14 Studies on Body Image in Children and Adolescents with Overweight/Obesity

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14.1 Introduction

Worldwide obesity has doubled since 1980 and the prevalence of overweight and obesity in children under the age of 5 has increased considerably being estimated around 41 million in 2016 (http://www.who.int/dietphysicalactivity/childhood/en/). High BMI has a negative impact on health (e.g., diabetes, cardiovascular problems). Overweight and obesity is also linked to negative psychological outcomes such as negative body image attitudes, low self-esteem, and body image disturbances (e.g., [1, 2]).

This chapter will review evidence related to these psychological outcomes, with a focus on body image attitudes and especially body weight and shape dissatisfaction in overweight and obese children and adolescents taking into account gender and age differences. The chapter will also outline sources and consequences of this weight bias and introduce the concept of positive body image that can help in developing health promotion interventions for improving children's and adolescents' body image.

14.2 Body Dissatisfaction as a Function of Age and Gender in Children and Adolescents with Overweight and Obesity

Previous chapters have outlined that body image is not a realistic perceptual mental representation of one's body but it is the result of a combination of perceptual, attitudinal, and affective characteristics. It develops through interactions with the environment and reflects influences from family, peers, and culture (see Chaps. 1, 8–12,

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22, 24, 28 and 31 of this book). Body dissatisfaction, i.e., negative attitudes towards one's body, is estimated to affect around 50% of the general population (e.g., [3]). Negative body image attitudes, weight concerns, and body dissatisfaction were considered in the past a specific problem for females but nowadays it is evident that an increasing percentage of males also report high body dissatisfaction (e.g., [4]). Concerns about appearance are present in both preschool female and male children but the desire to be thinner is bigger in females than in males at all ages and across countries (e.g., [5]).

Body dissatisfaction is widespread in adolescent girls and adult women of western societies, and it develops early in life: it has been reported by age of 6 (e.g., [5, 6]) and earlier (e.g., [7]). Moreover, it shows a linear increase with age [8] throughout the elementary school years, late elementary school, and early adolescence. Elementary school children express more concern about being overweight and a stronger desire to be thinner than their younger counterparts and body dissatisfaction in late elementary school predicts body esteem and eating problems in early adolescence, and negatively affects the adolescent global self-esteem (e.g., [5]). Negative attitudes and concerns about body weight and size increases in the pre-adolescence and adolescence. It is estimated that, notwithstanding the actual BMI, the percentages of body dissatisfied pre-adolescent girls are about 40–50%, while during adolescence it increases to over 70%, with the 60.4% of males and 80.0% of females being dissatisfied with their bodies [1]. For what attain to transitions from adolescence to adulthood findings are contradictory. There are data indicating that in middle and later adolescence body dissatisfaction stabilizes or sometimes decreases (e.g., [9]) while recent studies (e.g., [10, 11]) report an opposite trend, namely that body dissatisfaction increases between middle school and high school and increases further during the transition to young adulthood. Maybe other variables moderate the age trends, several being socio-cultural while others being personal. Craike et al. [12] found that in non-metropolitan areas, body dissatisfaction decreases with age whereas in metropolitan regions it increases with age. In Craike's et al. [12] study, trends were independent of body perceptions, which were unchanged over time, region, and age. Maybe the stronger predictor of those differences as well as the stronger predictor of increases in body dissatisfaction at increasing age in metropolitan areas is BMI. Data coming from a 10-years longitudinal population-based study (the EAT project) that examined 1902 participants from diverse ethnic/racial and socioeconomic backgrounds in the Minneapolis/St. Paul metropolitan area found that body dissatisfaction increased from early adolescence to young adulthood in both females and males. However, also BMI increased with time and when BMI was controlled, the age trend observed in body dissatisfaction disappeared [10]. As it is consistently reported across studies, when body dissatisfaction appears, it does not go away spontaneously without interventions [13]. Thus, it is relevant for researchers, clinicians, and health providers to increase knowledge about how to prevent not only obesity but also body dissatisfaction which is so strictly related to BMI increases, as evidenced by Bucchianeri and colleagues [10].

14.3 Social Attitudes Towards Obesity

In western societies, there is a strong preference for thinness and leanness (see Chaps. 27–31 of this book). This preference is associated with strong social pressures to be thin for girls and to be muscular for boys. A theory often used for explaining how social preference translates into body dissatisfaction is the social comparison theory (e.g., [14]). According to this theory, individuals compare their own characteristics to the socially prescribed ideals and when discrepancies are detected, negative attitudes are formed; a similar process is used for judging other people and form attitudes towards them (e.g., [15]).

Awareness of the social impact of high body size and of the societal bias against fat people is present in very young children who have internalized this message and are worried about being overweight [5, 16]. Even in early elementary school, children who are overweight or obese report more body dissatisfaction than their average-sized peers, wish they were thinner, chose a thin or average-sized playmate significantly more often than they chose an overweight playmate [17] and are worried about being overweight and thus not having people to play with, being less popular than thin children, having only fat friends or boy/girlfriends [16]. Xanthopoulos and colleagues [18] examined children of fourth to sixth grades finding that, after controlling for both sex and race/ethnicity, body weight was the strongest predictor of body dissatisfaction. However, this association is not consistently reported across studies. Rogers et al. [11], for instance, found that BMI was not strongly associated with varying levels of body dissatisfaction, maybe because not only actual body mass index (BMI) but also perceptions of body weight and size are relevant for explaining negative attitudes towards one's body (e.g., [19]). The internalized prejudice against fat people seems to increase with age [5] and has been reported to be greater in preschool girls than in boys [20].

Usually, with very young children the societal bias against fat people is assessed presenting children with three photographs or silhouettes or dolls and asking them to point to the one who is for instance happy, pretty, sad, has many good friends, has no friends, and so forth. Those instruments have shown that preschool children display a preference for the thin figure compared to both the average-sized and overweight figures [6] and are more likely to attribute negative adjectives towards overweight stimuli and positive adjectives towards thin or average-sized stimuli (e.g., [21]). Similar results have also been reported with 2.5 years old children using two instead of three pictures [22].

14.4 Consequences of Weight Bias

Societal anti-fat attitudes and weight bias have a negative impact on psychological well-being as reported in both cross-sectional and longitudinal studies (e.g., [23, 24]). Griffiths and colleagues [2] in a systematic review evaluating the negative impact of obesity on self-esteem, quality of life, physical competence, physical appearance perceptions, social acceptance, and social functioning showed that

obesity was associated to all these negative psychological outcomes with no clear age trend nor differences as a function of gender and ethnicity. Again, it is not obesity per se that may have a negative impact on psychological health, but stigmatization of people whose BMI do not conform to societal standards of beauty. Weight stigmatization is the process that leads to the assignment of people to a category based on their weight and the association to that category of other characteristics that are not necessarily related to weight but considered undesirable as well as the overweight (e.g., stupid, isolated, lazy). See Chap. 28 of this book.

In explaining how anti-fat attitudes are formed, also attributions are important. Attribution theories (e.g., [25, 26]) emphasize causality and controllability of an outcome. Outcomes may be perceived either as the result of internal, controllable causes or as the result of external, uncontrollable causes. In judging individuals belonging to a stigmatized group, people search for the cause of the stigma and if the stigmatized trait is thought to be under personal control, negative attributes are assigned, and discrimination is justified. Research has shown that overweight and obese children are frequently stigmatized and excluded on the bases of their assignment to that weight category (e.g., [6]). Moreover, as reported by Holub [20], internalization of the social anti-fat stereotypes is predicted by children's beliefs about the controllability of weight: those who viewed overweight as uncontrollable held fewer anti-fat attitudes than those who perceived overweight as controllable.

Appearance comparison processes and unfavorable comparisons with others may maintain or increase body dissatisfaction by a feedback loop (e.g., [11]): overweight and obese children and youths as well as their normal-weight peers form their negative attitudes towards fat people through social comparison processes, which in turn give rise to an increase in their level of body dissatisfaction as they do not conform to the social ideals of beauty. Several data indicate that adolescent girls with higher body mass indices are more stigmatized, experience more weight-related teasing and show greater body dissatisfaction than their average weight peers [5, 27, 28] and a study by Puhl and colleagues [29] show that high percentages of weight loss treatment seeking youths report of having been victimized from peers (92%), friends (70%), parents (37%), and teachers (27%).

A second negative feedback loop or vicious cycle has been described for explaining why stigmatized people, instead of losing weight for changing the social category they are included in, are more likely to increase their weight further. The mechanisms of this vicious cycle are described by Brewis [30] as follows:

1. Weight stigma increases eating and reduces exercise behavior: Results of several studies provide evidence that those who feel judged by others because of their body size are less motivated to be physically active (e.g., [31]). Similarly, exposure to stigmatizing materials like videos can trigger higher calorie consumption, especially in those who believe they are overweight [32, 33] and those who report on surveys that they feel stigmatized also report more comfort eating, bingeing, and extreme caloric restriction (e.g., [34]).
2. Weight stigma increases stress: There is a growing body of studies showing that chronic psychosocial stress predicts additional weight gain or greater food intake

especially among those already overweight or obese [35–37]. Research from sexual minority stigma may suggest the pathway that explains negative outcomes also in the case of weight stigmatization: Members of the stigmatized group compare with the other people and make efforts trying to fit it in without succeeding; in turn they receive a constant devaluation which can create chronic stress (e.g., [38]).

3. Weight stigma indirectly affects body weight via changes in social relationships: Adolescent networks influence exercise and eating behavior, but high levels of physical activity also creates and reinforces friendships among people with similar bodies and increases stereotyping and exclusion towards overweight and obese peers (e.g., [39, 40]), thus stigmatized children may become isolated and overeat as a function of that negative affect.
4. Weight stigma indirectly produces structural effects through discrimination: There is evidence that weight bias negatively affects access and opportunity in almost all aspects of everyday life [41]; this negative socioeconomic effect of weight discrimination can lead to additional weight gain [30].

14.5 Sources of Weight Stigmatization

Parents, peers, media, and also health professionals comments may contribute to the internalization of the thin ideal of beauty and thus to develop body dissatisfaction and weight stigmatization (e.g., [11, 27, 41]). See also Chaps. 22 and 27–31 of this book.

14.5.1 Parents

Parents may influence children attitudes towards their bodies through direct and indirect pressures to conform to the societal standards. Parents may directly influence their children attitudes commenting on their appearance and weight or by requiring them to eat or avoid certain foods or encouraging them to slim down (e.g., [42, 43]). The mealtime is often a moment of the day that families spend time together so it is very likely that parents may comment on their children appearance or eating behavior and although parents may or may not explicitly press their overweight/obese children to restrict eating for losing weight, the children perception of this pressure increases the likelihood of being dissatisfied with their bodies [44, 45]. Moreover, parents may indirectly influence their children concerns about body weight and shape through modeling. Dissatisfied children have often parents that remark on the appearance of their own bodies, engage in calorie-restrictive dieting or exercise for losing weight or are concerned about their own and their child's weight (e.g., [46]). Evidence of this relationship in very young children are scarce (e.g., [47]) although Holub and colleagues [42] observed that 3- to 6-year-old children mothers' fear of fatness was associated with children's negative stereotypes about overweight. Studies of older children (pre-adolescents and early adolescents) showed that mothers' negative attitudes towards fat bodies and parents' beliefs

about personal control over weight predict high children's weight prejudice (e.g., [48]). More recently, Damiano and colleagues [45] evidenced that mothers' overvaluation of weight and shape predicted use of fat restriction while their internalization of the thin ideal of beauty predicted pushing to eat feeding practices.

Girls may be particularly affected by their mothers' behavior through both direct comments and modeling [47, 49]. The father's influence on their children's, especially sons' attitudes has been investigated only recently. Although Wertheim and colleagues [46] failed in finding an association between fathers' dieting and their adolescent sons' or daughters' body attitudes, more recent findings indicate that fathers' influences are also important in the development of boys' body attitudes. McCabe and Ricciardelli [49] reported that adolescent boys who were pressed by their fathers for losing weight actually tried to lose weight more often than those who did not receive those pressures. Consistently, results of a study conducted by Damiano and colleagues [50] confirm that boys' body size attitudes are associated to fathers' negative attitudes towards obese persons. Moreover, negative comments about weight by fathers predicted binge eating or higher BMI in the sons (e.g., [43]) and Spiel and colleagues [47] reported similar bias in 3-years old children evidencing that fathers' attitudes prospectively predicted boys' weight bias and awareness of weight loss strategies.

The combined influences of both mothers' and peers' were investigated in a study by Lombardo and colleagues [51]. The authors compared two groups of female children practicizing aesthetic and non-aesthetic sports (aesthetic sports are those in which the performance is evaluated by judges, like in gym or dance) [52]. Children in the aesthetic group, despite their lower BMI, desired to be thinner than their peers in the non-aesthetic group. Moreover, their mothers were more dissatisfied with their children's body shape and adopted for themselves more calorie-restrictive dieting than the mothers of the children in the non-aesthetic sports group.

14.5.2 Peers

As children grow up family influences become less relevant while peers influences become stronger (e.g., [53]). Peers directly influence eating and exercise behavior and the closer is a friend the greater is his/her influence (e.g., [54, 55]) with greater effects seen in adolescents as compared to pre-adolescents and boys as compared to girls (e.g., [56]).

Results of the scientific literature are quite consistent in supporting also the influence of peers on body dissatisfaction. As it happens with family members, also peers may impact body dissatisfaction directly through overt comments or indirectly through shaping processes and friends selection. Peers may directly influence body dissatisfaction through negative comments and remarks that may become teasing and bullying (e.g., [23, 24, 57]). Teasing may be defined as a negative appearance-related verbal feedback that informs the recipient that his/her peers have a negative opinion of his/her physical appearance [58]. Verbal feedbacks may be insults or cruel comments and remarks. Results from cross-sectional and longitudinal studies

and meta-analysis support the connection between teasing and body dissatisfaction (e.g., [57, 59–63]). Menzel and colleagues [59] suggest that the link between teasing and body dissatisfaction in childhood and adolescence may be causal and predict body dissatisfaction in adulthood. Consistent results also come from the longitudinal study EAT cited above that evidenced that prevalence of weight-related teasing remained longitudinally stable throughout early adolescence, middle adolescence, late adolescence, and young adulthood (e.g., [60]). The association between weight teasing and body dissatisfaction is stronger in children and adolescents than in adults, in female than in male samples [59].

14.5.3 Teachers

The anti-fat attitudes are so widespread that they can also be found at school among teachers (e.g., [49]) and are also within this context a cause of stigmatization and disparity. Several studies (e.g., [64–66]) show that teachers are more likely to have lower expectations for overweight children, across a range of ability areas, and describe them as untidy, emotional, less likely to be successful at work, and more likely to have family problems as compared to their normal-weight peers.

As evidenced by the previously cited study by Puhl and colleagues [29], a high percentage of weight loss treatment seeking youths report of having been victimized not only by peers and friends but also by teachers (27%).

14.5.4 The Media

Media use is widespread in today's western societies. According to a 2013 Nielsen report [67], young people aged 12–24 years spent almost 22 h/week watching traditional TV. A more recent report by the same company confirm that TV is the preferred choice among media users still in 2016 although it is the most heavily consumed platform among adults while children consume multiple types of media and spend many of their waking hours in front of multiple types of screens, often simultaneously. The incidence of TV viewing, however, remains substantial across all age groups. Since 2011 the incidence of TV viewing has decreased slightly: 14–17 aged children show the biggest decrease from 99% in 2011 to 96% in 2014 but part of them is viewing content elsewhere. Given this heavy consumption of media, weight stigmatizing messages can be potentially harmful to young people. Research findings have shown that children's media present positive messages about being thin and negative messages about being overweight; thin characters are associated with desirable characteristics and have central roles, whereas less time is dedicated to overweight characters who usually have minor stereotypical roles, are rarely portrayed in romantic relationships and are more likely to be objects of humor [68].

Eisenberg and colleagues [69] asked 2793 middle and high school children to indicate their favorite television shows. Throughout the 30 episodes analyzed, there

were 66 total appearance- or weight-related stigmatizing, weight stigmatizing instances included both male and female characters. Half of the targets were overweight, even though only about one in five characters were overweight across shows. Audience laughter was the response in over 40% of these incidents, thus reinforcing the stigmatization of the characters' weight.

Ata and Thompson [70] surveyed the previous 15 years of research on weight bias and stigmatization in the media and discussed some theoretical models that might help explain the negative effects of such stigmatization. They evidenced that a wide range of media—from television shows to books, newspapers, and the internet—portray overweight and obese individuals in a stigmatizing manner. This is true not only for the adolescents' targeted media programs but also for children's targeted programs. Moreover, results showed that the longer is the time children spend using media the bigger is the impact of the stigmatizing messages on interiorization of those stereotypes. In boys, it was also associated with total time spent watching television. Liking of the obese figures (compared to the non-obese figures) was negatively related to magazine use, which tended to be higher among girls.

14.5.5 Health Providers

Obesity, especially in children and youths, has received significant attention by researchers, professionals, and policy makers due to its relevant consequences on health. As such, health providers often emphasize the need for losing weight or maintain a low BMI and prevention and treatment approaches to obesity address weight loss as the key construct for gaining health (e.g., [71, 72]). Since these negative messages pervade almost every aspect of life (e.g., media, family, work, school) and since also health care providers show high rates of weight bias (e.g., [73]), their messages may strengthen the social negative attitudes towards fat people and indirectly increase stigmatization.

Reviewing the literature on stigma and obesity, Washington [68] evidenced that, as it happens in the general population, also among health providers' stigma towards obesity is highly present and physicians attribute negative characteristics such as "weak-willed" to their obese patients, spend less time with them, and focus more on weight as a cause of their health problems. Negative attitudes about overweight patients have been reported by psychologists, nurses, and physicians [74–76] and also health care professionals treating obesity and eating disorders (e.g., [73, 77]). For instance, Puhl and colleagues [73] assessed through an online survey explicit weight bias, perceived causes of obesity, attitudes towards treating obese patients, perceptions of treatment compliance and success of obese patients, and perceptions of weight bias among their colleagues in 329 professionals treating eating disorders. Participants showed negative weight stereotypes and reported to have colleagues holding negative attitudes towards obese patients. Comparing professionals with less and those with more weight bias, the second were more likely to attribute obesity to behavioral causes, expressed more negative attitudes and frustrations about treating obese patients, and perceived poorer treatment outcomes for these patients.

An improvement (in terms of reduction of stigmatization among health providers) was observed by Budd and colleagues [78] from 1990 to 2007. However, little is known about weight bias in health providers towards children and adolescents obesity, at least at the best of the knowledge of the author of this chapter.

14.6 Positive Body Image and the Health at every Size Movement

Most of the scientific literature summarized above deals with negative body image and its causes and consequences. A change paradigm in the study of body image has been observed a few years ago when the new concept of positive body image was developed. Wood-Barcalow and colleagues [79] defined positive body image as a feeling of love and respect for one's body characterized by appreciation of the unique beauty and functions that it performs, acceptation of the aspects that are inconsistent with idealized images. Those who have this positive image of their bodies are also assumed to be resistant to the external pressure to conform to the socially shared standard of beauty. As for positive psychology, positive body image does not correspond to the absence or low levels of body dissatisfaction but as a sense of full appreciation of the body notwithstanding its imperfections [80].

A complete overview of this position goes beyond the scope of this chapter and a more complete account may be found in Tylka and colleagues [80]. A great impulse to this change paradigm is due to the contribution of feminist scholars (e.g., [81]) who questioned the equation "beautiful bodies equal standard thin bodies." According to this viewpoint, the mass media message that perfect thin bodies are preferable to an individualized concept of health and beauty is probably the most relevant source of body dissatisfaction and weight stigmatization. They proposed to shift the attention from weight to health and gave birth to a trans-disciplinary movement called Health at Every SizeSM (HAES)[2] whose main counter-message is intended to help people understand that it is empowering to resist internalizing media appearance ideals and messages and try to do one's best for gaining health instead of trying to change appearance in order to conform to a standard unrealistic thin body.

The positive body image paradigm be the theoretical framework for designing effective programs that promote the development of a positive image instead of or together with preventing the development of negative attitudes towards children's and adolescents' bodies.

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