

Original article

Weight Stereotypes and Behavioral Intentions toward Thin and Fat Peers among White and Hispanic Adolescents

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Abstract

Purpose: This study examined weight stereotypes among White and Hispanic youth. Specific objectives were to: (a) document stereotyped beliefs about fat vs. thin peers; (b) examine the extent to which stereotyped beliefs contribute to behavioral intentions toward fat vs. thin peers; and (c) explore potential differences in weight stereotypes and behavioral intentions in White and Hispanic youth.

Methods: Participants, 157 Hispanic and 117 White middle school students, completed a demographic and background survey, the Fat Stereotypes Questionnaire (FSQ), Adjective Checklist, and Shared Activities Questionnaire (SAQ).

Results: Participants endorsed weight-related stereotypes, which were predictive of their social, academic, and recreation behavioral intentions. Participants indicated greater willingness to engage in social ($p < .001$), academic ($p < .05$), and recreational ($p < .001$) activities with thin vs. fat peers. Few differences were found between White and Hispanic adolescents.

Conclusions: The results of this study highlight the ubiquitous nature of stereotyped beliefs about fat youth. Fat youth are considered unhealthy, lazy, and socially inept by their peers. Such stereotypes influence a variety of behavioral intentions and may contribute to discriminatory behaviors and difficult peer relationships. Additional research focused on weight stereotypes and peer relationships is needed. © 2006 Society for Adolescent Medicine. All rights reserved.

Keywords:

Adolescent; Overweight; Obesity; Stigmatization

During the past decade, the prevalence of overweight youth in the United States [1] has gained increased attention from media organizations and research institutions. Given the health risks associated with obesity, health professionals have called for a “war on childhood obesity” focused on obesity prevention and treatment [2,3]. Nevertheless, while this “war” is being waged, many youth experience negative psychosocial effects from weight bias and stigma [4]. Overweight youth are often negatively stereotyped and rejected by peers because of their weight. For example, positive

characteristics, such as having a lot of friends and being happy, are more likely to be attributed to thin youth; whereas negative characteristics, such as being lazy and having few friends, are ascribed to fat youth [5]. Youth also endorse beliefs that fat people are less healthy and less fit than thin people [6]. One aim of this study was to further document stereotyped weight beliefs among middle school students.

Given common negative stereotypes of overweight youth, it is not surprising that they often experience social rejection [7,8]. For example, Bell and Morgan [7] found that youth reported being less willing to engage in a variety of activities with fat youth compared with average-weight youth. Furthermore, the issue of weight bias is important

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because of documented negative psychosocial effects [4]. Fat youth, compared with normal-weight peers, are more likely to: (a) experience social marginalization [9]; (b) be victims of bullying [10]; and (c) report lower physical, social, emotional, and school quality of life [11]. Research also indicates that experiences of weight-based teasing are related to poor self-esteem, body dissatisfaction, and depressive symptoms [12]. Consequently, experiences of weight bias and stigma can have harmful psychological and social consequences. Building on previous research, a second aim of this study was to examine weight stereotypes in relationship to behavioral intentions toward peers. Specifically, it was hypothesized that youth with negative weight stereotypes would be less willing to engage in activities with fat vs. thin peers.

The third aim of this study was to explore weight attitudes among Hispanic youth, a group especially at risk for being overweight [13]. Little is known about weight bias among this group. Thus, an exploratory aspect of this project was to examine potential race-related differences in weight attitudes between White and Hispanic youth. There is some evidence that, similar to overweight youth in other racial groups, overweight Hispanic youth who experience weight bias have lower peer esteem in comparison with normal-weight Hispanic youth [14]. Related research findings in the area of body satisfaction and body shape preferences are somewhat ambiguous. Some research indicates that non-White adults are more accepting of larger body shapes and more satisfied with their bodies [15–19]. Other research has not demonstrated race or ethnic differences in body satisfaction [20]. In fact, data from the 2003 Youth Risk Behavioral Survey [13] reveal few differences between Hispanic and White youth in self-described weight and weight goals. Given conflicting findings in previous research, this study further explored and compared weight bias and stereotypes between White and Hispanic youth.

Methods

Participants

Participants were 155 male (56.6%) and 119 female (43.4%) middle school physical education students in a major metropolitan public school district located in the southern United States. Students ranged in age from 11 to 16 years ($M = 13.21$, $SD = .94$) and were in grades six (15.8%), seven (44.3%), and eight (39.9%). Over half of the participants identified themselves as Hispanic ($n = 157$, 57.3%) and 42.7% ($n = 115$) identified themselves as Caucasian.

Measures

As part of a larger study, participants completed a survey packet that included a demographic survey, the Fat Stereotypes Questionnaire (FSQ) [5], Adjective Checklist [21],

and Shared Activities Questionnaire (SAQ) [7,22]. (Data presented in this article come from a larger study of 309 middle school students. In addition to the survey instruments included in this article, participants also completed health-related items from the Youth Risk Behavior Survey [13], the Beliefs about Obesity Scale [23], and the Body Image Attitudes Visual Analog Scale, which was adapted from Hill and Silver's [6] body shapes attitudes visual analog measure.)

Demographics survey. The demographic portion of the survey included items pertaining to age, gender, race, and current grade. Participants also self-reported their height and weight.

Fat Stereotypes Questionnaire. The FSQ [5] consists of 18 items pertaining to nine personal characteristics and attributes, such as happiness, laziness, and attractiveness, of fat and thin people. Fourteen items were added to include stereotypes about seven additional characteristics of fat and thin people (i.e., eating habits, social habits, activity habits, likelihood of being teased, risk-taking behavior, health, and strength). These items were reviewed by four researchers with expertise in attitudes and weight bias. Each personal characteristic is rated on a four-point scale, from 1 (*really disagree*) to 4 (*really agree*). A difference score is calculated, with positive scores reflecting endorsement of the characteristics for thin people and negative scores reflecting endorsement for fat people. The modified FSQ used in the present study had adequate internal consistency ($\alpha = .80$). In a pilot test, the modified FSQ demonstrated adequate test-retest reliability ($r = .62$, two week).

Adjective Checklist. The Adjective Checklist [21] was used to measure participants' attitudes toward peers with thin and fat body shapes. The checklist includes 16 positive adjectives (e.g., happy, kind) and 16 negative adjectives (e.g., unhappy, greedy). Participants were asked to circle words they felt described the target figure. Participants completed the checklist twice, once when presented with a "fat" target (i.e., a heavy silhouette figure presented as the target person) and once with a "thin" target (i.e., a slim silhouette figure presented as the target person). Participants received same-gender figures (i.e., male participants viewed male silhouettes as targets and female participants viewed female silhouettes as targets). In the current study, internal consistencies were .78 ("fat" target) and .81 ("thin" target). Two-week test-retest reliabilities from a pilot study were .60 for the "fat" target and .65 for the "thin" target.

Shared Activities Questionnaire. The SAQ [22] consists of 24 items that assess willingness to engage in specific activities with a target person. There are three subscales in the SAQ: (a) general social, (b) academic, and (c) recreational. Participants choose one of three response options for each item: yes, maybe, or no. Higher scores reflect a greater

willingness to engage in activities with the target. In the present study, participants completed the SAQ twice, once with a “fat” target and once with a “thin” target. Participants viewed same-gender figure silhouettes. In the present study, SAQ responses for the “fat” and “thin” targets demonstrated strong internal consistency, $\alpha = .97$ and $.96$, respectively, with all subscale internal consistencies above $.90$. The SAQ also demonstrated adequate two-week test-retest reliability ($r = .58$, “fat” and $r = .84$, “thin”) in a pilot study.

Procedure

Human Subjects approval was secured from both the University Committee for the Protection of Human Subjects and the school district. Informed consent was secured from the student, teacher, and a parent or legal guardian. Participants completed the questionnaire in physical education classes with the same researcher present for all data collection sessions. Before participating, the researcher informed all individuals of the voluntary and confidential nature of the study as well as its general purpose. Less than 1% excluded themselves from the study due to lack of parental consent, disinterest, or language barriers. Upon completion, surveys were placed in an envelope for privacy of responses.

Results

Characteristics of sample

Self-reported height (inches) and weight (pounds) were converted to metric units and used to calculate BMI. Male and female participants had average BMIs of 20.91 kg/m^2 ($SD = 4.24$) and 21.95 kg/m^2 ($SD = 5.23$), respectively. Caucasian participants had an average BMI of 20.69 kg/m^2 ($SD = 4.66$) and Hispanic participants 21.96 kg/m^2 ($SD = 4.92$). Most participants (72.5%) had BMI values with a “normal” weight range; 10% were classified as “at-risk,” 7.5% as “overweight,” and 10% as “underweight” (as defined by the Centers for Disease Control) [1].

Weight stereotypes and bias

All FSQ difference scores were significantly different from zero ($p < .001$), except smart and strong, and stereotypes were endorsed in the expected direction (Figure 1). Total FSQ scores were significantly different from zero for all sub-groups: Hispanic male ($.51 \pm .86$, $p < .001$), Hispanic female participants ($.52 \pm .73$, $p < .001$), White male ($.78 \pm .82$, $p < .001$), and White female ($.64 \pm .56$, $p < .001$). A 2 (gender) \times 2 (race) analysis of covariance (ANCOVA) with BMI as the covariate was conducted with participants’ total FSQ scores as the dependent variable. No significant race or gender differences were found. (BMI was entered as a covariate in the analyses for group differences in FSQ, Adjective Checklist, and SAQ score in order to statistically control for the potential influence of BMI on the

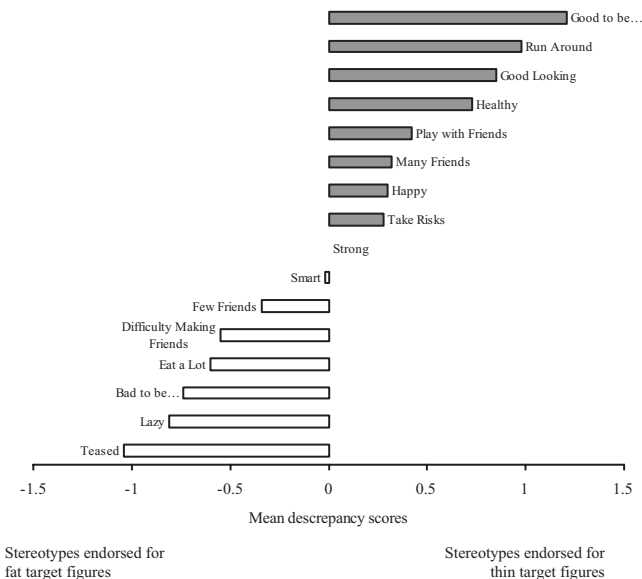


Figure 1. Fat stereotypes discrepancy scores.

psycho-social variables of interest. Previous research has also used BMI as a covariate when examining mental health variables, such as body dissatisfaction [12].

Responses to the Adjective Checklist indicated that, on average, participants selected more positive characteristics for the thin figure ($M_{\text{thin}} = 8.41$, $SD_{\text{thin}} = 4.63$; $M_{\text{fat}} = 5.92$, $SD_{\text{fat}} = 4.59$) and more negative characteristics for the fat figure ($M_{\text{thin}} = 2.14$, $SD_{\text{thin}} = 3.53$; $M_{\text{fat}} = 4.16$, $SD_{\text{fat}} = 4.21$). A 2 (gender) \times 2 (race) \times 2 (figure size) repeated measures multivariate analysis of covariance (MANCOVA) was conducted. Dependent variables were the number of positive and negative adjectives selected for the fat and thin targets. BMI was entered as the covariate. Significant main effects for figure size, Wilks’ Lambda = $.97$, $F(2, 234) = 4.04$, $p < .05$, $\eta^2 = .03$, power = $.72$, and gender, Wilks’ Lambda = $.92$, $F(2, 234) = 10.21$, $p < .001$, $\eta^2 = .08$, power = $.99$, were found. Participants selected significantly more positive ($p < .05$) and fewer negative ($p < .05$) adjectives for the thin compared with fat figures. Female participants reported significantly more positive ($p < .001$) and significantly fewer negative ($p < .05$) adjectives, regardless of figure size, than male participants. No significant race differences and no significant interactions emerged.

Follow-up paired t -tests were conducted to determine differences in the frequency of specific adjectives selected for the fat vs. thin figure (Table 1). Significant differences for 15 of the 16 positive adjectives were identified.

Behavioral intentions

To examine differences in behavioral intentions related to race, gender, and size of the target figure, a doubly-multivariate repeated measures MANCOVA was conducted, with BMI as the covariate, figure size as the repeated measure, race and gender as between-subject factors,

Table 1
Participants' responses to the Adjective Checklist

	Thin target	Fat target	<i>p</i> Value
Positive characteristics			
Friendly	74%	62%	.001
Smart	74	62	.001
Nice	67	51	.001
Happy	67	43	.001
Kind	61	49	.001
Healthy	61	16	.001
Honest	56	46	.004
Helpful	50	48	.459
Cheerful	50	35	.001
Bright	49	34	.001
Glad	48	33	.001
Clever	47	31	.001
Neat	44	25	.001
Careful	43	33	.002
Alert	26	15	.001
Handsome	24	9	.001
Negative characteristics			
Lonely	21%	47%	.001
Slow	12	42	.001
Lazy	13	39	.001
Unhappy	14	34	.001
Ashamed	9	28	.001
Sad	12	27	.001
Weak	13	27	.001
Ugly	12	25	.001
Careless	17	23	.071
Sloppy	12	21	.001
Dumb	15	19	.077
Stupid	14	19	.064
Foolish	15	18	.141
Selfish	12	17	.057
Greedy	13	16	.149
Dirty	9	13	.078

and participants' scores on the three SAQ subscales as the dependent variables. A significant main effect for figure size was identified, Wilks' Lambda = .95, $F(3, 215) = 3.65$, $p < .05$, $\eta^2 = .05$, power $> .75$. Significant main effects for figure size were found for all three subscales; participants indicated a greater willingness to engage in social ($p < .001$), academic ($p < .05$), and recreational ($p < .001$) activities with the thin figure (Table 2). A significant gender effect was also found, Wilks' Lambda = .88, $F(3, 215) = 9.96$, $p < .001$, $\eta^2 = .12$, power $> .99$. Female participants reported a greater willingness to engage in activities with target figures, regardless of size, compared with male participants ($p < .001$).

Three hierarchical regressions were conducted to determine if weight-biased attitudes were predictive of behavior intentions toward thin vs. fat targets; separate analyses were conducted for academic, social, and recreational SAQ subscale scores. BMI was entered first and race and gender were entered second. Third, FSQ scores, Adjective Checklist scores for the thin target figure, and Adjective Checklist scores for the fat target figure were entered. BMI, race and gender did not significantly contribute to the variance accounted for in behavioral intentions. For academic behavioral intentions, 25% of the variance was accounted for by weight stereotypes. Specifically, Adjective Checklist scores for the thin target ($\beta = .36$, $p < .001$) and fat target ($\beta = -.40$, $p < .001$) were predictive of academic behavioral intentions. For social and recreational behavioral intentions, weight stereotypes predicted 29% and 28% of the variance, respectively. Social and recreational behavioral intentions were predicted by Adjective Checklist scores for the thin target (social $\beta = .39$, $p < .001$; recreational $\beta = .36$, $p < .001$), Adjective Checklist scores for the fat target (social $\beta = -.36$, $p < .001$; recreational $\beta = -.38$, $p < .001$), and FSQ scores (social $\beta = .17$, $p < .005$; recreational $\beta = .17$, $p < .05$).

Table 2
Participants' responses to the Shared Activities Questionnaire for fat and thin figure silhouettes

Subscales	Males			Females			Sig.	η_p^2	Power
	Caucasian	Hispanic	Total	Caucasian	Hispanic	Total			
	(<i>n</i> = 70)	(<i>n</i> = 85)	(<i>n</i> = 155)	(<i>n</i> = 47)	(<i>n</i> = 72)	(<i>n</i> = 119)			
	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)			
Social									
Fat target	11.95 (3.91)	12.15 (3.18)	12.05 (3.55)	14.78 (4.16)	14.35 (4.11)	14.52 (4.11)	FS .001	.250	>.99
Thin target	14.75 (4.27)	14.17 (3.63)	14.45 (3.95)	17.12 (3.24)	16.19 (3.36)	16.56 (3.33)	G .001	.118	>.99
Academic									
Fat target	14.25 (4.74)	14.05 (3.89)	14.15 (4.31)	17.68 (4.91)	16.63 (4.39)	17.05 (4.61)	FS .001	.147	>.99
Thin target	16.78 (4.94)	15.85 (4.07)	16.31 (4.53)	19.02 (4.24)	18.39 (4.09)	18.64 (4.14)	G .001	.111	>.99
Recreational									
Fat target	13.15 (4.70)	13.42 (3.92)	13.29 (4.31)	15.90 (5.22)	15.76 (4.84)	15.81 (4.97)	FS .001	.309	>.99
Thin target	16.95 (5.09)	16.42 (4.48)	16.68 (4.78)	19.41 (3.82)	18.45 (4.25)	18.83 (4.09)	G .001	.087	>.99

FS = main effect for figure size; G = main effect for gender.

Discussion

The purpose of this study was to examine stereotypes of fat and thin peers and how those stereotypes relate to intentions to engage in a variety of academic, social and recreational activities with peers. Consistent with previous research [5–7], the participants in this study endorsed negative stereotypes of targets presented as fat and positive stereotypes of targets presented as thin. Regardless of the participants' ethnicity or gender, peers presented as fat were stigmatized. Furthermore, stereotyped weight beliefs were predictive of participants' intentions to engage in social, academic, and recreational activities with thin vs. fat peers. Stereotyped weight beliefs endorsed by participants included beliefs related to assumed personal, social, and health characteristics of the target figures presented as peers. For example, personal attributes ascribed to thin targets included being confident, happy, and good-looking, whereas fat targets were considered to be lazy. Furthermore, thin targets were more frequently described as friendly, smart, kind, and honest. Fat targets were more frequently described as lonely, slow, unhappy, ashamed, and sloppy. Similar to previous research [5,24], participants seem to have internalized the dominant socio-cultural message that "thin is good" and "fat is bad."

Socially, participants reported that fat peers were more likely to be teased, have few friends, and have a hard time making friends; whereas thin peers were expected to have many friends and enjoy playing with friends. These results are consistent with previous research indicating that youth expect fat peers to be socially inept [5,6]. Not surprisingly, participants were less willing to socialize or study with fat vs. thin targets. Such stereotypes and behavioral intentions are concerning because fat youth report lower social and school quality of life compared with their normal-weight peers [11]. Additional research is needed to examine the connection between weight-based social stereotypes and actual social behaviors to more fully understand how stereotypes contribute to reduced quality of life. Moreover, if there is a connection between such stereotypes, social behavior, and reduced quality of life, then intervention research aimed at reducing stereotypes may be an important step toward improving the lives of fat youth.

A strength of this study was the inclusion of stereotyped health-related characteristics in the measurement of fat stereotypes. In examining health-related stereotypes, fat peers were thought to eat a lot; whereas thin peers were expected to be healthier and more active than fat peers. Such stereotypes reflect dominant socio-cultural beliefs that a thin body is a healthy body [25]. Internalizing such stereotypes may have negative implications. For example, some adolescents may engage in *unhealthy* weight management behaviors, such as restrictive eating, in their quest to attain a thin body, which they equate with health. Further, overweight youth who feel they have little control over their weight may see

physical activity as pointless. If the end result of physical activity is not a thin (i.e., healthy and attractive) body, then physical activity may not be viewed as worthwhile.

Given consistent endorsements of weight stereotypes among the participants in this study, it is logical that participants also reported a greater willingness to engage in activities with thin vs. fat peers. Moreover, participants' intentions toward engaging in social, academic, and recreational activities with peers were influenced by their weight-related stereotypes. Participants with strong weight stereotypes were less willing to socialize, study, or play with a new classmate presented as fat. Such behavioral intentions are in line with results of previous studies indicating fat youth are socially isolated [9] and bullied [10] by their peers. Understanding how weight stereotypes are related to behavioral intentions among youth is important because, as the results of this study suggest, weight stereotypes are predictive of behavioral intentions. Interventions targeting stereotyped beliefs may be effective in changing behavior (or intended behavior); however, more research is needed to determine if behavioral intentions toward fat and thin peers result in actual behavior differences.

A unique aspect of this study was the exploratory comparison of weight stereotypes and behavioral intentions between White and Hispanic middle-school students. Nationwide, Hispanic youth are at increased risk for being overweight [13], yet little research has examined weight stereotypes among this group. Unlike national data [13], Hispanic youth in this study had no greater prevalence of being 'at risk for overweight' or 'overweight' than White youth. Furthermore, few differences in fat stereotypes and behavioral intentions were found between White and Hispanic adolescents in this study. Although the sample size in the present study suggests adequate power and the power analyses indicated adequate power ($1 - \beta > .70$) for the tests of gender and figure size, there was less power ($1 - \beta \leq .39$) for tests of race and its interactions. Further research investigations designed with adequate power to detect race-related differences seem to be warranted. It may also be the case that the stigma of fatness overrides race-related differences in attitudes toward weight. Even when there are race-related group differences in personal body satisfaction, as has been suggested by previous research [15–19], broader attitudes toward weight and obesity may still be reflective of dominant cultural ideologies that tend to disparage overweight and obese individuals. Previous research, for example, has found that even young children report negative attitudes toward overweight peers [5,6,8,24] and that health professionals specializing in the treatment of obesity report negative attitudes toward obese individuals [26]. Results of the present study provide additional evidence of the pervasive nature of weight bias, yet more research is needed to understand the potential influence of race on weight stigma and behavioral intentions.

There are several study limitations that must be acknowledged and considered for improving future research. First, data collected were self-report and subject to socially desirable responding. Several actions were taken to promote honest responding, including assuring participants of anonymity of responses and placing surveys in an envelope upon completion. In addition, the accuracy of responses to certain items, such as height and weight, may be questionable. However, Goodman and colleagues [27] found that seventh to 12th graders were accurate in reporting their height and weight. A second limitation was the use of figure silhouettes, as they are not necessarily “real” looking, which may limit the external validity of our findings. Future research should include “real” targets to more closely approximate real-world settings and situations.

A third limitation of this study was that some constructs potentially important to weight-related stereotypes and behavioral intentions were not assessed. For example, we did not assess ethnic identity, which may be an important construct to consider when studying weight stereotypes among ethnic groups [28]. Thus, further research is needed to examine weight attitudes among different ethnic groups and possible differences based on ethnic identity. Moreover, we did not examine developmental factors such as age and pubertal status. However, given the many physical, emotional, and social changes that take place during this time period (i.e., middle school), future research would benefit from considering developmental issues.

Finally, data collection took place during participants’ physical education classes, which may have influenced how participants responded to survey items. Although this was a consistent factor (all data were collected during physical education classes), it is possible that students’ awareness of their own and others’ bodies may be heightened during physical education and may have affected participants’ responses. Researchers should consider how data collection environments interact with participant responding.

Additional research focused on weight stereotypes and peer behavior is warranted. Research using more sophisticated methods, such as multidimensional scaling techniques [29], may allow for comparisons between the impact of weight and other factors on peer evaluations and stigmatization. Furthermore, research on how real-life experiences and interventions targeting youth obesity, such as BMI Report Cards and school health and physical education curricula, contribute to the disparagement of overweight youth is needed. Although school administrators are likely aware of increasing concern about overweight and sedentary youth and are sensitive to practices such as weighing students, there currently are no data on effective methods for dealing with such issues. Interventions should be sensitive to negative stereotypes associated with obesity and consider ways to minimize weight bias while promoting healthy behaviors. In summary, the results of this study highlight the ubiquitous nature of stereotyped beliefs about

fat youth. Overweight youth face numerous challenges, many of which stem from difficult peer relationships. The data from the present study provide a starting point for future studies examining the impact of obesity intervention programs on weight bias.

Acknowledgment

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