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Associations of Weight Bias with Disordered Eating among Latino and White Men

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Abstract

Objective—This study examined associations of different aspects of weight bias, which can include negative attitudes towards and beliefs about obesity, with eating/weight-related psychopathology.

Methods—Participants ($N=544$) were White ($n=376$) and Latino ($n=168$) men living in the United States who completed an online battery of established measures of weight bias (both attitudes toward and beliefs about obesity) and eating/weight-related psychopathology.

Results—Among White men, negative attitudes toward obesity were associated significantly with dietary restraint, overvaluation of weight/shape, and body dissatisfaction, whereas among Latino men, negative attitudes toward obesity were associated significantly with overvaluation of weight/shape. Among White men, lower weight-biased attitudes were associated with decreased use of compensatory behaviors and lower weight-biased beliefs with decreased overeating and binge eating. Among Latino men, neither attitudes about people with obesity nor beliefs about the controllability of obesity were associated with eating-disordered behaviors.

Conclusions—Weight bias was related to eating/weight-related psychopathology in men, with fewer associations observed among Latino men than White men. This highlights that associations with psychopathology may vary by ethnicity. Future research is needed to clarify the mechanism by which weight-biased attitudes and beliefs are associated with eating/weight-related psychopathology and why this might differ between White and Latino men.

Keywords

weight stigma; body image; disordered eating; men; ethnicity; Latino

Introduction

Weight bias, which includes negative attitudes and beliefs held about individuals with obesity based on their weight, is pervasive (1). The prevalence of obesity in the United

States and worldwide has increased over the past few decades, and so has bias against individuals with obesity (1). Weight bias occurs among racially/ethnically-diverse adults (2, 3) and adults across the weight spectrum (4, 5). Indeed, individuals with overweight or obesity are not protected by positive in-group bias (6) unlike other stigmatized groups (7). Weight bias and weight-related discrimination experiences are associated with many negative medical (8) and psychosocial (9) sequelae including eating-disorder behaviors, impaired weight loss outcomes, and changing health care providers (5, 10).

Prior research, which has focused on examining group differences in weight bias based on gender, ethnicity, and eating behaviors, has yielded mixed findings. No differences have been found in weight bias between women who binge eat and those who do not (2, 11). No differences in weight bias based on gender, eating-disorder features, or ethnicity have been found among young adults (4). Similarly, Latina women with obesity have comparable levels of weight bias as compared with samples of primarily White women (2). However, ethnic identity is directly associated with implicit weight bias, or unconscious beliefs that predict discriminatory behavior due to weight, in White women, while inversely associated with implicit weight bias in Black women (12). Although weight biases are strong in both men and women, men demonstrate stronger anti-fat attitudes (3).

The context of mixed findings between groups highlights the need to understand how weight bias might be associated with eating-disorder psychopathology *within*-groups. The American Psychological Association guidelines for multicultural research encourages *within*-group studies to gain in-depth knowledge, whereas between-group studies can suggest areas of difference (13). As variability within any one group is generally thought to be greater than variability between groups, studies that focus on within-group associations can help decrease stereotypes that presume members of a particular group have uniform experiences (14, 15).

Despite high rates of excess weight in White and Latino men, scant research has examined how weight bias relates to eating/weight-related psychopathology *within*-groups of men. Examining such within-group variability, which might provide clues about mechanisms to explore, is critical to move the field beyond descriptive research documenting between-group differences, as reported for example regarding weight and body size preferences *between* men and women. Men with overweight or obesity are less likely than women to desire weight loss (16). While women in North American culture often revere a slender body type, drive for leanness is similar across genders (17). Men, however, frequently desire to have a tall and more muscular frame (18). Indeed, a curvilinear relationship exists between men's body mass index (BMI) and body dissatisfaction, such that those with the lowest and highest BMIs report the greatest dissatisfaction (19). Thus, the relationship between eating/weight-related psychopathology and body size appears more nuanced in men although rates of body dissatisfaction and drive for muscularity remain high (20). Therefore, it is critical to understand how thinking about weight, including *both* attitudes towards weight bias and beliefs about the controllability of weight, relate to men's eating-disordered behaviors and excess weight.

Similarly, limited research exists on the association of weight bias and eating/weight-related psychopathology in Latinx individuals, although some studies have compared body image between White and Latino men. In general, Latino men's body image does not differ from that of White men (21), although studies do suggest that Latino men might have higher body satisfaction than men from other ethnic groups (22, 23). Nevertheless, regarding eating behaviors and weight loss strategies, Latino men are generally more likely to use extreme dieting methods and to engage in binge eating than White men (21). Research has also shown some potential cultural influences on weight bias among Latino men, although this work did not examine associations of weight-related attitudes with individuals' eating/weight-related behaviors. Qualitative research suggests that the concept of *machismo* (exaggerated sense of masculinity) may lead Latino men to view people with overweight or obesity as being "weak" or "out of control" (24), possibly contributing to greater weight bias. It is also possible that other important Latinx cultural concepts such as *fatalismo* (fatalism), *sobreponerse* (self-suppression), or *simpatía* (focus on agreement and conflict reduction) (25, 26), might influence the extent to which Latino men hold weight-biased attitudes or engage in eating-disordered behavior, although the direction of the possible associations between these constructs remains unclear.

Given these potential ethnic and sex differences in body-image attitudes and different cognitive aspects of weight bias, and the associations of weight bias with negative health outcomes, it is not currently known whether weight bias is associated with eating/weight-related psychopathology among men in general, and Latino men in particular. Recent epidemiologic research has documented that eating-disorder psychopathology is distributed across both Latinx and White groups (27). It is important to examine possible associations of weight stigma with eating-disorder behaviors, such as vomiting, laxative misuse, or compulsive exercise, because such behaviors are motivated by attempting to control or lose weight. Beliefs that weight is controllable might be related to blaming an individual for having excess weight, which is a form of weight stigma. This study aimed to extend the literature on weight bias by focusing on Latino and White men across the weight spectrum. Based on the emerging weight bias literature, we hypothesized that negative attitudes and beliefs about people with obesity would be associated with disordered-eating and body-image concerns. Because of potential differences between White and Latino men, we ran parallel *within*-group analyses of White men and in Latino men examining associations between weight-biased attitudes and beliefs and disordered eating and body image concerns, as well as between-group comparisons to assess whether the White and Latino men in our sample differed in weight stigma or eating disordered pathology.

Methods

Participants

Survey respondents ($N=544$) were recruited from Amazon's Mechanical Turk website to complete an online survey on opinions about weight and eating. Individuals responded to an advertisement to "share your opinions about eating, weight, and health" ("encuesta sobre la alimentación, el peso y la salud") and were eligible to participate if they spoke Spanish or English, were adults, and currently resided in the United States. Participants were included

in the current study if they completed weight stigma measures and identified as male and Latino ($n=168$) or non-Hispanic White ($n=376$).

Mechanical Turk is an online platform that is increasingly popular for participant recruitment because it yields high-quality and convenient data. Mechanical Turk has been used in psychological and psychiatric research (28), including research on weight stigma (29). Mechanical Turk samples have greater demographic variability and are more geographically diverse than undergraduate samples (30, 31, 32). Psychometric properties of measures completed by participants recruited from Mechanical Turk do not differ in reliability or validity from participants recruited using traditional sources (30). Mechanical Turk allows for quality control from the platform as well as validity checks from within the survey to review response quality. In the current study, we required that each participant's approval rating on Mechanical Turk exceeded 85%, and also included three items throughout the survey to assess effort and attention, in line with recommendations (31). Participants were excluded if they did not provide correct answers to validity items.

Participants were between 19 and 70 years old (White: $M=35.51$, $SD=11.27$; Latino: $M=32.93$, $SD=10.05$, $p=.011$). Participants were highly educated on average and education did not differ significantly between White and Latino men ($p=.138$): high school or less (White: $n=60$, 16.0%; Latino: $n=23$, 13.7%), some college (White: $n=98$, 26.1%; Latino: $n=58$, 34.5%), college degree (White: $n=142$, 37.8%; Latino: $n=63$, 37.5%), or more than a college degree (White: $n=76$, 20.2%; Latino: $n=24$, 14.3%).

This study received approval from the Yale Institutional Review Board; all participants provided electronic informed consent.

Measures

Body Mass Index (BMI)—BMI (kg/m^2) was calculated using participants' self-reported weight and height.

Weight Bias—Participants completed the “Attitudes Towards Obese Persons” (ATOP) scale (33), which assessed weight-biased attitudes including participants' ideas about people with obesity broadly, for example, whether individuals with obesity are “untidy.” Higher scores are indicative of more positive attitudes towards people with obesity. Participants also completed the “Beliefs About Obese Persons” (BAOP) scale (33), which assessed the extent to which participants believe that obesity is within individuals' control or responsibility, for example, that obesity stems from a “lack of willpower.” Higher scores are indicative of stronger belief that obesity is *not* under the control of a person with obesity. Spanish versions have been used with clinical samples of Latinx patients with obesity and binge-eating disorder (2). Previous work reported the ATOP to have a reliability range between $\alpha=.80$ and $.84$ ($\alpha=.67$ in Spanish; [3]), and BAOP between $\alpha=.65$ and $.82$ (33). The measures yielded internally-consistent scores among White ($\alpha=.84$, $\alpha=.70$) and Latino ($\alpha=.72$, $\alpha=.64$) men in the current study.

Eating/Weight-Related Psychopathology—The Eating Disorder Examination-Questionnaire (EDE-Q) measures eating-disorder psychopathology over the past 28 days

(34). The Spanish version has been validated in a nonclinical sample of Latinx individuals (35). The current study used a brief version of the EDE-Q, which has three subscales (Dietary Restraint, Overvaluation, and Dissatisfaction) and a global severity scale. EDE-Q subscale scores range from 0–6, with higher scores indicative of greater severity. The brief version has been shown to demonstrate superior psychometric properties in nonclinical and clinical studies compared with those from the original measure (36, 37). In the current sample, items yielded internally consistent scales for both White ($\alpha=.89$) and Latino ($\alpha=.88$) men. Frequency of objective overeating episodes, objective binge-eating episodes (eating an unusually large amount of food and feeling a subjective sense of loss-of-control while eating), and compensatory behaviors (vomiting, laxative misuse, and/or driven exercise) were also assessed and categorized as “recurrent” when episodes occurred at least 4 or more times within the past 4 weeks. Individuals who endorsed a score of 4 (“moderately”) or higher on either the overvaluation of weight or the overvaluation of shape item were categorized as having clinical levels of overvaluation. This corresponds to the criteria and definition used in previous work (e.g., 38).

Statistical Analyses—Continuous variables were found to meet assumptions of normality prior to analyses. Weight stigma and eating/weight-related psychopathology were compared between White and Latino men. Pearson correlations examined associations of weight-biased attitudes and beliefs with eating/weight-related psychopathology within each group, and the magnitude of correlations was compared between White and Latino men using Fisher’s *r*-to-*z* test. Logistic regressions examined whether attitudes and beliefs about people with obesity were associated with recurrent overeating, binge eating, and compensatory behaviors, clinical levels of overvaluation of shape/weight, and obesity.

Results

Table 1 summarizes means, standard deviations, and between-group (White men compared with Latino men) analyses. There were no significant differences between groups in weight stigma and eating/weight-related psychopathology with the exception of binge eating: a larger proportion of Latino men (18.5%) reported recurrent binge eating compared to White men (7.2%). Associations of weight-biased attitudes and beliefs with disordered eating, including comparisons of correlation magnitude between White and Latino men, are summarized in Table 2. More positive attitudes/beliefs towards people with obesity were negatively associated with eating/weight-related psychopathology, with the exception of the association between attitudes and dietary restraint in Latino men. There were no significant differences between groups in the magnitudes of the correlations between variables.

Among White men, 25.3% ($n=95$) reported overeating, 7.2% ($n=27$) binge eating, and 18.1% ($n=68$) engaging in compensatory behaviors (vomiting, laxatives, and/or driven exercise). Clinical overvaluation of weight or shape was reported by 45.2% ($n=170$) of White men. Among White men, the average BMI was 27.52 ($SD=6.12$); 26.5% ($n=99$) had a BMI in the obesity range.

Among Latino men, 32.1% ($n=54$) reported overeating, 18.5% ($n=31$) binge eating, and 21.6% ($n=36$) engaging in compensatory behaviors. Clinical overvaluation of weight or

shape was reported by 43.5% ($n=73$) of Latino men. Among Latino men, the average BMI was 28.21 ($SD=5.90$); 32.7% ($n=53$) had a BMI in the obesity range.

Among White men, attitudes towards people with obesity was associated significantly with personal dietary restraint, overvaluation of weight/shape, and body dissatisfaction. Beliefs about people with obesity was also associated with dietary restraint, overvaluation of weight/shape, and body dissatisfaction.

Among Latino men, attitudes towards people with obesity was associated significantly with overvaluation of weight/shape, but not dietary restraint or body dissatisfaction. Beliefs about people with obesity was associated with dietary restraint, overvaluation of weight/shape, and body dissatisfaction.

Results of logistic regression models are summarized in Table 3. For both White and Latino men, neither attitudes nor beliefs about obesity was significantly associated with having a BMI in the obesity range (all $p>.37$). However, the pattern of the other relations differed for each ethnic group. Among White men, beliefs (OR: 0.610, 95% CI 0.431 – 0.864, $p=.005$) but not attitudes ($p=.628$) were associated with recurrent overeating. Beliefs (OR 0.533, CI 0.288 – 0.987, $p=.045$) but not attitudes ($p=.968$) were associated with binge eating. Attitudes (OR 0.569, CI 0.398 – 0.812, $p=.002$) but not beliefs ($p=.884$) were associated with compensatory behaviors. Both attitudes (OR 0.636, CI 0.482 – 0.840, $p=.001$) and beliefs (OR 0.576, CI 0.424 – 0.784, $p<.001$) were associated with clinical levels of overvaluation of weight/shape. A subsequent analysis that also included age as a variable revealed no changes in the patterns or results.

Among Latino men, neither attitudes ($p=.258$) nor beliefs ($p=.600$) were associated with overeating. Neither attitudes ($p=.267$) nor beliefs ($p=.662$) were associated with binge eating. Neither attitudes nor beliefs were associated with compensatory behaviors ($p=.073$ and $p=.423$). Attitudes (OR 0.517, CI 0.335 – 0.797, $p=.003$) but not beliefs ($p=.281$) were associated with clinical levels of overvaluation of weight/shape. A subsequent analysis that also included age as a variable revealed no changes in the patterns or results.

Discussion

Weight bias is pervasive in the United States. Experiences of being treated negatively or discriminated against because of weight are associated with medical problems, poor psychological health, and worsened weight-loss treatment outcomes. This study examined associations of weight bias with eating and weight-related behaviors in White men and in Latino men. The study examined within-group differences to understand the nature of associations in each group and is, to our knowledge, the first to examine associations of these attitudes and behaviors in men and in Latinx. Consistent with hypotheses, in White men, negative attitudes toward obesity were associated with the disordered eating characteristics of personal dietary restraint, overvaluation of weight/shape, and body dissatisfaction. In Latino men, negative attitudes toward obesity were associated only with overvaluation of weight/shape, although the lack of correlation between attitudes toward obesity and body dissatisfaction may have been related to sample size because the

magnitudes of the correlations did not differ significantly. Thus, associations of weight bias with eating/weight-related psychopathology were present, but with different patterns of significance in White and Latino men, which suggests the importance of understanding associations within each ethnic group.

Beliefs about the controllability of obesity were associated (small magnitude) with dietary restraint, overvaluation of weight/shape, and body dissatisfaction in both groups of men. This suggests that men who believe success in weight management is their personal responsibility may work to control their weight and shape and may feel dissatisfied with their body image if they are unable to do so. Because the majority of men with excess weight who try to lose weight are unable to maintain losses long-term (39), this might contribute, in some, to a self-defeating cycle that perpetuates negative affect (e.g., frustration, guilt, despair), body dissatisfaction, and eating-disordered behavior. Additionally, given differences in cultural norms between White and Latino men, particularly around ideas that outcomes may not be under one's own control (25, 40, 41), future research should examine how Latinx cultural constructs relate to a sense of personal responsibility over weight management.

We also hypothesized that men's attitudes and beliefs would be associated with their eating/weight-related behaviors. Eating-disorder behaviors, such as vomiting or the misuse of laxatives or compulsive exercise, are extreme behaviors that individuals engage in because they are motivated to control or lose weight, especially following episodes of binge eating. Among White men, more positive attitudes about obesity were associated with decreased likelihood of using extreme weight-compensatory behaviors regularly. Stronger beliefs in White men that obesity is not controllable were associated with decreased likelihood of recurrent overeating and binge eating. In Latino men, neither attitudes about obesity or beliefs about the controllability of obesity were associated with any of the eating/weight-related behaviors. Future research should examine whether interventions to reduce weight-biased attitudes and beliefs could augment current treatments for binge eating and overeating. Future research should also examine other factors that may be more predictive of eating/weight-related behaviors in Latino men, such as experiences of minority stress and acculturation. In line with escape theory, it has been suggested that disordered eating behaviors develop in ethnic minorities as a coping response to negative affect resulting from experiences of discrimination and the acculturation process (42). Indeed, these relationships have already been demonstrated in Latina women (43, 44) and research is needed to examine them in Latino men.

One of the limitations of this research was the use of self-report questionnaires. Future research might consider other measures of weight bias including, for example, cognitive tests or observational methods that might tap implicit or behavioral biases that might not necessarily be endorsed in the self-report (explicit) measures. We also did not measure acculturation, assimilation, or important Latinx cultural constructs (e.g., *machismo*, *fatalismo*) that may provide further insights into understanding variability in both the obesity-related attitudes/beliefs and eating-disorder features as well as their associations with each other. Similarly, we did not include male-oriented measures of body image (e.g., drive for muscularity) that would provide better understanding of how weight bias influences

eating/weight-related psychopathology in men. An additional limitation is the use of a self-selected sample from Mechanical Turk, which, while more diverse than college samples, still tend to be younger and more educated than national samples (45). It is also unclear whether individuals with obesity in this study attributed the weight-biased attitudes to themselves. Finally, given the smaller sample size of Latino men compared with White men, it is possible that certain nonsignificant findings in Latino men might have been due to insufficient statistical power.

In conclusion, weight-biased attitudes and beliefs were associated with various features of eating/weight-related psychopathology among White men but showed fewer significant associations among Latino men. This research suggests that even in the absence of between-group differences, correlates and risk factors for psychopathology may vary by ethnicity. Future research should investigate potential mechanisms within Latino and White groups to understand how weight bias might influence disordered eating behaviors and psychopathology. Nevertheless, clinicians should consider screening for weight bias given its association with heightened risk for poor health outcomes. Further research is needed to understand better the most salient risk factors for eating-disorder psychopathology in Latino men.

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What is already known?

- Weight bias is pervasive across racially/ethnically-diverse adults and across the weight spectrum
- Weight bias and experiences of weight-related discrimination are related to poor health outcomes and disordered eating
- Body image differs between Latinx and non-Hispanic White individuals

What does this study add?

- Weight bias was associated with overeating, binge eating, and extreme weight-compensatory behaviors among White men
- Fewer associations were observed between weight bias and eating-disorder psychopathology among Latino men than White men
- Beliefs about the controllability of obesity were associated with dietary restraint, overvaluation of weight/shape, and body dissatisfaction in both groups of men

Table 1.

Means and standard deviations of weight stigma and eating/weight-related psychopathology among White and Latino men.

	White Men			Latino Men				
	<i>n</i>			<i>n</i>			<i>Test Statistic</i>	<i>p</i>
Weight Stigma								
ATOP, <i>M(SD)</i>	376	59.36	(17.98)	168	59.36	(16.20)	<i>t</i> =0.003	.998
BAOP, <i>M(SD)</i>	376	14.77	(6.55)	168	15.96	(7.46)	<i>t</i> =−1.78	.08
EDE-Q								
Dietary Restraint, <i>M(SD)</i>	376	2.22	(2.06)	168	2.42	(2.11)	<i>t</i> =−1.02	.31
Overvaluation, <i>M(SD)</i>	376	2.54	(1.84)	168	2.57	(1.77)	<i>t</i> =−0.21	.83
Clinical overvaluation, <i>n</i> (%)	376	170	(45.2%)	168	73	(43.5%)	χ^2 =0.15	.70
Body Dissatisfaction, <i>M(SD)</i>	376	2.61	(1.84)	168	2.68	(1.90)	<i>t</i> =−0.43	.67
EDE-Q Behaviors								
Overeating, <i>n</i> (%)	376	95	(25.3%)	168	54	(32.1%)	χ^2 =2.76	.10
Binge eating, <i>n</i> (%)	376	27	(7.2%)	168	31	(18.5%)	χ^2 =15.49	<.001
Compensatory behaviors, <i>n</i> (%) [*]	376	68	(18.1%)	167	36	(21.6%)	χ^2 =0.90	.34
Vomiting, <i>n</i> (%)	376	6	(1.6%)	167	6	(3.6%)	χ^2 =2.13	.14
Laxatives, <i>n</i> (%)	376	10	(2.7%)	167	6	(3.6%)	χ^2 =0.35	.55
Compulsive Exercise, <i>n</i> (%)	376	61	(16.2%)	167	34	(20.4%)	χ^2 =1.37	.24
BMI, <i>M(SD)</i>	374	27.52	(6.12)	162	28.21	(5.35)	<i>t</i> =−1.23	.22
Obesity, <i>n</i> (%)	374	99	(26.5%)	162	53	(32.7%)	χ^2 =2.17	.14

Note. ATOP: Attitudes Towards Obese People scale; BAOP: Beliefs About Obese People scale; EDE-Q: Brief version of the Eating Disorder Examination Questionnaire. In the current study, which is part of a larger project on the cross-cultural validity of eating/weight measures, the ATOP was scored as -3=strongly disagree, -1.5=slightly disagree, 1.5=slightly agree, 3=strongly agree, which is in line with earlier research (2); items were recoded so that higher ATOP scores are indicative of more positive attitudes towards people with obesity. The BAOP was scored similarly for Latino men, but used the original scoring for White men: -3=strongly disagree, -2=moderately disagree, -1=slightly disagree, 1=slightly agree, 2=moderately agree, 3=strongly agree, again with items recoded so that higher BAOP scores are indicative of belief that obesity is outside of an individual's control.

* Percentages do not sum to the overall percentage because some participants reported engaging in multiple compensatory behaviors.

Table 2.

Attitudes and beliefs about people with obesity and their associations with disordered eating among White and Latino men.

	White Men (n=376) <i>r</i>	Latino Men (n=168) <i>r</i>	<i>Z</i>	<i>p</i>
ATOP				
Dietary Restraint	-.142 **	-.135	-0.08	.939
Overvaluation	-.315 **	-.273 ***	-0.49	.623
Body Dissatisfaction	-.120 *	-.146	0.28	.777
BAOP				
Dietary Restraint	-.267 **	-.290 ***	0.27	.790
Overvaluation	-.283 **	-.243 **	-0.46	.646
Body Dissatisfaction	-.168 **	-.164 *	-0.04	.965

ATOP: Attitudes Towards Obese People scale; BAOP: Beliefs About Obese People scale. Higher ATOP and BAOP scores are indicative of more positive attitudes/beliefs towards people with obesity. The correlation of the ATOP and BAOP in White men was $r=.458$, $p<.001$; in Latino men, the correlation was $r=.259$, $p<.001$.

*
r significant at $p<.05$

**
r significant at $p<.01$

r significant at $p<.001$

Table 3.

Logistic regression associations of attitudes and beliefs about people with obesity with eating and weight among White and Latino men.

	<u>Model</u> X ²	<u>ATOP</u> OR (95% CI)		<u>BAOP</u> OR (95% CI)	
White Men					
Overeating	9.23**	1.075	(0.802 – 1.443)	0.610	(0.431 – 0.864)**
Binge eating	5.88	0.990	(0.604 – 1.622)	0.533	(0.288 – 0.987)*
Compensatory behaviors	12.89**	0.569	(0.398 – 0.812)**	1.028	(0.708 – 1.493)
Overvaluation	42.78***	0.636	(0.482 – 0.840)**	0.576	(0.424 – 0.784)***
Obesity	0.06	0.984	(0.737 – 1.313)	0.976	(0.712 – 1.339)
Latino Men					
Overeating	2.10	0.783	(0.513 – 1.196)	0.905	(0.624 – 1.314)
Binge eating	1.90	0.750	(0.452 – 1.247)	0.904	(0.574 – 1.422)
Compensatory behaviors	3.37	0.637	(0.389 – 1.044)	1.187	(0.780 – 1.808)
Overvaluation	13.82***	0.517	(0.335 – 0.797)**	0.818	(0.568 – 1.178)
Obesity	0.83	0.822	(0.537 – 1.259)	1.070	(0.741 – 1.547)

Note. N=544 (n=376 White men; n=168 Latino men). ATOP: Attitudes Towards Obese People scale; BAOP: Beliefs About Obese People scale. Higher ATOP and BAOP scores are indicative of more positive attitudes/beliefs towards people with obesity.

*
p<.05

**
p<.01

p<.001