

Adolescent Obesity, Overt and Relational Peer Victimization, and Romantic Relationships

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Abstract

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Objective: To examine associations between obesity and peer relations in adolescents, specifically testing the hypotheses that obese adolescents are more frequent victims of peer aggression and are less likely to develop romantic relationships.

Research Methods and Procedures: Measures of overt and relational victimization, as well as dating status and satisfaction, were collected for a group of 416 ninth- through twelfth-grade students (51.7% girls). Body mass index was computed for each teen based on self-reported height and weight data.

Results: Results revealed that obese boys reported more overt victimization and obese girls reported more relational victimization compared with their average-weight peers. Obese girls were also less likely to date than their peers. However, both obese boys and girls reported being more dissatisfied with their dating status compared with average-weight peers.

Discussion: The results suggest that obese adolescents are at greater risk for mistreatment by peers and may have fewer opportunities to develop intimate romantic relationships; this may contribute to the psychological and health difficulties frequently associated with obesity.

Key words: peer relations, psychosocial difficulties, dating behavior, stigma and negative stereotyping, adolescence

Introduction

In just two decades, the number of obese children and adolescents in the United States has doubled. Recent Na-

tional Health and Nutrition Examination Survey results indicate that 13% of young children (ages 6 to 11 years) and 14% of adolescents (ages 12 to 19 years) are obese, with body mass index (BMI) scores at the 95th percentile or greater (1). The percentage of non-obese adolescents who are significantly overweight is also striking. Approximately one in five American teens is overweight, with BMI scores at or above the 85th percentile (2). Obese adolescents are not only at risk for numerous physical disorders, such as hypertension, orthopedic complications, and endocrine disorders (3,4), but they also have an increased risk of morbidity and mortality in adulthood (5).

Perhaps equally as damaging as the negative health effects are the negative social and psychological ramifications of adolescent obesity (6). Overweight adolescents are less likely to marry as adults compared with their average-weight cohorts, and obese adolescent girls complete less schooling and have lower household incomes as adults than those who are not obese (7). These social and psychological difficulties associated with obesity may be related to the stigma and prejudice obese children experience, which hinder their social development during childhood and adolescence (7,8). Indeed, despite its high prevalence in the population, obesity may be one of the most discriminated against of all physical conditions, associated with numerous societal disadvantages (9).

Issues of stigma and stereotype among peers are particularly relevant during childhood and adolescence because the formation of adaptive social relationships is especially important during these developmental periods. Youth who are stigmatized for their weight or body shape may fail to achieve normal social developmental competencies, and difficulties with peer relationships may be predictive of short- and long-term psychological outcomes (10). Some evidence has been amassed to suggest that obese children may experience more social difficulties than their average-weight peers. In studies with hypothetical paradigms, obese children are viewed as less likable and less desirable than average-weight children (11). They are also more likely to be described by their peers as ugly, stupid, dishonest, and lazy (12). Using body silhouettes of hypothetical peers,

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first-graders reported that they were less likely to befriend an overweight child than an average-weight child (13). These negative stereotypes associated with obesity may influence social experiences as early as preschool (14).

In addition to results from hypothetical paradigms, research has also documented actual differences in the social experiences of obese children compared with those of normal-weight peers. For instance, Strauss et al. (15) used peer-report sociometric measures with second- to fifth-grade children, and demonstrated that, compared with non-obese children, obese children were liked less and rejected more often by peers. Baum and Forehand (16) found that obese children were more frequent peer aggressors and victims than their average-weight peers. In addition, a number of investigations have found that obese children have global deficits in parent ratings of social competence compared with those of normal-weight controls (17) or a community sample (18,19). In a sample of 152 children screened for obesity treatment, 45% of boys and 28% of girls had clinically elevated scores (t scores ≥ 67) on the Social Problems subscale of the Child Behavior Checklist (20). Overall, it seems that the prevalence of social problems among obese children is relatively high.

The association between obesity and peer difficulties in adolescence is unknown, although results from a recent study by Falkner et al. (21) suggest that obese adolescents are less likely to spend time with friends than their average-weight peers. Adolescence may be a particularly crucial time to study the effects of obesity on peer relationships for at least three reasons. First, adolescents are particularly reliant on peers for social support, identity, and self-esteem (22,23); negative peer experiences in teenage years can be especially important predictors of maladjustment (24). Second, the biological changes associated with pubertal development make adolescent body image more salient and, perhaps, more strongly associated with peer reputations and social experiences (25,26). Thus, teens may be especially vulnerable to victimization by peers if their physical appearance makes them different from others. Third, the development of the interpersonal skills required for romantic relationships during adolescence can be an important precursor for the formation and maintenance of romantic relationships in adulthood (27,28). We hypothesized that the peer experiences of obese adolescents may differ substantially from the peer experiences of their normal-weight peers because of the stigma associated with obesity. We investigated two constructs specific to this hypothesis in this study: peer victimization and adolescent romantic relationships.

For several decades, peer victimization was defined as verbal teasing or physical aggression by peers. This type of victimization (i.e., overt victimization) is experienced mostly by boys and is related to a variety of externalizing and internalizing symptoms (29,30). Research with youth and adults has demonstrated that obesity puts adolescents at

risk of being verbally teased by their peers, one component of overt victimization (31–34), with the level of obesity predicting the frequency of teasing (35). Several studies have shown that overweight children and adolescents, especially overweight girls, think that friends would like them better if they were thinner (36). Past research shows that weight-related teasing is part of a model that predicts a variety of negative outcomes. Teasing has consistently been linked to body dissatisfaction (33,37), which leads to restrictive eating practices and bulimic symptoms, which in turn lead to global psychological dysfunction (33). The onset of obesity in childhood and adolescence is especially damaging because the effects are long-lasting; compared with adulthood onset, the early onset of obesity is associated with greater body dissatisfaction in adults, as well as poor body image (38–40). Not all studies, however, have found that negative comments regarding adolescents' weight affected their body image (41).

Although most of the studies on victimization and weight have been conducted with girls, past research has not examined the forms of victimization that are specifically relevant to girls' social interactions. Recent evidence (42–44) has suggested that girls may be victims of a different form of aggression, which has important implications for understanding their psychological health. Termed "relational victimization," some research has demonstrated that girls are more likely to use their friendship status as a way of inflicting social harm (e.g., purposefully excluding a peer from social activities or threatening to withdraw one's friendship). Relational victimization of girls is concurrently and prospectively associated with increases in symptoms of depression and self-esteem difficulties (43). In addition, some preliminary evidence shows that female perpetrators may be at risk of developing bulimic symptoms (45). A recent study showed that female adolescent friendship cliques are characterized by similar levels of body image concern, frequency of use of extreme weight-loss behaviors, dietary restraint, BMI levels, depression, self-esteem, and anxiety (46). These researchers suggest that friendship cliques are a potentially negative environment for girls. Therefore, although past literature with female adolescents has shown an association between weight-related teasing and weight status, it may be that relational victimization is a more accurate, sensitive, and sex-specific measure of the type of peer victimization obese girls experience. By examining both overt and relational victimization, this study offered a more thorough examination of the social consequences associated with obesity than has past research. By studying relational forms of victimization, this study may elucidate potential pathways through which obesity and peer experiences may lead to adjustment difficulties, particularly for girls.

To our knowledge, no studies have examined the dating behavior of obese adolescents. Because romantic relation-

ships are increasingly important to adolescents, we felt this was a relevant area of peer relationships to examine. Berscheid and Walster (9) suggested that obese individuals are perceived as less attractive, and Gortmaker et al. (7) hypothesized that this might be one reason why obese men and women tend to marry less frequently in adulthood. In addition, college students who were given pictures of obese and normal-weight individuals judged the obese stimulus persons as less attractive, less likely to be dating, and more deserving of an overweight, less attractive dating partner (47). In this study, we examined the actual dating status and satisfaction with dating status of obese, overweight, and average-weight teens. We predicted that obese adolescents would date less frequently and have less satisfaction concerning their dating status compared with their average-weight peers.

Research Methods and Procedures

Participants

A group of 416 adolescents [215 girls (51.7%) and 201 boys (48.3%)] in grades 9 (24.2%), 10 (25.2%), 11 (25.9%), and 12 (24.7%) were recruited from a high school in a small southern New England city. The ethnicity of the participants was diverse (26.7% white/white, 63.7% Hispanic, 9.6% other/mixed ethnicity). The socioeconomic status of participants was fairly homogeneous (median family income, \$33,679) (48). According to school records, ~54% of students were eligible for free or reduced lunch, 21% of the parents did not finish high school, and 16% of parents graduated from college.

Procedures

Questionnaires were completed as part of the health screening curriculum of this school district to establish a baseline for a school district intervention program. All questionnaires were completed anonymously; identifying information included only the sex, grade, and ethnicity of the adolescents. Parents were notified of the school data collection 3 weeks in advance so that they could decline their adolescents' participation, if desired ($n = 5$ declined). Adolescents were assured of the confidentiality of their responses and that their participation was voluntary. A total of 37 students did not provide consent to participate or were absent on one of the days of testing. Questionnaires were administered to adolescents in groups, with a ratio of adult to adolescents between 1:5 and 1:10. We were cautious about interpreting the data from this group-administration format. The questionnaire packets of an additional 130 students were excluded from study analyses because of missing data or inconsistent responses. In total, 416 teens fully completed the packet of questionnaires (72.8% of total school population). [Initial analyses of these data also included an additional 45 African American students. Examination of these data and anecdotal reports suggested a

unique pattern of results for these students. Indeed, past research has also indicated that African Americans have unique body image perceptions compared with individuals of other ethnic backgrounds (49). Unfortunately, data were not available for each sex and weight group to examine this pattern with sufficient statistical power. Thus, data from these were excluded from the remaining analyses. Future research on ethnic differences among the obese is needed.]

Measures

Overt and Relational Aggression/Victimization. The Revised Peer Experiences Questionnaire (50) was used to assess overt and relational forms of aggression and victimization in the adolescents. This questionnaire includes nine items of peer aggressive behaviors, each presented in two versions. The aggressor version asked adolescents to indicate how often (1, never; 2, once or twice; 3, a few times; 4, about once a week; and 5, a few times a week) they engaged in each behavior toward another teen (e.g., "I chased a teen like I was really trying to hurt him or her."). The victim version asked adolescents how often they had been the victim of each behavior (e.g., "A teen chased me like he or she was really trying to hurt me."). The order of presentation of the victim and aggressor versions was counterbalanced. A stable factor structure has been supported for this measure, yielding four subscales with good internal consistency: Overt Aggression (four items; Chronbach's $\alpha = 0.80$), Relational Aggression (five items; Chronbach's $\alpha = 0.77$), Overt Victimization (four items; $\alpha = 0.79$), and Relational Victimization (five items; $\alpha = 0.76$). The evidence for validity came from significant associations between these self-reported subscales and peer nominations of overt and relational peer victimization (r between 0.20 and 0.25; $p < 0.001$). These items have also been significantly associated with peer-report indices of aggression and victimization (r between 0.34 and 0.40; $p < 0.001$). Additionally, validity data for these items are available from the initial version of this measure; significant correlations between self-reported victimization and parent-reported victimization (r between 0.36 and 0.39; $p < 0.001$) have been observed in two separate samples (51,52).

Dating Behavior. The Dating History Questionnaire (53), was administered to adolescents to examine the status of their dating behavior and their satisfaction with their dating status. A response set was used that included items measuring a range of dating behaviors (e.g., not dating now, dating or seeing someone casually, having a very serious relationship with one person, married, etc.). From this response set, the responses of the teens to the item measuring typical dating status were analyzed to obtain a general picture of how often teens date. Based on adolescent responses to their typical dating status, this item was coded to indicate whether each teen was a dater (e.g., dating someone casually or seriously), or a non-dater (i.e., not dating now). The

dating satisfaction of the adolescents was determined by asking, "Overall, how satisfied have you been with your romantic or dating life (or with not dating, if you don't date)?" On a five-point scale, responses ranged from very dissatisfied to very satisfied.

BMI. The BMI is a weight-for-height index calculated as weight in kilograms divided by square height in meters. Using national standards derived from the National Institutes of Health and the World Health Organization, obesity was defined as a BMI at or above the 95th percentile for age and sex, and overweight was defined as a BMI between the 85th and 94th percentiles. The average-weight group was defined as those teens having a BMI at or below the 84th percentile. The BMI scores were assessed with age- and sex-specific reference curves because scores have been shown to change based on these two variables (54). The self-reported weight and height of the adolescents were used to compute BMI scores in this study. Past research has supported the use of self-reported height and weight assessment with adolescents because high correlations (>0.90) have been demonstrated between self-reported and actual adolescent height and weight (55,56).

Results

Descriptive Statistics

BMI scores were used to form the three weight categories. There were 32 adolescents ($n = 17$ boys and 15 girls) classified as obese, 59 ($n = 35$ boys and 24 girls) classified as overweight, and 325 ($n = 149$ boys and 176 girls) classified as average-weight. The average BMI of the sample was 22.2 ± 4.01 kg/m² (mean \pm SD).

Victimization and Obesity: Overall and Sex Differences

To examine the hypothesis that obese adolescents experience more victimization than their average-weight peers, a 2×3 multivariate analysis of variance was conducted. The two forms of victimization (overt and relational) were entered as a set of dependent variables, and both sex and weight group (average weight, overweight, and obese) were entered as independent variables. Overall, a significant multivariate sex by weight group interaction effect was revealed, Wilks' $\Lambda(4818) = 2.92$; $p < 0.05$, which was significant in subsequent analyses for overt and relational forms of victimization. For boys, a significant effect of weight group on overt victimization was revealed ($F_{(2, 198)} = 3.63$; $p < 0.05$) but not for relational victimization ($F_{(2, 200)} = 1.55$; NS). Post hoc tests indicated that obese adolescents reported more overt victimization than did overweight adolescents (see Table 1 for means). There was no significant difference between these groups and average-weight boys. For girls, there were significant differences between the three weight groups for relational victimization ($F_{(2, 213)} = 3.19$; $p < 0.05$) but not for overt victimization

Table 1. Means \pm SD for obesity and overt and relational victimization

	Average	Overweight	Obese
Overt victimization			
Boys	1.43 \pm 0.57 ^{ab}	1.29 \pm 0.42 ^a	1.76 \pm 1.07 ^b
Girls	1.27 \pm 0.38	1.34 \pm 0.65	1.35 \pm 0.46
Relational victimization			
Boys	1.61 \pm 0.70	1.41 \pm 0.51	1.72 \pm 0.94
Girls	1.55 \pm 0.54 ^a	1.75 \pm 0.57 ^{ab}	1.88 \pm 1.01 ^b

Row means with different superscripts are significantly different (Fisher's least significant difference test, $p < .05$).

($F_{(2, 212)} = 0.59$, NS). Post hoc tests indicated that obese girls reported higher levels of relational victimization than did average-weight girls (see Table 1). No significant differences in victimization were found between average-weight girls and overweight girls or between overweight girls and obese girls, although there was an upward linear trend, as expected.

Dating Status and Satisfaction and Obesity

Two χ^2 analyses were conducted to compare the number of non-daters and daters across the three weight groups of adolescent boys and girls. Results showed that there was a significant effect of obesity on dating status for girls [$\chi^2(2) = 7.52$; $p < 0.05$]. As expected, obese girls were less likely to date than their peers. In fact, 50% of female obese adolescents reported that they had never dated, whereas 17% of their overweight peers and 20% of their average-weight peers reported no experience in dating. No significant differences of the effects of obesity on dating status were revealed for male adolescents [$\chi^2(2) = 0.028$, NS]. Twenty-nine percent of obese boys reported that they had never dated, whereas 28% of their overweight peers and 30% of their average-weight peers reported no experience with dating.

To examine the hypothesis that obese adolescents are less satisfied with their dating status and/or history, a 2×3 (sex \times weight group) ANOVA was conducted. Results showed that both obese boys and obese girls [boys, 3.2 ± 1.3 (mean \pm SD) and girls, 2.6 ± 1.7] were less satisfied with their dating status ($F_{(2, 374)} = 3.56$; $p < 0.05$) compared with average-weight (boys and girls, 3.6 ± 1.3) and overweight teens (boys, 3.5 ± 1.3 and girls, 3.6 ± 1.5).

Discussion

Research suggests that stigma and the negative stereotypes associated with obesity are related to psychological and

social difficulties (7). However, past research has not addressed the fact that negative stereotyping of the obese may have its greatest negative effect in adolescence. Adolescence is the developmental time period in which peer relationships are valued more than any other type of relationship (57). Furthermore, poor peer experiences in adolescence can lead to numerous problems in later life (24). Because obese adolescents may have a heightened risk of experiencing maladaptive peer experiences, they may also be at greater risk of developing a variety of psychological and social difficulties. This study examined two important aspects of peer functioning: victimization and dating status and satisfaction. We predicted that obese teens would experience more victimization, date less, and be less satisfied with their dating status than their peers. The results provide some evidence to support these hypotheses.

First, obese adolescents reported experiencing more victimization than their peers. This study benefited from recent conceptualizations of peer victimization as either overt or relational in form. This provided us with a more sensitive and informative measurement, and thus understanding, of the way in which obese teens are victimized. As expected, the type of victimization experienced by obese adolescents differed between the sexes. Obese boys reported being more overtly victimized by their peers. This means that they were teased, punched, hit, and kicked more often than their overweight and average-weight peers. In line with the research on stigma, it may be that obese boys are punished or taken advantage of by their peers for deviating from the cultural body image ideal (31,32). Interestingly, it appeared that boys classified as overweight by their BMI scores may have experienced less victimization than either obese or average-weight boys. It may be that the use of BMI scores to classify adolescents is confounded by a subset of teens who have high BMI scores due to muscle mass and athletic build. Boys with an athletic build may be more popular among peers and more difficult to victimize. Additionally, these teens may hold positions of higher dominance and thus may be less likely to be victimized by their peers.

As expected, the results for victimization differed for girls. Obese girls reported experiencing more relational victimization than their average-weight peers. The more girls weighed in proportion to their height, the more they reported that their peers refused to spend time with them, gave them the silent treatment, and would not sit near them at lunch or in class. Therefore, although research has shown that obesity is a risk factor for verbal teasing (31,32), one component of overt victimization, these results suggest that obese girls are more likely to experience victimization within their friendships rather than be teased. This is particularly noteworthy because the results suggest that obese girls may suffer from less supportive and more antagonistic friendships. Because relationships are central to the formation of the personal and group identity of girls, even more

than they are for boys (58), this type of victimization may put obese girls at particular risk for experiencing psychological and social difficulties. In fact, this form of victimization has been linked to depression and low self-esteem in girls (38). Victimization within the context of close friendships may cause obese girls to have an unstable sense of security in relationships and be deprived of the social support most teens receive from their friendships. Because of the association between social support and health, lack of social support may be another reason why obese girls suffer from psychological and health difficulties (59). If victimization had been defined simply as overt victimization as it was until the recent past, we would not have been able to detect the potentially devastating effects that victimization may have on obese adolescent girls.

The finding that obese adolescents experience more victimization than their peers provides some evidence that the weight status of obese teens can be detrimental to their peer experiences. Additional evidence is provided by the second part of the study, which examined romantic relationships. As expected, obese girls were less likely to date than their peers. Given the stigma and negative stereotypes associated with obesity, the results suggest that obese girls may be viewed as less attractive by the opposite sex and thus are more likely to be rejected as dating partners. This is consistent with the research on childhood obesity, which has found that obese children are more likely to be considered unattractive and more likely to be rejected by their peers (13). Girls in early adolescence are vulnerable to the feedback of others regarding their physical desirability to the opposite sex (60); thus, obese girls may be especially at risk for suffering from the adverse effects of negative feedback, such as self-consciousness and anxiety.

Again, the results tell a different story across the sexes. Unlike the negative results obtained for girls, obese boys did not report dating less than their overweight and average-weight peers. In fact, percentages were almost identical for all three weight groups. These findings may provide empirical support for the "double standard;" i.e., boys may not be judged by potential romantic partners according to their weight to the same extent as girls. Because dating is understood by teens as a public behavior, their dating partners become markers of status (61). This may be especially true for boys, who tend to look for romantic partners based on physical appearance more so than do girls (62). Therefore, to achieve a higher peer status, boys may intentionally avoid dating obese girls, who may be seen as less attractive partners. The peer status of girls, on the other hand, may not be as closely connected to the appearance of their dating partner and thus girls may be more willing to date an obese partner. This might explain why obese boys tend to date as frequently as non-obese boys, whereas obese girls do not.

What is particularly interesting is the fact that both obese male and female adolescents reported being less satisfied

with their dating status than their peers, despite the equality of dating status across all three male weight groups. It may be that the romantic relationships of obese boys were shorter or less fulfilling than those of their peers. Alternatively, if obese boys use their dating relationships as a means to disprove the negative stereotypes about the obese, such as “the obese are unattractive,” they may wish for a greater number of dating experiences than do those boys who are not using their romantic relationships in such a manner.

Future research may benefit from addressing several of the limitations of the present study. First, the results are based exclusively on self-reported data. As such, it is possible that obese adolescents are not being victimized more than their peers or dating less. It may simply be that they perceive themselves as more victimized and as having fewer romantic relationships than their peers; this finding would also have important implications, particularly for cognitive interventions. In future research it might be informative to compare self-reported “perception” data with peer report data. In addition, it is not clear that obese teens experienced more victimization because of their weight status or because of another factor associated with both obesity and victimization. For example, research has shown that obese children are more aggressive and have more social problems than do their average-weight peers (16,17). Thus, obese teens may be more victimized not because they are obese, but because they have poor social skills. The same is true for the dating status and satisfaction findings. Future research will need to rule out such alternative explanations.

Overall, as expected, obese adolescents are more victimized, date less, and are less satisfied with their dating status than are their peers. Because adolescents rely on their peers for the development and maintenance of their self-image, self-acceptance, and sense of belonging (63,64), the rejection that obese teens experience from their peers can have devastating effects on their social and psychological health. The results of this study point to the need for a greater awareness of and sensitivity to the negative effects of the stigma and negative stereotypes associated with obesity. Such education could be provided by schools, where obese adolescents may feel the brunt of the negative effects of stigma, as well as by the media. The results of this study suggest obesity not only puts adolescents at risk for physical health problems, but also negatively impacts their social and psychological health through maladaptive peer experiences. Now more than ever it is clear that we must address the weight problem of our youth.

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