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Internalization of Weight Bias: Implications for Binge Eating and Emotional Well-being

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Abstract

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Objective: This study examined the relationship between internalization of negative weight-based stereotypes and indices of eating behaviors and emotional well-being in a sample of overweight and obese women.

Research Method and Procedures: The sample was comprised of 1013 women who belonged to a national, nonprofit weight loss organization. Participants completed an on-line battery of self-report questionnaires measuring frequency of weight stigmatization and coping responses to deal with bias and symptoms of depression and self-esteem, attitudes about weight and obesity, and binge eating behaviors. In addition, participants were asked to list the most common weight-based stereotypes and whether they believed them to be true or false.

Results: Participants who believed that weight-based stereotypes were true reported more frequent binge eating and refusal to diet in response to stigma experiences compared with those who reported stereotypes to be false. The degree to which participants believed stereotypes to be true or false was not related to types or amount of stigma experiences reported, self-esteem, depression, or attitudes toward obese persons. In addition, engaging in weight loss strategies as a response to bias was not predicted by stereotype beliefs or by actual stigma experiences, regardless of the amount or types of stigma reported.

Discussion: These findings suggest that obese individuals who internalize negative weight-based stereotypes may be particularly vulnerable to the negative impact of stigma on eating behaviors and also challenge the notion that stigma may motivate obese individuals to engage in efforts to lose weight. This study highlights a new area of research that warrants attention to better understand weight stigma and its potential consequences for health.

Key words: eating behaviors, stigma, overweight, bias, binge

Introduction

Overweight individuals are frequent targets of weight stigma (1). Weight bias has been documented among health care providers (2,3), employers (4), educators (5), and even family members (6,7), with significant implications for both emotional and physical well-being (8–11).

Given the normative acceptability of weight stigma, it appears that bias can extend to obese individuals themselves. Several studies have documented the expression of anti-fat attitudes among overweight and obese populations (12,13). This research suggests that unlike other stigmatized groups, obese individuals may internalize stereotypes against their in-group.

It has been proposed that some degree of body dissatisfaction may motivate weight control behaviors (14). If experiencing weight stigma leads to increased body dissatisfaction, which, in turn, leads to increased weight loss efforts, one could argue that stigma might serve as a motivator to lose weight. This view is reinforced by examples in the popular media of individuals losing weight after a humiliating experience of weight-based stigmatization (15). However, there is no evidence to suggest that weight bias serves this motivational function. In fact, if this were the case, one would expect the increase in weight bias over the past 40 years (16) to be associated with a decrease in the rates of obesity, rather than the recent significant increase (17). To our knowledge, no previous research has examined this relationship. It is, therefore, critical to determine whether internalization of weight-based stigma may prompt individuals to modify their eating behaviors and to investigate its effects on emotional well-being.

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Table 1. Descriptive statistics for primary variables

Variable	Mean (SD)
BMI (kg/m^2)	37.66 (9.47)
Age	49.33 (13.47)
Age first dieted	20.15 (10.08)
ATOP	59.09 (16.53)
Depression (BDI)	15.60 (12.33)
Self-esteem (RSE)*	17.76 (6.28)
Aggregated frequency of stigma† (across 11 subscales)	0.96 (0.58)
Aggregated frequency of coping with stigma† (across 21 subscales)	1.42 (0.38)

SD, standard deviation; ATOP, Attitudes Toward Obese Persons; BDI, Beck Depression Inventory; RSE, Rosenberg Self-Esteem.
* RSE was scored from 0–30.
† Stigma and Coping scales ranged from 0–3.

Table 2. Perceptions of most common weight-based stereotypes reported by participants

Most commonly perceived stereotypes	Percentage of individuals endorsing responses
Lazy	71.9
Overeats/binges	33.6
Unintelligent	23.7
Poor hygiene	16.2
Lack of willpower/self-discipline	15.4
Unattractive/ugly/disheveled	8.6
Emotional/psychological deficit	7.3
Jolly/happy	5.4
Eats junk food/unhealthy foods	4.2
Worthless	2

This was an open-ended question, and respondents could endorse more than one category response to this question.

The aim of this study was to examine internalization of weight-based stigmatization and experiences of weight bias in a large sample of overweight and obese women. We tested the hypothesis that women who internalized weight stereotypes would be more likely to make efforts to lose weight compared with women who did not believe such stereotypes to be true.

Research Methods and Procedures

The participants in the present study were 1013 women selected from a larger data set comprised of 2671 adults (2560 women, 111 men) who belonged to a national nonprofit, non-commercial, weight loss support organization (18). Selection criteria for inclusion in the final sample was determined by the presence of responses to two qualitative questions regarding perceptions of whether common weight-based stereotypes are true or false (described below in "Internalization of Stereotypes"). Of the total sample, 1013 women and 68 men responded to this question. Because of the small sample of men in comparison with women, men were excluded from the study because meaningful gender comparisons could not be made. All data were collected through a Web site that was constructed for the present study, and completed surveys were submitted electronically and anonymously. Participants completed a battery of self-report measures to assess experiences of weight-based stigmatization, coping responses to stigmatizing situations, psychological functioning, and eating behaviors, which are described below. Descriptive statistics for primary variables are reported in Table 1.

Demographic and Weight Information

Participants were asked to report their age, gender, ethnicity, height, and weight. BMI was calculated using self-reports of height and weight.

Experiences of Weight Stigma

A modified version of Myers and Rosen's Stigmatizing Situations Inventory (1999) was used to assess experiences of weight stigma (19). Pilot work revealed that respondents reported difficulty in estimating the frequency of specific stigmatizing encounters using the survey's 10-point Likert scale. In addition, despite the broad scale of this measure, relatively low subscale means have been reported (9,19). We, therefore, modified the scale to a four-point scale (0, never; 1, once in your life; 2, more than once in your life; and 3, multiple times). Higher scores on this measure indicate increased frequency of stigmatizing experiences. Cronbach's α for the full scale in this study was 0.97.

Coping Responses to Weight Stigma

A modified version of Myers and Rosen's Coping Responses Inventory (1999) was used to assess whether, and how often, participants used different strategies to cope with stigmatizing situations based on their weight (19). This survey provides a list of 99 specific coping strategies. We modified the original Likert scale to a four-point scale (0, never; 1, once in your life; 2, more than once in your life; and 3, multiple times). Higher scores reflect increased use of coping responses in reaction to stigmatizing experiences. Cronbach's α for this scale with the current sample was 0.91.

Emotional Well-Being and Attitudes about Obesity

Measures to assess emotional well-being included the Rosenberg Self-Esteem Questionnaire (20) to assess general self-worth and global self-esteem and the Beck Depression Inventory (21) to measure characteristic attitudes and symptoms of depression. anti-fat attitudes were assessed with the Attitudes Toward Obese Persons Scale (22), which is a 20-item Likert rating scale that assesses stereotypical beliefs about obese individuals. Cronbach's α for this scale in the present study was 0.76.

Binge Eating Behaviors

Binge eating behaviors were assessed using seven items from the Questionnaire on Eating and Weight Patterns-Revised that specifically assess binge eating (23). The wording of these seven questions directly links to DSM criteria for binge eating disorder (BED),[1] including overeating, loss of control during binge episodes, behavioral markers of BED, and the 6-month stipulation.

Internalization of Stereotypes

One open-ended question asked of participants was: "In your opinion, what are the most common stereotypes about overweight and obese people?" followed by "Do you believe that these stereotypes are generally true or false?" Written responses to this question were coded using a stage model of qualitative content analysis (24). Participants' perceptions of the most common weight-based stereotypes were coded into 12 specific categories of stereotypes. Participants' responses regarding their own beliefs about whether weight-based stereotypes were true or false were coded into three categories: false (if all stereotypes endorsed were perceived to be false of obese persons), somewhat true (if some stereotypes were endorsed to be false and others as true or if stereotypes were perceived to be true for some obese persons but not for others), and true (if all stereotypes endorsed were perceived to be true of obese persons). Twenty percent of the responses were double coded, and intercoder reliability was assessed by calculating the number of agreements per total number of agreements plus disagreements (24). Intercoder reliability was 92%, indicating good consistency in categorization between the two coders for content analyses. After discussion of discrepancies in coding, agreement was increased to 100%.

Results

Ninety-five percent of the total sample were white. The average age of women was 49.33 (standard deviation = 13.47), and the mean BMI was 37.66 (standard deviation = 9.47). Participants identified a range of weight-based stereotypes that they perceived to be commonly attributed to obese persons. Table 2 reports cumulative frequencies of the most commonly perceived stereotypes. Of the total sample ($N = 1013$), 77% (733 participants) included commentary in their responses regarding their beliefs about whether weight-based stereotypes were true or false. Among those who responded, 63% ($N = 460$) reported that they believed stereotypes were false, 30% ($N = 220$) reported that stereotypes were sometimes true, and 7% ($N = 53$) believed that all stereotypes were true. There were no differences in mean age or BMI among these subgroups of participants.

Multivariate analyses of variance were computed to determine whether acceptance of weight-based stereotypes influenced primary variables of interest. There were no differences among participants who believed stereotypes to be true, sometimes true, or false regarding the types or frequency of stigma experiences reported or on measures of self-esteem, depression, BED status, or attitudes toward obese persons. However, significant effects emerged for coping strategies chosen in response to stigmatizing situations. Specifically, participants who reported beliefs that stereotypes were true were more likely to cope with stigma by refusing to diet compared with those who reported stereotypes to be false or sometimes true [$F(2,394) = 3.49$, $p < 0.05$]. In addition, engaging in weight loss strategies as a response to bias was not predicted by stereotype beliefs, or by actual stigma experiences, regardless of the amount or types of stigma reported.

Although the multivariate analysis of variance results above showed that participants who believed stereotypes to be true were not more likely to have BED, we conducted correlational analyses to examine whether there was an association between certain symptoms of BED and internalization of stigma. Specifically, results showed that participants reported more frequent binges per week if they believed stereotypes to be true ($r = 0.11$, $p < 0.05$).

Discussion

This study examines the relationship between internalization of weight-based stereotypes and emotional well-being, the likelihood of dieting, and binge eating behaviors. An interesting finding was that beliefs that stereotypes were true were unrelated to psychological functioning or distress. Because only one question was used to assess internalization of weight bias, different results might occur with the use of more comprehensive assessment.

The findings demonstrates that internalization of bias was associated with eating behaviors, suggesting that overweight and obese persons who internalize stereotypes may be more likely to binge eat and less likely to diet in response to stigma. This finding challenges the notion that stigma may motivate obese individuals to engage in weight loss strategies and suggests that, in fact, internalizing experiences of bias could have the opposite effect by increasing unhealthy eating behaviors and reducing motivation to lose

[1] Nonstandard abbreviation: BED, binge eating disorder.

weight. An alternative hypothesis is that binge eating serves a specific function, such as escape from self-awareness (25), which might, in turn, influence degree of internalization of stigma.

Furthermore, findings of the study indicated that those who believed stereotypes to be true were more likely to cope with stigma by specifically refusing to diet. One hypothesis to account for this finding is that individuals who internalize stigma may have less confidence in their ability to successfully lose weight (e.g., due to self-blame). Although only a minority of participants in this sample reported that they believed weight-based stereotypes to be true of all obese persons, this group may be particularly vulnerable to the negative impact of stigma on eating behaviors.

There are several limitations to this study. The sample was comprised of white women, limiting generalization to individuals of different ethnic backgrounds and to samples of overweight men. This study also relied on cross-sectional self-report data of participants about their experiences of stigma. Because directional causality cannot be ascertained, there may be alternative explanations for the results. For example, individuals who engage in binge eating behaviors may generate negative feelings about themselves, that could, in turn, generalize to attitudes about obese people as a whole. In addition, we did not include standardized measures to assess internalization of stigma but instead used qualitative data about participants' beliefs of whether weight-based stereotypes are true or false as indicative of internalization. Because there were no specific questions to evaluate whether participants perceived stereotypes to be true of themselves, it is possible that different findings would emerge using a more stringent definition of internalization. Similarly, the relatively low response rate to the qualitative question is important to consider. It could be that participants hurried through the battery of questionnaires or attended only to quantitative questions, which was the format of assessment for the vast majority of the battery. Alternatively, it could be hypothesized that individuals who did not respond to the qualitative questions had less internalization of stigma than those who responded. Finally, the sample was comprised of members of a weight loss organization who are motivated to lose weight, which may not be typical of the general population. However, the fact that the current findings emerged even within a sample of dieters suggests that stigma may have negative implications for eating behaviors even among those who are motivated to lose weight and have ongoing support in these efforts.

The findings of this study highlight several new areas of research that warrant attention to better understand weight stigma and its consequences for emotional and physical health. First, methods need to be developed to accurately assess internalization of weight stigma among overweight and obese persons. Second, studies are needed to examine whether, and to what degree, internalization of stigma impacts global distress or whether its effect is more pronounced for eating behaviors.

Finally, this work has important implications for treatment of obesity and stigma reduction efforts. If future research demonstrates that internalization of stigma increases vulnerability to unhealthy eating behaviors (such as binge eating) and/or reduces motivation to lose weight, this message must be disseminated as part of stigma reduction interventions to help challenge public perceptions that stigma may be a motivator for behavior change. This also requires health care professionals to be aware that stigma could be interfering with weight loss efforts among their overweight and obese patients and to help their patients adopt healthier and more adaptive strategies to cope with weight stigma in their lives.

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