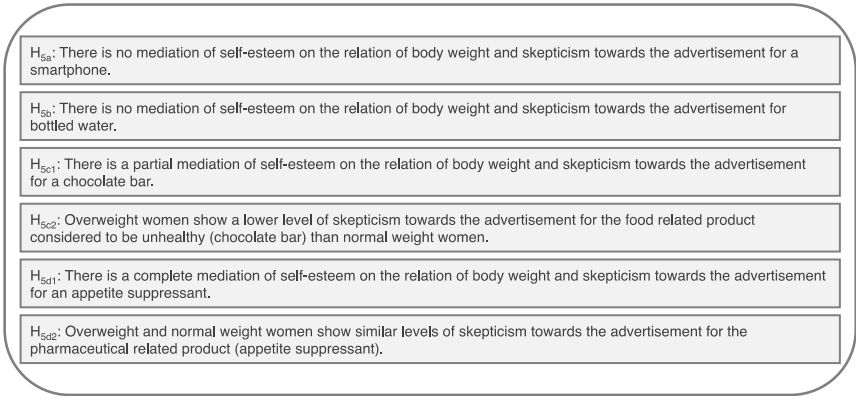

Figure 17: Summary of the derived hypotheses – Study 2

H_{6a}: There is a moderation of the season on the mediating effect of self-esteem in the relationship between BMI and skepticism towards advertising among women.

H_{6b}: There is a partial mediation of self-esteem on the relation of body weight and skepticism towards advertising among women in summer.

H_{6c}: There is a complete mediation of self-esteem on the relation of body weight and skepticism towards advertising among women in winter.

H_{6d}: There is an interaction of body weight x season on the skepticism towards advertising level among women. In winter, overweight women have lower levels of skepticism towards advertising than normal weight women. In summer, overweight and normal weight women show similar levels of skepticism towards the advertising.

Figure 18: Summary of the derived hypotheses – Study 3

H_{7a1}: There is a partial mediation of self-esteem on the relation of body weight and skepticism towards the advertisement for the smartphone promoted by a slim model.

H_{7a2}: Overweight women show a lower level of skepticism towards the advertisement for the non-food related product (smartphone) with a normal weight model than normal weight women.

H_{7b}: There is no mediation of self-esteem on the relation of body weight and skepticism towards the advertisement for the smartphone promoted by an overweight model.

H_{7c1}: There is a partial mediation of self-esteem on the relation of body weight and skepticism towards the advertisement for the chocolate bar promoted by a slim model.

H_{7c2}: Overweight women show a lower level of skepticism towards the advertisement for the food related product (chocolate bar) with a normal weight model than normal weight women.

H_{7d}: There is no mediation of self-esteem on the relation of body weight and skepticism towards the advertisement for the chocolate bar promoted by an overweight model.

Figure 19: Summary of the derived hypotheses – Study 4

4 Empirical Studies

In total, two different studies were conducted. Based on these two studies, four different research questions were answered. The findings for the research questions 1, 2 and 3 are based on the same sample from the first study. Research question 4 is based on the second study. The upcoming chapter titles Study 1, 2, 3 and 4 refer to the research questions 1, 2, 3 and 4, respectively. The first study focuses on the nature of the connection of body weight, self-esteem and skepticism towards advertising in general as well as on the effect of gender and education on the relation of body weight, self-esteem and skepticism towards advertising in general. The second study gives insight into the relationship among women considering four different advertisements with four different products. Therefore, the skepticism scale refers to the skepticism towards the specific advertisement and is not meant to be a long-term construct. The third study sheds light on possible effects of the seasons on the relationship among women. As in study 1, the skepticism towards advertising as a long-term contruct is center of the study. The fourth and final study answers the research question about the kind of effect differently sized models promoting different products have on this relationship. As in study 2, the skepticism level towards specific advertisement is retrieved.

All variables are tested for variance homogeneity as well as for normal distribution, since these are considered as prerequisites for variance analyses (Backhaus, Erichson, Plinke & Weiber, 2011). As all regressions were based on the bootstrap approach, testing for the normal distribution was not necessary, since the bootstrap results are independent of the structure of the dependent variable (Preacher, Rucker, & Hayes, 2007). In the case of a violation of the variance homogeneity or the normal distribution the analysis was adapted and the adequate method was applied. This was only the case in some specific variable settings.

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Due to the high number of hypotheses and the amount of tests for variance homogeneity and normal distribution, the documentation of compliance with the two prerequisites has been omitted and only violations have been reported, with the results of the adequate method being presented. Also, the Cronbach's Alpha for the reliability of the measured scales was tested. Unlike the variance homogeneity and the normal distribution, the reliability indicator is presented in the description of the respective study's design section. Furthermore, the groups of the various studies are described thoroughly and differences based on demographic variables, which are not focus of the hypotheses, are investigated in the relevant sections.

As the reporting of body weight is a sensitive topic, often discussed in the literature (Costa Font et al., 2010; Gil & Mora, 2011; Jeffery, 1996), and the meaningfulness of the research is based on the honest and realistic reporting of body weight, the two studies had to deliver reliable reports of the participants' weight. Therefore, the participants' weight was collected in three different ways. First, the participants had to report their own weight and height. Second, an interviewer remained with the interviewee for the entire time it took to complete the questionnaire and was tasked to estimate weight and height without the participant's knowledge. Third and last, the interviewer categorized the body physique of each participant on a physical appearance scale (male/female silhouettes from 1 (underweight) to 9 (obese)) (Leonhard & Barry, 1998). These three ways should guarantee that the key variable body weight meets the real body weight of the participants. Furthermore, the interviewers had to go through training, to practice the estimation of people's weight and height. Since the two studies used different interviewers, the accuracy of estimate is presented in the specific studies.

4.1 Study 1 – Body Weight, Self-Esteem and Skepticism towards Advertising

In the following study the nature of the relationship of body weight, self-esteem and skepticism towards advertising is reported. The hypotheses for the general relation of body weight, self-esteem and skepticism towards advertising and

the gender hypotheses are presented in one section. The hypotheses considering the education levels of the participants are recorded in a separate section, in order to allow a better overview.

4.1.1 Study Design

A survey with 481 participants in face-to-face interviews was carried out in Carinthia. The survey was limited to the Carinthian region in order to receive a small sample of the Carinthian population. In total, 974 people were asked to participate. The age of the participants was constrained to the range between 20 and 50 years in order to minimize the influence of developmental issues on the level of self-esteem. Children and adolescents show a volatile level of self-esteem, depending on their daily disposition; the same applies to people over 50, who tend to have higher self-esteem caused by a value shift (Franklin et al., 2006; Friestad & Wright, 1994). Due to the age restriction, almost 30% of the participants had to be eliminated. The exclusion of questionnaires with missing values (if over 30% of the questionnaire was missing), underweight people, or questionnaires, in which crucial variables (such as age, education or body weight or height) were missing, accounted for another 15% of the questionnaires. The interviewer also gathered the variable gender. Therefore, no exclusion followed, if the interviewee did not indicate the gender. Moreover, if there were inconsistencies between the participant's indication of body weight and height and the interviewer's estimation, the questionnaire was eliminated from the data set for further analysis. Summing up the eliminations, more than 50% (493 participants) had to be eliminated in order to arrive at a sample that corresponded to the stipulated restrictions. The recruitment was conducted in public places across the entire province of Carinthia. Interviewers followed a quota sampling approach with regards to BMI (body weight), age and gender. Approximately 54% of subjects were overweight, whereas 46% were of normal weight; 51.8% were male and 48.2% were female. Ages ranged from 20 to 50 years old (M = 34.78). Regarding the education level, almost 7% completed compulsory schooling, 34% learnt a vocation, 34% earned a school-leaving certificate and 20% had a university degree, while five percent have other educational backgrounds. The distribution reflects the Carinthian population rea-

sonably well, even though a greater share of people with a higher education participated than there are in the Carinthian population. The following table provides more details on the sample.

Characteristic	Category	Frequency	Percentage
Gender	Male	249	51.8%
	Female	232	48.2%
Age	20-30	185	38.5%
	31-40	141	29.3%
	41-50	155	31.2%
Education	Compulsory school	32	6.7%
	Vocation learnt	163	33.9%
	School leaving certificate	164	34.1%
	University degree	96	20.0%
	Other	26	5.4%
BMI	Normal weight (BMI < 24.99)	221	45.9%
	Overweight (BMI > 25)	260	54.1%

Table 4: Overview of the sample - Study 1

A self-administered questionnaire was used, i.e. participants completed the questionnaire on their own. The interviewer remained with the interviewee throughout the completion of the questionnaire. For further analyses, the participants were divided into two weight categories (overweight and normal weight participants) based on their BMI, with the cut-off point set at 25 (below 25 means normal weight and above 25 indicates overweight (WHO, 2015a)). The BMI range of people of normal weight is from 18.5 – 24.99 and the range of overweight participants is from 25 – 40. Furthermore, participants were grouped based on their self-esteem and identified as low and high self-esteem participants, but only under hypothesis H2b. A median split determined the cut-off point. The decision to split the variable self-esteem via the median was based on two main reasons. First, according to MacCallum, Zhang, Preacher and Rucker (2002), self-rated psychological constructs are usually suitable for dichotomization due to the fact that they tend to be considered discrete. Partic-

ipants assessing their own self-esteem level tend to evaluate in relatively broad categories and in one direction, either high or low. Therefore, a median split creating two groups, a high and a low group, seems to be adequate in this context. Second, an experimental manipulation of self-esteem to create two different groups was not considered a feasible option in this study. Skepticism towards advertising as well as self-esteem are long-term constructs that are relatively stable over time (Obermiller et al., 2005; Rosenberg et al., 1989). A short-term manipulation of self-esteem would artificially distort the long-term self-esteem. Using a median split in order to build groups did not require the artificial manipulation of self-esteem and allowed the measurement of self-esteem as a long-term construct. Hence, a median split was used. Another grouping of participants was based on gender. The final grouping was based on the education level. Participants indicating their education level to be either compulsory school or a learned vocation were combined into one group, as were those people with a school leaving certificate and those with a university degree. To test the hypotheses, t-tests, ANOVAS, mediation analyses (bootstrapping approach) (Preacher & Hayes, 2004) and moderated mediation analyses (PROCESS) (Hayes, 2012) were conducted. To measure the above-mentioned constructs, exclusively established scales from the literature were used. Skepticism towards advertising was based on the scale by Obermiller and Spangenberg (1998), which is a five-point Likert scale (lower/higher scores indicating low/high skepticism levels) (Cronbach's Alpha in this study was .881). To measure the self-esteem level of the participants, Rosenberg's (1965) five-point Likert (lower/higher scores indicating low/high self-esteem levels) self-esteem scale (Cronbach's Alpha: .912) was utilized. Body weight was measured in kilograms (kg) and body height in meters (m).

As mentioned before, the misreporting of body weight is a pertinent problem in data collection processes (Costa Font, Fabbri & Gil 2010; Gil & Mora 2011), therefore, body weight and body height were measured in three separate ways. First, participants were asked to provide their body weight and body height at the end of the questionnaire. Second, after completing each interview, interviewers filled out a separate questionnaire estimating the participant's weight and height without the participants' knowledge. Interviewers were trained to

estimate the variables in a realistic way and practiced this prior to the study. Correlation (Pearson) between self-reported BMI and BMI estimated by the interviewers was .90, indicating a generally realistic and honest reporting by the subjects. For further analyses, the average of the self-reported and estimated BMI was used. Moreover, the interviewers categorized the participants on a physical appearance scale (male/female silhouettes from 1 (underweight) to 9 (obese)) (Leonhard & Barry, 1998). This categorization helped to clarify whether the interviewer's estimation of the weight was reliable. The correlation (Pearson) between the physical appearance and the self-reported BMI (.78) and the estimated BMI (.77) and the averaged BMI (.80) indicated a high correlation and generally a realistic and honest estimation by the interviewers, matching the self-reported information by the participants. In addition, the fact that 94% of the interviewers were able to estimate the bod weight in a range of ± 5 centimeters and 95% of the interviewers were able to estimate body weight in a range of ± 5 kilograms, supports the assumption of reliable interviewers. This underlines the high correlations mentioned above between self-reported and estimated body weight. The following table gives a deeper insight on how the scales were prepared for the upcoming results section.

Measure	Scale origin	Items	Evaluation/ Calculation	Scores	Cronbach's Alpha
Body Mass Index	WHO (2012)	Body height in m Body weight in kg	BMI= kg/m^2 $(BMI_{self\text{-}reported} + BMI_{estimated})/2$	Normal weight 18 > BMI >25 Overweight 25 > BMI < 40	-
Skepticism (towards Advertising) 5-point-Likert scale	Obermiller and Spangenberg (1998)	e.g. We can depend on getting the truth in most advertising. Avertising is a reliable source of information about the quality and performance of products.	Calculation of a composite value of the nine items	Possible scores: 1-5 Lower score indicating a low skepticism level Higher score indicating a high skepticism level	.881
Physical appearance (9 female and 9 male silhouettes in a range from underweight, normal weight, slightly overweight, moderately overweight to obese)	Leonhard and Barry (1998)		1-2 underweight 3-4 normal weight 5 slightly overweight 6-7 moderately overweight 8-9 obese	1-9 Lower score indicating a low body weight/slim silhouette Higher score indicating a high body weight/big silhouette	-
Self-Esteem 5-point-Likert scale	Rosenberg (1965)	e.g. On the whole, I am satisfied with myself. I feel I do not have much to be proud of.	Recoding of inversely coded items Calculation of a composite value of the ten items Classification of groups via median split (low and high self-esteem level)	Possible scores: 1-5 Lower score indicating a low self-esteem level Higher score indicating a high self-esteem level	.912

Table 5: Overview of the scales and measures used in Study 1

4.1.2 Results – General Relation and Gender

Before testing the hypotheses, the two research questions were investigated. RQ1a seeks an answer to the question whether there is a direct connection between body weight and skepticism towards advertising. A t-test shows that overweight participants (M = 3.40 [.82]) are significantly less skeptical towards advertising than normal weight participants (M = 3.62 [.73]) (t (477.79) = -3.15, p = .002). The data provides a positive answer to RQ1a.

RQ1b poses the question whether there is an interaction effect of gender and BMI on skepticism towards advertising. Moreover, the analysis examined whether overweight women possess the lowest level of skepticism towards advertising. A 2 (BMI) x 2 (gender) analysis shows a significant main effect of BMI (F (1, 480) = 11.39, p = .001). The main effect of gender is not significant (F (1, 480) = 2.64, p = .105). The interaction effect is significant (F (1, 480) = 6.45, p

= .011). Also, the groups to which the participants belonged (overweight men/women and normal weight men/women), have a significant effect on the level of skepticism towards advertising (F (1, 480) = 5.76, p = .017). Normal weight females (M = 3.63 [.75]) and normal weight males (M = 3.61 [.71]) show a higher level of skepticism than overweight males (M = 3.51 [.79]) and overweight females (M = 3.25 [.83]). Contrast tests demonstrated that overweight females (M = 3.25[.83]) show a significantly lower level of skepticism towards advertising compared to all other groups (normal weight females: M = 3.63 [.75], t (477) = 4.15, p < .001; normal weight males: M = 3.61 [.71]), t (477) = 3.36, p = .001; overweight males: M = 3.51 [.79]), t (477) = -3.06, p = .002). These results can answer RQ1b in the affirmative and are depicted in Figure 20.

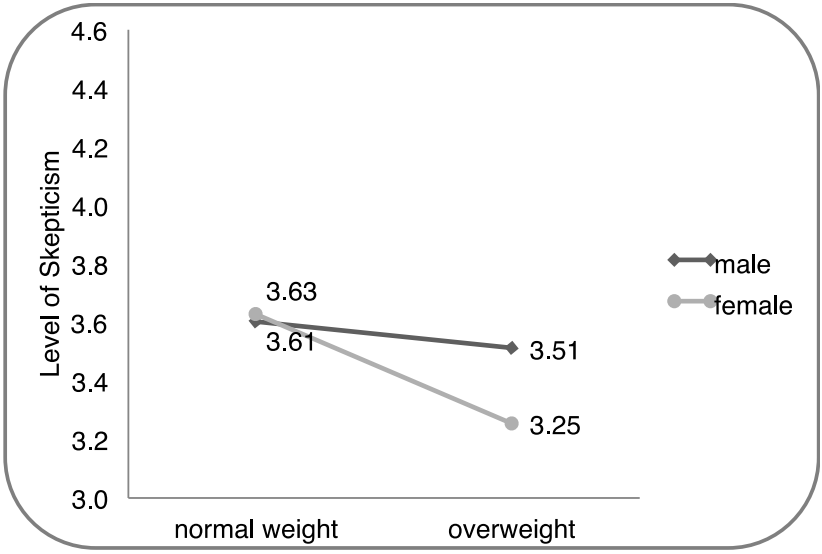

Figure 20: Interaction effects: Gender x BMI on skepticism towards advertising

The Relationship between Self-Esteem and Body Weight

H_{1a} predicts that overweight people have lower self-esteem than people with normal weight. A t-test indicates the significant relation between body weight and self-esteem (t (478.38) = -4.79, p < .001). Overweight participants (M =

4.02 [.74]; from a BMI of 25) have lower rates of self-esteem than participants who are of normal weight (M = 4.31 [.60]; up to a BMI of 24.99). H_{1a} is supported and is in line with findings from other studies (e.g. Hebl, King & Perkins, 2009; Miller & Downey, 1999; Mirza, Davis & Yanovski, 2008). The gender differences assumed in H_{1b} are also supported by the data. H1b suggests an interaction effect of gender and BMI on self-esteem, stating that overweight women show the lowest level of self-esteem. A 2 (BMI) x 2 (gender) ANOVA demonstrates that there is an interaction effect of body weight and gender. Both main effects (BMI: $F(1,480) = 30.47$, $p < .001$ and gender: $F(1,480) = 25.33$, $p < .001$) as well as the interaction effect (BMI x gender: $F(1,480) = 12.27$, $p = .001$) are significant. Also, the analysis of the effect of the subjects' groups (overweight men/women and normal weight men/women) on the self-esteem level shows significant results ($F(3, 258.74) = 20.08$, $p < .001$). The Welch-F-ratio has been reported, since the assumption of homogeneity of variance is violated. The mean values reveal that overweight females (M = 3.74 [.70]) have significantly lower self-esteem than normal weight females (M = 4.26 [.64]), overweight males (M = 4.22 [.69]) and normal weight males (M = 4.38 [.56]). The means and contrast tests revealed that overweight females (M = 3.74 [.70]) have significantly lower self-esteem than normal weight females (M = 4.26 [.64]; $t(477) = 6.32$, $p < .001$), overweight males (M = 4.22 [.69]; $t(477) = -6.27$, $p < .001$) and normal weight males (M = 4.38 [.56]; $t(477) = 7.08$, $p < .001$). In particular, overweight women show the lowest level of self-esteem, whereas normal weight men have the highest level of self-esteem. Overweight men show almost the same level of self-esteem as normal weight women. H_{1b} can be supported by the data. Figure 21 shows the main effects of BMI and gender and the BMI x gender interaction effect on self-esteem.

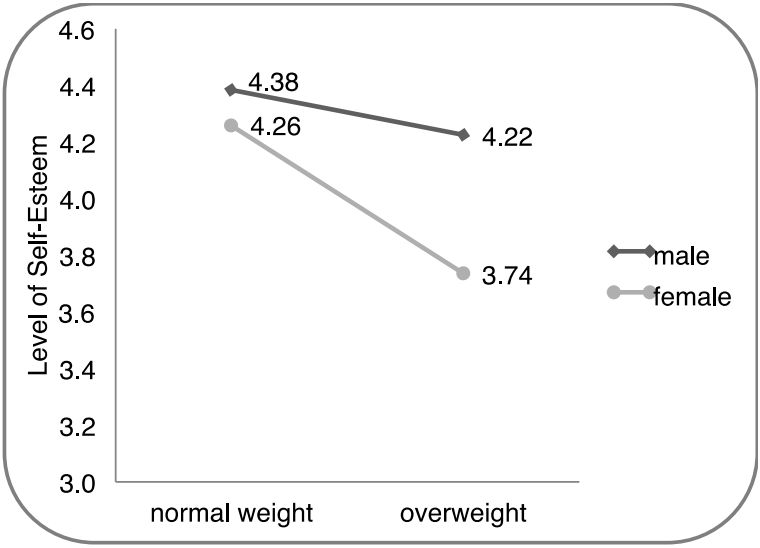

Figure 21: Interaction effects: Gender x BMI on self-esteem

The Relationship between Self-Esteem and Skepticism towards Advertising

The second hypothesis H_{2a} predicted that people with low self-esteem are less skeptical towards advertising than people with high self-esteem. The t-test results show that subjects with lower self-esteem (M = 3.35 [.74]) are less skeptical towards advertising than subjects with higher self-esteem (M = 3.67 [.80]) ($t(479) = 4.56$), $p < .001$). These results confirm the findings of the study by Boush, Friestad and Rose (1994). H_{2b} expected an interaction effect of gender and self-esteem on skepticism towards advertising and predicted that women with low self-esteem would show the lowest level of skepticism towards advertising. A 2 (self-esteem) x 2 (gender) ANOVA revealed that gender has no direct effect on skepticism towards advertising ($F(1, 480) = .40$), $p = .526$). Also, the interaction between gender and self-esteem ($F(1, 480) = .10$), $p = .757$) does not produce significant outcomes, whereas the main effect of self-esteem in this relationship is significant ($F(1, 480) = 19.15$), $p < .001$). Women with a low level of self-esteem (M = 3.32 [.79]) and with a high level of self-esteem (M = 3.65 [.82]) and men with a low level of self-esteem (M = 3.39 [.66]) and with a

high level of self-esteem (M = 3.68 [.80]) do not differ from each other significantly. Hence, H2b is rejected. Results are summarized in Figure 22.

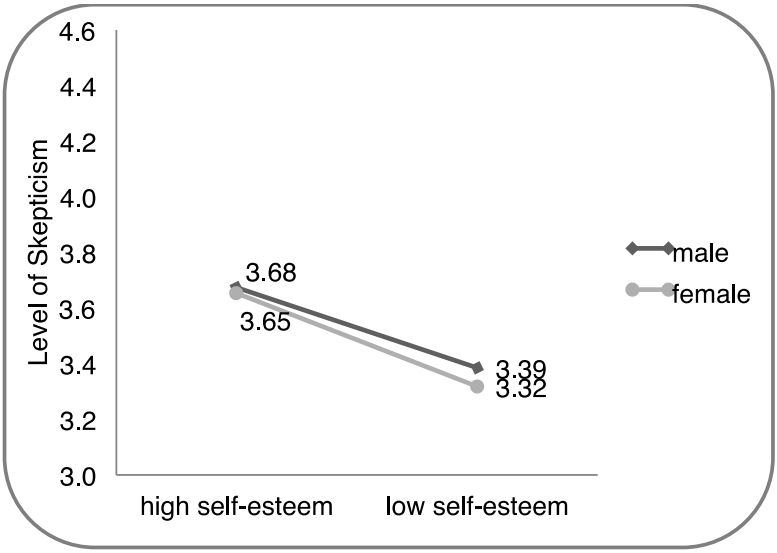

Figure 22: Interaction effects: Gender x self-esteem on skepticism towards advertising

The Mediating Effect of Self-Esteem in the Relationship Between Body Weight and Skepticism Towards Advertising

Hypothesis H_{3a} purported that self-esteem has a mediating effect on the relationship between BMI and skepticism towards advertising. The mediation analysis with the bootstrapping approach (Preacher & Hayes, 2004) estimates a confidence interval for the strength of the indirect effect. If zero is excluded from the confidence interval, it can be assumed that the indirect effect is significant. If the initial path coefficient between the independent and the dependent variable is significant and is significantly reduced after inclusion of the possible mediator variable, then a mediating influence can be concluded. Bootstrapping with 5,000 resamples was applied. After conducting the mediation analysis, the connection between body weight and self-esteem ($\beta = -.26$, $p < .001$) and self-esteem and skepticism towards advertising ($\beta = .23$, $p < .001$) suggested a significant relationship. In order to determine a mediating influence between the variables, the relationship between body weight and skepticism was calcu-

lated. The calculation without the mediator supports a connection (β = -.15, p < .001). Adding the mediator variable to the analysis reveals that the effect is lower (β = -.09, p = .050), but still significant. A bootstrap analysis with m = 5000 shows a significant mediation effect (CI_{95-}= -.098 CI_{95+}= -.030). Results support the assumption of a mediating role of self-esteem in the relationship between BMI and skepticism. H_{3b} assumes that gender moderates the mediating effect of self-esteem in the relationship of BMI and skepticism towards advertising and that the mediation would be higher among women than among men. A moderated mediation analysis is conducted using PROCESS Model 8 (Hayes, 2012). The analysis (Hayes, 2012; Muller, Judd, & Yzerbyt, 2005; Preacher, Rucker, & Hayes, 2007) results in a model showing the extent to which the indirect effect of the independent variable on the dependent variable through a mediator depends on a moderator. The analysis calculates the direct effect of the independent on the dependent variable as well as the indirect effect via the mediator and tests the significant influence of the variables (Hayes, 2012). Additionally, the analysis delivers path coefficients and p-values for each path in the model. The conditional direct effect of body weight on skepticism towards advertising among women (p = .002; CI_{95-}= .069 CI_{95+}= .308) as well as among men (p = .784; CI_{95-}= -.115 CI_{95+}= .152) support a moderation of gender. Moreover, the conditional indirect effect via the mediator self-esteem supports a moderation of gender (women: CI_{95-}= .040 CI_{95+}= .133; men: CI_{95-}= .000 CI_{95+}= .070). Therefore, the results of the PROCESS analysis indicate that gender moderates the mediating effect of self-esteem in the relation of BMI and skepticism towards advertising. The individual path results are illustrated in Figure 23.

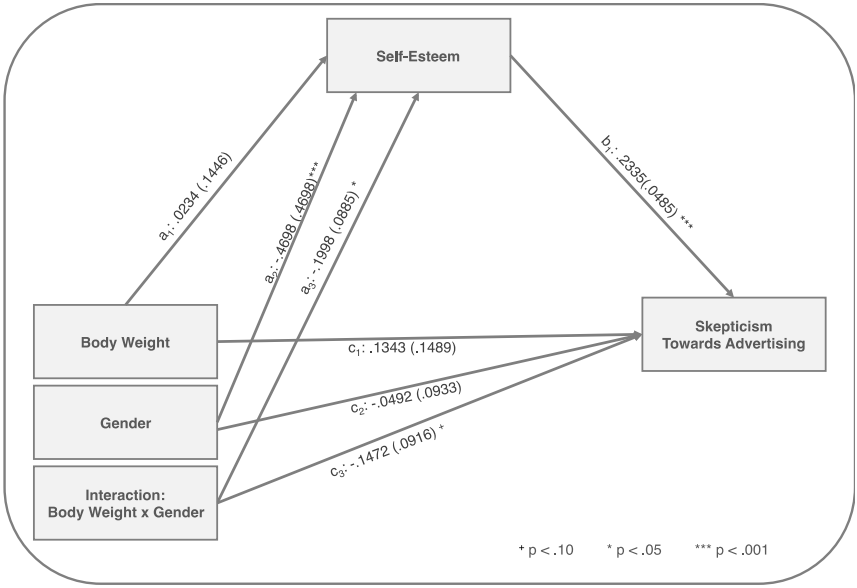

Figure 23: Moderated mediation path coefficients (standard errors) – Gender

In order to gain more detailed insight into the moderation of the mediation, two separate mediation analyses were executed, one for the female and another one for the male subjects (Fairchild & MacKinnon, 2009). For the female participants, the findings support the assumption of the relationship between BMI and self-esteem (β_{female} = -.39, p < .001), self-esteem and skepticism towards advertising (β_{female} = .20, p = .003) and BMI and skepticism towards advertising (β_{female} = -.26, p < .001). Furthermore, the analysis shows significant results for self-esteem having a mediating effect in the relationship between BMI and skepticism towards advertising (β_{female} = -.18, p = .010). A bootstrap analysis with m = 5000 supports these findings (CI_{95-}= -.155 CI_{95+}= -.018).

Results for the males deviate from those for the females. With regard to the male subjects, BMI significantly influences self-esteem (β_{male} = -.16, p = .005) and self-esteem significantly influences skepticism towards advertising (β_{male} = .24, p < .001). However, there is no direct influence of BMI on skepticism towards advertising among males (β_{male} = -.04, p = .502). Since the detection of a mediation does not depend on a significant direct effect of BMI on skepticism towards advertising (Preacher & Hayes, 2008), the mediating effect of self-

esteem is analyzed in this context, but it does not yield significant results (β_{male} = -.002, p = .971). Again, a bootstrap analysis with m = 5000 supports the findings (CI_{95-}= -.080 CI_{95+}= .000). To summarize the results, the two mediation analyses (for women and men) show a change in the nature of the mediation, i.e. a change in the strength of the indirect effect (Preacher, Rucker & Hayes, 2007). Therefore, a conditional indirect effect can be assumed and this supports the assumption that gender moderates the mediating effect of self-esteem in the relationship between BMI and skepticism towards advertising. Among females, self-esteem mediates the relationship between BMI and skepticism towards advertising, whereas no such mediation exists among males. Relevant findings from the mediation analyses (general, women and men) can be found in Figure 24.

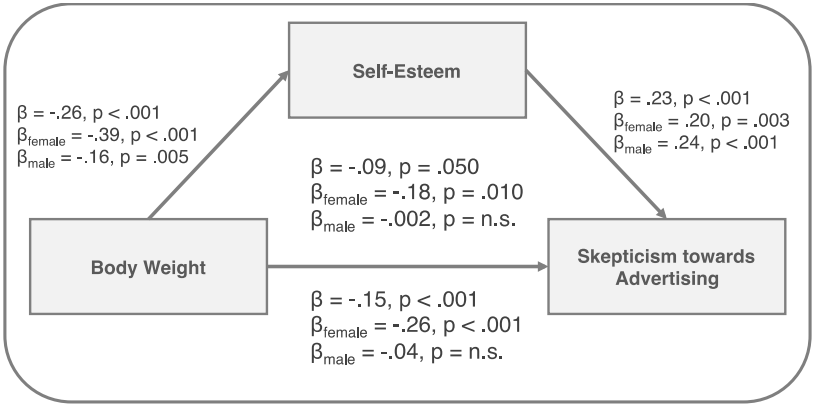

Figure 24: Mediation of self-esteem on the relation of body weight and skepticism towards advertising (general, women and men) (n = 481; n_{female} = 232; n_{male} = 249)

4.1.3 Results - Education

H_{4a} suggests a moderation of education on the mediating effect of self-esteem in the relationship between BMI and skepticism towards advertising. Furthermore, it is assumed that the mediation is higher among people with lower educational levels than among people with higher levels of education. Analyses show that the conditional direct effect of body weight on skepticism towards

advertising among people with a higher educational level (p = .633; CI_{95-}= -.098 CI_{95+}= .160) as well as among people with a lower educational level (p = .031; CI_{95-}= .012 CI_{95+}= .252) support a moderation of education. Moreover, the conditional indirect effect via the mediator self-esteem supports a moderation of education (higher educational level: CI_{95-}= -.003 CI_{95+}= .059; lower educational level: CI_{95-}= .028 CI_{95+}= .108). The results delivered by the PROCESS analysis support the assumption that education moderates the mediating effect of self-esteem on the relation of BMI and skepticism towards advertising. Figure 25 gives further information on the coefficients and standard errors of the individual paths of the analysis.

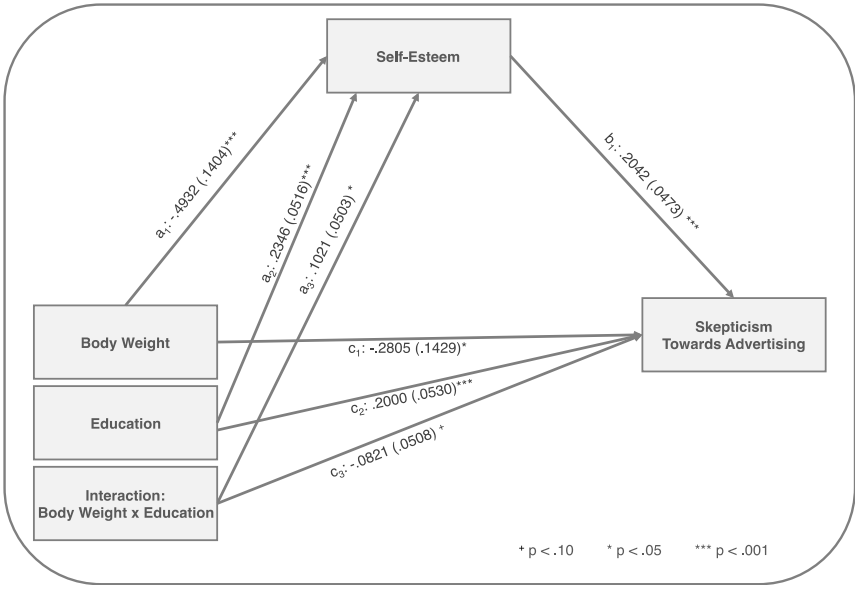

Figure 25: Moderated mediation path coefficients (standard errors) – Education

In order to detect whether the moderation is stronger among the people with lower levels of education than among those with higher educational levels, two separate analyses were performed; one for less educated people (those who have completed compulsory schooling or learned a vocation) and one for more

highly educated people (those who have earned the school leaving certificate or a university degree). Among people with lower levels of education there is a significant influence of BMI on self-esteem (β_{lowedu} = -.31, p < .001), self-esteem on skepticism towards advertising (β_{lowedu} = .30, p < .001) and BMI on skepticism towards advertising (β_{lowedu} = -.19, p = .007). However, the analysis does not yield significant results regarding the mediating relationship of self-esteem on skepticism towards advertising (β_{lowedu} = -.10, p = .171). Nevertheless, a bootstrap analysis with m = 5000 does not support these findings (CI_{95-} = -.163 CI_{95+}= -.041). This might be a clue to investigate this relationship further in combination with other variables (Preacher & Hayes, 2004). Results for the people with higher levels of education show different outcomes. BMI influences self-esteem significantly ($\beta_{highedu}$ = -.15, p = .015) and self-esteem affects skepticism towards advertising significantly as well ($\beta_{highedu}$ = .13, p = .045). However, the analysis shows that BMI does not influence skepticism towards advertising ($\beta_{highedu}$ = -.03 p = .672), nor does the indirect effect of BMI on skepticism towards advertising via the mediator self-esteem ($\beta_{highedu}$ = -.01, p = .905) result in significant outcomes. A bootstrap analysis with m = 5000 supports the findings (CI_{95-}= -.050 CI_{95+}= .001). The two mediation analyses (for people with a high and a low educational level) support the assumption that there is a stronger mediation among people with lower levels of education than among people with higher levels of education (with regard to the higher level of beta-indicators). No mediation is detected among people with higher levels of education, whereas people with lower levels of education show another outcome. First, the direct effect is significant, then the indirect effect via the mediator does not yield significant results, which might have been caused by another variable (Preacher & Hayes, 2004), which is analyzed in the following hypothesis. Findings from the mediation analyses are summarized in Figure 26.

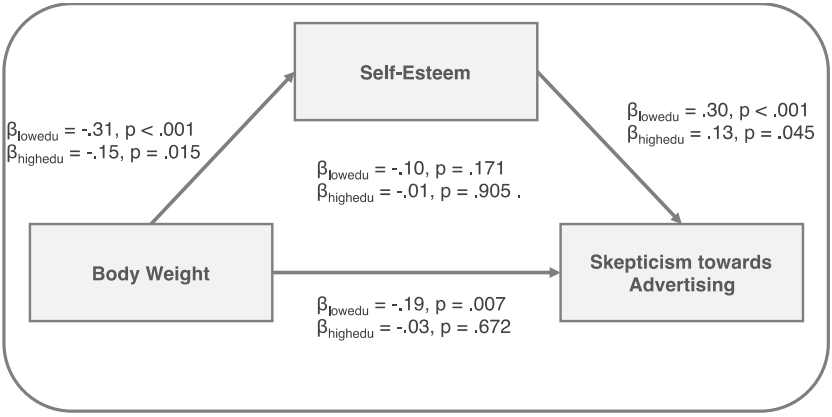

Figure 26: Mediation of self-esteem on the relation of body weight and skepticism towards advertising (people with low and high levels of education) (n_{lowedu} = 195; $n_{highedu}$ = 260)

H_{4b} suggests a moderation of gender on the mediation of self-esteem on the relation of BMI and skepticism towards advertising, considering people with low levels of education. Furthermore, it is proposed that the mediation is stronger among women than among men. In order to check if there is a moderation, an analysis was conducted using PROCESS (Model 8). According to the analysis, the conditional direct effect of body weight on skepticism towards advertising among women (p = .033; CI_{95-}= -.401 CI_{95+}= -.017) as well as among men (p = .931; CI_{95-}= -.193 CI_{95+}= .210) support a moderation of gender. Moreover, the conditional indirect effect via the mediator self-esteem supports a moderation of gender (women: CI_{95-}= -.216 CI_{95+}= -.049; men: CI_{95-}= -.159 CI_{95+}= -.022). The first part of the hypothesis can be supported. All individual paths of the moderated mediation analysis are depicted in Figure 27.

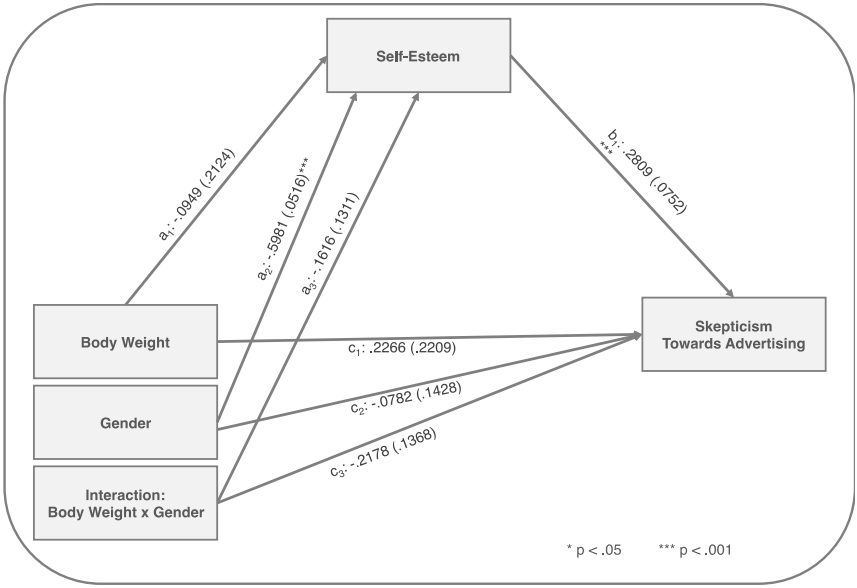

Figure 27: Moderated mediation path coefficients (standard errors) – Gender (among people with low levels of education)

The mediation for women with lower levels of education delivered the following results. There is a significant influence of body weight on self-esteem (β_{lowedu_female} = -.45, p < .001) and also of self-esteem on skepticism towards advertising (β_{lowedu_female} = .28, p = .010), as well as the direct effect of body weight on skepticism towards advertising (β_{lowedu_female} = -.33, p = .001). After adding the mediator self-esteem the regression shows an almost significant result (β_{lowedu_female} = -.21, p = .058). This supports the assumption of a mediation of self-esteem on the relation of body weight and skepticism towards advertising among women with lower levels of education. This is also supported by the bootstrap analysis (m = 5000) (CI_{95-}= -.260 CI_{95+}= -.014). Among men with lower levels of education the regressions from body weight to self-esteem (β_{lowedu_male} = -.25, p = .011) and self-esteem to skepticism towards advertising (β_{lowedu_male} = -26, p = .010) deliver significant results. Yet the direct effect from body weight towards skepticism towards advertising (β_{lowedu_male} = -.06, p = .539) and the indirect effect including the mediator self-esteem (β_{lowedu_male} =

.01, p = .962) are not significant. The bootstrap analysis with m = 5000 can also supports this finding (CI_{95-}= -.149 CI_{95+}= -.008). According to the results, there is no mediation among male participants with lower levels of education. The second part of the hypothesis can be supported, since the mediation is stronger among women than among men. The following figure shows the results graphically.

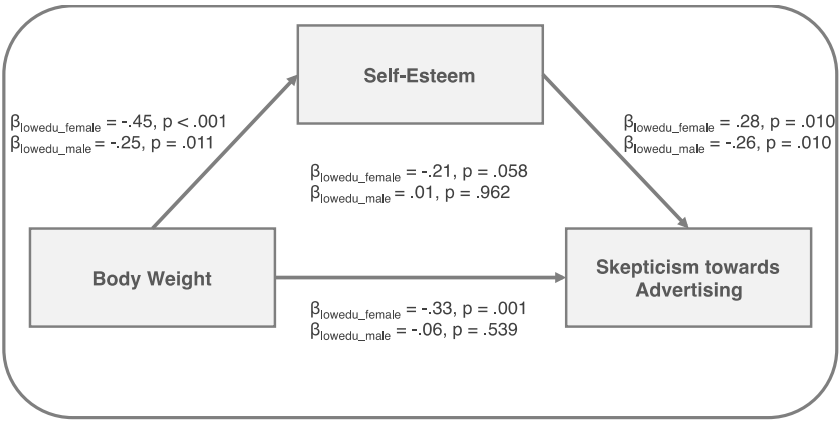

Figure 28: Mediation of self-esteem on the relation of body weight and skepticism towards advertising (men and women with low levels of education) (n_{lowedu_male} = 101; n_{lowedu_female} = 94)

Hypothesis H_{4c} investigates people with high levels of education and the moderation of gender on the mediation of self-esteem on the relation of body weight and skepticism towards advertising. The PROCESS analysis shows that the conditional direct effect of body weight on skepticism towards advertising among women (p = .390; CI_{95-}= -.235 CI_{95+}= .092) as well as among men (p = .431; CI_{95-}= -.114 CI_{95+}= .266) do not support a moderation of gender. Moreover, the conditional indirect effect via the mediator self-esteem does not support a moderation of gender (women: CI_{95-}= -.034 CI_{95+}= .018; men: CI_{95-}= -.081 CI_{95+}= -.001). Therefore, the hypothesis can be supported. The following illustration depicts the individual path coefficients and standard errors in full.

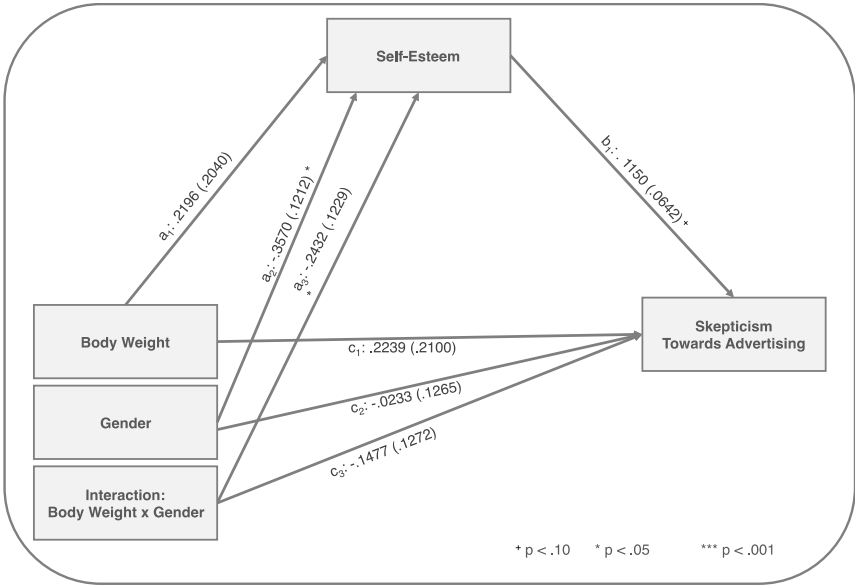

Figure 29: Moderated mediation path coefficients (standard errors) – Gender (among people with high levels of education)

The second part of the hypothesis claims that the mediation among men and women with higher levels of education is similar. Considering women with a higher level of education, there is a significant influence of body weight on self-esteem ($\beta_{highedu\_female}$ = -.26, p = .002). No significant influences of self-esteem on skepticism towards advertising ($\beta_{highedu\_female}$ = .05, p = .603), body weight on skepticism towards advertising ($\beta_{highedu\_female}$ = -.12, p = .167) and including the mediator self-esteem in this relation of body weight and skepticism towards advertising ($\beta_{highedu\_female}$ = -.10, p = .240) are found. No mediation can be found among women with a high level of education. A bootstrap analysis (m = 5000) lends further support (CI_{95-}= -.069 CI_{95+}= .033). Similar results are found among men with higher levels of education. The effect of body weight on self-esteem ($\beta_{highedu\_male}$ = -.02, p = .790) is not significant, whereas the effect of self-esteem on skepticism towards advertising results in a significant outcome ($\beta_{highedu\_male}$ = .17, p = .047). The other two tested paths do not show significant results: direct effect of body weight on skepticism towards advertising

($\beta_{highedu\_male}$ = .07, p = .430) and including the mediator ($\beta_{highedu\_male}$ = .07, p = .399). Therefore, no mediation can be assigned to men with higher levels of education, which is also underlined by the bootstrap analysis with m = 5000 (CI_{95-}= -.043 CI_{95+}= .026). The second part of H_{4c} cannot be supported, since the mediations occur neither among women nor among men. In the following graph, the relevant results are depicted.

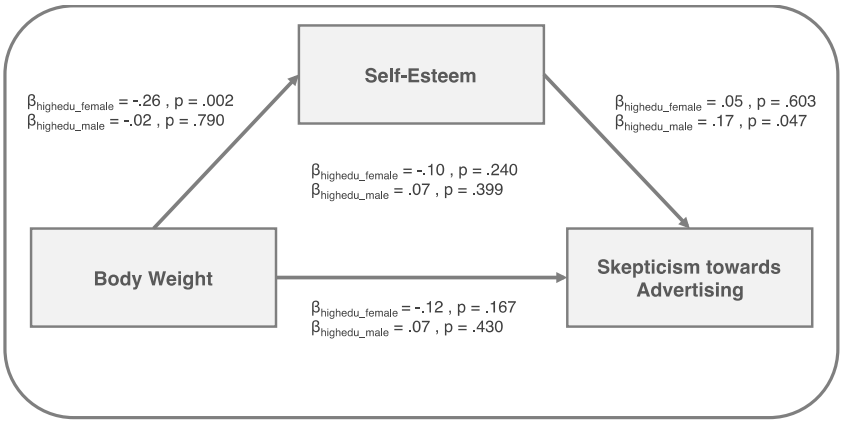

Figure 30: Mediation of self-esteem on the relation of body weight and skepticism towards advertising (men and women with high levels of education) ($n_{highedu\_male}$ = 139; $n_{highedu\_female}$ = 138)

The next hypothesis H_{4d} suggests a partial mediation of self-esteem of body weight and skepticism towards advertising among women with low levels of education. The above-calculated mediation (results can be seen in Figure 28) results in a complete mediation. The hypothesis cannot be supported.

The last hypothesis of the section suggests a complete mediation of self-esteem on the relationship of body weight and skepticism towards advertising among women with higher levels of education. According to the results (depicted in Figure 30), no complete mediation (or to be precise, no mediation at all) can be supported for this group.

4.1.4 Discussion

The section above investigates the direct connection of body weight and skepticism towards advertising. The results indicate that overweight female participants show lower levels of skepticism towards advertising than normal weight females, males and overweight males. Whereas overweight women are the least skeptical towards advertising, overweight men and normal weight participants (men and women) show almost equal levels of skepticism towards advertising. The analyses further reveal that the relationship between body weight and skepticism towards advertising is mediated by self-esteem and that the mediation is moderated by gender. While self-esteem mediates the relationship between BMI and skepticism towards advertising among women, no mediation exists among males.

In line with the Objectification Theory (Fredrickson & Roberts, 1997), due to the media and the high presence of ideal female bodies in the media, women might see themselves as objects that have to conform with the slim body ideal. In addition, according to Hebl and Turchin (2005), it is not only women who have high expectations of their bodies and the bodies of other women, but men also tend to accept the standard for women set by the media and advertisements when judging women (Stankiewicz & Rosselli, 2008). Hebl and Turchin (2005) stated that even men adopt the societal ideal for women regarding their weight and they are more critical when judging overweight females (Hebl & Turchin, 2005). This expectation might cause the higher concern about the weight (Hebl & Turchin, 2005; Hebl, King & Perkins, 2009; Mangleburg & Bristol, 1998) and a greater feeling of pressure among women, especially among overweight women, to correspond to the ideal body scheme. Comparing their physical appearance to the ideal body might lead to low self-esteem, if the outcome of the comparison is not convenient and consequently, might lead to a lower level of skepticism towards advertising (Argo, White, & Dahl, 2006; Argo & White, 2012; Holmqvist & Frisén, 2012; Swami et al., 2008).

Another important finding is the mediating effect of self-esteem in the relationship between body weight and skepticism towards advertising among women. Furthermore, the moderating role of gender in the mediation has been demon-

strated. In both analyses, men are less affected than women are. Among men, data confirmed an impact of body weight on self-esteem and an influence of self-esteem on the level of skepticism towards advertising. However, there is no direct influence of body weight on skepticism towards advertising and no mediation of self-esteem in the relationship among men. An explanation for this outcome might be that any objectification of male bodies and men takes place to a lesser extent. Another explanation might be the different sources men and women have at their disposal to derive their self-esteem from. As already outlined above, women focus more on their body weight (O'Driscoll & Jarry, 2015) than men do, and might therefore show a direct connection of body weight and skepticism towards advertising, whereas men do not.

Furthermore, the study confirmed a relationship between self-esteem and body weight, which is in line with previous research (see the meta-analysis by Miller and Downey, 1999). According to the data, overweight people have lower levels of self-esteem. Overweight women show the lowest level of self-esteem, overweight men and normal weight women are on almost equal levels with regard to their self-esteem, and normal weight men have the highest self-esteem level. As outlined above, causes might include the strong influence of media and advertising and the societal ideal of a slim body putting pressure on the female population, especially on overweight women, who do not conform to society's ideal of a slim body (Stankiewicz & Rosselli, 2008).

Moreover, analyses reveal that self-esteem has a positive impact on skepticism towards advertising, which is also in line with previous research (Boush et al., 1994). Furthermore, an interaction of self-esteem and gender on skepticism towards advertising is assumed. Surprisingly, no significant differences between men and women are found. A possible explanation can be found in further analyses. The calculations show that male participants with low levels of self-esteem show equal levels of skepticism towards advertising regardless of their body weight (normal and overweight), whereas women differ in their levels of skepticism towards showing low levels of self-esteem but differing in their body weight levels. This may support the assumption that the development of low self-esteem among men is determined by sources other than body weight. Among women, body weight might be the influencing factor for determining the

self-esteem level. The differences cause similar results when using means in the calculations. Therefore, the assumption that women with lower levels of self-esteem show the lowest levels of skepticism towards advertising could not be supported.

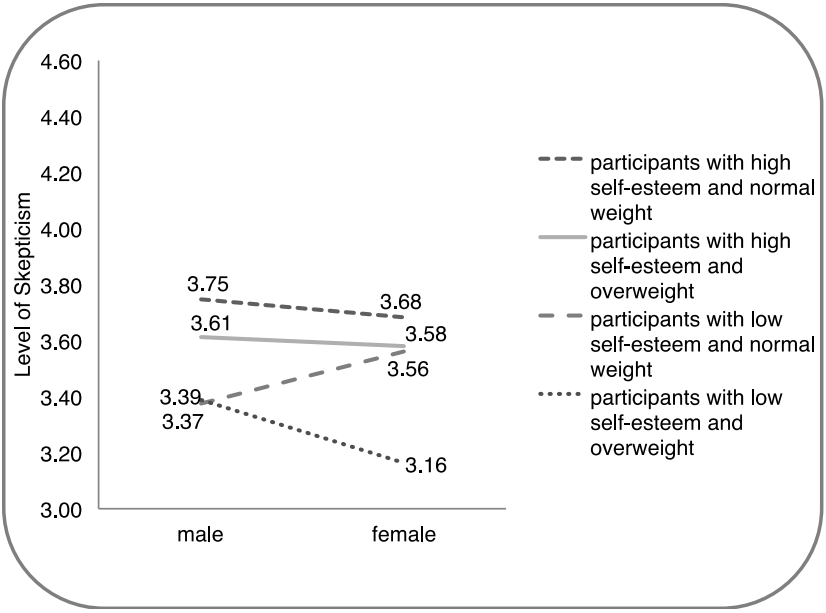

Figure 31: Levels of body weight, self-esteem and skepticism towards advertising (Extension Hypothesis H_{2b})

Furthermore, the calculations with the variable education deliver interesting results. The moderation of education can be supported. Regarding people with lower levels of education, a complete mediation can be found, whereas among people with higher levels of education only the paths from body weight to self-esteem and self-esteem to skepticism towards advertising are significant. These results can be explained by two facts. On the one hand, education represents another source of self-esteem (Cheung et al., 2011; Costa Font et al., 2010; Gil & Mora, 2011; Klimont et al., 2008; Miller & Downey, 1999; Sobal & Stunkard, 1989), and on the other hand, it affects the ability to critically scrutinize the advertisements shown (Phillips & Stanton, 2004; Prendergast et al.,

2009; Roedder John, 1999; Valkenburg & Cantor, 2001). Moreover, a higher level of education can influence the likelihood of adopting the societal body ideal shown in the media. People with a higher educational level might reflect more on the artificiality of the ideal body, which is heavily edited using various programs, and have a higher probability of questioning this body than people with a lower level of education. The results support these assumptions, since a partial mediation is detected among people with a low level of education, whereas among people with a high level of education only an influence of body weight on self-esteem and of self-esteem on skepticism towards advertising has been established. This could lead to the assumption that education can interrupt a direct influence of body weight and skepticism towards advertising. Gender plays an important role in the relationship of body weight, self-esteem and skepticism towards advertising and is also essential considering different levels of education. No moderation of gender on the mediation of self-esteem on the relation of body weight and skepticism towards advertising among people with a low level of education is detected. However, considering men and women separately, while no mediation of self-esteem is supported among men, a complete mediation is in fact found among women. A possible explanation for the different outcomes among men and women might be the higher probability among women to focus on their physical appearance and especially their body weight (Hebl & Turchin, 2005; Hebl, King & Perkins, 2009; Knauss, Paxton, & Alsaker, 2008). Men might focus on other sources, independently of their educational level, in order to gain high self-esteem, which can support a higher level of skepticism towards advertising. Regarding people with higher educational levels, women and men do not differ in the nature of the connections. No mediations are detected, not even indirect influences from body weight to self-esteem and self-esteem to skepticism towards advertising can be seen. This might imply that education is the key influencing factor of skepticism towards advertising, but considering the last assumptions regarding education, it can be seen that body weight is the influencing factor among women with a low educational level. This shows that education is important for higher self-esteem and higher skepticism towards advertising, but body weight remains a fundamental factor for determining skepticism towards advertising among people with low levels of education, at least among women.

4.1.5 Limitations and Implications

There are possible boundary conditions of the study. First, the findings relate to advertising in general and have not been specified with regard to particular types of advertisements, products or promotional channels. A different selection of products could change the nature of the relationship and may not affect the level of skepticism towards advertising, or may prove irrelevant for the self-esteem. Further studies could focus on various products in various channels, such as advertisements in magazines, billboards or on TV or on the radio. Second, the sample consists of Caucasians, which eliminates comparisons between different ethnic groups. Future research might include a detailed exploration of the influence of ethnic backgrounds, since Miller and Downey (1999) report an interaction of body weight, self-esteem and ethnicity. Third, the study focuses on two groups: normal weight and overweight people, but underweight people were not investigated. A more highly differentiated analysis of different groups might prove promising for future research. Last, the focus lies on body weight, gender and education, but other possible factors influencing self-esteem (e.g. intelligence or social competencies) are not considered. Other sources might be helpful in furnishing an explanation for gender differences, especially on different educational levels. Future research, especially in experiments, should consider additional factors.

Nevertheless, the findings have important implications for scientific research as well as for public policy makers. So far, the literature has only reviewed the influence of advertising on self-esteem and body related variables (Boush et al., 1994; Seiders & Petty, 2004; Smeesters & Mandel, 2006), and has omitted the investigation of influences of a higher BMI on the level of skepticism towards advertising. The study's findings support the assumption that it might be interesting for academic research to look at the relationship from a different angle as well. Furthermore, the findings of the study may be of interest to public policy groups. Currently, the advertisement landscape is dominated by low-nutrient, high-calorie food and beverages (Byrd-Bredbenner & Grasso, 2000; Warren et al., 2008). Due to the lower skepticism towards advertising, consumers may be more easily influenced by advertised products (which are predominately unhealthy food products and beverages) (Byrd-Bredbenner &

Grasso, 2000; Harris et al., 2009). This may lead to bad eating habits, and in the long run possibly to overweight (Bates et al., 2009; Harris et al., 2009; Seiders & Petty, 2004). In this context, it might be of relevance first for those groups, who are responsible for the public health care sector. Health organizations and governments are facing higher expenditures due to the higher prevalence of overweight, which can burden the welfare state tremendously (Salihu, Bonnema & Alio, 2009; Shea & Pritchard, 2007; Wellman & Friedberg, 2002). Therefore, the public health care sector could investigate influencing factors for the rising numbers of overweight persons and use the study's results as a basis for their research in order to reduce overweight rates and costs for treatments and health implications. In addition, it might be important for the public health sector to work towards reducing the number of high-calorie and low-nutrient food and beverages (possibly causing the higher overweight rates and affecting women's self-esteem) and the prevalence of the slim body ideal in advertising in order to stop the negative influence on the consumer. This can only be achieved in collaboration with groups responsible for advertising regulations. Second, it might be of interest for the governments to produce information campaigns to make consumers aware of the influences they are exposed to unconsciously. It is important to not only focus on children and adolescents, but to approach the broad public and all age groups to guarantee a comprehensive distribution of information.

4.2 Study 2 – Body Weight, Self-Esteem and Skepticism towards Specific Products among Women

Study 2 is based on the same sample as Study 1, but only female participants are considered. In this section of the thesis four hypotheses are tested, which were presented in Chapter 3.4.3. The focus of this study lies on skepticism towards the advertisement of specific products in order to settle the question about the product categories in which an influence occurs. The section is divided into the study's design, results, discussion, limitations and implications.

4.2.1 Study Design

To test the hypotheses, a between subject quasi-experiment with 232 participants was conducted. The recruitment was based on using a quota sampling approach (age and BMI) and was random. Since this study's sample is a part (only women) of the same sample as used in Study 1, the preparations of the sample can be read in Chapter 4.1. Additional information relevant for this study is given below. Respondents were shown one out of the four fictional advertisements and filled in the questionnaire (skepticism towards the specific advertisement for four different products and general data), while interviewers completed an interviewer questionnaire (estimation of height, weight and physique). Four different products were selected, based on the notion that various products either affect the rational or the emotional ability of a person (Buck et al., 1995). The first product, the smartphone, was chosen due to its technical features and the low affiliation to a food product. Furthermore, it predominantly initiates a cognitive process rather than an emotional. This product is considered as the study's neutral product. In order to cover diverse features of food related products, the following three products were chosen. On the one side a healthy (bottled water) and on the other side an unhealthy (chocolate bar) product were chosen, in order to test whether there are differences in the level of skepticism considering the level of healthiness of the product. The last product (appetite suppressant) is related to the pharmaceutical industry, and may help consumers attempting to correspond to the body ideal represented in society and the media. In the following figure, the fictitious advertisements created by a professional graphics designer are depicted.

Figure 32: Promoted products – Study 2

Considering the characteristics of the sample with 232 female participants, about 52% of the subjects are overweight, 48% are of normal weight. The age range is between 20 and 50 years (M = 34.85). In total, 52 people were shown the smartphone advertisement, 71 the advertisement with the bottled water, 64 the chocolate bar and 45 the appetite suppressant, respectively. People who indicated that they know the fictitious products were eliminated from the sample, since this might have led to differences among the groups due to preexisting attitudes towards the products. Table 6 illustrates the characteristics of the sample.

Characteristic	Category	Frequency	Percentage
Age	20-30	88	37.9%
	31-40	64	27.6%
	41-50	80	34.5%
BMI	Normal weight (BMI <24.99)	112	48.3%
	Overweight (BMI >25)	120	51.7%
Advertisement	Smartphone	52	22.4%
	Bottled water	71	30.6%
	Chocolate bar	64	27.6%
	Appetite suppressant	45	19.4%

Table 6: Overview of the sample - Study 2

Hypotheses are tested with mediation analyses (bootstrapping approach) (Preacher & Hayes, 2004) and t-tests. For all further analyses apart from the mediations, participants are divided into two weight groups (overweight and normal weight), based on their BMI, setting the cut-off point at 25 (below 25 identifies normal weight and above 25 overweight) (WHO, 2015a). As mentioned in the previous study, the well-established skepticism towards advertising scale was used (Cronbach's Alpha in this study: .928) (Obermiller & Spangenberg, 1998). Rosenberg's (1965) five-point scale asking about self-esteem was also used again (Cronbach's Alpha in this study: .876). In order to avoid the problem of missing or misreported values (Costa Font et al., 2010; Gil & Mora, 2011) relating to body weight, body weight was measured with three independent scales, as mentioned in the context of the previous study. The correlation (Pearson) between the self-reported and the estimated body weight

was very high (.95), as were the correlations of the body physique and the self-reported BMI (.84) and the estimated BMI (.84) and the averaged BMI (.84) indicated high correlations of the self-reported and the estimated values and reliable data. Also, the reliability of the interviewers was given, as previously described in Study 1, since the interviewers were the same. Details of the scales are reported in Table 7.

Measure	Scale origin	Items	Evaluation/ Calculation	Scores	Cronbach's Alpha
Body Mass Index	WHO (2012)	Body height in m Body weight in kg	BMI= kg/m^2 ($BMI_{self\text{-}reported}$ + $BMI_{estimated}$)/2	Normal weight 18 > BMI >25 Overweight 25 > BMI < 40	-
Skepticism (towards the Product/Advertisement) 5-point-Likert scale	Obermiller and Spangenberg (1998)	e.g. We can depend on getting the truth in this advertisement. This advertisement is a reliable source of information about the quality and performance of products.	Calculation of a composite value of the nine items	Possible scores: 1-5 Lower score indicating a low skepticism level Higher score indicating a high skepticism level	.928
Physical appearance (9 female and 9 male silhouettes in a range from underweight, normal weight, slightly overweight, moderately overweight to obese)	Leonhard and Barry (1998)		1-2 underweight 3-4 normal weight 5 slightly overweight 6-7 moderately overweight 8-9 obese	1-9 Lower score indicating a low body weight/slim silhouette Higher score indicating a high body weight/big silhouette	-
Self-Esteem 5-point-Likert scale	Rosenberg (1965)	e.g. On the whole, I am satisfied with myself. I feel I do not have much to be proud of.	Recoding of inversely coded items Calculation of a composite value of the ten items Classification of groups via median split (low and high self-esteem level)	Possible scores: 1-5 Lower score indicating a low self-esteem level Higher score indicating a high self-esteem level	.876

Table 7: Overview of the scales and measures used in Study 2

4.2.2 Results

Four different hypotheses were postulated for the four different advertisements promoting four different products. H_{5a} suggests no mediation of self-esteem on the relation of body weight and skepticism towards the advertisement for a smartphone. The mediation analysis shows that the effect of body weight on self-esteem is significant ($\beta_{smartphone}$ = -.29, p = .036), but not the effect of self-esteem on skepticism towards advertising ($\beta_{smartphone}$ = -.03, p = .839). The di-

rect influence of body weight on skepticism towards the advertisement is not significant ($\beta_{smartphone}$ = -.27, p = .055), as is the influence via the mediator ($\beta_{smartphone}$ = -.28, p = .060). Nevertheless, no mediation is certified, since the required path of self-esteem to skepticism towards the advertisement did not yield a significant result. Therefore, H_{5a} can be supported. In the following figure, the results are summarized graphically.

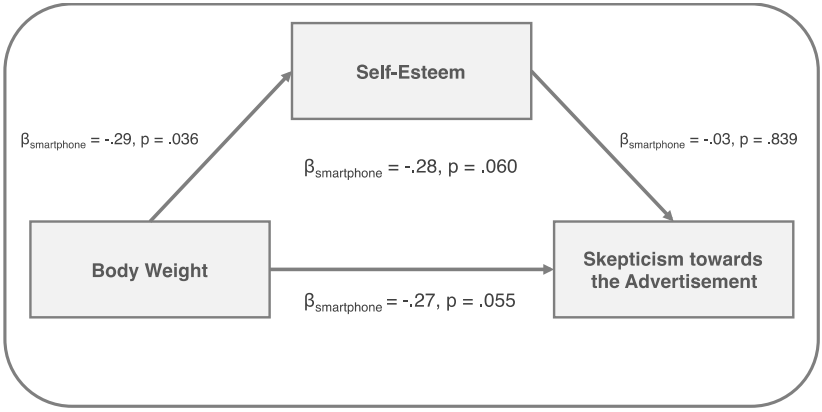

Figure 33: Mediation of self-esteem on the relation of body weight and skepticism towards the advertisement for a smartphone

H_{5b} states that there is also no mediation of self-esteem on the relation of body weight and skepticism towards the advertisement for bottled water. The mediation analysis supports this assumption. The influence of body weight on self-esteem is significant (β_{water} = -.44, p < .001), whereas no significant influences of self-esteem on skepticism towards the advertisement (β_{water} = .06, p = .632), of body weight on skepticism towards the advertisement (β_{water} = -.17, p = .159) or of body weight on skepticism towards the advertisement via the mediator (β_{water} = -.14, p = .291) could be found. Therefore, no mediation can be detected and the hypothesis can be supported. The graphical summary can be found in the figure below.

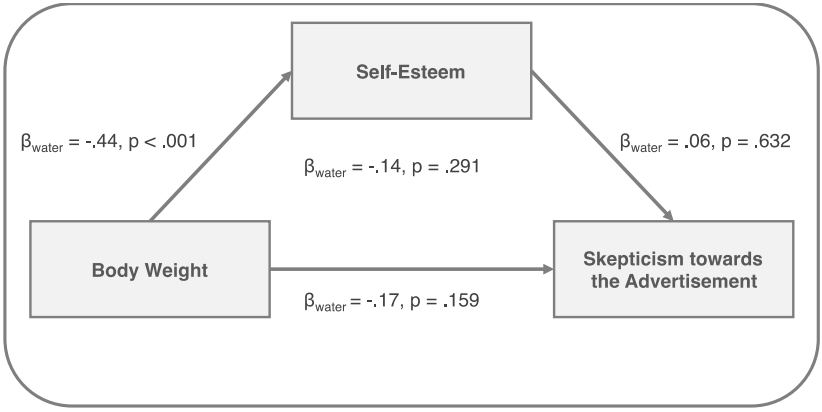

Figure 34: Mediation of self-esteem on the relation of body weight and skepticism towards the advertisement for bottled water

H_{5c1} supports the assumption of a partial mediation of self-esteem on the relation of body weight and skepticism towards the advertisement for a chocolate bar. According to the mediation analysis, a partial mediation can be supported. The paths body weight to self-esteem ($\beta_{chocolatebar}$ = -.42, p < .001), self-esteem to skepticism towards the advertisement for a chocolate bar ($\beta_{chocolatebar}$ = .44, p < .001) and body weight to skepticism towards the advertisement ($\beta_{chocolatebar}$ = -.39, p = .001) deliver significant results. But the path via the mediator ($\beta_{chocolatebar}$ = -.21, p = .078) does not result in a significant outcome. Therefore, the assumption of a partial mediation cannot be supported, but results in a complete mediation and is depicted in the following figure.

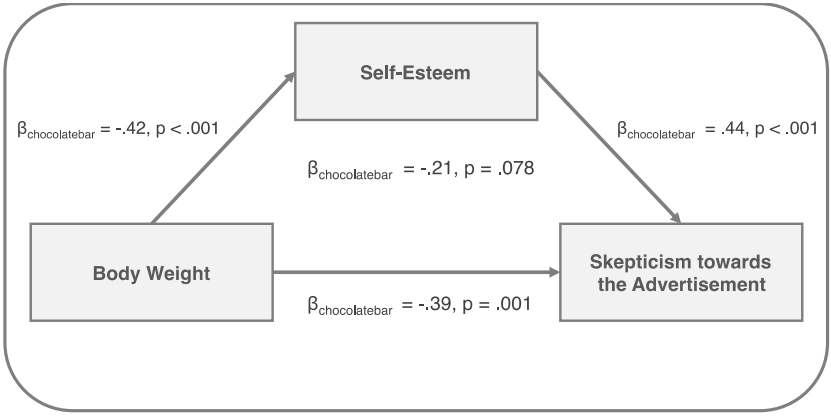

Figure 35: Mediation of self-esteem on the relation of body weight and skepticism towards the advertisement for a chocolate bar

H_{5c2} assumes that overweight women are less skeptical towards the advertisement for a chocolate bar. The t-test also delivers support for the assumption (t (62) = -3.60, p = .001) that overweight (M = 3.19 [.92]) and normal weight (M = 3.95 [.76]) women differ in their levels of skepticism towards the advertisement for a chocolate bar.

Last, H_{5d1} claims a complete mediation of self-esteem on the relation of body weight and skepticism towards the advertisement for an appetite suppressant. A mediation analysis shows significant results for the paths of body weight to self-esteem ($\beta_{appetitesuppressant}$ = -.34, p = .021), self-esteem to skepticism towards the advertisement for the appetite suppressant ($\beta_{appetitesuppressant}$ = .37, p = .014) and body weight to skepticism towards the advertisement for the appetite suppressant ($\beta_{appetitesuppressant}$ = -.31, p = .034). Only the path of body weight to skepticism towards the advertisement for the appetite suppressant via the media did not yield a significant result ($\beta_{appetitesuppressant}$ = -.19, p = .202). This supports the assumption of a complete mediation. The results are shown in the next figure.

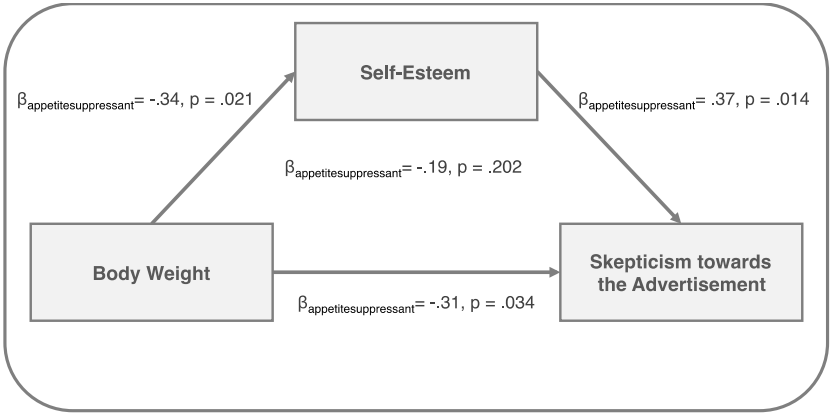

Figure 36: Mediation of self-esteem on the relation of body weight and skepticism towards the advertisement for an appetite suppressant

In addition, H_{5d2} suggests that overweight and normal weight women show similar levels of skepticism towards the advertisement. The t-test supports the second part of the hypothesis (t (43) = -1.43, p = .161). Overweight (M = 3.84 [.89]) and normal weight (M = 4.19 [.72]) women show similar levels of skepticism towards the advertisement for the appetite suppressant.

4.2.3 Discussion

Analyses have revealed that the tested products cause different relations of body weight, self-esteem and skepticism towards the specific advertisements for various products. Regarding the smartphone, which is considered to be a neutral product with regard to this relation, indeed no mediation could be discovered. Women seeing the advertisement for the smartphone might not activate any social norms, since the product is neutral with regard to body-/food-related content. Therefore, in accordance with the SCT, a cognitive dissonant situation is not established among either normal weight or overweight women, and therefore no mediation is detected. With regard to the water, the same applies as with the smartphone. Results support the assumption of no mediation. Moreover, analyses have shown that women seeing the advertisement for the chocolate bar show a partial mediation of self-esteem on the relation of body

weight and skepticism towards the advertisement. In addition, overweight people show lower levels of skepticism towards the advertisement for the chocolate bar than normal weight people. This might be a result of the connection of overweight and a negative body image, which is caused by societal pressure to correspond to the ideal shown in media and advertising (Fernandez and Pritchard, 2012; Knauss et al., 2008). Overweight people tend to trust the media and society, and therefore show less skepticism because they might think that they themselves do not know how to correspond to the ideals and hence have to follow suggestions offered by society and advertising (Fernandez & Pritchard, 2012). The results for the appetite suppressant state a complete mediation and no differences among normal weight and overweight women who are shown the advertisement for the appetite suppressants. This may have various reasons. An appetite suppressant is a means to reduce body weight. Persons of normal weight can also have the wish to lose some weight and are therefore less skeptical (compared to overweight people and different products), because they might see a chance of a weight reduction.

4.2.4 Limitations and Implications

The study's limitations have to be addressed in order to improve possible further research. One limitation results from using print advertisements. There are many more ways to advertise products to consumers. Therefore, the results can only be implicated in a print advertising context. No research has examined the effect sizes of print advertisements or TV spots, etc. and therefore, there is no guarantee that similar results will occur. Another boundary condition is set by the selection of the products. Four products were selected in order to achieve a broad range of products. Considering the huge variety of promoted products in the advertising landscape, many more examples of non-food related, food related and pharmaceutical products could have been found. Moreover, other categories not listed here might also be important. Further research should address this gap and should test various products. Last, the sample size of 232 female participants is completely adequate for mediation analysis. In addition, the fact that due to the testing of four products, each group included from 45 to about 70 women, which also represents a sufficient sample size

for the mediation analysis. However, since t-tests were also conducted and groups were split according to their weight, the subgroups of overweight and normal weight women in the various conditions of the advertisements were on the borderline of statistical analysis in terms of numbers. This fact has to be taken into consideration when interpreting these results.

The findings of the study may be of interest to different groups such as consumers, public policy makers and public institutions. Overweight female consumers are affected and can be seen as a high-risk group due to their low level of skepticism towards advertising when it comes to food related (unhealthy) products. The lower skepticism level towards the advertisements of the food related products (with mostly unhealthy food being promoted) might lead to a higher percentage of purchasing and consumption, which can eventually increase weight. Consumers have to be aware of this influence in order to make conscious decisions regarding their skeptical attitude towards advertising and their food choice (Bates et al., 2009; Rotfeld, 2009; Scammon et al., 2011). In addition, the study's results could contribute to the fields of public policy and public institutions. Annually, public institutions are spending huge amounts of money on the consequences of overweight and obesity (Salihu et al., 2009; Shea & Pritchard, 2007; Wellman & Friedberg, 2002). If advertising has an impact on the overweight rates by increasing the numbers of overweight and obese people in Western society, public institutions should have an interest in regulating advertisements directed at this particular group. There could be various scenarios defining how public institutions could intervene. First, they could introduce taxes, which have to be paid by the advertisers or marketers for showing these advertisements. However, this would not affect the fact that overweight people, especially women, might be influenced and therefore, could gain weight. The tax collection would only financially support the public institutions. Therefore, in a second step, public institutions should establish a law, which prescribes health warnings in advertisements and products, similar to pharmaceutical products and cigarettes or alcohol (planned) (Bui, Burton, Howlett, & Kozup, 2008; Illert & Emmerich, 2008). Moreover, information campaigns by public institutions could be started in order to make people aware of the influence they are exposed to. In order to combat overweight and obesity, the influence of advertising has to be made public, and those affected, as well

as people engaged in and under the influence of advertising have to be informed.

4.3 Study 3 – Body Weight, Self-Esteem and Skepticism towards Advertising in Different Seasons Among Women

Study 3 is based on the same sample as Study 2, shifting the focus to seasons instead of products, and to skepticism towards advertising in general instead of skepticism towards the advertisement for a specific product. This section intends to establish if there is an influence of the season on the relation of body weight, self-esteem and skepticism towards advertising, and should specify when there is an influence. The hypotheses derived in Chapter 3.4.4 are tested. In terms of structure, this section is divided into the parts study design, results, discussion, limitations and implications.

4.3.1 Study Design

The quasi-experiment with 232 female participants was conducted in two waves. In both waves, the recruitment was based on a quota sampling approach with regard to age and BMI. The respondents filled out a questionnaire with questions about their self-esteem, skepticism towards advertising and general data such as age, body weight and body height. In the meantime, interviewers estimated the body weight and body height of the participating women and evaluated the women's body silhouette. Wave 1 was conducted from the middle of May until the end of June, which is considered as the summer condition, whereas wave 2, the winter condition, was a survey carried out from the beginning of November until the middle of December. The general characteristics of Study 2 remain relevant for this study and can be seen in Table 6. In total 91 (39.2%) women participated in the summer condition and 141 (60.8%) women completed the questionnaire in winter. In the summer condition about 54% were normal weight and 46% were overweight. In the winter study about half of the women were overweight and half of them were normal weight. The mean age of the winter condition group is 36.32 years and the mean for

the summer condition 32.57 years. In order to guarantee that differences are not based on differences in the groups, two t-tests were executed. The t-test for differences in age results in a significant difference in the two conditions (t (211.48) = -3.12, p = .002). This means that the women in the winter and summer conditions differ in the mean ages. Since the range of 20 to 50 years should result in a consistent result with regard to self-esteem (Fernandez & Pritchard, 2012), this difference should not further affect the results of the hypotheses. The analysis for differences of body weight between the winter and summer group shows no significant result (t (230) = -1.40, p = .162). Therefore, no differences between the summer and winter condition can be found regarding women's body weight. The following table provides further information on the sample used in Study 3.

Characteristic	Category	Frequency Summer / Winter	Percentage Summer / Winter
Age	20-30	41 / 47	45.0% / 33.3%
	31-40	28 / 36	30.8% / 25.5%
	41-50	22 / 58	24.2% / 41.2%
BMI	Normal weight (BMI <24.99)	49 / 71	53. 8% / 50.4%
	Overweight (BMI >25)	42 / 70	46.2% / 49.6%

Table 8: Overview of the sample - Study 3

Hypotheses are tested with moderated mediation analyses (PROCESS Model 8) (Hayes, 2012), mediation analyses (bootstrapping approach) (Preacher & Hayes, 2004) and ANOVAS. For further analyses apart from the mediation the female participants are divided into two weight groups (overweight and normal weight), based on their BMI, setting the cut-off point at 25 (below 25 identifies normal weight and above 25 overweight) (WHO, 2015a). Again, as in the previous studies, the skepticism towards advertising scale (Cronbach's Alpha in this study: .921) (Obermiller & Spangenberg, 1998) and the self-esteem scale by Rosenberg (1965) (Cronbach's Alpha in this study: .876) were used. The three different ways of gathering body weight/body height and the body phy-

sique were also used again in order to guarantee reliable values for the important variable body weight (Costa Font et al., 2010; Gil & Mora, 2011). The correlations between the independent ways of collecting body weight remain the same as in Study 2, since the interviewers remained the same. Therefore, the reliability of the interviewers is given once more, as described in Study 1. More details on the scales used in Study 3 are given in the table depicted below.

Measure	Scale origin	Items	Evaluation/ Calculation	Scores	Cronbach's Alpha
Body Mass Index	WHO (2012)	Body height in m Body weight in kg	BMI= kg/m^2 $(BMI_{self\text{-}reported} + BMI_{estimated})/2$	Normal weight 18 > BMI >25 Overweight 25 > BMI < 40	-
Skepticism (towards Advertising) 5-point-Likert scale	Obermiller and Spangenberg (1998)	e.g. We can depend on getting the truth in advertising. Advertising is a reliable source of information about the quality and performance of products.	Calculation of a composite value of the nine items	Possible scores: 1-5 Lower score indicating a low skepticism level Higher score indicating a high skepticism level	.921
Physical appearance (9 female and 9 male silhouettes in a range from underweight, normal weight, slightly overweight, moderately overweight to obese)	Leonhard and Barry (1998)		1-2 underweight 3-4 normal weight 5 slightly overweight 6-7 moderately overweight 8-9 obese	1-9 Lower score indicating a low body weight/slim silhouette Higher score indicating a high body weight/big silhouette	-
Self-Esteem 5-point-Likert scale	Rosenberg (1965)	e.g. On the whole, I am satisfied with myself. I feel I do not have much to be proud of.	Recoding of inversely coded items Calculation of a composite value of the ten items Classification of groups via median split (low and high self-esteem level)	Possible scores: 1-5 Lower score indicating a low self-esteem level Higher score indicating a high self-esteem level	.876

Table 9: Overview of the scales and measures used in Study 3

4.3.2 Results

The first hypothesis of the section H_{6a} suggests a moderation of the season (summer, winter) on the mediating effect of self-esteem in the relationship between body weight and skepticism towards advertising among women. Therefore, a moderation analysis with Model 8 in PROCESS was calculated. Anal-

yses show that the conditional direct effect of body weight on skepticism towards advertising during summer (p = .083; CI_{95-}= -.432 CI_{95+}= .027) and during winter (p = .028; CI_{95-}= -.333 CI_{95+}= -.018) support a moderation of the season. Moreover, the conditional indirect effect via the mediator self-esteem supports a moderation of the season (summer: CI_{95-}= -.203 CI_{95+}= .024; winter: CI_{95-}= -.151 CI_{95+}= -.016). Therefore, a moderation can be assumed. In the following figure, further details relating to the individual paths of the moderation are depicted.

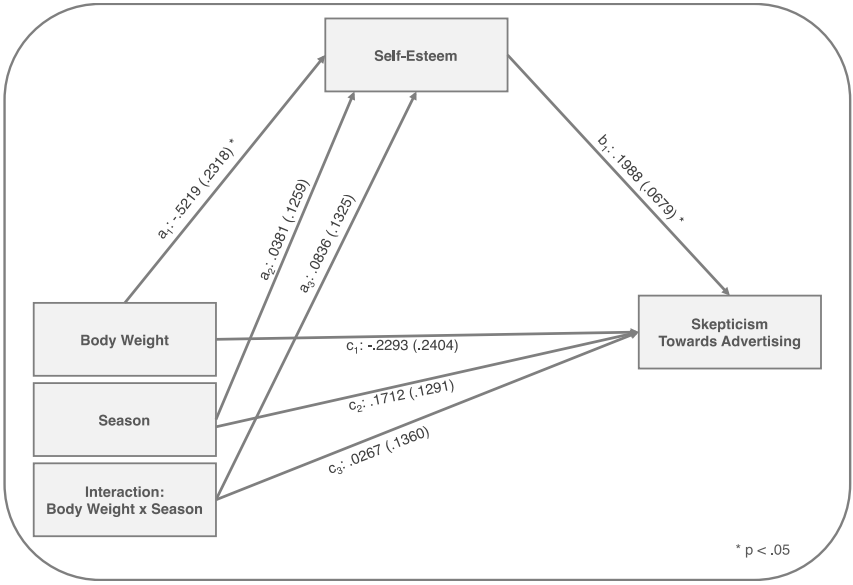

Figure 37: Moderated mediation path coefficients (standard errors) – Seasons (among women)

H_{6b} suggests a partial mediation of self-esteem on the relation of body weight and skepticism towards advertising among women in summer. A mediation analysis shows that body weight influences self-esteem significantly (β_{summer} = -.40, p < .001). While self-esteem does not significantly influence skepticism towards advertising (β_{summer} = .11, p = .339), the other two paths show significant results. The direct path from body weight to skepticism towards advertis-

ing shows a significant influence (β_{summer} = -.30, p = .003), the path including the mediator also shows a significant influence of body weight on skepticism towards advertising (β_{summer} = -.26, p = .019). According to the results, no mediation has been detected, since the path from the mediator to the dependent variable shows no significant result (Fairchild & MacKinnon, 2009; MacKinnon, Fairchild, & Fritz, 2007). However, in some cases, depending on the question, the strength of an independent variable can remove the connection of a mediator on the dependent variable (MacKinnon et al., 2007). In this specific case, the body weight could be more important for determining the level of skepticism towards advertising than self-esteem in summer. Therefore, according to the suggestions of the author group of MacKinnon (2007), a partial mediation is supported and therefore, H_{6b} can be supported. A bootstrap analysis with m = 5000 supports these findings (CI_{95-}= -.208 CI_{95+}= -.156).

H_{6c} suggests a complete mediation of self-esteem on the relation of body weight and skepticism towards advertising among women in winter. As for the previous hypothesis, a mediation analysis was conducted. The path from the independent variable body weight to the mediator self-esteem shows significant results (β_{winter} = -.37, p < .001), as does the path from the mediator self-esteem to the dependent variable skepticism towards advertising (β_{winter} = .25, p = .005). Also, the direct path from body weight to skepticism towards advertising delivers significant results (β_{winter} = -.24, p = .004), whereas the path including the mediator does not result in a significant outcome (β_{winter} = -.15, p = .087). Therefore, a complete mediation is established and H_{6c} can be supported by the data. Again, a bootstrap analysis with m = 5000 supports the findings (CI_{95-}= -.190 CI_{95+}= -.015). The following illustration features both mediation analyses and provides further details.

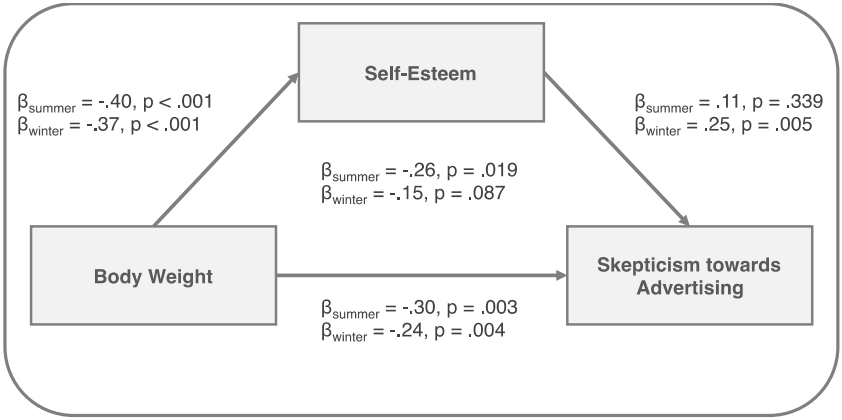

Figure 38: Mediation of self-esteem on the relation of body weight and skepticism towards advertising (winter, summer)

The last hypothesis in this section H_{6d} suggests an interaction of body weight x season on the skepticism towards advertising level among women. In winter, it is suggested that overweight women have lower levels of skepticism towards advertising than normal weight women do. In summer, overweight and normal weight women show similar levels of skepticism towards advertising. A 2 (BMI) x 2 (seasons) ANOVA shows that there is no interaction effect of body weight and season. The main effect of body weight ($F (1,231) = 14.51$, $p < .001$) is significant, whereas the main effect of season does not deliver significant results ($F (1,231) = 1.15$, $p = .284$). Also, the interaction effect of body weight x season does not yield a significant outcome ($F (1,231) = .72$, $p = .397$). Therefore, the first part of the hypothesis has to be rejected. Since the main effect of body weight delivers significant results, a pairwise comparison is calculated. It shows that overweight ($M = 3.24$ [.90]) and normal weight ($M = 3.73$ [.80]) women differ significantly in their levels of skepticism towards advertising in the winter condition ($F (1,228) = 13.88$, $p < .001$). Indeed, in winter, overweight women show lower levels of skepticism towards advertising than normal weight women do. In summer, overweight women ($M = 3.21$ [.69]) also show lower levels of skepticism towards advertising than normal weight women ($M = 3.53$ [.66]), but not on a significant level ($F (1,228) = 3.60$, $p = .059$). The second part of the hypothesis cannot be supported on a significant level. In the follow-

ing figure, the interaction of body weight and season on skepticism towards advertising is depicted.

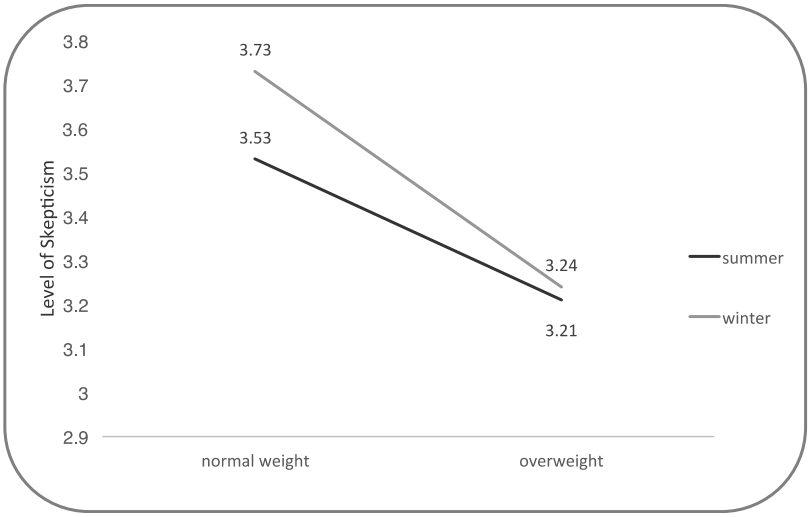

Figure 39: Interaction effects: Season x body weight on skepticism towards advertising

4.3.3 Discussion

This study is one of the first to contemplate the effect of seasons on skepticism towards advertising. According to the analyses, no moderation of winter and summer on the mediation of self-esteem on the relation of body weight and skepticism towards advertising can be detected. This may be explained by the fact that both mediations (summer as well as winter) result in either a partial or complete mediation. In summer, a partial mediation is detected. An interesting result occurs among the participants testing the summer condition. The path from self-esteem to skepticism towards advertising is not significant. In the literature this would mean that no mediation occurs (Fairchild & MacKinnon, 2009; MacKinnon et al., 2007). However, depending on the research question, the independent variable may remove the direct effect of the mediator and the dependent variable and may still result in a partial mediation. This may also be

the case in this specific mediation. In summer, there is a high pressure to match the slim ideal due to a higher prevalence of slim models and more body weight related products (Hollow, 2012; Willis & Knobloch-Westerwick, 2014). Therefore, women might feel that the body weight is the strongest determining factor for self-esteem and equal body weight with self-esteem, even though their global self-esteem would probably be on a different level. Due to a possible shift of values of body weight and the higher probability of the exclusion of other factors positively influencing self-esteem, the body weight might be responsible for the level of skepticism towards advertising. This process is initiated by the wish to correspond to the thin ideal in summer. Women may substitute self-esteem with body weight and the discrepancy between the ideal body weight and the own body weight might lead to a lower skepticism towards advertising. This may be caused by a higher internalization of the body ideals in summer and a greater belief in advertising and the media knowing what is right. Conversely, a partial mediation is detected in winter. This finding supports the assumption that self-esteem plays a more important role than body weight in winter because of the sparser presence of the slim body ideal. Other influencing factors of self-esteem may be more important, but body weight plays an important role for the levels of skepticism towards advertising even in winter. Another important finding of this study focuses on the differences between overweight and normal weight women in winter and summer. In winter, normal weight women show higher levels of skepticism towards advertising than overweight women do. This may be caused by the fact that fewer advertisements focus on the slim body ideal compared to summer advertisements (Adams et al., 2011; Hull et al., 2006). But this may also be based on the higher internalization of the societal ideals among overweight than among normal weight women (Fernandez & Pritchard, 2012). In summer, overweight and normal weight women do not differ in their levels of skepticism towards advertising. This means that normal weight and overweight women show similar levels of skepticism towards advertising in summer. In addition, normal weight women have lower levels of skepticism towards advertising in summer than in winter, whereas overweight women show almost equal levels of skepticism towards advertising over the seasons. This can probably mean that overweight women always feel the pressure of society to correspond to the societal slim body ideal, whereas normal weight women have a higher need to match the societal

ideal in summer, due to a higher prevalence of advertisements promoting this thin ideal.

4.3.4 Limitations and Implications

As before, limitations can also be derived for this study. First of all, this study focuses on women only. Even though Study 1 and other studies (e.g. Diedrichs et al., 2011) have shown that men are less affected by the influence of the media with regard to the societal slim body ideal, this area could be the focus of further research. So far, no study has focused on seasons with regard to the body ideal and therefore, no information is available on the influence on men in different seasons. Second, even though the age range is limited to 20-50 years and this range should guarantee a consistent self-esteem level, it might be different with regard to the body ideals. The societal ideal is consistent, but may vary for specific age groups. This might also have an effect on the evaluation of skepticism towards advertising. Third, the conditions of summer and winter were not manipulated within an experiment, but were established with real seasons. The study's participants were not asked about their perception of the current season. Moreover, only summer and winter were investigated, spring and fall were left out. This could be addressed in further research. Last, this study focuses on advertising in general. Participants were not asked about the perception of advertising/advertisement they have in mind when answering the questionnaire. In future studies, specific products could be investigated in various seasons and advertisements with different model sizes could be the focus of future research.

The study could shed light on differences in the levels of skepticism towards advertising among normal weight and overweight women in winter and summer. Various groups could benefit from gaining this knowledge. First, the scientific sphere can further investigate the influence of seasons on skepticism towards advertising and differences in the societal slim body ideal. Gaining deeper insight could also help in understanding consumer behavior. Second, the consumers themselves could profit from knowing about the different influences of advertising in various seasons. The awareness that the influence

might increase in summer could affect the influence in general and increase the level of skepticism towards advertising. Lastly, institutions tasked with consumer protection could use the study's findings as a basis for regulations for advertisements showing the thin societal ideal and could reduce this to a certain percentage in summer. In addition, the continuous influence on overweight women should be reduced. Therefore, information campaigns could be started in order to make consumers aware of the influence they are exposed to.

4.4 Study 4 – Body Weight, Self-Esteem and Skepticism towards Specific Products by Differently Sized Models among Women

The fourth study focuses on exploring how the previously revealed influence of body weight and self-esteem on skepticism towards advertising can be diminished. For that reason, advertisements with different products promoted by differently sized models are investigated. This study should serve as a foundation for regulations for advertisements in order to decrease the influence of advertising on body weight, self-esteem as well as skepticism towards advertising. The sample used in Study 4 is a new sample and is discussed in detail below. In chapter 3.4.5 the hypotheses for this study were derived. This part is also divided into study design, results, discussion, limitations and implications.

4.4.1 Study Design

In total, 332 female participants completed a self-administered questionnaire. After eliminating people younger or older than 20 to 50 years (again due to developmental issues with self-esteem) about 270 questionnaires were left. Moreover, as described in Study 1, questionnaires were eliminated, which included missing values (e.g. crucial information or over 30% of the questionnaire was empty), or people who were underweight. Underweight participants in that data set were deleted, since research has detected differences in the perception of advertising among members of this group (Smeesters & Mandel, 2006). Moreover, questionnaires completed by people who claimed to know

the fictitious advertisement were eliminated as well, in order to guarantee that differences occur with regard to specific characteristics of the person, but not based on attitudes previously built. In the end, 235 women participated in the study. The study's recruitment was based on a random design and conducted in public places. As in the previously conducted survey, the interviewers followed a quota sampling approach. People were judged regarding their age and body weight and categorized with regard to their gender. In total 235 women participated, of which about 60% were of normal weight and almost 40% were overweight. The mean age is 30.47 years, reflecting a young sample. Participants saw one out of four advertisements. In total, two categories were chosen and two differently sized models. In total 63 women saw the advertisement for a smartphone with a slim model, 71 were shown the advertisement for a smartphone with an overweight model, 50 looked at the chocolate bar with a slim model, and 51 saw the chocolate bar with an overweight model, respectively. In the following figure, more detailed information is given.

Characteristic	Category	Frequency	Percentage
Age	20-30	155	65.9%
	31-40	23	9.8%
	41-50	57	24.3%
BMI	Normal weight (BMI <24.99)	143	60.9%
	Overweight (BMI >25)	92	39.1%
Advertisement	Smartphone (slim model)	63	26.8%
	Smartphone (overweight model)	71	30.2%
	Chocolate bar (slim model)	50	21.3%
	Chocolate bar (overweight model)	51	21.7%

Table 10: Overview of the sample - Study 4

As in Study 2, a professional graphic designer created four fictitious advertisements. Two different products were chosen, a smartphone as a neutral product and a chocolate bar as an unhealthy food-related product, in order to initiate the process of activating societal ideals with regards to body weight. Two female models (one for each advertisement) were depicted in two different sizes. One model corresponds the societal slim ideal and the other one is overweight, since studies have shown that women show different reactions with changing

body sizes of models (Diedrichs et al., 2011; Diedrichs & Lee, 2011; Groesz et al., 2002; Hüttl & Gierl, 2012). Furthermore, only female models were used, since women prefer a comparison with women and other outcomes would be possible, if they had to compare themselves with men (Diedrichs & Lee, 2011; Martin et al., 2007). In order to guarantee that the models were perceived as the societal ideal and as overweight, a pre-study was conducted. Sixty-five students had to evaluate the models' bodies as underweight, normal weight or overweight. In every case, at least 78% of the students attributed the models to the intended category. Only the model used in the advertisement for the smartphone with the overweight model was perceived by a smaller percentage of only 55% of the students as an overweight model. Furthermore, the participants themselves had to indicate how they perceived the models, and over 70% perceived the models as either slim or overweight and categorized them into the intended category. The figure below shows the four different advertisements.

Figure 40: Promoted products – Study 4

In the study, the women were shown one out of the four advertisements and filled in the questionnaire (skepticism towards the advertisement, self-esteem and general data such as age, body weight and body height), while interviewers completed an interviewer questionnaire (estimation of height, weight and physique). As in the studies before, three independent methods were used to gather the variable BMI: self-reported body weight and height, an estimate by the interviewer, as well as a body physique silhouette scale (Leonhard & Barry, 1998), in order to guarantee that the self-reported and estimated results match

the reality. Again, interviewers practiced estimating body weight and body height. The correlations (Pearson) show that the interviewers estimated reliably and realistically. The correlation between the self-reported BMI and the estimated BMI was .91. As in the previous studies, further analyses used the average of the self-reported and estimated BMI. The correlation (Pearson) between the physical appearance and the self-reported BMI (.81) and the estimated BMI (.83) and the averaged BMI (.83) indicated a high correlation, and therefore point to the honest and realistic indication of body weight and body height and eventually of BMI. In this study, interviewers were once again trained and during their training 97% were able to estimate the body height in a range of ± 5 centimeters and 89% of the interviewers were able to estimate body weight in a range of ± 5 kilograms. This supports the reliable foundation of the BMI. A validated and reliable skepticism towards advertising scale (scaled 1-5) (Cronbach's Alpha in this study was .860) was used (Obermiller & Spangenberg, 1998). Moreover, Rosenberg's (1965) five-point scale was used (Cronbach's Alpha in this study was .870). Body weight was measured in kilograms and meters. Further details on the scales are given in the following table.

Measure	Scale origin	Items	Evaluation/ Calculation	Scores	Cronbach's Alpha
Body Mass Index	WHO (2012)	Body height in m Body weight in kg	BMI= kg/m^2 ($BMI_{self\text{-}reported}$ + $BMI_{estimated}$)/2	Normal weight 18 > BMI >25 Overweight 25 > BMI < 40	-
Skepticism (towards the Product/Advertisement) 5-point-Likert scale	Obermiller and Spangenberg (1998)	e.g. We can depend on getting the truth in this advertisement. This advertisement is a reliable source of information about the quality and performance of products.	Calculation of a composite value of the nine items	Possible scores: 1-5 Lower score indicating a low skepticism level Higher score indicating a high skepticism level	.860
Physical appearance (9 female and 9 male silhouettes in a range from underweight, normal weight, slightly overweight, moderately overweight to obese)	Leonhard and Barry (1998)		1-2 underweight 3-4 normal weight 5 slightly overweight 6-7 moderately overweight 8-9 obese	1-9 Lower score indicating a low body weight/slim silhouette Higher score indicating a high body weight/big silhouette	-
Self-Esteem 5-point-Likert scale	Rosenberg (1965)	e.g. On the whole, I am satisfied with myself. I feel I do not have much to be proud of.	Recoding of inversely coded items Calculation of a composite value of the ten items Classification of groups via median split (low and high self-esteem level)	Possible scores: 1-5 Lower score indicating a low self-esteem level Higher score indicating a high self-esteem level	.870

Table 11: Overview of the scales and measures used in Study 4

To test the hypotheses, mediation analyses (bootstrapping approach) (Preacher & Hayes, 2004) and t-tests were conducted. For the t-tests, the female participants were divided into two weight groups depending on their BMI. A BMI below 25 is identified as normal weight and a BMI above 25 indicates overweight (WHO, 2015a).

4.4.2 Results

H_{7a1} suggests a partial mediation of self-esteem on the relation of body weight and skepticism towards the advertisement for the smartphone with a slim model. A mediation analysis supports the first part of the assumption. Body weight influences self-esteem significantly ($\beta_{smartphoneSlim}$ = -.30, p = .017), but the path from self-esteem to skepticism towards the advertisement is not significant ($\beta_{smartphoneSlim}$ = .05, p = .664). The direct path from body weight to skepticism towards the advertisement is significant ($\beta_{smartphoneSlim}$ = -.27, p = .030), where-

as the path via the mediator ($\beta_{smartphoneSlim}$ = -.26, p = .053) is not. A bootstrap analysis conducted with m = 5000 suggests no mediation (CI_{95-}= -.100 CI_{95+}= .084). However, due to the fact that an independent variable can remove the direct connection of a mediator and a dependent variable (MacKinnon et al., 2007), a complete mediation can be supported by the data, but no a partial mediation. The following figure depicts the mediation.

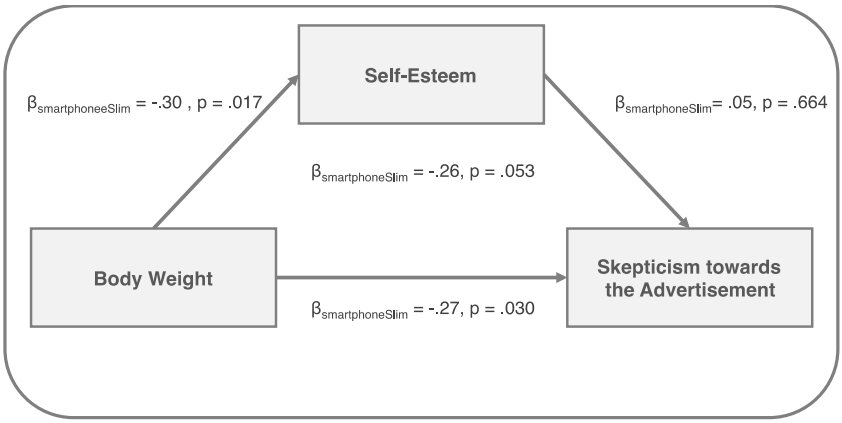

Figure 41: Mediation of self-esteem on the relation of body weight and skepticism towards the advertisement for the smartphone with the slim model

Moreover, H_{7a2} hypothesizes that overweight women show lower levels of skepticism towards the advertisement than normal weight women. A t-test was conducted. Overweight (M = 3.73 [.84]) and normal weight (M = 4.10 [.62]) women differ in their levels of skepticism towards the advertisement for the smartphone promoted by a slim model. But H_{7a2} cannot be supported (t (40.89) = -1.93, p = .061) due to higher significance levels than permitted.

The next hypothesis of the study H_{7b} proposes no mediation of self-esteem on the relation of body weight and skepticism towards the advertisement for the smartphone promoted by an overweight model. The path from body weight to self-esteem ($\beta_{smartphoneOverweight}$ = -.18, p = .133) and the path from self-esteem to skepticism toward the advertisement ($\beta_{smartphoneOverweight}$ = .18, p = .132) are

not significant. The same applies to the direct path from body weight to skepticism towards the advertisement ($\beta_{smartphoneOverweight}$ = -.06, p = .608) and the path via the mediator self-esteem ($\beta_{smartphoneOverweight}$ = -.03, p = .813). The bootstrap analysis with m = 5000 supports the assumption of no mediation (CI_{95-}= -.108 CI_{95+}= .025). The hypothesis can be supported and is shown in the subsequent figure.

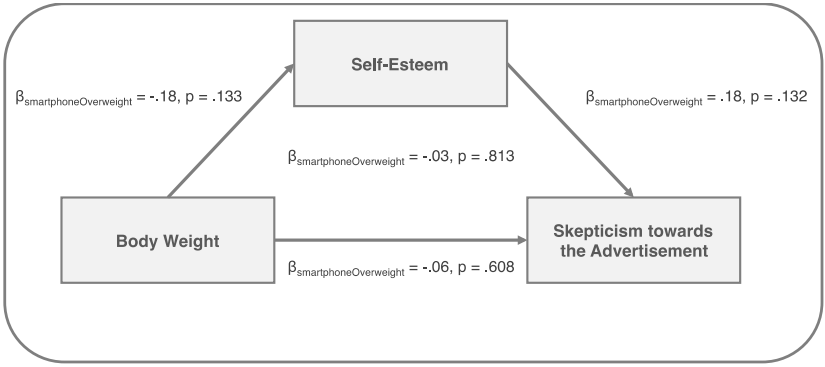

Figure 42: Mediation of self-esteem on the relation of body weight and skepticism towards the advertisement for the smartphone with the overweight model

H_{7c1} proposes a partial mediation of self-esteem on the relation of body weight and skepticism towards the advertisement for a chocolate bar promoted by a slim model. In a mediation analysis, no support was found for the suggested first part of the hypothesis. No path is significant. The paths from body weight to self-esteem ($\beta_{chocolatebarSlim}$ = -.15, p = .295), self-esteem to skepticism towards the advertisement ($\beta_{chocolatebarSlim}$ = .03, p = .865), body weight to skepticism towards the advertisement ($\beta_{chocolatebarSlim}$ = -.18, p = .213) and the path via the mediator ($\beta_{chocolatebarSlim}$ = -.18, p = .232) produce no significant results. The bootstrap analysis with m = 5000 also supports the findings (CI_{95-}= -.122 CI_{95+}= .049). The hypothesis has to be rejected. The mediation is depicted in the following figure.

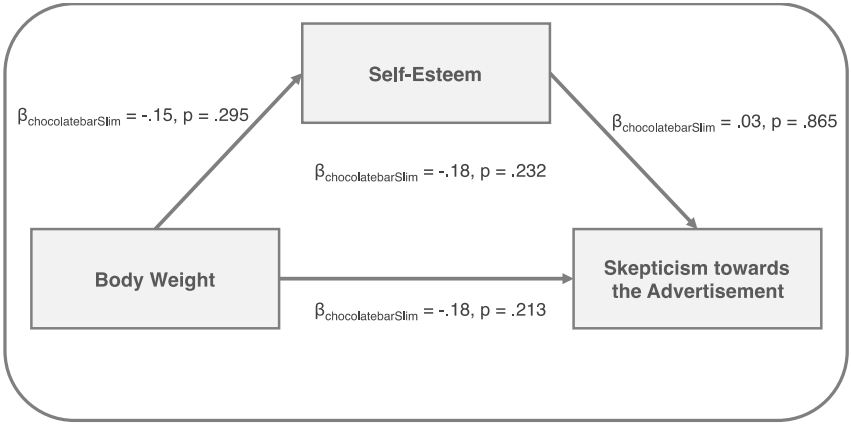

Figure 43: Mediation of self-esteem on the relation of body weight and skepticism towards the advertisement for the chocolate bar with the slim model

In addition, H_{7c2} suggests that overweight women show lower levels of skepticism towards the advertisement than normal weight women. According to the t-test (t (48) = -1.37, p = .177), overweight women (M = 3.69 [.59]) show similar levels of skepticism towards the advertisement for the chocolate bar with the slim model when compared to normal weight women (M = 3.95 [.66]). The hypothesis cannot be supported.

The last hypothesis of this section proposes no mediation of self-esteem on the relation of body weight and skepticism towards the advertisement for the chocolate bar promoted by an overweight model. According to the mediation analysis, the assumption of no mediation can be supported. The paths from body weight to self-esteem ($\beta_{chocolatebarOverweight}$ = .00, p = .994), self-esteem to skepticism towards the advertisement ($\beta_{chocolatebarOverweight}$ = .06, p = .675), body weight to skepticism towards the advertisement ($\beta_{chocolatebarOverweight}$ = .13, p = .379), and the path via the mediator self-esteem ($\beta_{chocolatebarOverweight}$ = .13, p = .383) are not significant. The assumption of no mediation can be supported and is underlined by the bootstrap analysis with m = 5000 (CI_{95-}= -.051 CI_{95+}= .045). The following figure illustrates the mediation analysis in detail.

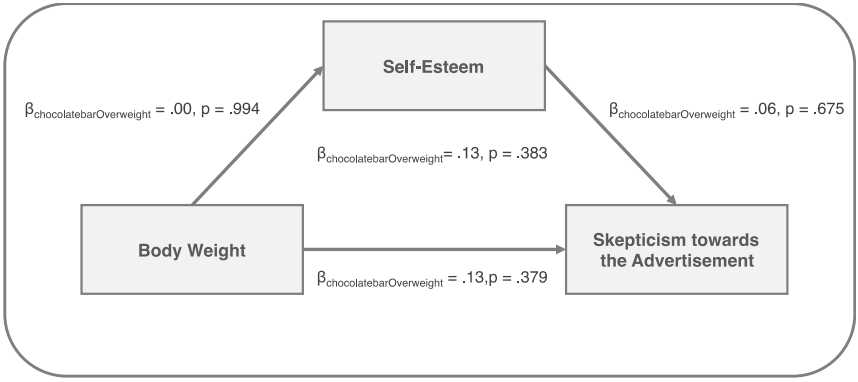

Figure 44: Mediation of self-esteem on the relation of body weight and skepticism towards the advertisement for the chocolate bar with the overweight model

4.4.3 Discussion

Data has supported the assumption of a mediation of self-esteem on the relation of body weight and skepticism towards the advertisement for a smartphone with a slim model. Since the direct effect of self-esteem and skepticism towards the advertisement was not significant, it is expected that the woman's self-esteem is replaced by the body weight (Rosenberg et al., 1995). In addition, results reveal that overweight women have lower levels of skepticism towards the advertisement than normal weight women. This situation, seeing a slim model promoting products, might be the common situation they are used to. Therefore, clear differences can be found. Considering the advertisement for the smartphone promoted by the overweight model, no mediation could be found. Increasing the size of models in advertisements increases the appearance self-esteem among the women seeing it (Hüttl & Gierl, 2012) and might also affect the skepticism towards the advertisement. Because no path of the mediation was significant, two questions arise. First, there is the question whether this is a sign that this kind of advertisement can stop the influence of advertisements on the relation of body weight, self-esteem and skepticism towards the advertisement. Second, since models shown in advertisements are predominantly slim (Dittmar, 2009; Halliwell et al., 2005), the participants were

probably not used to it and were irritated by an overweight model promoting a product. Nevertheless, a study has shown that people react positively to models of their body size and body weight (Hüttl & Gierl, 2012), probably the first question can be answered in the affirmative and doubts about the usefulness of this specific way of advertising can be cast aside. This is also underlined by the fact that overweight and normal weight women assimilate with regards to their levels of skepticism toward the advertisement. This means that promoting products with overweight models might help to increase the levels of skepticism towards advertising among overweight women. This is in line with other studies focusing on effective alternatives to the current imagery of the societal ideal (Diedrichs & Lee, 2011; Peck & Loken, 2004). No mediation of self-esteem on the relation of body weight and skepticism toward the advertisement for a chocolate bar promoted by a slim model was detected among women. A possible explanation for this outcome could be the irritation caused among the women when they see a slim model promoting an unhealthy food related product. Studies have shown that if a person perceives contradictions in the persuasive attempt, it might not be convincing (Wei, Fischer & Main, 2008). This could have happened in this case. With regard to the advertisement for the chocolate bar promoted by the overweight model, no mediation was found, nor were there any differences between the two weight groups, normal weight and overweight. This can also be seen to lend support to the assumption that this method of advertising could lead to higher levels of skepticism towards the advertisements and towards advertising in general.

4.4.4 Limitations and Implications

This study has some limitations, which could be used as guidelines for further research. First of all, the advertisements with the specific characteristics lead to limitations. Using print advertisements can be considered as a limitation, since there are many other ways of promoting products. Moreover, the print advertisement only included two different product categories. This could be expanded in further research. In addition, the models in the advertisements are two different types and do not cover the entire spectrum of different features and characteristics that a person could have (such as hair color, eye color, skin

color, clothes, etc.). Studies have shown that similar models (similar to the consumer's weight category) are perceived as positive (Hüttl & Gierl, 2012; Peck & Loken, 2004), while other studies claim that an average-size model is a positively perceived model (Diedrichs & Lee, 2011) and therefore, can affect the self-esteem positively and eventually the skepticism towards the advertisement or advertising in general. No normal weight or average-sized model was used in this study, but including a model of this kind would shed more light on the response by normal weight women and probably also by overweight women. This could answer the question whether an average-sized model could also lead to higher skepticism levels among overweight women. Second, this study does not explore how male consumers react to such advertisements and how males or females would react to male models. This aspect was not considered in this study. Third, there could be age differences with regard to which societal ideal is internalized and this could also affect the outcome of a mediation of self-esteem on the relation of body weight and skepticism towards advertisements. Last, the sample size of 235 participants for eight subgroups should be expanded. The group size is very small at certain points. Future research should address these gaps.

The findings of the study might suggest that an assimilation of models to the respective target group might bring higher skepticism towards the advertisement. In general, an increase of the models' body weight might lead to higher levels of skepticism towards advertising. A higher skepticism towards advertisements could also lead to a more critical attitude towards promoted unhealthy food, might lower the purchase intention as well as the level of consumption and could lead, in the long run, to a reduction in overweight and obesity rates. This finding might be especially relevant for the fields of public policy and public institutions spending money on the consequences of obesity and overweight (Salihu et al., 2009; Shea and Pritchard, 2007; Wellman and Friedberg, 2002). Those responsible could, for example, create regulations stipulating a certain BMI threshold for models used in advertisements, below which the advertisement cannot be broadcast, transmitted or shown. The findings of the study should not be considered as a finalized version of how advertisements should look, but is intended instead as a foundation for further research to investigate the role of the model size in skepticism towards the advertisement.

Further tests could be conducted to create advertisements, which enable overweight women to show skepticism towards advertising and advertisements.

5 Summary, Limitations and Implications

The final section provides a summary of the results of the presented studies. The main findings are presented and the results of the hypotheses are summarized in a figure. Moreover, limitations of the studies as well as of the overall empirical research are addressed. Based on the limitations, ideas for further research are suggested. Last, implications for the scientific area as well as consumers and public institutions are described.

5.1 Summary of the results

This subchapter offers a short overview of the main results in order to enhance the comprehensibility of the proceeding limitations and the implications. The first study's main results concern the direct influence of body weight on skepticism towards advertising. First of all, the study's findings support a general direct influence of body weight on skepticism towards advertising. Furthermore, self-esteem mediates the relation of body weight and skepticism towards advertising. Including the variable gender, it can be said that gender is a moderator in the mediated relationship. Moreover, the results support the assumption that (overweight) women in particular show a stronger relation between the variables and show lower self-esteem levels as well as lower levels of skepticism towards advertising. Last, education impacts the previously mentioned relationship. Results support a moderation of education on the mediating relationship of body weight, self-esteem and skepticism towards advertising. Generally, people with low levels of education show a stronger relation of body weight and skepticism towards advertising as well as a stronger mediation of self-esteem on the relation. In addition, women with a low level of education are affected more strongly than men with a low level of education, since they show a strong relation of body weight, self-esteem and skepticism towards advertising. The first study concludes with the main findings of a direct influence of body weight on skepticism towards advertising and a moderation of gender

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and education on the mediation of self-esteem on body weight and skepticism towards advertising.

The figure below depicts all tested hypotheses of Study 1, with the addition of either a check mark (for hypothesis supported), a cross (for hypothesis rejected), or a check mark with a small cross (for hypothesis partly supported/rejected).

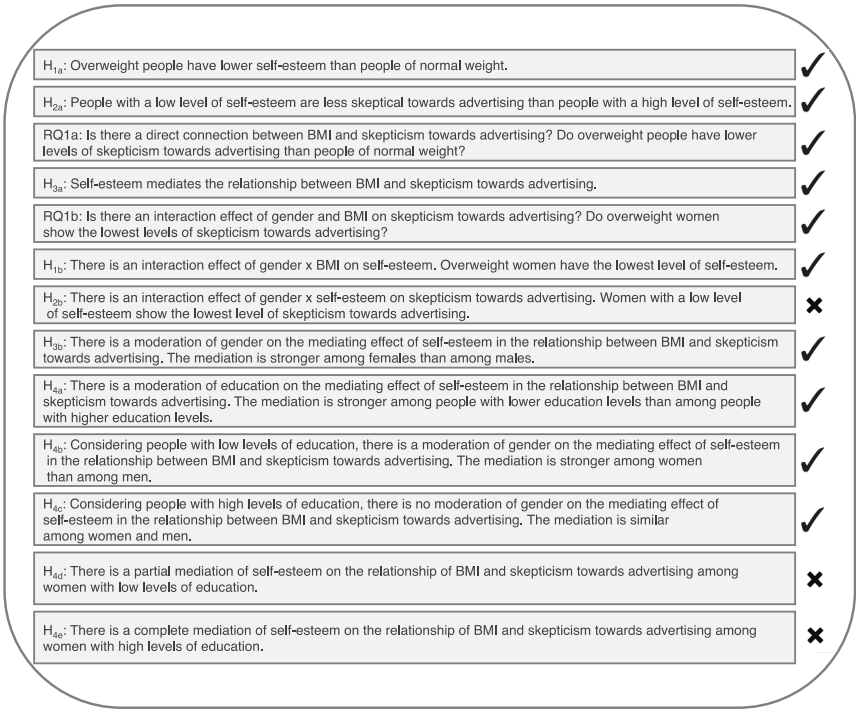

Figure 45: Summary of the outcomes of the hypotheses of study 1

The second study's main result provides an answer to the question whether different products cause differences in the strength of the relations of the variables body weight, self-esteem and skepticism towards advertising among women. Neutral products, represented by a smartphone in this study (a technical product is considered as not food-related), do not cause a mediation of

self-esteem on the relation of body weight and skepticism towards advertising. The second product, bottled water (considered as a food-related but healthy product) does not yield a mediation either. However, seeing an advertisement with a chocolate bar (considered as a food-related and unhealthy product) results in a partial mediation of self-esteem on the relation of body weight and skepticism towards the advertisement of the chocolate bar. The fourth tested product, an appetite suppressant (considered as a food-related and pharmaceutical product) delivered a complete mediation of self-esteem on body weight and skepticism towards advertising. The main finding of Study 2 is therefore that the specific product, which is promoted in the advertisement, does influence the relation of body weight, self-esteem and skepticism towards advertising. Moreover, the assumption that overweight and normal weight women differ in their levels of skepticism towards specific products can be supported. As in the previous figure, the hypotheses of Study 2 are tagged with check marks to illustrate the statistical support of the assumptions.

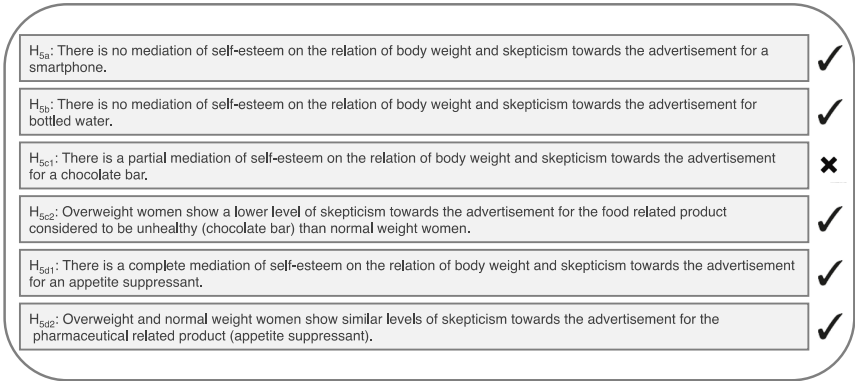

Figure 46: Summary of the outcomes of the hypotheses of study 2

The third study focuses on the question whether seasons can affect the relationship of body weight, self-esteem and skepticism towards advertising among women. No moderation of the seasons can be detected, but investigating summer and winter separately, both relationships of body weight, self-esteem and skepticism towards advertising result in a mediation. In summer, a partial mediation is detected, while in winter a complete mediation is found. Moreover,

further analyses reveal that overweight women show lower levels of skepticism towards advertising than those of normal weight. In summer, normal weight and overweight women show similar levels of skepticism towards advertising. The following graph shows the hypotheses of Study 3, marked with check marks or crosses, either supporting or rejecting the assumptions.

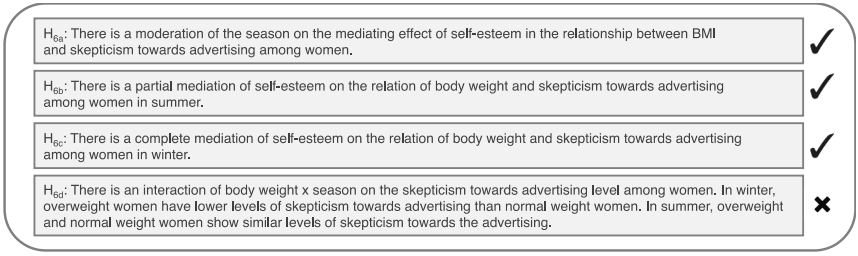

Figure 47: Summary of the outcomes of the hypotheses of study 3

The final study, Study 4 answers the question, if differently sized models promoting different products affect the relationship of body weight, self-esteem and skepticism towards advertising. Two products with two differently sized models show interesting results. The advertisement with the smartphone promoted by a slim model results in a partial mediation of self-esteem on the relation of body weight and skepticism towards the advertisement. In addition, overweight women have significantly lower levels of skepticism towards the advertisement than normal weight women do. In contrast, no mediation of self-esteem on body weight and skepticism towards the advertisement is found when considering an advertisement for a smartphone promoted by an overweight model. When promoted by a slim model, the chocolate bar surprisingly does not yield a mediation of self-esteem on the relation of body weight and skepticism towards the advertisement. Overweight and normal weight women do not differ in their levels of skepticism towards the advertisement. The final advertisement results in the expected outcome. The advertisement for the chocolate bar promoted by an overweight model results in no mediation of self-esteem on the relation of body weight and skepticism towards the advertisement. In the figure below, check marks and crosses are assigned to the final set of hypotheses, to illustrate support for or rejection of the respective hypothesis.

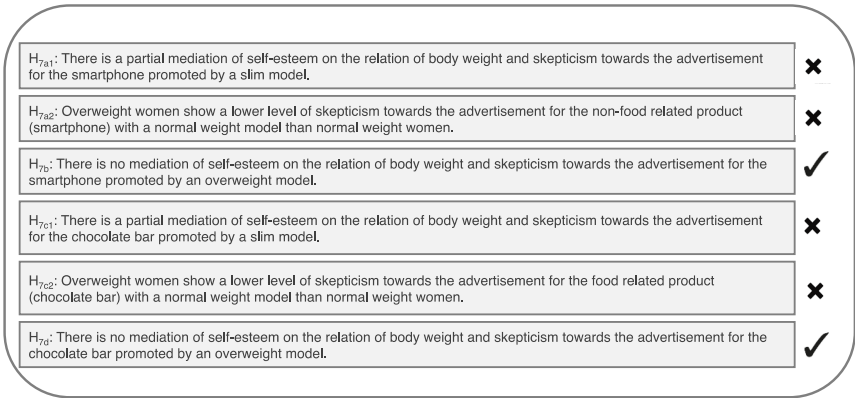

Figure 48: Summary of the outcomes of the hypotheses of study 4

5.2 Limitations of the Empirical Research and Further Research

Of course, each study has various limitations as previously described, but there are also some general boundary conditions of the presented research and the field of research. The following categories limitations of the research are addressed and stimuli for further research is given:

1. Samples and participants
2. Materials and advertisements
3. Questionnaire content and variables

In the first of the three categories “Samples and participants” the following limitations are addresses:

- Gender focus
- Participant selection (disregard of certain body weight classifications, ethnicity)
- Sample size

First, overall this research focuses mainly on women. Even though the first study investigates the relationship of body weight, self-esteem and skepticism towards advertising among men and women, the other three studies focus on

women only. The focus on women is driven by the results retrieved from the first study and from other studies (e.g. Diedrichs & Lee, 2011; Dittmar et al., 2006; Fernandez & Pritchard, 2012; Halliwell et al., 2005). Nevertheless, an investigation of male consumers with regard to various products can be interesting for public institutions as well as for marketers and advertisers from companies. To determine whether men are simply not affected and are therefore not as interesting as a target group as women are, or whether they are affected in specific cases, can be interesting for the above-mentioned companies and institutions. Further studies should consider this research gap.

Second, certain characteristics of participants could not been taken into consideration. First, the participants were selected with regard to their body weight among other criteria. The studies focus only on normal weight and overweight participants. Underweight people were completely excluded from the studies, since other research has shown that other psychological processes take place and would demand other theories for an explanation (Cheung et al., 2011; Falkner et al., 2001; Thompson & Stice, 2001). However, the contemplation of underweight people can be of interest for public institutions since this condition also expenditure and has a detrimental effect on well-being. Second, the ethnicity of the participants might also affect the relationship of body weight and skepticism towards advertising. Miller and Downey (1999) found differently strong relations of body weight and self-esteem among people with different ethnicities. In this thesis, only Caucasians in Austria were surveyed and therefore results only show the relation of body weight and skepticism towards advertising among this ethnical group. Other ethnical groups could show different results in the relation of body weight, self-esteem and skepticism towards advertising.

Finally, the sample size in the first study is entirely acceptable. The other three studies involve lower sample sizes, but are also completely adequate with regard to statistical prerequisites for certain analyses. At some point, many subgroups were considered and small groups were left over. This can be a problem when over-interpreting the results of the small subsamples. Nevertheless, taking the small subgroups into account, the results can be very useful for con-

sumers as well as public institutions. However, an expansion of the sample might be helpful to support the expressiveness of the results.
The second limitations category focuses on “Materials and advertisements” used in the studies. The following limitations are discussed:

- Advertising in general
- Specific advertisements
- Limited selection of products
- Print advertisements
- Model selection in advertisements

First, the first and third study focus on advertising in general. Advertising can be done in various ways (e.g. print, TV, radio, billboards, etc.). In the studies, the term advertising was not explained and every participant made up their own mind about what they conceive by the term advertising. The individual comprehension of the term advertising was not the subject of any question, and this can lead to variations in understanding. Generally, the term “general” was used, so that participants had a general idea of advertising in their minds while answering the questions. Nevertheless, it might be interesting to investigate whether the conscious classification into certain types of advertising might affect the outcome. Since specific channels are used with different intensities, there might be differences in the influences of those specific areas. It could be promising to investigate whether TV advertising is more strongly influential, for example, than other channels of advertising. Further research could address this question.

Second, study 2 and 4 investigated research questions with specific advertisements. Pre-testers regarded the advertisements as professional. However, the advertisements show some inconsistencies with regards to the amount of text, size of text, depicted models and size of the depicted products (especially in study 2). In general, text does not attract as much attention as pictures or models in advertising, but perceived differences might nevertheless lead to a different perception of the product and could ultimately cause another level of skepticism towards advertising (Wedel & Pieters, 2000). In further research, this has to be taken into consideration, in order to determine whether specific differences may be influenced by other characteristics of the advertisement.

Third, the selection of products was limited in order to guarantee the feasibility of the studies. Still, many more product categories can have an influence on the relation of body weight, self-esteem and skepticism towards advertising (Buck et al., 1995). Further research in various product categories and probably various advertisements of the same product can be focus of another study.
Fourth, the research for this thesis focuses on print advertisements in those cases where it does not apply to advertising in general. There are many other methods of advertising products and services as already mentioned above. No research has focused on the different effects on consumers due to experiencing advertisements through different channels. Differences are likely, since TV is perceived audio-visually, whereas others channels are only perceived in a visual (billboards, print advertisements) or an audio context (radio). Research in this area might be promising.

Last, the models used in the advertisements in Study 4 correspond to a certain beauty ideal with regard to hairstyle, make up and clothing. Nevertheless, there are many other options to determine the ideal beauty in terms of other hair colors or positions depicted in the advertisement (Häfner & Trampe, 2009; Smeesters & Mandel, 2006). A content analysis of current advertisements and depicted models would be useful to determine the beauty ideal in today's society, and in a next step to create an advertisement with models based on the findings of the content analysis and determine differences in the relationship of body weight, self-esteem and skepticism towards an advertisement. This can also be considered as a basis for further research.

Finally issues with the "Questionnaire content and variables" are addressed:

- Limited investigation of sources of self-esteem
- No consideration of other influencing variables (e.g. body image, social comparison, health influencing factors such as health consciousness, eating behavior)
- Discounting other dependent variables (e.g. purchase intention, consumption)

First, regarding the Self-Esteem Theory (Rosenberg, 1965), there are various sources, which may influence self-esteem. Besides body weight, social compe-

tencies or intelligence also contribute to the establishment of a certain level of self-esteem. This thesis has only focused on body weight as an influencing factor, based on the notion that Western society are ruled by a slim beauty ideal and therefore, more importance is put on body weight than on other factors. However, the different sources would serve as an interesting research area in order to determine to which extent other factors influence the relation of self-esteem and skepticism towards advertising and the interplay of body weight, self-esteem and skepticism towards advertising.
Second, this research focused on investigating the influence of self-esteem on the relation of body weight and skepticism towards advertising and special advertisements. Nevertheless, other influencing factors such as body image (Dittmar & Drury, 2000; Dittmar et al., 2006; Dittmar, 2009; Halliwell et al., 2005), social comparison (Brunet, Sabiston, Dorsch, & McCreary, 2010; Dittmar & Howard, 2004; Lindner et al., 2012; Tylka & Sabik, 2010), health consciousness, or eating behaviors may be of interest, since they might also affect the relationship of body weight, self-esteem and skepticism towards advertising.

Last, in this thesis, skepticism towards advertising/an advertisement was considered as the only final dependent variable. However, other variables such as the purchase intention (Hüttl & Gierl, 2012), or the consumption of various products could also have delivered interesting results and relationships. Further research can take this into account.

5.3 Implications

The thesis‘ findings lead to implications in various areas. The following three contribution areas are discussed in detail:

1. Scientific area
2. Consumers
3. Public institutions/health facilities (e.g. World Health Organization, European Consumer Organisation)

First, the studies' findings contribute to the "Scientific area" in various ways. The studies' results support an influence of body weight on the level of skepticism towards advertising and therefore, the addition of an influencing factor of skepticism towards advertising can be reported. So far, research has focused on self-esteem, demographic variables, or other body related variables as influencing factors of skepticism towards advertising (Boush et al., 1994; Seiders & Petty, 2004; Smeesters & Mandel, 2006). This study supports the recognition of body weight as another directly influencing variable of skepticism towards advertising. Researchers conducting studies in this area can regard the findings as a foundation for their research. Moreover, moderator variables in the relationship of body weight, self-esteem and skepticism towards advertising were found. On the one hand, gender has been detected as moderator, on the other hand, education has been identified as well. As already mentioned above, these variables can be included by other researchers in their studies and they can extend their research questions to include other possible moderators. Furthermore, other research questions in this area can be investigated in order to determine whether these two moderators are still influencing the relationship. In addition, the results show that different products cause different relationships of the variables body weight, self-esteem and skepticism towards advertising. Further research can consider the already investigated products and can extend the list of product categories. Furthermore, the studies in this thesis lend support to the difference in the relationship of body weight, self-esteem and skepticism towards advertising across different seasons. Since this study was only one small sample sized study, further investigations determining other influences of the seasons in this relationship would be helpful in order to understand the connections between those variables. Finally, with the help of the final study, knowledge of the consumers' perception of differently sized models was gained. Furthermore, the results supported the findings of another study (Hüttl & Gierl, 2012), by focusing on differently sized models, and adding the new conclusion that overweight women might be more skeptical if overweight models were shown in advertisements.

Second, the studies' results have importance for "Consumers" in Western society. On the one hand, the insights gained can be considered as awareness raising for consumers in general. They can benefit from an understanding of

the influences they are exposed to through advertising in general and specific advertisements showing specific product categories. Moreover, it might also be interesting for the consumers to know that altering the current beauty ideal can break the influencing chain. On the other hand, the studies' results deliver important information for female (overweight) consumers, since they are more affected by the influence than men, according to the first study. Since women are still predominantly responsible for the household as well as for grocery shopping (Bianchi et al., 2000), a higher influence of advertising, especially of advertisements for unhealthy products, might cause problems in the long run. Nowadays, the number of overweight persons is rising consistently (Statistik Austria, 2015a; US Census, 2015; WHO, 2015a). This increases the probability that more overweight people do the grocery shopping and influence their children and others in their surroundings. This might consequently lead to a further rise in overweight numbers due to advertising. An awareness among the population is really important to allow people to make conscious decisions regarding their skeptical attitude towards advertising and their food choice (Bates et al., 2009; Rotfeld, 2009; Scammon et al., 2011) and to break the vicious cycle.

Third and last, the studies' findings can serve as the foundation for campaigns designed by "Public institutions as well as health facilities", such as the World Health Organization or the European Consumer Organisation. General campaigns on TV, radio or billboards can be created. Based on the designs of the ministry of transport, people can be warned that advertising and advertisement for specific products can influence the levels of skepticism towards advertising. Even though people are already aware of the advertisers' and marketers' influence, a reminder by public institutions, the WHO or the European Consumer Organisation might be helpful to deal consciously with this specific knowledge. This might also affect the vicious cycle, which overweight women in particular might be part of. Due to the modeling behavior of children with regard to their parents, awareness raising campaigns should also be started in schools. Children are influenced by their parents and learn a lot through modeling behavior or attitudes (Bussey & Bandura, 1999). Due to the high proportion of overweight persons among the population, there might be a higher probability that many children learn a behavior, which corresponds to a less skeptical attitude

towards advertising and less healthy eating behavior. Once children are used to Western society diet, there might be a higher probability that they will consume more unhealthy products. Studies have found that Western society diet is high in saturated fats and simple carbohydrates, which is linked to overweight and obesity, and can lead to cognitive impairment, which can eventually lead to the development of excessive food intake and, ultimately, to obesity (Davidson et al., 2012, 2013; Kanoski & Davidson, 2011). This development, paired with the internalization of the slim ideal, can lead to a lower skeptical attitude, a higher food intake and is supported by the parents' unhealthy behavior. Eventually, this creates overweight and barely skeptical children, adolescents and adults. Therefore, public institutions as well as the WHO and the European Consumer Organisation should support campaigns in schools, showing children alternative eating behaviors, as well as a more skeptical attitude towards advertising and the societal ideal. Since public institutions are spending a lot of money on the disease "overweight" (Salihu et al., 2009; Shea & Pritchard, 2007; Wellman & Friedberg, 2002), they could use the studies' findings as a foundation for tax payments from companies offering unhealthy products as well as marketers and advertisers producing advertisements for unhealthy products. Packages for companies could be created in order to limit their advertisements in various channels, and could also be marked with red flags. The same could be done on the packaging of the product itself (similar to cigarettes, pharmaceutical products or, as is planned, with alcohol in Austria). Red flags can signal that the product may harm your health and could lead to weight gain. This law should be introduced for several products and should be mandatory for companies producing products, which might be harmful for the consumer. Advertisements for high-caloric and low-nutrient products are prominently and often shown in winter (Capita & Alonso-Calleja, 2005; Ma et al., 2006). Due to the varying perception of the study's participants, public institutions should probably introduce a certain threshold for unhealthy product advertisement. Since female participants were less skeptical towards an overweight model than a normal weight model promoting various products, public institutions or advertising landscape persons in charge should think about introducing a minimum threshold BMI for models shown in advertising in general. France has recently passed such a law for advertisements in order to start a campaign against role models who are too thin.

Introducing all of the above-mentioned implications would be utopian, since the rights and opinions of the companies have to be canvassed as well as considered. Nevertheless, public institutions, the World Health Organization or the European Consumer Organisation, could set the first milestone by realizing just a few of the legislation changes or campaigns suggested above, in order to fight a disease, which is currently affecting all of the Western countries, as well as, increasingly, other countries all over the globe.

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