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Brief research report

Stereotypical portrayals of obesity and the expression of implicit weight bias

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ABSTRACT

The strength of implicit anti-fat attitudes may be related to visual portrayals of obesity and individuals' pre-existing explicit attitudes toward appearance and weight. Participants ($N = 117$) completed measures of explicit weight bias, beliefs about weight controllability, orientation toward personal appearance, overweight preoccupation, and two Implicit Association Tests (IAT). One IAT measured implicit anti-fat attitudes when individuals with obesity were shown engaging in behaviors congruent with common stereotypes (e.g., eating snacks, watching television), while a second IAT measured attitudes in response to stereotypically incongruent images (e.g., preparing vegetables, exercising). Whereas implicit weight bias was evident for both IATs, the stereotype congruent IAT was significantly related to higher implicit weight bias, appearance orientation, and overweight preoccupation, and was marginally related to explicit anti-fat attitudes. The stereotypical portrayal of individuals with obesity was related to implicit anti-fat attitudes, which may have implications for the development, maintenance, and expression of stigmatizing anti-fat attitudes.

Introduction

Individuals who are obese experience high levels of weight stigma and encounter numerous sources of weight biased attitudes, prejudice, and discrimination (Puhl & Heuer, 2009). Weight bias can take a variety of forms, including negative assumptions regarding personal attributes of individuals with obesity (e.g., gluttony, laziness; Puhl, Moss-Racusin, Schwartz, & Brownell, 2008). In light of the pervasiveness and negative consequences of weight bias, research has focused on a more comprehensive study of anti-fat attitudes, including evidence for implicit weight bias (e.g., Teachman, Gapinski, Brownell, Rawlins, & Jeyaram, 2003) and ways in which the expression of biased attitudes may be subtly influenced by external stimuli (e.g., Pearl, Puhl, & Brownell, 2012).

Implicit weight bias reflects rapid, automatic reactions to or associations with obesity. Implicit weight bias is independent from explicit attitudes and is associated with one's own psychosocial well-being and the treatment of others. For example, individuals who possess implicit anti-fat attitudes evidence greater binge eating, base evaluations of others on appearance (Carels et al., 2010), and demonstrate prejudiced behaviors toward others (e.g., physically distancing oneself from individuals with obesity; Bessenoff & Sherman, 2000). Implicit attitudes are influenced by repeated exposure to messages that are prevalent in the environment (Greenwald & Banaji, 1995). Indeed, media sources portray individuals with obesity as lazy, over-eaters (Ata & Thompson, 2010), sloppy, and undisciplined (Greenberg, Eastin, Hofschire, Lachlan, & Brownell, 2003). Visual content analyses of online news sources found that individuals with obesity were frequently portrayed in negative, stigmatizing, and stereotypical manners in photos (Heuer, McClure, & Puhl, 2011) and videos (Puhl, Peterson, DePierre, & Luedicke, 2013).

Interestingly, research suggests that the way in which obesity is portrayed may have important implications for the level of weight bias that is expressed. Pearl et al. (2012) found that participants reported higher explicit weight bias after viewing stereotypical images of persons with obesity (e.g., sitting on a couch eating snack food) compared to viewing images that were incongruent with common stereotypes (e.g., picking out produce). Similarly, viewing images of individuals with obesity portrayed in unflattering, stereotypical ways in conjunction with a neutral news story increased anti-fat attitudes compared to viewing positive, non-stereotypical

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media images (McClure, Puhl, & Heuer, 2011). Of particular interest in this investigation was the effect of these two types of stimuli – images of persons with obesity that were stereotype congruent (i.e., eating unhealthy foods, being sedentary) and incongruent (i.e., healthful eating, being active) – on implicit weight bias. In a sample of weight loss treatment-seeking adults who were overweight and obese, Carels et al. (2013) found that viewing stereotype congruent, versus stereotype incongruent images, was associated with higher implicit weight bias. The current study sought to build upon this research with individuals representing a range of BMIs. Examining how individuals respond to such depictions, directly compared to parallel images of normal weight individuals, could have important implications for portrayals of weight espoused by media and accompanying anti-fat attitudes of media consumers.

Additionally, individual traits and attitudes, such as the tendency to judge one's own and others' appearance and weight, may play an important role in the expression of implicit weight bias. Individuals with a tendency to focus on personal physical appearance (e.g., Carels et al., 2010), who are pre-occupied with their body weight (O'Brien, Hunter, & Banks, 2007), and who have greater beliefs in the controllability of weight (O'Brien, Hunter, Halberstadt, & Anderson, 2007) displayed greater levels of implicit anti-fat attitudes than individuals low on these factors. Although Lewis, Cash, Jacobi, and Bubb-Lewis (1997) found no relationship between appearance orientation and explicit anti-fat attitudes, they found that women's fears about becoming fat were related to weight bias. Other researchers have suggested that individuals with high appearance orientation, representing a strong emphasis on personal appearance and investment in associated behaviors to look one's best, may view individuals with obesity as digressing from this standard and consequently express greater anti-fat attitudes (O'Brien, Hunter, Halberstadt, et al., 2007). Explicit anti-fat attitudes have been associated with implicit attitudes (e.g., Nosek et al., 2007), particularly among individuals presumed to be more appearance oriented (e.g., physical education students; O'Brien, Hunter, & Banks, 2007), and both attitude types were observed at higher levels in individuals with lower BMIs (Schwartz, Vartanian, Nosek, & Brownell, 2006).

The current study sought to examine whether implicit weight bias levels are associated with ways in which weight is portrayed in relation to common stereotypes. Consistent with previous research with treatment-seeking adults (Carels et al., 2013), it was predicted that in a university sample, high implicit weight bias would emerge and higher bias would be associated with viewing stereotype congruent compared to incongruent images. Additionally, research has supported that individual attitudes and orientations can motivate responding to the environment in a particular way. It was predicted that appearance orientation, overweight preoccupation, and explicit weight bias would be associated with implicit weight bias, particularly when participants responded to images congruent with weight stereotypes.

Method

Participants

Participants ($N = 117$) were undergraduate students at a mid-sized Midwestern university in the United States who earned psychology course research credit. This study received university institutional review board approval. Participants (78.6% female; 71.8% Caucasian) had a mean age of 19.3 ($SD = 1.5$) and a mean BMI of 24.9 ($SD = 4.32$; range = 18.0–39.5; normal weight = 54.2%; overweight = 32.2%; obese = 11.9%). Due to computer errors, participant data were lost for one congruent (final $N = 116$) and three incongruent IATs (final $N = 114$).

Measures

Implicit weight bias. Two computerized versions of the Implicit Association Test (IAT; Greenwald, McGee, & Schwartz, 1998) were administered with target category labels (i.e., Fat, Thin) and attribute category labels (i.e., Good, Bad) paired at the top of the screen (e.g., Fat/Good, Thin/Bad). Participants classified stimulus exemplars, presented in a random order throughout trials, that were either photos (obese and thin people) or words (e.g., joy, hate) into their appropriate category as quickly as possible based on provided instructions. Faster reaction times to categorize "Fat" images when paired with concepts of "Bad" (and "Thin" images when paired with "Good" concepts) relative to "Fat" images paired with "Good" (and "Thin" images paired with "Bad) were indicative of implicit weight bias.

Participants completed both stereotype congruent and stereotype incongruent IATs. In each IAT, participants viewed 32 different images portraying an equal number of individuals who were obese (labeled as "Fat") and normal weight (labeled as "Thin"), with both genders equally represented. Eight individuals were featured in the photos (25% Caucasian, 25% Latino(a), 50% African American), with half of the photos portraying younger individuals (18–35 years old) and half portraying older individuals (40–65 years old). For each IAT, participants viewed each of the 32 images multiple times for a total of 112 images, the order of which was randomly presented. The pictures of individuals with obesity were provided by the Yale Rudd Center for Food Policy and Obesity. These images depicted individuals with obesity engaging in stereotype congruent 'unhealthy' behaviors (watching TV and eating junk food) and stereotype incongruent 'healthy' behaviors (exercising or preparing vegetables). The normal weight pictures featured individuals photographed by the authors to match existing photos as closely as possible on factors such as style of dress, poses, situations, and props, as well as gender, ethnicity, and age. Normal weight individuals were depicted engaging in stereotype congruent 'healthy' and incongruent 'unhealthy' behaviors. The IATs were scored using standard procedures (Greenwald, Nosek, & Banaji, 2003).

Appearance orientation and overweight preoccupation. Two subscales from the Multidimensional Body Self-Relations Questionnaire (MBSRQ; Cash, 2000) measuring attitudes toward appearance and weight were used. Each subscale has demonstrated acceptable internal consistencies (all αs > .70) and one-month test–retest reliabilities (all rs > .71; Cash, 2000). The 4-item Overweight Preoccupation scale measures anxiety and vigilance regarding weight/dieting (e.g., "I constantly worry about being or becoming fat"). The 12-item Appearance Orientation scale assesses investment in appearance (e.g., "Before going out, I usually spend a lot of time getting ready"). Cronbach's alphas for the subscales in the current study were .76 and .85, respectively.

Explicit weight bias. Crandall's Anti-fat Attitudes Scale (AFA; Crandall, 1994) comprises three subscales (Dislike, Fear of Fat, and Willpower), which have demonstrated borderline to acceptable internal consistencies (all αs > .66; Crandall, 1994). The 7-item Dislike subscale measures participants' level of dislike for individuals with obesity (e.g., "Fat people make me feel somewhat uncomfortable"). The 3-item Fear of Fat subscale assesses participants' anxiety about gaining weight (e.g., "One of the worst things that could happen to me would be if I gained 25 pounds"). The 3-item Willpower subscale (i.e., belief in the controllability of weight) measures participants' beliefs that individuals with obesity are in control of and are responsible for their weight (e.g., "Fat people tend to be fat pretty much through their own fault"). Cronbach's alphas for subscales in the current study were .87, .88, and .77, respectively.