

Weight-Based Discrimination in Occupational Hiring and Helping Behavior¹

VIREN SWAMI²

*University of Westminster
London, Great Britain*

FLORA CHAN, VIVIEN WONG, AND

ADRIAN FURNHAM
*University College London
London, Great Britain*

MARTIN J. TOVÉE

*University of Newcastle
Newcastle, Great Britain*

This study explored weight-based discrimination using a range of weight categories, as represented by images of real women with known body mass index (BMI). In the first study, 30 men rated each image according to likelihood of occupational hiring for a managerial post. In the second study, 28 men rated the same images for likelihood of helping behavior following a minor accident. Study results showed that individuals with a slender body weight (BMI = 19–20) were most likely to be hired and helped, while obese (BMI > 30) participants were least likely to be hired and helped. However, results also showed that emaciated (BMI < 15) individuals were likely to be discriminated against. Implications for real-life settings are discussed.

A large body of research has indicated that weight-based discrimination is prevalent in multiple domains, and that individuals most exposed to such stigma suffer negative psychological and social consequences as a result (Puhl & Brownell, 2003). Indeed, weight-based discrimination appears to have become more widespread since the first systematic studies of obesity stigmatization were conducted in the early 1980s (e.g., Allon, 1982), so much so that some believe such stigmatization to be the last acceptable form of discrimination, not unlike racism or sexism several decades ago (e.g., Falkner et al., 1999; Kilbourne, 1994; O'Hara, 1996). The present paper reports two studies that measure the severity of stigmatization of women with a wide range of body weights in two domains: the first (occupational hiring) relatively well researched, and the second (helping behavior) less so.

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²Correspondence concerning this article should be addressed to Viren Swami, Department of Psychology, University of Westminster, 309 Regent Street, London W1B 2UW. E-mail: virenswami@hotmail.com

Occupational Hiring

One of the most widely researched settings of weight-based discrimination is in the workplace, where overweight individuals are vulnerable to stigmatizing attitudes and anti-fat bias (see Puhl & Brownell, 2003). Almost without exception, the literature points to prejudice and inequity for overweight and obese individuals, often even before the interview process begins. Experimental studies typically have investigated hiring decisions by manipulating perceptions of employee weight, either through written descriptions or photographs. Participants are randomly assigned to a condition in which a fictional job applicant is described or pictured as overweight or average weight (but with identical qualifications), and the participants are asked to evaluate the applicant's suitability for the job.

For example, Decker (1987) used written descriptions of hypothetical managers. Individuals who were described as average weight were rated as significantly more desirable supervisors, whereas those who were described as overweight were judged more harshly for undesirable behaviors (e.g., taking credit for someone else's work). Another study (Klassen, Jasper, & Harris, 1993) used written descriptions of fictitious women employees, who varied in weight and in stereotypical descriptions associated with obesity and thinness. The authors reported that participants showed the strongest desire to work with thin targets, and the least desire to work with obese targets. Similarly, a study of job applicants for sales and business positions reported that written descriptions of target applicants resulted in significantly more negative judgments for obese women than for non-obese women (Rothblum, Miller, & Garbutt, 1988).

More recent studies have manipulated applicant weight with photographs or video recordings. One study (Pingoire, Dugoni, Tindale, & Spring, 1994) used videotaped mock interviews with the same professional actors acting as job applicants for computer and sales positions, in which weight was manipulated with theatrical prostheses. Participants indicated that employment bias was much greater for obese candidates than for average-weight applicants, and that the bias was more apparent for women than for men. An earlier study (Larkin & Pines, 1979) used videotapes of job applicants in simulated hiring settings and showed that overweight applicants were significantly less likely to be recommended for hire than were average-weight applicants. The overweight applicants were also judged to be significantly less neat, productive, ambitious, disciplined, and determined.

Just as troubling is the fact that where overweight individuals have been hired, negative perceptions of them persist throughout their careers (Paul & Townsend, 1995). In a comprehensive review of the literature, Roehling (1999) summarized numerous work-related stereotypes reported in over a

dozen laboratory studies. Overweight employees were assumed to lack self-discipline and to be lazy, less conscientious, less competent, sloppier, more disagreeable, and emotionally unstable. Further, these attitudes have a negative impact on wages, promotions, and decisions about employment status (e.g., Bordieri, Drehmer, & Taylor, 1997; Pagan & Davilla, 1997; Register & Williams, 1990; Rothblum, Brand, Miller, & Oetjen, 1990).

Helping Behavior

Few studies have examined the likelihood of helping behavior being extended to individuals of different weight categories. Nevertheless, it is clear that overweight individuals may be the subject of discrimination when seeking help, either in public or in more private settings. For instance, anecdotal evidence suggests that overweight individuals are less likely to be offered help in finding adequate seat sizes in restaurants and transportation (see Puhl & Brownell, 2001).

Another study suggested that weight discrimination may exist for obese tenants seeking apartment rentals (Karris, 1977). Obese and non-obese student confederates each visited 11 available rental units, pretending to be seeking apartments for rent. All 11 landlords offered the units to the non-obese confederate, but 5 landlords would not rent to the obese confederate. While this study suggests that overweight individuals may be less likely to receive help in comparable situations, to date this hypothesis has not been tested experimentally.

The Present Study

Although earlier studies have suggested that discrimination against overweight applicants may be significant, additional experimental research is needed to support these findings and to provide more confident conclusions (Puhl & Brownell, 2001). An important limitation to the use of average-weight and obese confederates either in photographic or videotape assessments is that it is difficult to rule out possible confounds (e.g., age, race, gender). Furthermore, it is important that earlier studies generally have only examined discrimination against overweight and obese individuals, and have not included emaciated or underweight individuals. This is important because little is known about the discrimination faced by such groups of individuals. Comparable evidence highlights the fact that emaciated women are considered less physically attractive than are normal-weight and overweight (but not obese) individuals (Swami & Tovée, 2005; Tovée, Maisey,

Emery, & Cornelissen, 1999; Tovée, Reinhardt, Emery, & Cornelissen, 1998). This points to the possibility that emaciated individuals may suffer similar levels of weight-based discrimination as do obese individuals.

The present study, therefore, examines weight-based stigmatization in occupational hiring and helping behavior using a vignette-style method. Participants were asked to make their assessments based on photographic images of real women who varied in body weight ranging from emaciated to obese on the scale of body mass index (BMI; measured as kg/m^2 ; Bray, 1998). A further advantage of these stimuli is the fact that the heads of the women were obscured, so that facial attributes would not be a factor in participants' ratings. Although the present study was exploratory in nature, we nevertheless predicted that obese and possibly emaciated targets would be most discriminated against, in comparison with normal-weight targets.

Study 1

Method

Participants

The study participants were 30 British male undergraduates (M age = 24.9 years; SD = 9.4). The socioeconomic and educational backgrounds of participants were fairly homogeneous. Participants' mean self-reported BMI was 23.51 (SD = 5.60). All participants were naïve to the aims of the study and participated on a voluntary basis.

Materials

The stimuli used in the present study have been used previously (e.g., Swami & Tovée, 2005). Here, we present only an overview of the materials and procedure. Participants rated grayscale images of 50 real women in front view, wearing tight gray leotards and leggings (e.g., see Tovée, Hancock, Mahmoodi, Singleton, & Cornelissen, 2002).

In order that facial attractiveness would not influence judgments of attractiveness, the heads of the women in the images were obscured. The image set consisted of 10 women drawn from each of the five BMI categories: *emaciated* ($<15 \text{ kg}/\text{m}^2$), *underweight* ($15\text{--}18.5 \text{ kg}/\text{m}^2$), *normal* ($18.5\text{--}24.9 \text{ kg}/\text{m}^2$), *overweight* ($25.0\text{--}29.9 \text{ kg}/\text{m}^2$), and *obese* ($>30 \text{ kg}/\text{m}^2$). The range of BMI values was 11.6 to $41.2 \text{ kg}/\text{m}^2$, representing the widest range that we have available.

Women's images were printed on sheets of paper measuring 210 × 297 mm, so that each image covered the entire page. Participants were presented with a booklet to record their ratings, where the first page consisted of brief instructions and the final page requested participants' demographic details (i.e., age, gender, ethnicity, weight, height). Other pages in the booklet contained a 9-point Likert scale on which to record their ratings.

Procedure

Participants were invited to take part in a study examining "professional hiring in the modern age." They were told to imagine the following:

[You work] in the human resources department of a large, multinational firm looking to hire a new trainee in sales management. Fifty women have applied for the job, and it is your responsibility to choose the successful applicant. The requirements of the managerial job in the firm include the ability to motivate sales personnel, the ability to make prompt and explicit decisions, clarity of thought in stressful situations, the ability to foresee management problems and to initiate plans and actions promptly to ward off these problems, and the ability to communicate effectively with and to ensure cooperation with other parts of the company and the public.

Participants were then given a quick preview of the stimuli to get an idea of the range of bodies being shown. Participants were told to assume that "all applicants have the same qualifications for the job and have the same work experience," as well as other demographic details (e.g., ethnicity). The participants were then shown the images a second time. On this occasion, they were asked to rate on a 9-point scale ranging from 1 (*very unlikely*) to 9 (*very likely*) how likely they were to hire each stimulus person for the job. Participants were also told that there were no right or wrong answers and that they should, therefore, be as honest as possible in their responses. The entire procedure took about 30 min to complete, and participants were debriefed following the experiment.

Results and Discussion

We first asked whether participants were making their ratings of hiring likelihood based on the applicants' BMI. Following previous studies (Swami

& Tovée, 2005; Tovée et al., 1998, 1999), we chose the simplest approach possible to model these data, which included third-order terms for BMI in a multiple regression model. This approach balances the amount of variance accounted for with the simplest possible regression model. The model, run separately for the different groups, is as follows:

$$y = a + b_1x_1 + b_2x_2 + b_3x_3 + e$$

where y is the participant's rating, a is the intercept, x_1 is the BMI, x_2 is the BMI², x_3 is the BMI³, and e is random error.

Figure 1a show plots of ratings as a function of BMI, with the data being significantly explained by BMI ($p < .001$). The total variance explained by the regression model for the relationship between BMI and hiring likelihood was 84.8%, indicating that BMI is a useful and robust predictor of hiring behavior in the present study.

It was also possible to calculate statistically the "peak" of the rating in Figure 1(a), which provides a measure of optimal BMI for hiring likelihood. To do this, third-order polynomials for BMI were fitted to the ratings made by all participants, allowing the BMI of the peak to be calculated for participants' ratings. The results show that participants were most likely to hire applicants who had a BMI of 19.26 ($SD = 1.53$), and that applicants on either side of this peak were less likely to be hired.

In addition, we calculated mean ratings for each BMI category: emaciated, $M = 4.24$ ($SD = 1.14$); underweight, $M = 5.93$ ($SD = 0.38$); normal weight, $M = 5.46$ ($SD = 0.82$); overweight $M = 4.13$ ($SD = 0.84$); and obese, $M = 2.00$ ($SD = 0.29$). A one-way ANOVA showed that there were overall significant differences between the different BMI categories, $F(4, 49) = 23.32$, $p < .001$. Post hoc Sidak tests show that the normal-weight and underweight categories were rated the most positively (i.e., no significant difference between these categories), followed by the emaciated and overweight categories (which again were not significantly different from each other), and finally by the obese category (see Figure 2a).

This set of findings is particularly striking and suggests that individuals who have slender body weight are more likely to be hired than are emaciated, overweight, or obese individuals. However, from Figures 1a and 2a, it is also notable that obese individuals were the least likely to be hired, suggesting the strongest stigmatization against individuals within this weight range. Overall, the present study supports previous findings suggesting that weight-based stigmatization may be predicated on the "what is beautiful is good" bias (see General Discussion).

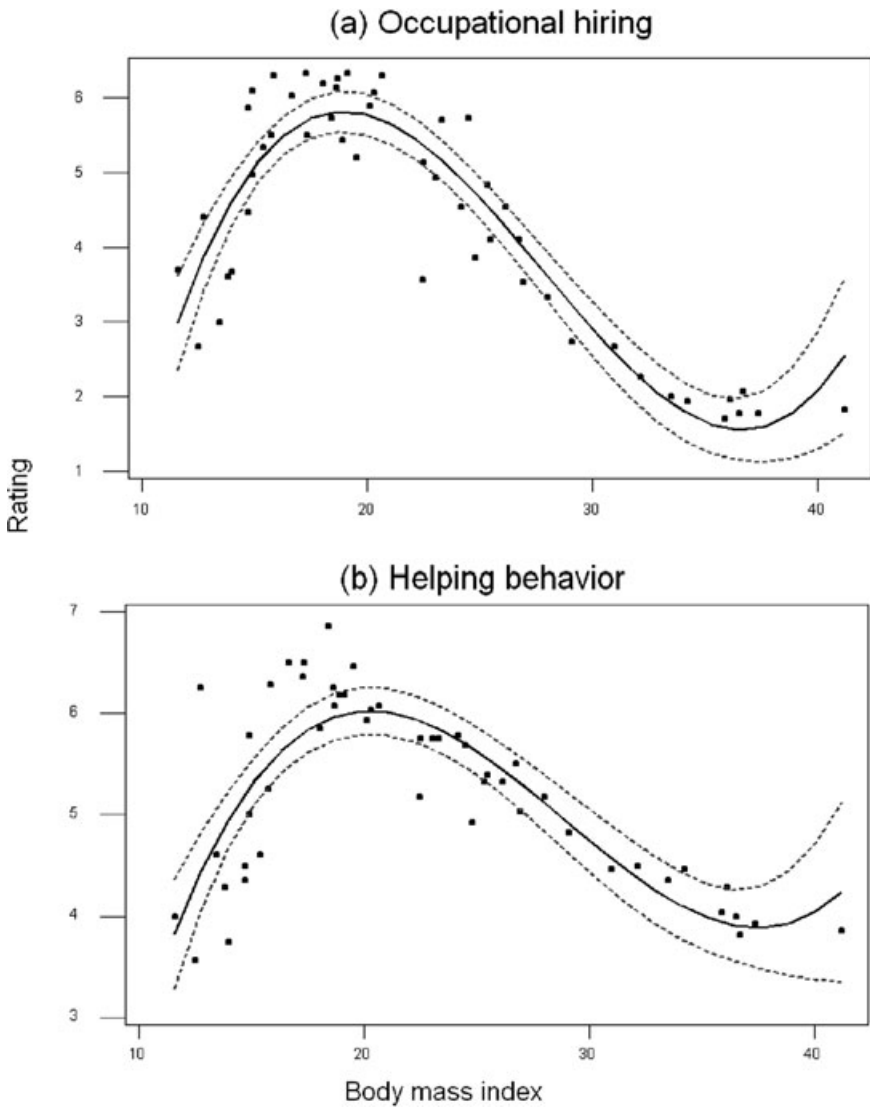


Figure 1. Variables as functions of body mass index. Each point represents the 50 ratings made by participants. Regression lines (solid lines) and their 95% confidence levels (dotted lines) are superimposed.

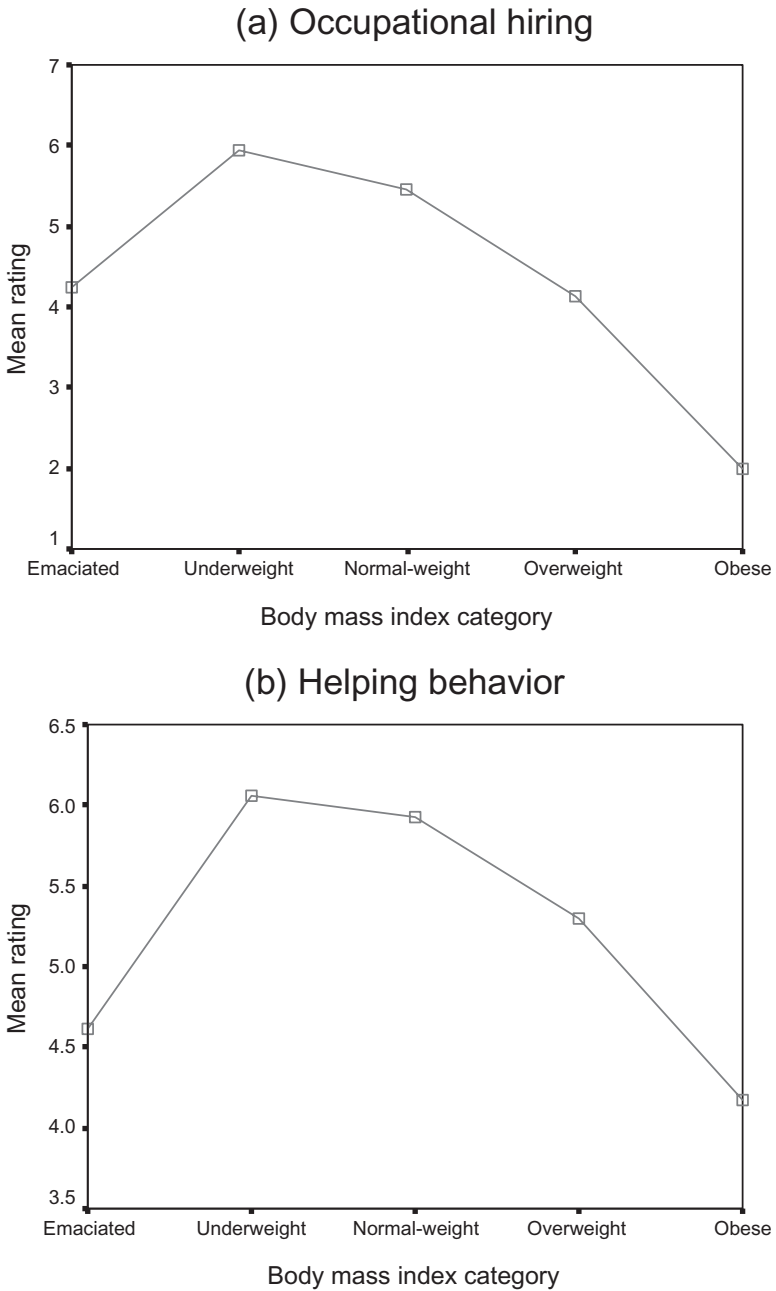


Figure 2. Mean ratings by body mass index categories for (a) occupational hiring and (b) helping behavior.

Study 2

Method

Participants

A total of 28 British male undergraduates participated in this study. The mean age of the sample was 20.9 years ($SD = 2.2$), whereas the mean self-reported BMI was 23.08 ($SD = 3.81$). Although a wide range of ethnicities was included, the socioeconomic and educational backgrounds of participants were fairly homogeneous. All participants were naïve to the aims of the study, and they were not remunerated for their participation.

Materials and Procedure

The stimuli used in Study 2 were identical to those used in Study 1. Participants were invited to take part in a study examining “helping behavior” and were told to imagine that they had “just witnessed a relatively serious traffic accident involving a pedestrian. A woman has been knocked down and requires immediate attention.” Participants were then given a brief view of the entire image set and were told to assume that “each of the women have the same non-physical attributes (e.g., intelligence) and certain physical attributes (e.g., ethnicity, age).” The participants were asked to assume that they were the lone witness.

Participants were then shown the images a second time. They were asked to provide a rating on a 9-point scale ranging from 1 (*very unlikely*) to 9 (*very likely*) as to the likelihood that they would provide help to the victim in the scenario. As in Study 1, participants were requested to be honest in their ratings. The entire procedure took about 30 min to complete, and the participants were debriefed following the procedure.

Results and Discussion

As in Study 1, we first asked whether participants were making their ratings of helping likelihood based on the victims' BMI. Using the same regression model, we found that the ratings were significantly explained by BMI ($p < .001$; see Figure 1b). The total variance explained by the regression model for the relationship between BMI and hiring likelihood was 67.0%, indicating that the BMI of the victim was a good predictor of helping behavior. As in Study 1, we fitted third-order polynomials for BMI to the ratings

made by all participants, allowing the BMI of the peak to be calculated for participants' ratings. The result shows that they were most likely to help victims who had a BMI of 20.34 ($SD = 2.86$) and that victims on either side of this peak were less likely to be helped.

As in Study 1, we again we calculated the mean ratings for each BMI category: emaciated, $M = 4.61$ ($SD = 0.86$); underweight, $M = 6.05$ ($SD = 0.67$); normal weight, $M = 5.93$ ($SD = 0.35$); overweight, $M = 5.30$ ($SD = 0.31$); and obese, $M = 4.17$ ($SD = 0.27$). The results of a one-way ANOVA show overall significant differences between the different BMI categories, $F(4, 49) = 22.72$, $p < .001$. Post hoc Sidak tests show that the underweight category was rated the highest, but this was not significantly different from ratings of the normal-weight category. This was followed by the overweight category, which was rated significantly higher than the emaciated category, which in turn was rated significantly higher than the obese category (see Figure 2b). Overall, this study suggests that helping behavior in the present scenario was most likely to be offered to victims who had a body weight within the underweight and normal-weight ranges, and that obese participants were the least likely to be helped.

General Discussion

Similar to previous findings (e.g., Decker, 1987; Klassen et al., 1993; Pingitoire et al., 1994; Rothblum et al., 1988), the two studies reported here show that overweight and obese individuals were less likely than were normal-weight individuals to be hired for a position in sales management or accorded helping behavior if involved in a traffic accident. This is in accordance with the suggestion that overweight and obese individuals are negatively stigmatized, at least in socioeconomically developed settings (Falkner et al., 1999; Kilbourne, 1994; Puhl & Brownell, 2003).

However, the present studies also show that emaciated individuals were likely to be discriminated against in terms of hiring and helping behavior (although perhaps to not the same degree as obese individuals), suggesting a neglected aspect in the previous literature. To the best of our knowledge, earlier studies on weight-based discrimination in employment settings have not included emaciated or underweight individuals, which make the present findings particularly important. This is because we have shown that, subject to limitations of the design (to be discussed later), emaciated individuals may face similar levels of weight-based discrimination as overweight individuals.

By contrast, ratings for both helping and hiring were most favorable for women who had a BMI of about 19 to 20, which is consistent with the finding that such women are accorded the highest ratings for physical attractiveness.

For example, using the same procedure and stimuli as in the present study, Swami and Tovée (2005) found a similar relationship between BMI and physical attractiveness as that found in the present study with hiring and helping behavior. It seems plausible, therefore, that the weight-based discrimination seen in the present study is associated with the stereotype of what is beautiful is good.

In other words, individuals who are considered physically attractive are also believed to possess positive qualities in other domains (e.g., social skills, competency, life outcomes; Eagly, Ashmore, Makhijani, & Longo, 1991; Jackson, Hunter, & Hodge, 1995; Langlois et al., 2000). Indeed, there is some evidence to suggest that, as a result of this attractiveness bias, some applicants have an advantage in hiring decisions (Cesare, 1996; Chiu & Babcock, 2002), which seems in line with the results of Study 1. Moreover, professionals are just as susceptible to this attractiveness bias as are nonprofessionals (Cesare, 1996; Gilmore, Beehr, & Love, 1986; Hosoda, Stone-Romero, & Coats, 2003), which suggests that the present results may be generalizable to some real-life settings.

However, there are a number of important limitations to these studies that must be discussed. First, while the stimuli used in the present paper allowed us to examine weight-based discrimination more accurately than in earlier studies, there is a need to examine more fully the effect that body weight has on helping and hiring behavior in real-life settings. It is notable that our stimuli and procedures lack ecological validity, in that real-life decision making typically does not take place in the manner of the present studies. Importantly, real-life situations provide individuals with a wealth of information (e.g., facial attributes, ethnicity, intelligence, personality; cf. Swami, Greven, & Furnham, 2007) into which the present studies were not able to tap. For example, applicants for employment vacancies typically must undergo a job interview, during which nonphysical attributes (e.g., personality, intelligence) may be important. Similarly, the urgency of a traffic accident in real life may lead to helping behavior, regardless of the victim's body weight.

It is also possible, given the ubiquity of body-weight differences in the stimuli, that participants surmised the nature of the experiment and adjusted their ratings accordingly. That is, participants may have deduced that the two studies were about the effects of body-weight variation on hiring and helping and, therefore, altered their judgments to ingratiate themselves with the experimenters. If this were the case, then it becomes difficult to determine whether what is being documented is an instance of weight-based discrimination, or merely participants providing culturally appropriate responses (which may be distinct from politically correct responses; i.e., no discrimination).

These limitations will only be overcome with the use of more sophisticated methodological designs that tap into the way in which decisions are made in real-life settings. Such designs could build upon existing frameworks for research that approximate real-life situations (e.g., Pingitore et al., 1994), but should include stimulus persons from a range of body-weight categories. Future studies should also examine the attitudes of women toward other women, as well as the possible stigmatizing effect of body weight for men (cf. Hebl & Turchin, 2005), both of which were neglected in the present study. Future work would also do well to escape reliance on college students as participants, and include non-college samples in their work.

These limitations notwithstanding, the present study provides some evidence that weight-based discrimination may extend beyond the stigmatizing of obese individuals. More precisely, emaciated individuals may also be stigmatized to some degree. Moreover, the present results extend the established finding of weight-based discrimination in employment settings to a relatively underresearched setting; namely, altruistic behavior. If these findings can be substantiated, it would highlight the need for strategies aimed at reducing weight-based stigmatization in applied settings.

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