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It's Not You, It's Me: Self-Perceptions, Antifat Attitudes, and Stereotyping of Obese Individuals

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Abstract

Much research focuses on the formation of antifat attitudes, but an understanding of antifat bias is incomplete without incorporating self-perceptions. We tested a model in which self-perceptions influenced stereotyping of the same target shown as obese versus thin via antifat attitudes. Participants rated six targets, two of which were the same individual before and after weight loss. Questionnaires assessed participants' self-perceptions and antifat bias. Multiple group path analysis indicated participants' body mass index positively predicted greater perceived body size in men and women, though the relationship was stronger for women. Greater perceived body size predicted decreased antifat attitudes, while greater body shame and beliefs about personal control predicted increased antifat attitudes. Antifat attitudes predicted greater negative stereotyping of the target when shown as obese relative to thin. These findings point toward the importance of self-perception in the stigmatization of others and the need to include self-acceptance in weight-bias interventions.

Keywords

stigma, stereotypes, self-evaluation, attitudes, moderation

Weight-based stigmatization is a widespread and accepted prejudice in the United States (Puhl & Heuer, 2009). Despite a large literature demonstrating the consequences of weight-based stigmatization (Vartanian & Smyth, 2013), less research examines the role of the self in the formation of antifat attitudes. In order to effectively combat stigmatization, we must understand factors underlying the formation of antifat attitudes and weight-based stigmatization. This article proposes a model in which multiple *self*-perceptions predict dislike of obese individuals, which in turn predicts negative stereotyping of obese targets relative to thin targets (see Figure 1).

Consequences of Weight-Based Stigmatization

Understanding how antifat attitudes are formed is important because the consequences of weight-based stigmatization can be severe. Obese individuals face economic penalties including lower pay for equal work, fewer advancement opportunities, and wrongful termination (Puhl & Heuer, 2009). In health care settings, obese individuals have shorter visits with physicians and report lower care quality compared to individuals with a "normal" body mass index (BMI) between 18.5 and 24.9 (Carr & Friedman, 2005; Puhl & Heuer, 2009). Weight-based stigmatization is associated with poor psychological functioning as evidenced by depression, anxiety, body dissatisfaction, and low-self-esteem (Friedman et al., 2005; Jackson, Grilo, & Masheb, 2000; Puhl & Brownell, 2006; Rosenberger, Henderson, Bell, & Grilo, 2007). Obese individuals are often blamed for their stigma because obesity is seen as controllable (Puhl & Heuer, 2010). Many, including policy makers, view stigmatization as a positive motivator for weight loss (Callahan, 2013; Vartanian & Smyth, 2013). However, research indicates stigma promotes overeating, reduces perceived dieting efficacy (Major, Hunger, Bunyan, & Miller, 2014; Schvey, Puhl, & Brownell, 2011), and is associated with increased odds of obesity in longitudinal studies (Hunger & Tomiyama, 2014). In order to intervene on these negative consequences of weight-based stigmatization, we must understand mechanisms involved in creating antifat attitudes—an understanding that is incomplete without the inclusion of self-perceptions.

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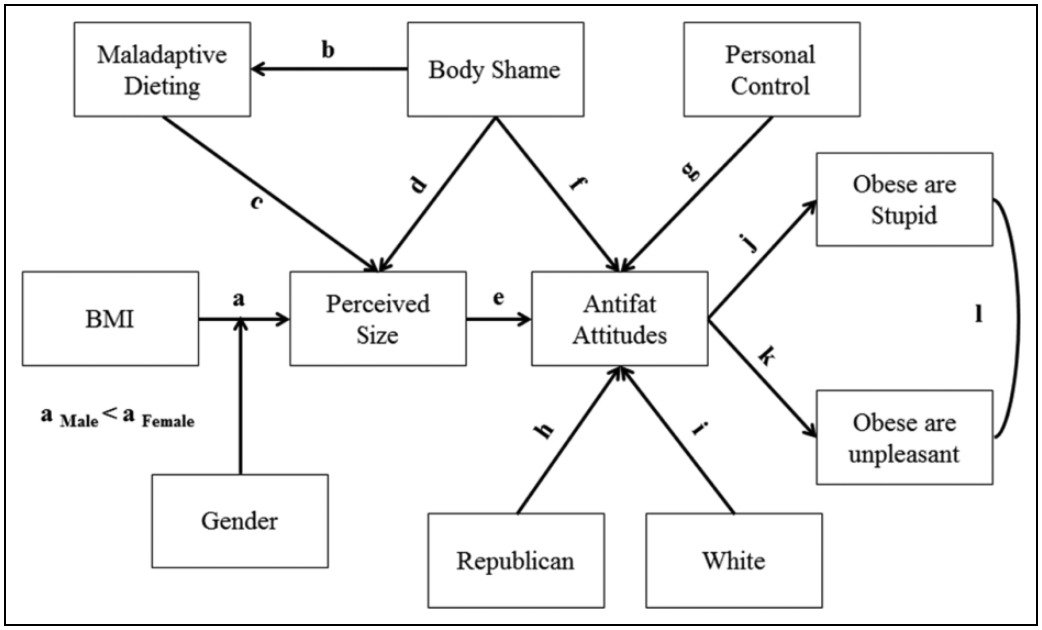

Figure 1. Hypothesized model.

Precursors to Antifat Attitudes

Antifat attitudes function to reinforce personal values and beliefs (e.g., Protestant work ethnic and just-world beliefs; see Crandall, 1994; Crocker & Quinn, 2000). While antifat attitudes are firmly rooted in perceptions of others, they likely originate, in part, with dislike of one's own body (O'Brien, Hunter, Halberstadt, & Anderson, 2007) and failure of oneself to meet personal or cultural beauty expectations rather than dislike of targets' bodies exclusively. Internalization of cultural beauty standards contributes to body dissatisfaction, body shame (Jefferson & Stake, 2009), and negative evaluation of obese others (Klaczynski, Goold, & Mudry, 2004). Body shame is associated with antifat attitudes, and one major consequence of body shame includes maladaptive dieting (starving, purging, or bingeing; Noll & Fredrickson, 1998; Pepper & Ruiz, 2007). Use of maladaptive dieting strategies *themselves* contribute to distorted body perception (Cattarin & Thompson, 1994; Counts & Adams, 1985; Grabe, Ward, & Hyde, 2008). Thus, body shame feeds into maladaptive dieting strategies, which in turn change body size perception. We therefore hypothesized body shame acts directly on antifat attitudes (Figure 1, Path f), maladaptive dieting (Figure 1, Path b), and body size perception (Figure 1, Path d). Further, body shame acts indirectly on perceived size through maladaptive dieting (Figure 1, Paths b and c). Finally, body shame acts indirectly on antifat attitudes through body size perception (Figure 1, Paths d and e).

The relationship between antifat attitudes and BMI is mixed. Perez-Lopez, Lewis, and Cash (2001) found no relationship between BMI and antifat attitudes, while Lieberman, Tybur, and Latner (2012) found a positive relationship in men (increases in antifat bias associated with increases in BMI) and a negative relationship in women (increases in antifat bias associated with decreases in BMI). We propose BMI influences how individuals perceive their body size. Conceptualizing BMI as the precursor to perceived size is a key contribution of our model because it links body size to self-perception to antifat attitudes. We expect the relationship between BMI and perceived size (Figure 1, Path a) to be moderated by gender, such that BMI will be more strongly related to perceived body size in women compared to men for two reasons (Figure 1, Path a_{male} < Path a_{female}). First, cultural beauty standards encourage lower BMI for women reflecting a thin physique and higher BMI for men reflecting a muscular physique (Crawford & Campbell, 1999; Garner & Garfinkel, 1980; Neighbors & Sobal, 2007; Pingitore, Spring, & Garfield, 1997). Second, women perceive themselves as overweight at a BMI of about 23 compared to men who perceive themselves as overweight at a BMI of 26 (Crawford & Campbell, 1999). The objective criterion for overweight BMI is 25.

Control beliefs in antifat attitudes usually reflect the mutability of weight and perceived lack of willpower in obese *targets* (Klaczynski et al., 2004; Pearl & Lebowitz, 2014; Vartanian, 2010)—the belief that obese individuals became obese through diet-related choices and can control their weight. Because our model focused on self-perceptions, we examined the role of *self-based* control beliefs (degree to which an individual perceives control over their behavior) in antifat attitudes. The personality literature on prejudice (Sibley & Duckitt, 2008) suggests a strong relationship between self-based control beliefs encompassed in Right-Wing Authoritarianism and out-group prejudice. Thus, we hypothesized a positive relationship between self-control beliefs and antifat attitudes (Figure 1, Path g). Likewise, conservative ideals, beliefs about personal responsibility, and personal control

appear interrelated in regard to antifat attitudes (Puhl & Brownell, 2003), so we included political orientation in our model as a means to separate control beliefs from conservative ideology related to personal responsibility. We hypothesized identifying as conservative (Republican) would be positively predictive of antifat attitudes (Figure 1, Path h).

Certain demographics predict antifat attitudes, which may stem from differential beauty standards across racial and ethnic groups (Evans & McConnell, 2003). White individuals admit to more antifat bias than both Black women (Perez-Lopez, Lewis, & Cash, 2001) and non-acculturated (women with more comparative exposure to Latino culture vs. North American culture) Latinas (Pepper & Ruiz, 2007). Pepper and Ruiz (2007) found no difference in antifat attitudes between acculturated Latinas and White women. Similarly, Asian women and White women do not differ in responses to mainstream American beauty ideals (Evans & McConnell, 2003). We included race as a predictor in our model to account for potential differences in antifat attitudes (Figure 1, Path i).

Antifat Attitudes and Stereotyping

In the last step of our model, we hypothesized antifat attitudes engender weight-based stereotyping (Figure 1, Paths j and k). Prior work attempting to account for origins of weight-based prejudice (Crandall et al., 2001) proposed an attribution value model in which prejudice occurs because individuals hold stigmatized groups responsible for negative stereotypes about their group. In this study, we focused on two popular, pervasive stereotypes about obese individuals: stupidity and unpleasantness (Teachman & Brownell, 2001). Unpleasantness accounted for a number of general negative stereotypes of obese individuals (e.g., lazy and unattractive). We chose these specific stereotypes because they are present in multiple countries (Crandall & Martinez, 1996; Crandall et al., 2001; Puhl & Heuer, 2009) and social groups, including obesity-specialized health providers (Schwartz, Chambliss, Brownell, Blair, & Billington, 2003; Teachman & Brownell, 2001; Tomiyama et al., 2014).

Current Study

The current study proposed a model in which self-perceptions collectively predicted antifat attitudes. We hypothesized a model (see Figure 1) in which an individual's BMI (Path a), maladaptive dieting strategies (Path c), and body shame predicted perceived size (Path d). We expected shame to act on perceived size directly (Path d) and indirectly through maladaptive dieting (Paths b and c). Then, we predicted that perceived size (Path e), body shame (Path f), and personal control beliefs (Path g) would be associated with antifat attitudes. We expected shame to be associated with antifat attitudes directly (Path f) and indirectly through perceived size (Paths d and e). We included race as a positive predictor of antifat attitudes (Path i) because prior research (Pepper & Ruiz, 2007; Perez-Lopez et al., 2001) indicated White individuals endorsed more antifat attitudes than Black and non-acculturated Latina individuals. We included political orientation as a means to separate control beliefs from conservative ideology and hypothesized identifying as conservative would positively predict antifat attitudes (Path h). Finally, we hypothesized that antifat attitudes would be associated with photos of the same target being stereotyped as more unpleasant (Path k) and stupid (Path j) when shown as obese relative to thin. To accomplish this, participants rated a photo of the same target before and after a major weight loss.

Method

Participants

Data were pooled from two studies with parallel methodologies examining antifat attitudes and stereotyping of obese relative to thin target profiles. The only methodological difference between the studies involved the type of profile evaluated. Study 1 ($n = 117$) profiles described class partners while Study 2 ($n = 197$) described dating partners. Only two differences on demographic or modeled variables emerged between samples (see Table 1). Participants in Study 1 were younger, 20.01 versus 20.60, $t(264) = -2.61$, $p = .010$, and reported more body shame, 3.50 versus 3.25, $t(264) = 2.00$, $p = .045$, compared to Study 2 participants. Controlling for age and study did not change the model results. Age and sample did not significantly influence any variable in the model, thus we did not control for either in our analyses. All variables met assumptions for normality. Participants who completed less than 25% of questions (Study 1 = 7 and Study 2 = 11) were excluded from analyses because scale scores could not be computed for variables in the model.

The final sample consisted of 296 (61.1% women and 38.9% men) participants. Half the sample ($n = 152$, 51.4%) identified as Asian, and remaining participants identified as White ($n = 54$, 18.2%), multiracial ($n = 40$, 13.5%), Hispanic ($n = 33$, 11.1%), Middle Eastern ($n = 12$, 4.1%), or Black ($n = 5$, 1.7%). Half the sample ($n = 143$, 48.3%) identified as Democrat, independent ($n = 69$, 23.3%), other ($n = 40$, 13.5%), Republican ($n = 33$, 11.1%), or Libertarian ($n = 11$, 3.7%). Most indicating "other" as a political orientation specified, "I don't follow politics" or "I am apathetic." Nearly all participants ($n = 291$, 98.3%) identified as heterosexual, including all participants in Study 2 who rated dating partners. Excluding participants based on sexuality did not change results, so all participants were included.

Procedure

Participants signed up for the study through a psychology subject pool at a large public university on the West Coast. Participants rated six profiles containing pictures of opposite-sex targets. We chose to use opposite-sex targets to avoid stereotype differences that could have arisen by having individuals rate both same-sex and opposite-sex targets (Tiggemann & Rothblum, 1988). The order of the profiles was randomized to control for order. Each profile was presented on a single page

Table 1. Independent *t*-Tests by Study.

	Sample 1		Sample 2			
	M	*SD*	*M*	*SD*	*t*(294)	*p*
Antifat dislike	2.99	1.31	2.93	1.33	0.35	.729
Maladaptive dieting	2.78	0.82	2.60	0.90	1.77	.077
Perceived size	2.84	0.76	2.81	0.68	0.40	.691
BMI	22.31	3.06	22.37	4.05	−0.15	.883
Body shame	3.50	1.03	3.25	1.05	2.00	.045
Personal control	3.89	0.98	3.81	0.97	0.73	.467
Obese are stupid	0.14	0.96	0.08	0.84	0.56	.575
Obese are unpleasant	0.55	0.86	0.54	0.75	0.08	.938
Age	20.01	1.63	20.60	2.18	−2.61	.010
	n	%	*n*	%	$\chi^2(1)$	*p*
Female	121 of 186	71.4	60 of 110	72.62	3.21	.073
Republican	22 of 186	11.18	11 of 110	11.9	0.23	.629
White	37 of 186	22.36	17 of 110	20.83	0.913	.339

Note. BMI = body mass index.

with a white background, which contained a 4 × 6 color photo of a clothed, smiling individual alongside a 4 × 6 table containing biographical information (age, hometown, and gender). The photos showed the individual from the waist up, so the difference in weight was evident. Two of the profiles contained a picture of the same individual (White male or female) before and after substantial weight loss. The only difference between the target profiles was the photo shown. Target photos were real weight loss photos. Four nontarget profiles were used as fillers to decrease participant awareness that two of the profiles contained the same individual. The photos in nontarget profiles showed thin White individuals from the waist up, accompanied by similar demographic information. Several potential target photos were pretested by independent raters, and we chose the target photos found to be most similar in pleasantness of facial expression but vastly different in body size. Analysis of variance confirmed that the chosen images were no different in facial expression, $F(1, 13) = 1.42$, $p = .250$, but different in body size, $F(1, 13) = 120.69$, $p < .001$. Participants rated each profile on a number of characteristics (described subsequently) and then completed the questionnaires presented in a random order followed by demographic information.

Measures

Antifat attitudes. Antifat attitudes consisted of 7 items from the dislike scale of the Antifat Attitudes Questionnaire (Crandall, 1994). Participants indicated agreement (e.g., "I really don't like fat people much") on a scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Scores ranged from 1.00 to 7.00 ($M = 2.96$, standard deviation [*SD*] = 1.32, $\alpha = .90$) and were similar to those validated by Crandall (1994).

Maladaptive dieting. Maladaptive dieting included 13 items (e.g., "I avoid eating when I am hungry") from the dieting subscale of the Eating Attitudes Test (Garner, Olmsted, Bohr, & Garfinkel, 1982). Participants indicated frequency of engaging in each behavior on a scale of 1 (*never*) to 6 (*always*). Scores ranged from 1.00 to 5.38 with a mean of 2.72 ($SD = 0.85$, $\alpha = .88$) and were similar to scores normed on nonclinical adolescent samples (Rosen, Silberg, & Gross, 1988).

Perceived size. Participants rated perceived body size on a 6-point scale: "Compared to others would you say you are: very thin, thin, average, overweight, obese, morbidly obese." Values ranged from 1 to 6 ($M = 2.83$, $SD = 0.73$), with higher numbers indicating a larger perceived size.

BMI. BMI was calculated from self-reports of height (in inches) and weight (in pounds) using the formula provided by the Centers for Disease Control and Prevention (2014). Values ranged from 14.64 to 43.04, but the average participant had a "normal" BMI (i.e., BMI between 18.5 and 24.9; $M = 22.33$, $SD = 3.45$; $M_{\text{Female}} = 21.68$, $SD_{\text{Female}} = 3.05$; $M_{\text{Male}} = 23.35$, $SD_{\text{Male}} = 3.08$). The top value of 43.04 qualified as an outlier but was plausible (5'10", 300 pounds). Excluding cases more than two *SD*s above or below the mean did not significantly change the model. Thus, we included the outlying case in our analysis.

Body shame. Participants indicated agreement with 8 items (e.g., "I would be ashamed for people to know what I really weigh") assessing body shame from the Objectified Body Consciousness Scale (McKinley & Hyde, 1996). Possible responses ranged from 1 (*strongly disagree*) to 7 (*strongly agree*). Scores ranged from 1.00 to 6.63 ($M = 3.41$, $SD = 1.04$, $\alpha = .77$) and were similar to those validated by McKinley and Hyde (1996).

Personal control. Ten items (e.g., "When I get what I want it's usually because I worked hard for it") assessed personal control using Levenson's (1973) multidimensional locus of control scale. Higher scores indicated feeling less control over one's actions. Participants indicated agreement on a scale of 1 (*strongly agree*) to 7 (*strongly disagree*). Scores ranged from 1.60 to 6.30 ($M = 3.86$, $SD = 0.97$, $\alpha = .73$) and were similar to the normal samples tested by Levenson (1973).

Target ratings. Participants rated profiles on a 7-point scale ranging from 1 (*definitely does NOT possess this trait*) to 7 (*strongly possesses this trait*). (1) *Obese are stupid stereotype:* The stupidity stereotype comprised 4 items (stupid, dumb and reversed scores for intelligent, and smart). We computed ratings by subtracting stupidity stereotypes about the thin target ($\alpha = .86$) from stupidity stereotypes about the same target shown as obese ($\alpha = .84$). Higher scores indicated the target was rated as more stupid when shown as obese relative to thin (range: −3.75 to 3.50, $M = 0.12$, $SD = 0.92$). (2) *Obese are unpleasant stereotype:* The unpleasant stereotype comprised 10 items (weak, insecure, lazy, unpleasant, disgusting,

Table 2. Inter-Item Correlations for Variables Included in the Model.

	1	2	3	4	5	6	7	8	9	10
1. Maladaptive dieting	—	0.33***	0.12	0.05	−0.02	0.27***	0.60***	−0.05	−0.05	0.16*
2. Perceived size	0.00	—	−0.13	0.01	−0.04	0.72***	0.27***	−0.12	−0.08	0.04
3. Antifat attitudes	0.12	−0.19*	—	0.06	0.18*	−0.10	0.30***	0.29***	0.01	0.03
4. Obese are stupid	0.06	0.03	0.25**	—	0.46***	−0.04	0.03	0.10	0.14	0.00
5. Obese are unpleasant	0.02	0.06	0.16	0.42***	—	−0.06	0.03	0.16*	0.13	0.05
6. BMI	0.14	0.48***	−0.14	0.08	0.15	—	0.21***	−0.13	−0.09	0.05
7. Body shame	0.55***	−0.04	0.36***	0.06	0.05	−0.06	—	0.09	0.02	0.12
8. Personal control	0.07	−0.09	0.14	0.08	−0.05	−0.16	0.16	—	−0.01	−0.15*
9. Republican	0.00	−0.05	−0.05	−0.08	−0.04	0.06	−0.01	−0.16	—	0.04
10. White	−0.06	0.00	−0.11	−0.21*	0.03	0.04	−0.02	−0.09	0.16	—

Note. Males appear in the lower half of the table and females appear in the shaded on the upper half of the table. BMI = body mass index.
*$p < .05$. **$p < .01$. ***$p < .001$.

unattractive, complainer, rude, pitiful, and irritating). We computed ratings by subtracting unpleasant stereotypes about the thin target ($\alpha = .88$) from unpleasant stereotypes about the same target shown as obese ($\alpha = .82$). Higher scores indicated the target was rated as more unpleasant when shown as obese relative to thin (range: −3.00 to 4.00, $M = 0.54$, $SD = 0.82$).

Statistical Analysis

Paired *t*-tests compared stereotyped ratings of the thin and obese target to determine whether a difference in appraisal existed. The hypothesized path model analysis followed. Following the recommendations of Kline (2011), we tested a multiple group path model comparing men and women using maximum likelihood estimation in MPlus 6.1 (Muthén & Muthén, 2010). Models with a good fit should have a nonsignificant χ^2, a root mean square error of approximation (RMSEA) ≤ 0.08, a Comparative Fit Index (CFI) ≥ 0.95, and a Tucker–Lewis Index (TLI) ≥ 0.95 (Kline, 2011). Before testing for moderation in a multiple group path model, the common model (model in which all paths were free to vary between gender groups) must demonstrate a significantly better fit than the path invariant model (model in which all paths were constrained to be equal between groups). If the common model produces a significantly better fit than the path invariant model, then moderation is tested by constraining each path in the model and comparing the χ^2 fit index of the constrained model to the χ^2 fit index of the common model. Moderation occurs when constraining a path to be equal across groups causes the model fit to suffer as demonstrated by significant χ^2 difference tests (Kenny, Kashy, & Cook, 2006). In the final model, moderated paths should be free to vary across groups, and nonmoderated paths should be constrained across groups. Final model fit indices should be superior to the path invariant model but not different from the common model (Kline, 2011).

Results

Participants rated the target as more stupid when shown as obese ($M = 3.06$, $SD = 1.10$) relative to thin, $M = 2.94$, $SD = 1.05$: $t(295) = 2.18$, $p = .030$, $d = 0.11$. Likewise, participants rated the target as more unpleasant when shown as obese ($M = 3.60$, $SD = 0.91$) relative to thin, $M = 3.06$, $SD = 0.94$: $t(295) = 11.37$, $p < .001$, $d = 0.58$.

Inter-item correlations appear in Table 2. The common model fit well to the data on all fit indices, $\chi^2(46) = 39.37$, $p = .744$; RMSEA = 0.00 (0.00, 0.04); CFI = 1.00; TLI = 1.02. Constraining all paths (path-invariant model) to be equal between men and women produced an adequate model fit on all measures, $\chi^2(57) = 62.53$, $p = .286$; RMSEA = 0.03 (0.00, 0.06); CFI = 0.99; TLI = 0.98, but caused the overall fit to suffer compared to the common model, $\Delta\chi^2(11) = 23.16$, $p = .017$, suggesting the relationships between predictors varied across men and women. In order to determine which paths were moderated by gender, we constrained individual paths to be equal for men and women and then compared the model fit of the constrained model (i.e., model with a single constrained path) to that of the common model using χ^2 difference tests. The model fit suffered when the relationship between BMI and perceived size was constrained to be equal across gender, $\Delta\chi^2(1) = 5.66$, $p = .017$, suggesting the relationship between gender and perceived size varied between men and women (stronger relationship for women, but present in both men and women, described below), as hypothesized. We tested a final model (see Figure 2) in which the paths not moderated by gender were constrained to be equal for men and women and the aforementioned moderated path was free to vary between men and women. This final model met all fit criteria, $\chi^2(56) = 55.12$, $p = .508$; RMSEA = 0.00 (0.00, 0.05); CFI = 1.00; TLI = 1.03, and was significantly better than the path invariant model, $\Delta\chi^2(1) = 7.41$, $p = .007$, but not significantly different from the common model, $\Delta\chi^2(10) = 15.76$, $p = .107$.

As displayed in Figure 2, BMI positively predicted perceived size in both men ($B = 0.10$, $SE = 0.02$, $p < .001$) and women ($B = 0.16$, $SE = 0.01$, $p < .001$), but the relationship was significantly stronger for women. Body shame directly predicted maladaptive dieting ($B = 0.47$, $SE = 0.04$, $p < .001$) but not perceived size ($B = 0.03$, $SE = 0.04$, $p = .407$) in men and women. Maladaptive dieting did not directly predict perceived size ($B = 0.06$, $SE = 0.05$, $p = .190$) in men or women. Perceived size ($B = -0.33$,

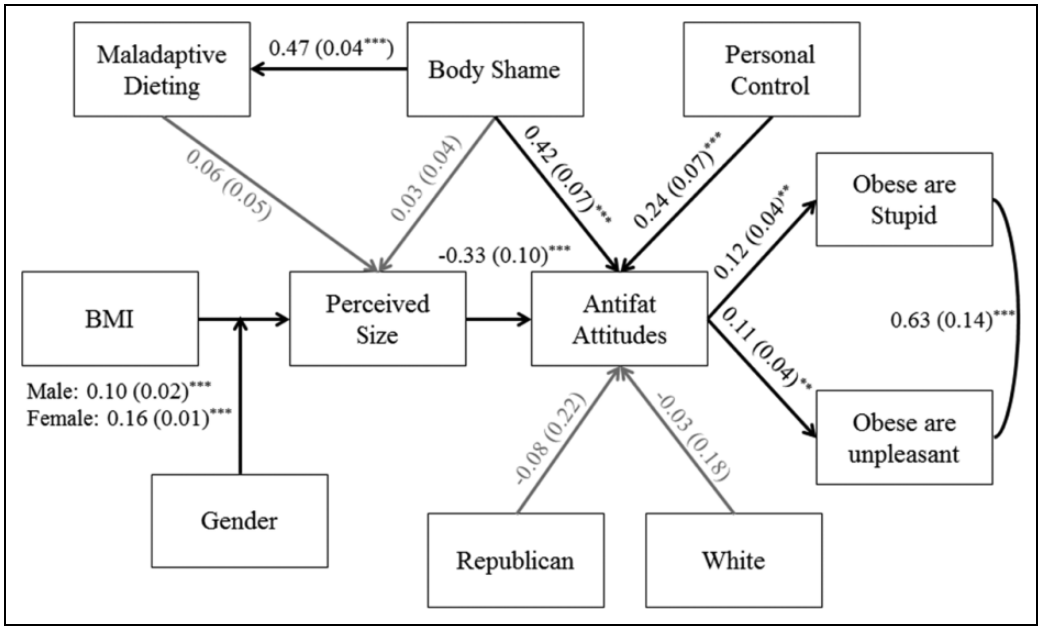

Figure 2. Body mass index to perceived size was moderated by gender; all other paths are constrained to be equal across men and women. Paths shown in gray are not significant. **$p < .01$. ***$p < .001$.

$SE = 0.10$, $p = 0.001$), body shame ($B = 0.42$, $SE = 0.07$, $p < .001$), and personal control beliefs ($B = 0.24$, $SE = 0.07$, $p = .001$) directly predicted antifat attitudes in men and women, but political affiliation ($B = -0.08$, $SE = 0.22$, $p = .732$) and race ($B = -0.03$, $SE = 0.18$, $p = .867$) had no direct association with antifat attitudes. Antifat attitudes were related to stereotyping the same target as more stupid ($B = 0.12$, $SE = 0.04$, $p = .003$) and more unpleasant ($B = 0.11$, $SE = 0.04$, $p = .003$) when shown as obese relative to thin.

Discussion

This study examined the role of self-perceptions in the formation of antifat attitudes, an area lacking in the current literature. Our model examined how individuals moved from self-perceptions to stereotyping of obese relative to thin individuals. We proposed a model originating in self-perception to test the hypothesis that weight stigma originated, in part, from dislike of one's own body in addition to dislike of out-group targets. Our model yielded a positive relationship between body shame and antifat attitudes (increases in body shame were associated with increases in antifat attitudes) and a negative relationship between perceived size and antifat attitudes (increases in perceived size were associated with decreases in antifat attitudes). It demonstrated a positive relationship between control beliefs and antifat attitudes (increases in beliefs about personal control were associated with increases in antifat attitudes) and antifat attitudes predicted greater negative stereotyping of the same target when the target was shown as obese relative to thin. Contrary to prior studies, no associations existed between maladaptive dieting and perceived size, or demographic variables and antifat attitudes. Prior research found no direct relationship between BMI and antifat bias (Perez-Lopez et al., 2001). Our model provides a potential explanation—BMI may act on antifat attitudes by affecting self-perceptions of body size. Increases in BMI were associated with increases in perceived size and decreases in antifat attitudes via perceived size. Although true of both women and men, our results indicated the relationship between BMI and perceived size was stronger for women (Crawford & Campbell, 1999; Johnson, Iida, & Tassinary, 2012). We expected a stronger relationship between BMI and perceived size in women because beauty standards prescribe a thin physique in women and a more muscular physique in men (Crawford & Campbell, 1999; Garner & Garfinkel, 1980; Neighbors & Sobal, 2007; Pingitore et al., 1997).

Prior research supported direct pathways between body shame and antifat attitudes (Lin & Reid, 2009; O'Brien et al., 2013) and findings were similar in this study. The shame individuals felt about their own body positively predicted their attitudes toward obese individuals (increases in shame were associated with increases in antifat attitudes). Although body shame positively predicted maladaptive dieting as the literature suggested (Noll & Fredrickson, 1998), we did not find support for a relationship between maladaptive dieting and body size perception (Grabe et al., 2008). This could relate to the nonclinical nature of this sample, as the link between maladaptive dieting strategies and size perceptions may arise only in samples with clinical body image issues.

We examined self-based control beliefs rather than control beliefs attributed to obese individuals because our model focused on ways in which self-perceptions are associated with weight-based stigma. As hypothesized, we found as perceived control over one's behavior increased, so did antifat attitudes.

This association helps explain some of the mechanisms behind the belief that obese individuals lack willpower, so are to blame for their body size. If individuals believe they have exclusive control over their weight outcomes as a result of their behaviors, they likely believe others have the ability to control their weight status behaviorally. Dislike, then, arises from perceived lack of willpower on the part of obese individuals to control their weight via behavior.

Prior research (Pepper & Ruiz, 2007; Perez-Lopez et al., 2001; Puhl & Brownell, 2003) found positive associations between antifat attitudes and political ideology (conservative) as well as positive associations between demographic variables (White race) and antifat attitudes. We found no association between identifying as a Republican (a proxy for conservative political ideology) and antifat attitudes. We note our sample of students identifying as Republican was relatively small (11%) and political orientation, in this sample, may be particularly subject to parental influence. Interpretations of this finding should be made with caution. We similarly found no association between identifying as White and holding antifat attitudes. We may have failed to find race-related associations with antifat attitudes because our sample was overwhelmingly comprised of Asian and White participants (69.6% of the sample) who do not vary by group in endorsement of thin beauty ideals (Evans & McConnell, 2003). We tested an alternative model comparing Asian and White participants against other racial groups in our sample; the model yielded similar results and race did not influence antifat attitudes. More research is needed to explore differential antifat attitudes in minority populations. Our model focused on the role self-perceptions may play in antifat attitudes and stereotyping of obese individuals relative to thin individuals. Each path in our model was chosen based on literature suggesting existing relationships between each variable. It is possible, however, that other competing models may be derived from our key variables. We tested an alternative model in which self-perceptions related to the body (body shame, perceived size, and maladaptive dieting) were removed from our model and beliefs about personal control predicted stereotyping rather than antifat attitudes. The alternative model did not fit well to the data lending support for our model over potential alternative models.

Our study findings should be considered in light of the following limitations. We calculated BMI from self-report, which may include self-presentation bias. However, prior research demonstrated self-reports for height and weight are equivalent (Rowland, 1990) or off by small amounts (underestimating weight and overestimated height; see Connor Gorber, Tremblay, Moher, & Gorber, 2007) when compared to measured height and weight in young individuals, so self-report estimates of height and weight for BMI calculations may be acceptable in the context of this study. Likewise, this sample was comprised of college students and may not be representative of the larger U.S. population. Studying weight stigma in college students does, however, have an added advantage of capturing a time when maladaptive dieting strategies are at their peak (Phillips & Pratt, 2005). Finally, our data, as it relates to the formation of attitudes, are cross-sectional in nature. Although we can make a good theoretical case for the causal pattern of each path in our model, we cannot definitively infer causation based on these techniques—a significant limitation.

This study indicated models of weight-based stereotyping should include self-perceptions, which is a novel way of thinking about stigma. These results suggested weight stigma reductions could occur by focusing on becoming more accepting of oneself in order to facilitate acceptance of multiple body sizes and shapes. Ultimately, greater self-acceptance of our individual bodies may have significant downstream consequences in reducing weight stigma toward others.

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