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Internalized Weight Stigma and Its Ideological Correlates Among Weight Loss Treatment Seeking Adults

R.A. Carels, K.M. Young, C.B. Wott, J. Harper, A. Gumble, M. Wagner Hobbs, and A.M. Clayton

Department of Psychology, Bowling Green State University, Bowling Green, OH

Abstract

There are significant economic and psychological costs associated with the negative weight-based social stigma that exists in American society. This pervasive anti-fat bias has been strongly internalized among the overweight/obese. While the etiology of weight stigma is complex, research suggests that it is often greater among individuals who embrace certain etiological views of obesity or ideological views of the world. This investigation examined 1) the level of internalized weight stigma among overweight/obese treatment seeking adults, and 2) the association between internalized weight stigma and perceived weight controllability and ideological beliefs about the world ('just world beliefs', Protestant work ethic). Forty-six overweight or obese adults (BMI ≥ 27 kg/m²) participating in an 18-week behavioral weight loss program completed implicit (Implicit Associations Test) and explicit (Obese Person's Trait Survey) measures of weight stigma. Participants also completed two measures of ideological beliefs about the world ("Just World Beliefs", Protestant Ethic Scale) and one measure of beliefs about weight controllability (Beliefs about Obese Persons). Significant implicit and explicit weight bias was observed. Greater weight stigma was consistently associated with greater endorsement of just world beliefs, Protestant ethic beliefs and beliefs about weight controllability. Results suggest that the overweight/obese treatment seeking adults have internalized the negative weight-based social stigma that exists in American society. Internalized weight stigma may be greater among those holding specific etiological and ideological beliefs about weight and the world.

Introduction

Weight stigma among children and adults is widespread (1, 2). In nearly all areas of living, including interpersonal relationships, education, employment, and health care, obese persons are often mischaracterized and mistreated (1, 2). Despite the ubiquity of weight stigma, there is little consensus on why heavier individuals are universally maligned (1).

While the etiology of weight stigma is complex, research suggests that it is often greater among individuals who embrace certain etiological views of obesity or ideological views of the world (3-5). For instance, Allison et al. (3) found that people who believe obesity is largely within the person's control tend to have more negative attitudes toward obese persons than do individuals who believe obesity cannot be controlled by the obese person. Similarly, Crandall (4, 5) observed an association between greater negative attitudes toward obese persons and greater endorsement of ideological beliefs that people get what they deserve in life (i.e., "just world beliefs") and that hard work and determination lead to good things (i.e., the Protestant work ethic). It appears that people who hold these etiological and ideological

beliefs infer that obese persons either deserve their negative plight or have not worked hard enough to reverse their highly controllable negative condition.

Unlike other stigmatized groups (e.g., minorities) (6), researchers have been surprised to observe internalized weight stigma among obese persons (7). For example, using procedures such as the Implicit Associations Test (IAT), obese people evidence an implicit anti-fat bias (6, 7). Similarly, on personality attribute rating measures, obese people sometimes evidence an explicit antifat bias (i.e., endorsing unflattering adjectives, such as excessive laziness, when describing obese people) (6, 7).

The economic and psychological costs of internalized weight stigma and obesity-related discrimination are substantial (8-12). Compared to thin individuals, obese individuals are consistently less likely to be hired and promoted and more likely to receive lower wages (8, 11, 12). Among obese persons, stigmatizing experiences predict binge eating, psychological distress, body image disturbance, and poor self esteem (9, 10, 13). Also, in women of varying body mass indexes (BMIs), a greater number of stigmatizing experiences predict an increased desire to avoid exercise (14).

Most studies conducted on weight stigma examine the beliefs about or behavioral discrimination displayed toward obese people by the non-obese (15). Studies that examine the overweight or obese often assess the impact of stigmatizing experiences on psychological well-being (9, 10). Only a few studies have examined the correlates of internalized weight stigma among overweight/obese treatment seeking adults (7, 9, 10). The first aim of this investigation is to examine the level of internalized weight stigma among overweight/obese treatment seeking adults. Because explicit and implicit measures of stigma are commonly unrelated (16), the study employed both explicit [Obese Persons Trait Survey (OPTS) (17)] and implicit (IAT) (18) assessments of anti-fat bias. A second aim is to examine the association between internalized weight stigma and etiological beliefs about weight controllability as well as ideological beliefs about the world, such as “just world beliefs” (i.e., the belief that people get what they deserve in life), and the Protestant work ethic (i.e., the belief that hard work and determination lead to good things). It was hypothesized that 1) overweight/obese treatment seeking adults would evidence both implicit and explicit weight bias, and 2) weight bias would be greater among those embracing etiological beliefs that weight is controllable and ideological beliefs that the world is just and that hard work and determination lead to good things.

Materials and Methods

Participants

Fifty-eight overweight and/or obese adults were recruited through advertisements in local newspapers and campus e-mail at a Midwestern University to take part in a behavioral weight loss intervention (see Table 1 for sample characteristics). Participants were included if they were 1) overweight/obese (BMI ≥ 27 kg/m²), and 2) non-smokers; and excluded if they had 1) cardiovascular disease, 2) musculoskeletal problems preventing moderate physical activity, or 3) insulin-dependent diabetes. All participants received their physician's medical clearance. Forty-six participants completed baseline questionnaires.

Study design

During a baseline weight loss program orientation session, height and weight were assessed, the IAT for weight stigma (16) was administered, and participants were instructed to complete online questionnaires [OPTS, Beliefs about Obese Persons (BAOP), Just World Scale (JWS), Protestant Ethic Scale (PES)].

Assessments and measures—Obese Persons Trait Survey. The OPTS (17) consists of 20 items listing stereotypical traits, including 10 negative (e.g., lazy, undisciplined, unattractive) and 10 positive stereotypes (e.g., sociable, honest, intelligent). Participants were asked to estimate the percentage (0-100%) of obese persons who possess these traits, as well as their confidence in their estimates (on a 9-point Likert scale). In this investigation, participants were asked to complete the survey a second time and to estimate the percentage (0-100%) of normal weight persons who possess these traits, as well as their confidence in their estimates (on a 9-point Likert scale). Higher scores indicate stronger negative and positive traits on the OPTS subscales, respectively. The OPTS has been found to be reliable for both the positive and negative traits subscales (17). For this investigation, Cronbach alpha was 0.86 for negative stereotypes for obese persons, 0.78 for positive stereotypes for the obese persons, 0.92 for negative stereotypes for normal weight persons, and 0.85 for positive stereotypes for normal weight persons.

Beliefs About Obese Persons Scale: The BAOP (3) assesses ‘stereotypical’ perceptions of the controllability of obesity (e.g., In many cases, obesity is the result of a biological disorder). The BAOP consists of 8 six-point Likert items. Higher scores on the BAOP indicate a stronger belief that obesity is not under the obese person's control. Normative and reliability data for the measure is available (3). For this investigation, Cronbach's alpha was 0.60.

Protestant Ethic Scale: The PES (19) consists of 19 six-point Likert response questions that assess the extent to which individuals believe that hard work and determination lead to success (e.g., Anyone who is willing and able to work hard has a good chance of succeeding). Higher scores on the PES indicate a belief that hard work is valuable in its own right and as a key to success. The PES has been found to be associated with various prejudices (20). For this investigation, Cronbach alpha was 0.80.

Just World Scale: The JWS (21) consists of 20 six-point Likert scale items that measure the extent to which individuals perceive others/themselves as deserving of their fates in a multitude of situations (e.g., By in large, people get what they deserve). Higher scores indicate greater belief in a just world. For this investigation, Cronbach's alpha was 0.82.

Implicit Associations Test: The IAT is a widely used measure of implicit attitudes that are typically related to social prejudice (18). The IAT is based on the idea that stimuli classification is facilitated and thus faster when category pairs match implicit associations. Therefore, participants are expected to categorize stimuli faster when categories are paired in such a way that matches the way concepts are already related in their minds. Processing speed is used as an indirect measure of an individual's association between two concepts (i.e., obesity and negative stereotypes). The pencil and paper IAT used in this investigation have been used in prior studies examining implicit weight-based stigma (7, 16). At the top of each page of the IAT, target category labels (i.e., Fat People, Thin People) and attribute category labels (i.e., Good, Bad; Motivated, Lazy) are listed with respective subordinate stimuli (e.g., Fat People: fat, obese, large). Below these labels, the target and attribute categories are paired on the top of each side of a column (e.g., Fat People/Bad, Thin People/Good). Participants then classify a list of words (subordinate stimuli, appropriate category) by checking off a circle in the appropriate column as quickly as possible. On one page, the target and attribute categories are paired in a way to match implicit negative associations with weight (e.g., Fat People and Lazy heading one side of the column and Thin People and Motivated heading the other side of the column), and on the next page, the target and attribute categories are paired in a way to contradict expected associations (e.g., Fat People

and Good heading one side of the column and Thin People and Bad heading the other side of the column).

Individuals are given 20 seconds and told to go as quickly as possible, not to make judgments about the words, and not to correct any mistakes that they make. To familiarize them with the IAT procedure before proceeding to the weight-based IAT, participants complete a practice IAT in which the target category labels are bugs and flowers and attribute category labels are good and bad (7, 16).

Body weight: Body weight was measured using a digital scale (BF-350e; Tanita, Arlington Heights, IL) to the closest 0.1 lb, and height (baseline only) was measured in inches to the closest 0.5 inch using a height rod on a standard spring scale.

Results

Forty-six participants (79.3%) completed baseline measures. Analysis of variance (ANOVA) and χ^2 analyses were used to examine differences in demographic variables between survey completers and non-completers. Survey completers had a significantly lower average BMI [mean (M) =35.6, standard deviation (SD) =6.5] than non-completers (M=41.0, SD=8.2), $F(1,54)=5.1$, $p=0.03$. Also, survey completers were more likely to be Caucasian, $\chi^2(2,58)=9.25$, $p=0.01$, and female, $\chi^2(1,58)=3.5$, $p=0.06$, than survey non-completers.

Implicit bias

Consistent with prior research (16), implicit anti-fat bias was calculated by subtracting the number of correct responses in the mismatched condition (i.e., Fat People and Motivated) from correct responses in the matched condition (i.e., Fat People and Lazy). To control for individual differences in the number of items completed and maximize reliability, scores were transformed using the strategy outlined by Teachman, Gapinski, Brownell and Rawlins (16).

Paired-sample t-tests were conducted to examine implicit weight bias. On the IAT, significantly more items were correctly classified when the target category Fat People was paired with the attribute category Bad (M=21.4, SD=6.8) versus the attribute Good (M=11.1, SD=4.6; $t(45) = 14.96$, $p<0.01$). Similarly, more items were correctly classified when the target category Fat People was paired with the attribute category Lazy (M=22.4, SD=6.5) versus Motivated (M=12.0, SD=5.3; $t(45)=13.53$, $p<0.01$). There was not a significant difference between the number of correctly classified items in the Lazy-Motivated condition compared to the Bad-Good condition. However, the correlation between correctly classified items in each condition was significant, $r=0.35$, $p=0.02$, indicating that the greater the implicit belief that obese people are bad, the greater the implicit belief that obese people are lazy.

Explicit bias

Paired-sample t-tests were conducted to examine explicit weight bias (Table 2). On the OPTS, participants estimated that obese people possessed significantly more positive attributes (M=61.1, SD=11.6) than negative attributes (M=54.8, SD=11.2; $t(45)=2.46$, $p=0.02$). Participants also estimated that obese people possessed significantly more positive attributes (M=61.1, SD=11.6) than normal weight individuals (M=57.3, SD=12.1; $t(45)=2.20$, $p=0.03$). However, participants also estimated obese people to have significantly more negative attributes (M=54.8, SD=11.2) than normal weight individuals (M=43.9, SD=10.6; $t(45)=-5.32$, $p<0.01$). When the difference between positive traits attributed to

normal weight and obese persons ($M=-3.3$, $SD=9.9$) was compared to the difference between negative traits attributed to normal weight and obese persons ($M=-10.4$, $SD=12.7$), the difference was significant, $t(45)=-2.9$, $p<0.01$ (Table 2). Thus, although participants estimated that obese people possess significantly more positive traits than negative traits and they estimated more positive traits among obese individuals than normal weight individuals, participants also described obese persons much more negatively than they described individuals who are normal weight, and the negative bias was significantly more pronounced than the positive bias. Pearson correlations indicated that implicit (IAT) and explicit measures (OPTS) of weight stigma were unrelated to each other.

Relationships between etiological beliefs, ideological beliefs, and weight stigma—Pearson correlations were used to examine the relationships between weight stigma measures (i.e., OPTS, IAT) and etiological (i.e., BAOP) and ideological beliefs (i.e., JWS, PWS). The more that participants endorsed belief in a just world, the greater the implicit bias, $r=0.29$, $p=0.024$, and the more likely they were to attribute negative personality traits to obese persons (i.e., OPTS), $r=0.34$, $p=0.011$. Belief in a just world was not associated with the attribution of positive personality traits to obese persons.

The more that participants endorsed views consistent with the Protestant work ethic, the more likely they were to attribute negative personality traits to obese persons, $r=0.49$, $p<0.001$. Endorsement of the Protestant work ethic was not associated with the attribution of positive personality traits to obese persons or implicit weight bias.

The more that individuals believed that obesity is not under one's control, the less likely they were to attribute negative personality traits to obese persons, $r=-0.60$, $p=0.01$. Beliefs about the controllability of obesity were not associated with the attribution of positive personality traits to obese persons or implicit weight bias.

Discussion

The significant economic and psychological costs of internalized weight stigma and obesity related discrimination are substantial and increasingly well-documented (8-12). Consistent with previous research (6, 7), in this investigation, the overweight/obese treatment seeking adults appear to have internalized the pervasive negative weight-based social stigma that exists in American society. The implicit negative weight bias in this sample was equal to, or stronger than, the weight bias observed in prior research with normal and overweight individuals (7, 16, 22). Also, consistent with prior research (6, 7, 22), in this investigation, evidence for an explicit weight bias was mixed, and only emerged when ratings of obese individuals were examined relative to ratings of normal weight individuals. For example, when only ratings of personality attributes among obese adults were examined, no explicit bias was evident. The participants in this investigation rated obese people significantly more positively than they rated obese people negatively, and rated obese people significantly more positively than they did normal weight people. Yet, overweight/obese adults in this sample also rated obese people significantly more negatively than they rated normal weight people when comparing obese people to normal weight people. Ultimately, the negative bias toward obese persons was much stronger than the positive bias toward obese persons. Thus, the explicit weight bias in this investigation was subtle and only evident relative to the ratings of normal weight individuals. Consistent with previous research (16, 23), explicit and implicit measures were uncorrelated, suggesting a lack of awareness or conscious denial of in-group bias.

Researchers have convincingly argued that certain ideological worldviews (4, 5), as well as etiological beliefs about the causes of obesity (1, 3), may exacerbate weight-based stigma.

Consistent with Crandall's observations among college students (4), ideological beliefs that obese persons deserve their negative plight (i.e., just world belief) or they have not worked hard enough to reverse their negative condition (i.e., Protestant work ethic) were related to greater weight stigma. Also, consistent with previous research among children and adults, the more obesity was deemed as controllable, the more weight stigma increased (3, 24). Interestingly, participants' endorsement of just world beliefs and Protestant work ethic ideology were positively related to their ratings of negative personality traits, but not their ratings of positive personality traits (i.e., OPTS). In other words, the presence of these ideological beliefs did not diminish positive attitudes, but rather exacerbated negative attitudes towards obese persons.

Greater endorsement of the belief that people in this life get what they deserve ("just world belief") was significantly associated with greater implicit bias when the target category Fat People was paired with the attribute Bad. This association was not evident when the target category Fat People was paired with the attribute Lazy. As people internalize the belief that good things happen to good people and bad things happen to bad people, the implicit link between obesity and "badness" may be strengthened. This finding suggests that the type of ideological worldview that an individual holds may plausibly influence the type and strength of the implicit bias that an individual possesses. The association between implicit bias where the target category Fat People was paired with the attribute Lazy and a greater belief that hard work has a value in its own right and is a key to success (i.e., Protestant work ethic) was in the expected direction, but failed to meet conventional standards for statistical significance ($r=0.19$, $p>0.1$).

This investigation has several limitations that should be noted. The small sample may have limited power to detect relationships among constructs, and the self-selected overweight/obese individuals participating in a weight loss program may limit the generalizability of these findings to people attempting to lose weight on their own by using different methods, people participating in professionally- led programs (e.g., very low kcal diets), or to people attempting to maintain a previous weight loss. In addition, the majority of the weight loss participants in this investigation were female (89.7%). According to Puhl and Brownell (1), studies indicate that the economic disadvantages related to obesity seem to be specific to, or at least more common for women, thus indicating greater weight bias against women. It is unclear whether similar relationships would be observed in a sample of weight loss treatment seeking men. In this investigation, although consistent with prior research (3), the alpha reliability of the BAOP was somewhat low (0.60). The low alpha may suggest that people's 'stereotypical' perceptions of the controllability of obesity may represent a multidimensional rather than a unidimensional latent construct. Finally, because the OPTS does not specifically ask whether participants perceive the traits to be true of themselves, the presumption that the weight bias may suggest a negative view of the self was not verified. It is not clear whether the overweight/ obese persons in this investigation identified themselves as belonging to the category/ group of "obese" persons. However, given that the participants were beginning a weight loss program it is highly plausible that they viewed themselves to be overweight.

This investigation has several implications. It is possible that participant estimates of obese persons may, in part, reflect a view of self. Therefore, seeing the obese (and consequently, themselves) as competent and as possessing positive personality attributes might benefit these treatment seeking adults in their selfimage and in their weight loss efforts. The absence of these positive views might, in turn, reflect diminished views of the self, including reduced self-efficacy for weight loss success. For example, a recent investigation revealed that greater internalized weight stigma among the overweight/obese contributed to greater binge eating, a condition known to adversely influence weight loss treatment outcomes (13).

The current study suggests that internalized weight stigma is evident among overweight/obese treatment seeking adults. It will be important to assess whether people's stigmatizing experiences are related to weight loss outcomes. Perhaps, what is most clear from this investigation is that overweight/obese treatment seeking adults have internalized the pervasive negative weight-based social stigma that exists in American society.

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TABLE 1

Demographic characteristics.

Demographics	N	%	M	SD
Female	52	89.7		
Married	42	72.4		
Caucasian	54	93.1		
≥ College degree	27	46.5		
Income ≥\$45,000	35	50.4		
Age			47.6	10.3
Baseline BMI			36.6	7.1

BMI: body mass index; M: mean; SD: standard deviation.

TABLE 2

Means and standard deviations of weight stigma measures.

	Weight	
	Obese	Normal
OPTS: Positive ^d	61.1 (11.6) ^{a,b}	57.3 (12.1) ^{a,b}
OPTS: Negative ^d	54.8 (11.2) ^{a,c}	43.9 (10.6) ^{a,c}

OPTS: Obese Persons Trait Survey.

^a Obese: OPTS-positive versus OPTS-negative;

^b OPTS-positive: obese versus normal weight;

^c OPTS-negative: obese versus normal weight;

^d Difference OPTS-positive/negative obese versus OPTS-positive/negative normal weight.

All subscripts $p < 0.05$.