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Obesity stigmatization as the *status quo*: Structural considerations and prevalence among young adults in the U.S.

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ABSTRACT

Objective: Although obesity stigmatization contributes to significant health, economic, and quality-of-life challenges for U.S. adults, the prevalence and nature of stigmatizing attitudes requires an update and clarification. The present study sought to examine the prevalence and major dimensions of negative attitudes toward obesity through assessment of young U.S. adults' responses to the *Attitudes Toward Obese Persons Scale*.
Method: Participants were women ($n = 578$) and men ($n = 233$) who completed self-report questionnaires assessing obesity stigmatization and eating disorder features.
Results: Results indicate that at least one stigmatizing attitude was endorsed by 92.5% of respondents, with an average endorsement rate of 32.8% across items. Eating disorder features, body size, and gender were not related to one's likelihood of endorsing negative attitudes toward obesity. Distinct clusters of negative attitudes were identified involving beliefs that "obese people suffer" and "obese people are inferior."
Discussion: Data suggest that large proportions of young U.S. adults harbor negative attitudes toward obese persons and these attitudes are pervasive across individuals with different characteristics. Although such negative attitudes have traditionally been conceptualized as relatively unidimensional, results suggest that future research would benefit from deconstructing negative attitudes into those related to pitying the obese and those related to perceiving the obese with harsh judgment.

1. Introduction

Despite the relative increases in obesity prevalence in the United States, the degree of obesity stigmatization has not correspondingly abated. In fact, recent studies have reported a 66% increase in weight-based discrimination in the United States from 1995 to 2006 (Andreyeva, Puhl, & Brownell, 2008) and highlighted the pervasiveness of this discrimination across virtually all aspects of daily life including the workplace, healthcare and educational systems (Puhl & Brownell, 2001; Puhl & Heuer, 2009). Moreover, discrimination extends beyond a systemic level to a familial or personal level; for instance, one study reported that family members and physicians were the most frequent sources of discriminatory comments and treatment (Puhl & Brownell, 2006). The consequences of this pervasive prejudice are significant as obese persons who report more frequent exposure to discrimination experience greater psychological problems (Wang, Brownell, & Wadden, 2004) and may be more likely to avoid seeking medical treatment (Drury & Louis, 2002).

Given the rising rates of obesity and the substantial impact of obesity stigmatization, we sought to provide an update on the prevalence of weight-based stigmatization. We also sought to examine individual differences such as one's own BMI, eating disorder features, and gender as potential moderators of negative attitudes toward obese persons. Previous studies examining gender differences in obesity stigmatization offer conflicting evidence: whereas some suggest that among college men and women, the former are more likely to stigmatize obesity than the latter (Aruguete, Yates, & Edman, 2006; Chen & Brown, 2005; Latner, Stunkard, & Wilson, 2005; Perez-Lopez, Lewis, & Cash, 2001), a representative population-based study reported that gender was not associated with level of obesity stigmatization (Hilbert, Rief, & Braehler, 2008). Research exploring the role of BMI is similarly mixed, with some reports suggesting that BMI negatively correlates with obesity stigmatization (Aruguete et al., 2006; Lin & Reid, 2009; Schwartz, Vartanian, Nosek, & Brownell, 2006) and others suggesting that these variables are unrelated (Latner et al., 2005; Perez-Lopez et al., 2001). From a clinical standpoint, we might expect the strongest moderator of obesity stigmatization to be eating disorder levels, as one's dislike and fear of fatness should be conceptually linked with one's own eating pathology. However, research investigating the association between obesity stigmatization and disordered eating is scarce. Although two studies reported that eating pathology was not significantly associated with one's negative weight-based attitudes (Puhl, Masheb, White, & Grilo, 2010; Puhl et al., 2011), these reports were limited to

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examinations of binge-eating disorder. Rather, an assessment of disordered eating attitudes and behaviors on a continuum of eating pathology might serve to identify a sub-group of individuals for whom obesity stigmatization is a particularly salient phenomenon.

A second aim of this study was to better understand the structure of negative attitudes toward obese persons among educated young adults in the U.S. Important limitations among several available assessment approaches restrict measurement and understanding of this construct. For instance, assessment tools range from *semantic differential measures* with unclear content validity, reliability and dimensionality, to *ranking tests* with unclear external validity, to *implicit attitudes tests* with questionable criterion-related validity (Morrison, Roddy, & Ryan, 2009). The arguably most direct method of assessing anti-obesity attitudes involves the use of *attitudinal rating scales*, such as the Attitudes Toward Obese Persons scale (ATOP; Allison, Basile, & Yuker, 1991), and research employing such measures could serve to clarify the nature of the construct. Some studies suggest that attitudes toward obese persons are multidimensional, including underlying dimensions such as beliefs that obese individuals have deficient personalities, interpersonal problems, and negative self-perceptions (Friedman et al., 2005). Despite such findings, most researchers have treated negative attitudes toward the obese as unidimensional (e.g., Friedman et al., 2005; Geier, Schwartz, & Brownell, 2003; Puhl & Brownell, 2006) or reported multidimensionality without clarifying the underlying structure (e.g., Harvey & Hill, 2001; Harvey, Summerbell, Kirk, & Hill, 2002). The absence of structural information makes it challenging not only to understand the basic *nature* of anti-obesity attitudes but also to generalize findings and draw comparisons across different social and cultural groups (Latner, Simmonds, Rosewall, & Stunkard, 2007). Consequently, an examination of the structure of negative attitudes toward obese people would clarify the construct of obesity stigmatization and thereby facilitate research efforts to combat weight-based discrimination.

2. Method

2.1. Participants

Participants were female ($n = 578$) and male ($n = 233$) young adults enrolled at a large public university in the Midwestern United States. Ages ranged from 18 to 29 years ($M = 19.75$; $SD = 1.55$). Most participants self-identified as Caucasian (83.1%) and self-reported Body Mass Index (BMI; weight kg/height m^2) ranged from 15.37 to 52.56 ($M = 23.43$, $SD = 4.16$, $Mdn = 22.59$, $IQR = 4.28$). Classification into BMI categories (BMI ≤ 18.4 as underweight, 18.5–24.9 as normal weight, 25–29.9 as overweight, and BMI ≥ 30 as obese; National Institutes of Health, National Heart, Lung, & Blood Institute, 1998) indicated the following percentages by BMI category (excluding those with missing data, n = 26): 3.3% underweight ($n = 26$), 71% normal weight ($n = 560$), 18.8% overweight ($n = 148$), and 7% obese ($n = 55$).

2.2. Measures

2.2.1. Attitudes Toward Obese Persons Scale (ATOP; Allison et al., 1991)

The ATOP is a commonly employed 20-item self-report questionnaire that assesses attributions about obese individuals. Respondents rate their agreement with statements such as "Most people feel uncomfortable when they associate with obese people." In the present study, we deviated from the typical six-point Likert response scale in favor of a five-point scale that offers a neutral option to respondents (strongly disagree, disagree, neither agree nor disagree, agree, strongly agree). Internal consistency (Cronbach's alpha) was .82 (men) and .80 (women).

2.2.2. Eating Disorders Examination—Questionnaire (EDE-Q; Fairburn & Bèglin, 1994)

The EDE-Q is a 36-item self-report questionnaire of eating disorder symptoms. Participants responded on a 7-point scale ranging from *no days* to *every day* to items such as: "On how many of the past 28 days have you had a definite fear that you might gain weight?" Research supports the reliability of the EDE-Q among undergraduate women (Luce, Crowther, & Pole, 2008) and men (Lavender, De Young, & Anderson, 2010). Cronbach's alphas for the EDE-Q global scores were .95 for both men and women.

2.3. Data analysis

We first examined the percentage of individuals in our sample who agreed with negative statements about obese persons. To assess potential moderators of obesity stigmatization, we then compared response rates by respondents' sex, BMI, and eating disorder symptoms using chi-square difference tests. To assess the structure of obesity stigmatizing attitudes, we modeled the 20 ATOP items in Mplus6 (Muthén & Muthén, 2010) with exploratory factor analysis (EFA) using oblique

Table 1
Percent of young adults (n = 824) who endorsed negative attitudes toward obese persons.

ATOP items	
1. Obese people are as happy as nonobese people	37.2%
2. Most obese people feel that they are not as good as other people.	21.1%
3. Most obese people are more self-conscious than other people.	21.4%
4. Obese workers cannot be as successful as other workers.	40.4%
5. Most nonobese people would not want to marry anyone who is obese.	27.5%
6. Severely obese people are usually untidy.	34.1%
7. Obese people are usually sociable.	19.0%
8. Most obese people are not dissatisfied with themselves.	31.6%
9. Obese people are just as self-confident as other people.	35.5%
10. Most people feel uncomfortable when they associate with obese people.	36.1%
11. Obese people are often less aggressive than nonobese people.	20.4%
12. Most obese people have different personalities than nonobese people.	34.8%
13. Very few obese people are ashamed of their weight.	44.7%
14. Most obese people resent normal weight people.	35.7%
15. Obese people are more emotional than nonobese people.	34.9%
16. Obese people should not expect to lead normal lives.	40.8%
17. Obese people are just as healthy as nonobese people.	38.3%
18. Obese people are just as sexually attractive as nonobese people.	38.7%
19. Obese people tend to have family problems.	29.5%
20. One of the worse things that could happen to a person would be for him to become obese.	33.3%

Note. Percentages represent how many respondents endorsed agree or strongly agree for each ATOP item. *Positively keyed items are in italics* and percentages for these items reflect how many respondents endorsed "disagree" or "strongly disagree" for each ATOP item.