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The harmful and beneficial impacts of weight bias on well-being: The moderating influence of weight status

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ABSTRACT

Weight bias is evident among normal weight and obese individuals. This weight bias may be associated with comparisons to others, which may enhance feelings of self-worth. However, the ego-enhancing versus ego-diminishing influence of these evaluations may be moderated by the individual's weight status, and the strength of these effects may be moderated by gender. Eight-five participants completed the Implicit Associations Test, questionnaires assessing explicit weight bias, body image, and self-esteem, and height and weight assessments. Implicit weight bias was prevalent among all individuals, $p < .001$, and was associated with a more positive body image, $ps < .05$, and higher self-esteem, $ps < .01$, for thinner individuals but a more negative body image and lower self-esteem for heavier individuals. Gender moderation effects were not observed. It is arguably problematic that the positive benefits to normal weight individuals' self-esteem and body image appear to come via negative comparisons with overweight individuals.

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Introduction

Weight bias consists of negative attitudes toward and beliefs about others because of their weight, which often leads to the discrimination of obese individuals. Unlike other forms of discrimination, which have remained stable over the past ten years (i.e., gender, race, age, ethnicity), weight bias has increased (Andreyeva, Puhl, & Brownell, 2008). Weight bias is evident among a wide range of individuals (Crandall, 1995; Janssen, Craig, Boyce, & Pickett, 2004; Puhl, Moss-Racusin, Schwartz, & Brownell, 2008; Roehling, 1999) who express the belief that obese individuals possess negative attributes, such as laziness, ugliness, lack of intelligence, and incompetence (Teachman, Gapinski, Brownell, Rawlins, & Jeyaram, 2003). These derogatory attributions can sometimes result from the comparisons people make between themselves and others.

Weight bias may be conceptualized in a number of ways and assessed using a variety of methods. Explicit attitudes are self-reported attitudes of which individuals are consciously aware. In contrast, individuals also possess implicit anti-fat attitudes, which are conceptualized to be outside of individuals' awareness and conscious control (Greenwald & Banaji, 1995). Whereas explicit attitudes more often predict deliberative responses, such as written evaluations of individuals, implicit attitudes more often predict spontaneous and nonverbal behaviors, such as the amount of time spent looking at someone during a conversation (Bessenoff & Sherman, 2000; Dovidio, Kawakami, Johnson, Johnson, & Howard, 1997).

Festinger's Social Comparison Theory (1954) indicates that individuals compare themselves to similar others in order to establish their standing and/or to evaluate the self. However, over the years, there has been increased understanding that social comparison can serve self-enhancing motives (Suls & Martin, 2001). In fact, it has been suggested that downward comparisons (i.e., comparisons to people or others who are worse off on some relevant dimension) may facilitate self-enhancement, particularly in people who are experiencing a threat to self-esteem. For example, if a normal weight man or woman maligns an obese individual, this downward social comparison is likely to perform a self-enhancing function for the normal weight individual. It is plausible that the downward social comparisons could be motivated by the normal weight person's concerns about their own weight (i.e., threat to self-esteem). After all, there is considerable evidence that individuals, particularly women, experience considerable societal pressures to be thin (e.g., Thompson & Stice, 2001).

By contrast, to malign a group of which one is a member will likely undermine self-esteem. For example, if an individual is overweight and s/he maligns overweight people, self-esteem will likely diminish. Although the extent to which overweight individuals identify with other overweight individuals has been questioned (Grover, Keel, & Mitchell, 2003), several studies indicate a significant relationship between internalized and explicit weight bias (Carels et al., 2009; Durso & Latner, 2008). In other words, the

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more likely an overweight person is to express negative weight-related attitudes toward the obese, the more likely s/he is to express negative weight-related attitudes toward the self. It has been increasingly well-documented that obese individuals exhibit moderately strong explicit (Wang, Brownell, & Wadden, 2004) and very strong implicit anti-fat attitudes (Carels et al., 2009; Grover et al., 2003; Schwartz, Vartanian, Nosek, & Brownell, 2006; Wang et al., 2004). To malign a group of which one is a member, even if the individual does not believe s/he is a permanent, full-fledged member, will likely be self-diminishing. Therefore, to the extent that an overweight individual evidences strong anti-fat attitudes, s/he is likely to have diminished self-esteem and body image. However, as social comparison theory would suggest, the ego-enhancing versus ego-diminishing influence will likely depend on the individual's weight status.

Numerous studies have shown that overweight and obese individuals are more dissatisfied with their bodies than normal weight individuals (Forrest & Stuhldreher, 2007; Monteath & McCabe, 1997; Muth & Cash, 1997; Watkins, Christie, & Chally, 2008). Body dissatisfaction is especially prevalent for overweight and obese women who show significantly higher levels of body dissatisfaction than overweight and obese men (Cash, Morrow, Hrabosky, & Perry, 2004; Forrest & Stuhldreher, 2007; Green & Pritchard, 2003; Muth & Cash, 1997). As BMI increases, women become disproportionately more dissatisfied with their bodies than men and place more importance on weight and body shape (Pingitore, Spring, & Garfield, 1997). Research also indicates that obese individuals report lower levels of self-esteem than normal weight individuals (Carr & Friedman, 2005; Myers & Rosen, 1999; Puhl & Brownell, 2006; Puhl & Latner, 2007). No previous research has examined the association between weight bias and body image and self-esteem, or whether weight status and gender moderate these relationships.

This study seeks to understand the effects of weight bias on explicit and implicit body image and self-esteem for normal weight and overweight college students. The current study hypothesized that greater explicit and implicit weight bias would be associated with explicit and implicit ratings of a more positive body image and higher self-esteem for normal weight individuals but explicit and implicit ratings of a more negative body image and lower self-esteem for overweight individuals. We also examined whether gender would moderate the relationship between weight bias, self-esteem, and body image among college students, such that greater weight bias would be more strongly related to low self-esteem and body image for women than men.

Method

Participants

Participants included 91 students enrolled in undergraduate psychology courses who received extra credit for their participation. Six students were removed from the study due to invalid scores on the IAT, leaving a sample size of 85. In order to eliminate students with a potential eating disorder, participants with a BMI $\leq 18\,kg/m^2$ were excluded (EAT-26 was used to assess for eating disordered symptoms among participants with a BMI > 18). Informed consent was obtained from participants before the study. All procedures were in accordance with the ethical standards of the Human Subjects Review Board.

Thirty-nine participants (45%) were normal weight (BMI >18 and <25) and 46 (55%) were overweight (BMI $\geq 25\,kg/m^2$). Of the 46 individuals that were overweight (BMI $\geq 25\,kg/m^2$), 29 (34% of total sample; 63% of overweight participants) were obese (BMI $\geq 30\,kg/m^2$). BMI ranged from 18.8 to 49.9 with a mean of 27.7 ($SD = 6.4$). Thirty-eight (45%) participants were male and 47 (55%) were female. Participants' mean age was 19.9 ($SD = 3.7$). Fifty-seven (67%) participants were freshman. Fifty-seven (67%) participants were Caucasian and 28 were non-Caucasian (33%). Fifty-three individuals (62%) described themselves as either single or dating and 32 individuals (38%) reported that they were in a committed relationship.

Study Design

Upon arrival for the study, participants completed the informed consent and were told that the study examined perceptions of different social groups. Participants then completed either the online questionnaires or the IAT. The order of the questionnaires and IAT was counterbalanced among participants. At the end of the study, height and weight were assessed.

Measures

BMI.. Body weight was assessed using a digital scale to the closest 0.1 lb, and height was measured in inches to the closest 0.5 in. using a standard balance beam scale height rod. Height and weight were converted to kilograms and meters to calculate BMI (kg/m^2).

Demographic questionnaire.. Participants completed a basic questionnaire assessing age, gender, race, year in school, relationship status, weight, and height.

Obese Persons Trait Survey (OPTS).. The OPTS is designed to measure explicit attitudes toward obese individuals (Puhl, Schwartz, & Brownell, 2005). The measure consists of 20 items listing stereotypical traits, 20 of which are negative (e.g., lazy, undisciplined) and 20 of which are positive (e.g., honest, generous). The OPTS was constructed with identical format to the racial trait survey by Stangor, Sechrist, and Jost (2001). Traits were chosen to reflect the most commonly reported weight stereotypes (see Puhl & Brownell, 2001), drawing in part from existing measures (Allison, Basile, & Yuker, 1991; Lewis, Cash, Jacobi, & Bubb-Lewis, 1997; Teachman & Brownell, 2001). Individuals are asked to estimate the percentage of obese persons who possess each of these traits. Higher scores on each subscale indicate stronger negative and positive traits. In the current study, both the positive and negative subscales had an alpha of .86.

Eating Attitudes Test-26 (EAT-26).. The EAT is a measure used to identify individuals with eating disorders by measuring thoughts, attitudes, and behaviors associated with eating disorders (Garner & Garfinkel, 1979). Although eating disorder symptoms are not of interest in the present study, it was possible that they could have skewed this investigation's results due to the significant low self-esteem, negative body image, and distorted weight identity that are often associated with having an eating disorder. Therefore, all participants were assessed for eating disorder symptoms using the EAT-26 to identify individuals with eating disorder symptoms, and EAT-26 scores were controlled for in all statistical analyses in which the EAT-26 was significantly correlated with the variables of interest. In the current study, Cronbach's alpha for the EAT-26 was .90.

Multidimensional Body Self-Relations Questionnaire — Appearance Scales (MBSRQ-AS).. The 34-item MBSRQ-AS was used to measure appearance-related body image, which is a shortened version of the 69-item MBSRQ (Cash, 2000). This measure consists of five subscales: Appearance Evaluation, Appearance Orientation, Overweight Preoccupation, Self-Classified Weight, and the Body Areas Satisfaction Scale (BASS). Self-Classified Weight was