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ORIGINAL ARTICLE

Obesity discrimination: the role of physical appearance, personal ideology, and anti-fat prejudice

KS O'Brien[1,2], JD Latner[3], D Ebneter[3] and JA Hunter[4]

OBJECTIVE: Self-report measures of anti-fat prejudice are regularly used by the field, however, there is no research showing a relationship between explicit measures of anti-fat prejudice and the behavioral manifestation of them; obesity discrimination. The present study examined whether a recently developed measure of anti-fat prejudice, the universal measure of bias (UMB), along with other correlates of prejudicial attitudes and beliefs (that is, authoritarianism, social dominance orientation; SDO, physical appearance investment) predict obesity discrimination.

METHOD: Under the guise of a personnel selection task, participants ($n = 102$) gave assessments of obese and non-obese females applying for a managerial position across a number of selection criteria (for example, starting salary, likelihood of selecting). Participants viewed resumes that had attached either a photo of a pre-bariatric surgery obese female (body mass index (BMI) = 38–41) or a photo of the same female post-bariatric surgery (BMI = 22–24). Participants also completed measures of anti-fat prejudice (UMB) authoritarianism, SDO, physical appearance evaluation and orientation.

RESULTS: Obesity discrimination was displayed across all selection criteria. Higher UMB subscale scores (distance and negative judgement), authoritarianism, physical appearance evaluation and orientation were associated with greater obesity discrimination. In regression models, UMB 'distance' was a predictor of obesity discrimination for perceived leadership potential, starting salary, and overall employability. UMB 'negative judgement' predicted discrimination for starting salary; and authoritarianism predicted likelihood of selecting an obese applicant and candidate ranking. Finally, physical appearance evaluation and appearance orientation predicted obesity discrimination for predicted career success and leadership potential, respectively.

CONCLUSION: Self-report measures of prejudice act as surrogates for discrimination, but there has been no empirical support for the validity of explicit measures of anti-fat prejudice. Here, the UMB, authoritarianism, and physical appearance investment predicted obesity discrimination. The present results provide support for the use of these measures by researchers seeking to assess, understand, and reduce anti-fat prejudice and discrimination.

INTRODUCTION

Alongside the increasing rates of overweight and obesity in the population[1] is a somewhat counterintuitive increase in prejudice and discrimination toward people perceived as being fat.[2,3] Prejudice, a preconceived adverse judgment or opinion, is greater when directed at those perceived as fat (anti-fat prejudice) than when directed at other groups commonly targeted for mistreatment (that is, Muslims and homosexuals).[4] Anti-fat prejudice is prevalent in education, health and employment settings.[5–7] For example, Puhl et al.[8] found that dieticians, who are tasked with helping obese clients, displayed high levels of anti-fat prejudice that may result in discriminatory practices and interactions. Similarly, Schwartz et al.[9] found that health professionals and obesity researchers attending an international conference on obesity displayed significant levels of implicit weight stigma. Anti-fat prejudice appears so ingrained and normative that parents have been shown to discriminate, whether consciously or unconsciously, when providing financial support to their overweight daughters for college.[10] Self-reported experiences of obesity discrimination are also common among obese individuals and are associated with problems such as depression, psychiatric symptoms, low self-esteem, and poor body image.[11] Importantly, obesity discrimination, the posited behavioral manifestation of anti-fat prejudice, has increased by 66% over the past decade with prevalence rates now comparable to race-based discrimination.[2,12] Surprisingly, there is little legal recourse available to combat obesity discrimination, whereas many other targets of discrimination are protected by legal deterrents.[13]

As with other emerging fields, the literature in this area has largely been descriptive,[13] observing and documenting the occurrence of prejudice. Much less research has sought to explicate the reasons for anti-fat prejudice. The limited research seeking to understand the reasons for anti-fat prejudice suggests that attributions regarding the causes of obesity (for example, lack of personal control, laziness, gluttony), and stereotypical characteristics of the obese individual (for example, smelly, stupid) may underpin anti-fat prejudice.[13] However, recent research suggests that constructs such as disgust,[14] and importance placed on physical appearance (for example, body image) also underpin anti-fat prejudice.[15,16] For example, Vartanian[14] found that disgust was related to a relative dislike of fat people

[1]Behavioural Studies, Monash University, Melbourne, Victoria, Australia; [2]School of Psychological Sciences, University of Manchester, Manchester, UK; [3]Department of Psychology, University of Hawaii at Manoa, Honolulu, HI, USA and [4]Psychology Department, University of Otago, Dunedin, New Zealand. Correspondence: Dr KS O'Brien, Behavioural Studies, Monash University, Caulfield East Campus, PO Box 197, Melbourne, Victoria VIC3145, Australia. Email: kerrykez@gmail.com

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compared with thin people. O'Brien et al.[15,16] also found that higher ratings of participants' own physical attractiveness and greater perceived importance of physical appearance predicted greater anti-fat prejudice.

As with other prejudices such as racism, sexism, and homophobia, anti-fat prejudice has been found to be associated with authoritarian personality and social dominance orientation (SDO).[17,18] For example, Crandall found that anti-fat attitudes were strongly associated with right-wing authoritarianism, or the belief in the importance of strong moral values and the rule of law.[18] Similarly, SDO, or the belief in societal hierarchies and the innate superiority and dominance of some over others, has also been found to be associated with anti-fat prejudice.[5] Indeed, prejudice may be so practiced by people high in SDO that they may automatically display prejudice and discrimination against those seen as inferior or deviant for the group norm.

Although there is a growing body of research describing the nature and extent of anti-fat prejudice, there is a noted paucity of work on the relationship between measures of anti-fat prejudice and obesity discrimination.[13,19] Measures of prejudice merely assess prejudicial attitudes and beliefs, rather than behaviors; in contrast, measures of discrimination assess behaviors that may harm obese individuals in real-world settings. We are aware of only two studies that directly tested whether implicit and explicit anti-fat prejudice measures predict obesity discrimination.[20,21] Only one of these studies found a significant link ($r = 0.19$) between an implicit anti-fat prejudice measure (a lexical decision task) and subtle discrimination (seating distance from a hypothetical obese person),[21] with no studies showing a link between explicit measures of anti-fat prejudice and obesity discrimination. Thus, there is little evidence supporting the predictive validity of anti-fat prejudice measures, or indeed of other potential predictors of obesity discrimination (for example, authoritarianism, SDO).

The majority of studies examining discriminatory behavior against people with obesity have focused primarily on mistreatment in employment settings.[22] Experimental research on employment discrimination has typically involved presenting participants with resumes of job candidates on which researchers manipulate the candidate's weight by providing written, verbal, or pictorial (photograph or video footage) representations that clearly identify whether the candidate is overweight/obese or not. This research shows that people with obesity are less likely to be employed,[23] are assigned less desirable tasks,[24] and receive lower salaries[25] than non-fat job candidates and colleagues. However, these studies have not administered measures of anti-fat prejudice to confirm the predictive validity of these attitudinal scales. In addition, the relationship between SDO and authoritarianism and obesity discrimination has never been examined.

Research on the link between anti-fat prejudice, and obesity discrimination is important, as discrimination is the putative behavioral outcome of prejudice. Crucially, interventions designed to reduce obesity discrimination in groups high in anti-fat prejudice assess changes in measures of anti-fat prejudice as a presumed surrogate for discrimination.[19,26] Thus, it is important to show whether measures of anti-fat prejudice do predict obesity discrimination. In addition, the relationship between psychosocial predictors (SDO, authoritarianism) of other forms of discrimination (for example, racism, sexism) have not been explored in obesity discrimination, which may be an important step in the theoretical development of obesity stigma research. The present study aimed to first test whether prejudicial attitudes and discriminatory behaviors' against obese people are related. A second aim was to examine whether other personal ideologies are also related to obesity discrimination. We used an innovative paradigm to establish individual levels of obesity-based employment discrimination. We expected that the new multidimensional measure of anti-fat prejudice (that is, the universal measure of bias (UMB)) would predict obesity discrimination. On the basis of the previous research showing the role of SDO, authoritarianism, and personal investment in physical appearance in race and gender-based discrimination, we expected these constructs would also be related to obesity discrimination.

MATERIALS AND METHODS

Participants
One hundred and two undergraduate college students (80% female) with a mean (M) age of 20.17 and standard deviation (s.d.) of 4.63 years participated in the study as part of a course requirement. BMI ($kg\,m^{-2}$; $M = 22.9$; s.d. $= 4.03$) was calculated from self-reported heights and weights. Eighty-two percent of the participants identified themselves as Caucasian, 10% as Asian and 8% as Polynesian.

Materials
A first questionnaire administered for the study collected demographic information (that is, age, gender, ethnicity, weight, and height) and contained distracter questions designed to boost the deceptive guise for the study. The distracter questions came from a rational thinking scale, and socially desirable responding and self-esteem scales.

To establish obesity discriminatory behavior we used a similar methodology as used in a previous work on employment discrimination.[20] A questionnaire package containing six two-page booklets was used to assess discrimination. Each booklet contained a candidate resume, candidate photo, and personnel suitability rating scale. The bogus resumes were constructed as equivalent in terms of candidate age, degree qualifications, work history (career experience and area of expertise), and self-described personal qualities. Each of the resumes was formatted differently, with different font and/or typesetting. Resumes were pretested ($n = 18$) for equivalence (for example, qualifications, experience, and personal and professional qualities) using a 7-point Likert scale. Scores for each resume were pooled and a univariate analysis of variance was conducted to assess differences across resumes. No significant differences were found between resume ratings ($P > 0.05$).

Each of the resumes had a $4 \times 4\,cm^2$ passport-style photograph of a bogus candidate (shown from the waist up) attached to the top right-hand corner of the page. To control for facial appearance, before (presurgery) and after (postsurgery) photos of female bariatric surgery patients were used. From 132 sets of female before and after bariatric surgery photos found on the internet, we selected 30 sets that were of similar age, race (European), clothing style, and BMI. From these 30 sets, we removed those that differed greatly between pre-/postsurgery pairs in hair, clothing styles, or facial appearance or attractiveness. Six sets of pre- and postsurgery target photos (12 different photos) were finally selected and rated ($n = 18$) for equivalence in clothing, facial expression, body size, age, and attractiveness within their respective pre- and postsurgery groups of photos. No differences were found between ratings of the six targets pre- and postsurgery photos. Pre- and postsurgery photos were all taken within 24 months of each other. Targets' BMI's, as reported on their internet sites, ranged from 37.8 to 41.1 presurgery and 22.4 to 24.4 postsurgery. Age of the targets presurgery ranged from 29 to 32 years. All photo targets were contacted and gave permission for their photographs to be used in this study. Two corresponding photos were attached to each resume pair: one of the targets in their presurgery 'obese' state, and another of the same targets' postsurgery 'non-fat' photo (see O'Brien et al.[20] for more details of stimuli).

The two identical sets of resumes with the exception of the target photos attached to them were constructed. On two of the resumes in each set, we attached a presurgery (obese) female's photo. Photos of these same targets' at postsurgery (non-fat) were attached in the other set of resumes. The remaining two resumes in each set of six had two non-fat postsurgery targets. Thus, in each of the final sets of resumes there were two obese target photos and four non-fat postsurgery target photos, all depicting different individuals. Assignment of photographs to resumes was counterbalanced.

Obesity discrimination. The second page of the candidate resume and personnel selection booklet contained five questions with 6-point Likert scales (candidate employment ratings) designed to assess obesity-related discriminatory behavior. The participants were asked four questions to rate the candidate on: their leadership potential, 'Is this someone people in the

company will follow? (1 = low leadership potential, 6 = high leadership potential'); predicted success, 'What do you predict the long-term career success of this candidate will be?' (1 = very unsuccessful, 6 = very successful); likelihood to select, 'Although you would not make the final decision in a personnel selection, how likely would you be to select this candidate for this position?' (1 = very unlikely, 6 = very likely); and salary, 'What would you recommend as a starting salary offer for this candidate if they were to be employed?' (1 = $70 000, 2 = $75 000, 3 = $80 000, 4 = $85 000, 5 = $90 000, 6 = $95 000). Higher scores indicate better candidate evaluations. Participants were also asked to rank the candidates in order of overall quality from 1 to 6 (1 = best, 6 = worst).

Anti-fat prejudice. The third questionnaire contained the UMB.[4] The UMB is a 20-item scale, with each item rated on a Likert scale (1 = strongly agree to 7 = strongly disagree). Higher scores indicate stronger negative attitudes against the specified target. The scale was developed as a universal measure to assess bias against different targets, including obese individuals. The UMB has good convergent validity and internal consistency (Cronbach's α ranging from 0.87 to 0.91) and a four-factor structure that includes: attraction (for example, 'I find fat people pleasant to look at'); negative judgment (for example, 'Fat people are sloppy'); distance (for example, 'I don't enjoy having a conversation with a fat person'); and equal rights (for example, 'Special effort should be taken to make sure that fat people have the same rights and privileges as other people'). In the present sample, Cronbach's α across these four subscales ranged from 0.80 to 0.85. A total UMB score was computed as the mean of all items.

Authoritarianism. Authoritarianism was measured using Zakrisson's[27] revised version of the Right Wing Authoritarianism Scale. A 9-point Likert scale was used to assess agreement (1 = very strongly disagree, to 9 = very strongly agree) with items (for example, 'If the society so wants, it is the duty of every true citizen to help eliminate the evil that poisons our country from within'). In the present study Cronbach's alpha for the scale was acceptable (0.79). Higher scores indicate greater authoritarianism.

Social dominance orientation. The 14-item SDO scale[17] was used to measure participants' beliefs in the superiority and dominance of some people over others. A 9-point Likert scale was used to indicate participants' agreement (1 = very strongly disagree, to 9 = very strongly agree) with statements such as 'Some people are just inferior to others' (Cronbach's alpha = 0.83). Higher SDO scores indicate greater belief in the innate superiority and dominance of some over others.

Physical appearance evaluation and investment. The Multidimensional Body-Self Relations Questionnaire-Appearance Scales[28] were used to assess participants' self-appearance evaluation and orientation. Participants respond on a scale of 1–5 their disagreement/agreement with item statements such as, 'My body is sexually appealing' (evaluation), and 'It is important that I always look good.' Cronbach's alpha for the scales was 0.84 and 0.87, respectively. Higher scores on this scale indicate greater satisfaction with one's physical appearance, and a belief in the importance of physical appearance.

Procedure

We advertised the study as personnel selection study and told prospective participants that we were examining whether intuitive vs analytical decision makers are better at making real decisions in a time pressured personnel selection task. The experimenter described the bogus nature of the study to participants via a PowerPoint presentation. Within this presentation, the experimenter introduced the typical role of a human resource personnel selection specialist (employment recruiter). Participants were then told that, 'We are going to present you with six resumes of applicants which you are going to have to evaluate and make employment recommendations on, according to five personnel selection criteria.'

Following the study introduction, the demographic and distracter items questionnaire was administered. Participants were then shown the employment advertisement (a modified version of a real employment advertisement) for which candidates were apparently applying. The position was for a midlevel managerial position in a large department store chain. The second questionnaire booklet (resume package) was then handed out. The assignment of resume packages was double blind, as packages were premade and sealed in unlabeled brown envelopes, and

distributed randomly. Participants were given the same amount of time to preview all six resumes, after which they were required to evaluate and rate all six candidates on the five candidate suitability scales. Following completion of the candidate suitability rating task and collection of the resume packages, participants were asked to write down what they thought the study was about. Participants were then given the final questionnaire booklet to complete. The study was approved by the local Institutional Review Board (ethics panel).

Statistical analyses

As we were interested in the differences between targets (employment candidates) when they were presented as either obese or non-obese, we restricted our analysis to the participants' ratings of these targets. Thus, the participants' ratings are of the four targets presented as both obese and non-obese. To increase reliability of the employment discrimination measure, we created a summary variable (*total employment rating*) comprised of the mean of the four comparable rating scales (that is, *leadership, predicted success, likelihood to select, salary*; Cronbach's α = 0.86). As one-way analyses of variance across all six obese targets and across all six non-obese BMI targets revealed no differences within weight categories on demographics and prejudice measures, data were collapsed within target weight categories. Differences in mean participant ratings were examined for obese vs non-obese targets on each of the five candidate rating criteria using simple *t*-tests. Obesity employment discrimination scores were created for each participant by computing a difference score for each of the individual employment rating scales (ratings of non-obese targets minus obese targets) and for total employment rating. Pearson's correlations coefficients were used to examine the relationships between obesity employment discrimination, UMB scales, SDO, authoritarianism, and physical appearance evaluation and orientation scores. Variables with significant correlations with obesity discrimination were subsequently entered in hierarchical regression models to examine whether they predict obesity employment discrimination scores. Confidence intervals (95% CIs) are reported for significant β values.

RESULTS

Complete data on the outcome measures were provided by 98 participants. Preliminary screening found that three participants reported that they thought the study was about 'fat/people with obesity.' The results reported here are from the remaining participants ($n = 95$). Preliminary analysis of gender differences showed that males reported significantly greater (all P values <0.05) anti-fat prejudice than females for three of the UMB subscales (that is, attraction, males = 5.64, s.d. = 1.09, females = 4.86, s.d. = 1.06; negative judgement, males = 2.90, s.d. = 1.20, females = 2.21, s.d. = 1.00; equal rights, males = 3.29, s.d. = 1.63, females = 2.53, s.d. = 1.09), and for UMB total (males = 3.71, s.d. = 0.66, females = 3.16, s.d. = 0.61). There were no significant gender differences for physical appearance evaluation or orientation, and participant age was not significantly correlated with any of the independent or dependent variables.

Obese targets were rated significantly lower than non-fat targets across all candidate ratings, indicating obesity employment discrimination (Table 1). Obese targets received more negative responses on leadership potential, predicted success, likelihood to select, salary, total employment rating, and rank order of preference relative to other candidates.

Pearson's correlation coefficients for the UMB anti-fat prejudice scales, authoritarianism, SDO, appearance evaluation and orientation, and obesity employment discrimination measures are displayed in Table 2. Several significant positive associations were found between UMB scores and obesity employment discrimination. Higher UMB negative judgement scores were associated with greater salary-based discrimination. Similarly, higher UMB distance scores were associated with greater obesity discrimination on leadership, salary, and total employment ratings. Significant relationships were found between authoritarianism and SDO, and several of UMB anti-fat prejudice scales. Higher authoritarianism and SDO scores were associated with greater levels of anti-fat

prejudice. Greater authoritarianism was also associated with lower likelihood of selecting an obese target for the job, and lower overall ranking of obese candidates. Finally, the higher the participants' appearance self-evaluation, the greater their obesity discrimination for predicted career success. Similarly, a greater belief in the importance of physical appearance was associated with a lower rating of obese targets' leadership potential.

Hierarchical regression models were used to examine whether the UMB scales, authoritarianism, and the physical appearance constructs, predicted obesity employment discrimination scores. Gender and BMI were entered in a first block in regression models, and independent variables with significant correlations with the respective obesity employment discrimination dependent variable (see Table 2) were entered in a second block. Obesity employment discrimination scores were entered as dependent variables. After accounting for gender and BMI, greater bias on the UMB distance subscale was a significant predictor of greater obesity discrimination on leadership ($B = 0.26$, s.e. $B = 0.13$, $\beta = 0.21$, 95% CI: 0.002–0.51), salary ($B = 0.30$, s.e. $B = 0.15$, $\beta = 0.21$, 95% CI: 0.004–0.59), and total employment ratings ($B = 0.24$, s.e. $B = 0.12$, $\beta = 0.21$, 95% CI: 0.01–0.49). In addition, greater UMB negative judgement ($B = 0.25$, s.e. $B = 0.09$, $\beta = 0.29$, 95% CI: 0.07–0.44)

predicted greater salary discrimination. Greater authoritarianism was a significant predictor of greater obesity discrimination in candidate selection (likelihood to select; $B = 0.04$, s.e. $B = 0.02$, $\beta = 0.22$, 95% CI: 0.002–0.07), and candidate ranking ($B = -0.06$, s.e. $B = 0.03$, $\beta = -0.25$, 95% CI: -0.11 to -0.01). Finally, higher appearance evaluation was a significant predictor of greater obesity discrimination relating to predicted career success ($B = 0.36$, s.e. $B = 0.15$, $\beta = 0.28$, 95% CI: 0.07–0.66), and greater appearance orientation predicted more discriminatory ratings of leadership potential ($B = -0.27$, s.e. $B = 0.13$, $\beta = -0.21$, 95% CI: -0.54 to -0.01).

DISCUSSION
The present study sought to address a gap in the anti-fat prejudice literature by examining relationships between measures of anti-fat prejudice and psychological correlates (that is, personal ideology, personality, physical appearance), and obesity discrimination. Discrimination against fat targets was significant for all measures related to employment. Two subscales of the UMB anti-fat prejudice measure were significantly related to obesity discrimination in regression models, even when controlling for gender. Specifically, higher UMB distance scores (anti-fat prejudice) predicted the allocation of a lower starting salary, lower perceived leadership potential, and overall employability rating for fat candidates vs non-fat candidates. In addition, the UMB negative judgement subscale predicted the allocation of a lower starting salary for fat candidates vs non-fat candidates.

Three of the proposed correlates of several forms of discrimination (for example, racism) were found to also be related to obesity discrimination. Consistent with previous work,[18] higher authoritarianism was associated with less likelihood of employing obese targets, and poorer ranking of fat targets overall. Although previous work has shown that investment in physical appearance is related to anti-fat prejudice,[15] the present study did not find this relationship, but it is the first to demonstrate that physical appearance investment is related to obesity discrimination. This latter finding suggests that discrimination against people with obesity may be partly due to the beholder's physical appearance investment rather than known skills and accomplishments of the obese target. Although this is concerning, it is perhaps not surprising. There is a wealth of research showing that people perceived as physically attractive are treated more positively in

Table 1. Mean (s.d.) participants ratings for non-fat vs obese targets on each of the candidate employment suitability criteria

Rating criteria	Non-fat	Obese	t-Value (d.f. = 94)	P-value	Effect size[c]d'
Leadership[a]	4.10 (0.57)	3.70 (0.77)	4.68	0.0005	0.60
Predicted success[a]	4.05 (0.62)	3.69 (0.83)	3.89	0.001	0.50
Likelihood to select[a]	3.81 (0.57)	3.28 (0.88)	5.02	0.0005	0.70
Salary[a]	2.76 (0.90)	2.37 (0.98)	4.16	0.001	0.41
Total employment Rating[a]	3.66 (0.49)	3.28 (0.75)	4.80	0.0005	0.61
Ranking[b]	3.24 (0.56)	4.09 (1.03)	−5.57	0.0001	1.07

[a]Higher scores denote more positive ratings. [b]A higher score denotes a lower ranking. [c]Cohen's d', small effect ≈ 0.2 moderate effect ≈ 0.5, large effect $\approx 0.8+$.

Table 2. Pearson's product moment correlations between anti-fat prejudice, AUTH, SDO, appearance evaluation, appearance orientation, and discrimination non-fat vs obese target difference scores for candidate suitability ratings

Variable	Attraction	Negative judgement	Distance	Equal right	AUTH	SDO	Appearance evaluation	Appearance orientation
BMI	—							
Attraction	−0.22*	—						
Negative judgement	0.08	0.24*	—					
Distance	−0.01	−0.18*	0.30**	—				
Equal rights	0.05	0.25*	0.45**	0.04	—			
AUTH	−0.03	−0.09	0.28**	−0.10	0.07	—		
SDO	0.08	0.05	0.45**	0.16	0.43**	0.41**	—	
Appearance evaluation	−0.38**	0.16	0.08	0.11	−0.03	−0.09	−0.12	—
Appearance orientation	−0.02	0.05	0.10	0.05	0.10	0.15	0.07	−0.11	—
leadership	−0.04	−0.02	0.13	0.21*	−0.08	0.04	0.05	0.13	−0.21*
Predicted success	0.05	−0.03	0.15	0.17	−0.07	0.07	0.05	0.21*	−0.08
Likely to select	−0.08	−0.04	0.10	0.13	−0.15	0.22*	0.13	0.15	−0.04
Salary	−0.06	0.03	0.27**	0.21*	0.18	0.18	0.19	0.01	−0.02
Total employment rating	−0.04	−0.02	0.19	0.21*	−0.02	0.18	0.13	0.15	−0.10
ranking	0.08	0.18	−0.10	−0.11	0.03	−0.25*	−0.06	−0.13	0.10

Abbreviations: AUTH, authoritarianism; SDO, social dominance orientation. *P < 0.05. **P < 0.01.

most domains of life, and it follows that perceivers who place greater value on physical attractiveness would penalize obese individuals more for their physical appearance.[29] It is worth positing that the relationship between disgust and anti-fat prejudice may be related to negative cognitions about the physical appearance of fat people, particularly those who are medically defined as morbidly obese.[14,30] That is, the physical appearance of fat person may evoke a feeling/emotion of disgust (perhaps automatic gut feeling) perhaps because it contravenes societal norms and personal orientation around beauty. This disgust, in turn, results in negative attributions and thoughts (conscious) about fat people. Although we are unaware of any research directly testing this hypothesis, recent research by Lieberman et al,[30] examining pathogen, moral, and sex-related disgust, showed that the greatest disgust of fat people was elicited to the sex-related item '… how disgusting would it be to have sex with someone who was obese?'(p.3). Research examining these relationships is important and needs sufficient samples sizes to explore these relationships in more complex statistical models (for example, path analyses).

The present study is the first to show a relationship between explicit self-report measure of anti-fat prejudice (UMB) and obesity discrimination. Two previous studies showed no relationship between another measure of anti-fat prejudice and discrimination in social[20] and employment[21] domains, and only one previous study found a small relationship between a measure of implicit anti-fat prejudice and discriminatory behavior.[21] Research on anti-fat prejudice has mostly relied on attitudinal measures, however, such measures do not provide evidence for the behavioral manifestation of prejudice; discrimination. Therefore, it is important to verify that measures used in the field correspond to discriminatory behavior against heavier individuals. For example, most anti-fat prejudice reduction studies use these measures to determine the success of interventions.[19,26] Therefore, the relationship between prejudice and discrimination shown here is an important finding for the field. The results for the UMB found here suggests that this measure might be a more useful tool for screening likely discriminatory behavior than previous explicit measures. The significant correlations between UMB negative judgment and SDO and authoritarianism, and between UMB equal rights and SDO, provide additional construct validation of the UMB. Few studies have assessed attitudes about equal rights for obese individuals, but the present results suggest that beliefs in the innate superiority of some individuals over others is related to the perception that obese individuals deserve fewer privileges and opportunities than non-fat individuals.

Notwithstanding the novel findings, there are limitations to the study. The present study assessed obesity discrimination against only female targets. Although the logic for such an approach is supported by research showing that females typically bear the brunt of anti-fat prejudice,[12] it is important that research assesses whether the prejudice measures used here are also valid predictors of discrimination against male targets. Indeed, one might expect that the physical appearance-related measures may be related to discrimination against only obese females, as societal expectations regarding physical attractiveness are weighted more heavily on females than males.[29] In addition, because the sample comprised university students (20% male) with only 20% reporting a BMI in the overweight/obese range, the sample is not representative of the general population. Although research shows prejudice is greater in the general population than in university student samples,[31] it is important to examine the validity of measures in more realistic work settings. However, conducting such research has significant logistical challenges such as maintaining deception and associated ethical concerns.

The study shows that a newly developed measure of anti-fat prejudice can predict obesity discrimination in an employment task. In addition, the study shows that authoritarianism and physical appearance-related constructs are associated with obesity discrimination. These findings may be important to anti-fat prejudice researchers seeking to use prejudice measures as surrogates for discrimination, the purported behavioral outcome of prejudice. Similarly, the current findings may inform anti-fat prejudice interventionists who depend on attitudinal measures to assess the success of stigma reduction programs.[32]

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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