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Ethnic differences in the stigma of obesity: Identification and engagement with a thin ideal

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ABSTRACT

In the current research, components of disidentification theory [Steele, C. M., & Aronson, J. (1995). Stereotype vulnerability and the intellectual test performance of African–Americans. *Journal of Personality and Social Psychology*, *69*, 797–811] are extended to the domain of body weight and provide an explanation as to why Black women typically do not – but under certain circumstances do – stigmatize obesity. Across three studies, results show that Black women are generally less likely to stigmatize obesity than are White women [see also Hebl, M., & Heatherton, T. F. (1997). The stigma of obesity: The differences are black and white. *Personality and Social Psychology Bulletin*, *24*, 417–426]. Taken as a whole, the current research also provides preliminary evidence consistent with disidentification theory to demonstrate that there are situations in which Black women will re-engage with valuing thinness, particularly when re-engagement is tied to conceptions about the self.

Women in the US are pressured to be thin – they are constantly surrounded by media images of gaunt models, increasingly skinnier actresses, and other thin weight ideals (e.g., Katzmarzyk & Davis, 2001; Milke, 1999; Owen & Laurel-Seller, 2000). However, Black women may be more immune to such pressures than are White women, as evidence shows that Black women are less likely to stigmatize obesity and experience eating disorders than are White women (Dolan, Lacey, & Evans, 1990; Hebl & Heatherton, 1997; Mulholland & Mintz, 2001). One explanation for such differences involves *disidentification theory* (Quinn & Crocker, 1999; Steele, 1997; Steele & Aronson, 1995), which suggests that when stigmatized individuals experience threat in a domain, they begin to disengage from and ultimately disidentify from valuing the domain. Two parallel streams of research support the notion that Black women might disengage and eventually disidentify with thinness as an ideal. The first demonstrates that as young children, both Black and White girls initially stigmatize obesity (Margulies, Floyd, & Hojnoski, 2007; Richardson, Goodman, Hastorf, & Dornbusch, 1961), while the second suggests that older Black female adults, who are presented with fewer thin media and role models (and thus, may experience a sense of threat in the domain of thinness) do not stigmatize obesity to the same extent as do White female adults (Hebl & Heatherton, 1997). We propose that Black women, who are less likely to be thin than White women, might re-engage in devaluing obesity, particularly when their social identity can be positively linked to doing so. This theory is explored across three studies, and we consider the chronic body-related experiences and coping strategies of Black and White women as well as the implications of removing threat perceptions on the attitudes of Black women.

Disidentification theory

The process of disidentification, proposed by Steele (1997; see also Steele & Aronson 1995), describes Black Americans' rejection of the standards and ideals of the White community in an attempt to protect or affirm their sense of self-esteem. By disidentifying, Black individuals do not base their self-evaluations on the domain in which they are stereotyped (i.e., academics); rather, they view the domain as unimportant and irrelevant to their self-worth and evaluative system. Research on disidentification has been extended to many other domains (e.g., women's math performances: Spencer, Steele, & Quinn, 1999; perceptions that elderly individuals hold: Levy, 1999; and Black and White athletes sports' performances: Stone, Lynch, Sjomeling, & Darley, 1999) but has not yet been applied to the body size domain.

More recently, researchers have identified an early stage of disidentification, which has been termed "disengagement" (Crocker, Major, & Steele, 1998; Major, Spencer, Schmader, Wolfe, & Crocker, 1998; Schmader, Major, & Gramzow, 2001). Disengagement is

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likely to occur when individuals distance themselves from a threatening domain or suggest that performance in threatening domain is unimportant. However, disengagement tends to be more short-term than disidentification and can be context-specific, thereby allowing individuals to benefit when they achieve in a threatening domain but maintain positive self-views when they do not. Steele, Spencer, and Aronson (2002) propose that disengagement may lead to disidentification, particularly if individuals experience long-term threat in a domain and cope with it by permanently detaching their identity from the domain. Black women may be motivated to disengage and eventually disidentify from weight standards, particularly if they are threatened by potentially being larger, on average, than White women. Indeed, this is the case (for comparisons, see Health, 2006). Thus, Black women face greater levels of failure in meeting societal aspirations for thinness and may protect themselves from the stigmatizing effects of being overweight by similarly rejecting the views of others as a relevant basis for self-esteem (see also Kerr, Crocker, & Broadnax, 1995).

Black women might disengage from White cultural ideology concerning body size ideals if it psychologically benefits them to do so (see Ogbu, 1995). The current research examines this phenomenon and proposes that under certain conditions (e.g., when threat is removed and the ingroup clearly succeeds in a given domain), Black women may re-engage (at least temporarily) with the domain ideal. To test this possibility, we conduct three studies, the first of which examines typical perceptions of Black and White women and represents an improvement and replication of research by Hebl and Heatherton (1997). The second study experimentally manipulates threat removal in the domain of thinness, allowing a direct test of re-engagement with a thin ideal. Finally, the third study manipulates threat removal and examines the self-protective processes that disengaging may have for Black women.

Study 1

Method

Participants

Sixty-six (21 Black and 45 White) female college students at Northeastern University volunteered to participate in this study.

Development of the stimulus materials

Using a procedure consistent with Hebl and Heatherton (1997), a set of pictures were collected of Black and White women and were grouped into three categories (“thin,” “average,” and overweight”) by seven raters. Only photos with 100% agreement in the categorizations were selected for use in the experiment. To standardize the photographs across race, Adobe PhotoShop® allowed us to attach Black and White heads (matched in level of facial attractiveness) to the same body, and adjust body skin tones or arms and necks to match respective faces. Two complete sets of stimuli were developed to ensure that idiosyncrasies due to any single photograph did not produce the results. Each set had two different White and two different Black faces attached to a small, medium, and large body. Thus, there were 12 unique pictures in each of the two sets of stimuli. Participants viewed six target photographs (embedded within other filler photographs) that included three photographs of Black women (thin, medium, and large) and three photographs of White women (thin, medium, and large); thus, it was a fully crossed, within-subjects design.

Questionnaire

First, using 9-point Likert-type scales with anchors of 1 (“Not at all *X*”) and 9 (“Very *X*”), participants responded to six items adapted from Gledhill (1990): (a) “How attractive is this person?” (b) “How intelligent is this person?” (c) “How good is this person at her job?” (d) “How successful is this person in relationships?” (e) “In general, how happy is this person with her life?” and (f) “How popular is this person?”. A Positivity Composite was created by taking the average of these six items (Cronbach alpha = .93). As a manipulation check, participants also rated how heavy they perceived each of the 12 individuals to be.

Second, using 9-point Likert-type scales with anchors of 1 (“I disagree very strongly”) and 9 (“I agree very strongly”), participants also completed four items developed specifically for the current study to assess identification with a thin ideology: (a) “The ideal woman in our society is thin,” (b) “I value thinness,” (c) “In general, I believe that the thinner women are, the more attractive they are,” and (d) “I am strongly influenced by society’s emphasis on thinness.” Using these same scales, they also completed two items from Crandall’s Anti-fat Attitudes (AFA) fear of fat subscale (1994): “I fear becoming obese” and “One of the worst things that could happen to me is for me to gain 25 pounds.” A factor analysis revealed two distinct factors, the first including the four Identification items (Eigenvalue = 3.06, 51% of Variance Accounted for; Cronbach’s alpha = .79), and the second including the two AFA items (Eigenvalue = 1.19; 19.88% of the Variance Accounted for; Cronbach’s alpha = .76).

Procedure

Twelve (three male and nine female; three Black and nine White) students served as experimenters and recruited students on campus to participate. Participants viewed and rated 12 stimulus targets presented in random order, completed ratings after viewing each picture, and then completed the Identification and AFA items.

Results[2]

Manipulation check

A significant main effect conducted on the mixed model [2 (Participant Race: Black, White) × 2 (Target Race: Black, White) × 3 (Target Size: Thin, Medium, Heavy) ANOVA emerged $F(2, 77) = 276.33$, $p < .001$, revealing that participants were able to successfully distinguish between the three target weights. As expected, participants rated large-sized targets ($M = 6.84$, $SD = 0.67$) to be heavier than both medium-sized targets ($M = 6.00$, $SD = 0.72$), $t(65) = 8.07$, $p < .001$, and thin targets ($M = 3.69$, $SD = 0.88$), $t(65) = 25.32$, $p < .001$; and average-sized targets were rated heavier than were thin targets, $t(65) = 19.72$, $p < .001$.[3] Participant race did not show main effects and/or significantly interact with size ratings (all p’s > .75), which is important to establish since we do not expect differing perceptions of body size to drive the results.

[2] In describing the overall effects of each of the three studies, we present both same- and cross-race ratings but our research question involves comparisons of Black and White participants’ same-race ratings, so we focus on them particularly across the three studies. The reason for this focus is that past research has shown (and the current studies also show) that Black targets are often rated more favorably than are White targets by both Black and White participants (see Hebl & Heatherton, 1997). This pattern may represent ingroup favoritism toward Black participants, political correctness on the part of White participants, and/or other sources of bias (see Judd, Park, Ryan, Brauer, & Kraus, 1995). Although we find this pattern to be interesting (and consistent), it is beyond the scope of interest in the current study.

[3] Medium-sized targets were rated slightly heavier than the intended scale midpoint (5) and that the heavy individuals were rated to be somewhat lower than anticipated (9).

Table 1
Study 1: participants' Positivity Composite ratings of same-race targets varying in size and ethnicity.

Participant race	Target race	Target size	*M* (*SD*)
White	White	Thin	6.72 (.96)
		Medium	6.06 (1.02)
		Heavy	5.80 (.81)
	Black	Thin	6.88 (.87)
		Medium	6.42 (1.14)
		Heavy	6.27 (1.05)
Black	White	Thin	5.97 (1.33)
		Medium	6.56 (1.14)
		Heavy	6.18 (1.30)
	Black	Thin	6.69 (1.43)
		Medium	6.85 (1.19)
		Heavy	6.89 (1.41)

Overall effects

A mixed model [2 (Participant Race: Black, White) × 2 (Target Race: Black, White) × 3 (Target Size: Thin, Medium, Heavy) ANOVA was conducted on the Positivity Composite; Participant Race was a between-subjects factor and Target Race and Target Size were within-subjects factors (see Table 1). The ANOVA revealed a marginal Target Size main effect, $F(2, 63) = 2.40$, $p < .10$, $\eta^2 = .04$, indicating that heavier stimuli ($M = 6.28$, $SD = 1.13$) were rated somewhat more negatively than thin stimuli ($M = 6.57$, $SD = 1.07$), and a Target Race main effect, $F(2, 63) = 25.61$, $p < .001$, $\eta^2 = .29$, indicating that Black targets ($M = 6.67$, $SD = .99$) were rated more favorably than White targets ($M = 6.22$, $SD = 1.02$). As predicted, the main effects were qualified by a significant Target Size × Participant Race interaction, $F(12, 53) = 8.90$, $p < .001$, $\eta^2 = .12$, revealing that White participants tended to stigmatize heavier same-race targets whereas Black participants did not (see Table 1). Paired sample *t*-tests revealed that White participants rated thin White targets ($M = 6.72$, $SD = .96$) more positively than heavy White targets ($M = 5.80$, $SD = .81$), $t(44) = 5.09$, $p < .01$. No other significant effects emerged (all $ps > .10$), but Black participants rated thin ($M = 6.69$, $SD = 1.43$) and heavy ($M = 6.89$, $SD = 1.41$) targets similarly, $t(20) = -.99$, $p > .10$.

t-Tests comparing Black participants' responses with White participants' revealed significant differences on both the Identification and AFA measures. As predicted, Black participants identified much less with the importance of being thin ($M = 3.93$, $SD = 2.01$) than did White participants ($M = 5.72$, $SD = 1.71$), $t(64) = 4.20$, $p < .001$; and Black participants feared fat significantly less ($M = 5.43$, $SD = 2.81$) than did White participants ($M = 6.76$, $SD = 2.01$), $t(64) = 2.19$, $p < .03$.

The relationship between disidentification and ratings of overweight women was examined as a preliminary test of the hypothesis that Black women disidentify when evaluating large women. Correlations between the Identification Measure, AFA Measure, and ratings of large same-race women for both Black and White participants revealed that the less Black women identified with thinness as an ideal, the more likely they were to evaluate larger Black women positively ($r = -.45$, $p = .04$). This pattern was not found for White women's ratings of large White targets ($r = -.09$, $p = .55$), and the difference between these two sets of correlations was marginally significant, evidenced by the comparison using Fisher *Z*-transformations of the correlations ($z = 1.40$, $p = .08$, one-tailed). Thus, identification measures were related to obesity stigmatization more so for Black than for White participants. This difference may be due to the fact that White participants had higher means overall with a smaller standard deviation than did Black participants; a restriction of range in identification with a thin ideal to White women may have resulted in their lower correlation with stigmatization.

Discussion

The present data provide preliminary support for the notion that Black women do not identify with the quest to be thin. In fact, unlike White participants, Black participants did not stigmatize obesity, thereby replicating Hebl and Heatherton (1997). Second, scores on the Identification and AFA measures were significantly lower for Black than White women. While this preliminary study highlights the fact that Black women are not identifying with a stigma of obesity, we begin to explore whether it is possible, under certain circumstances, they might. If a lack of identification occurs because Black women sense that they have a decreased likelihood of achieving thinness, then the removal of this threat should lead Black women to re-engage with thinness as an ideal. One way to test this component of disidentification theory (see Steele, 1997; Steele & Aronson, 1995) might be to lead Black women to believe that they are not more likely, but rather are less likely, to be overweight than White women. To manipulate the removal of this threat, female participants are presented with either a "control" article or a fictitious "scientific" article stating that same-race women are thinner than cross-race women. In particular, the article explicitly informs Black participants that it is actually White women who are heavier than Black women. Likewise, White participants are informed that Black women are actually heavier than White women, which we know is consonant with what both races believed in Study 1. It is predicted that if Black women believe they are more likely than White women to meet societal norms regarding body weight, then Black women may begin to re-engage with the thin ideal.

Study 2

Method

Participants

A total of 99 (55 Black and 44 White) female college students from Rice University and the University of Houston participated in this study.

Procedure

One of seven (four female, three male; two Black, five White) experimenters collected data for this study by recruiting participants at various places on campus. We used the same procedure, stimuli,[4] and measures used in Experiment 1 with the following exception. Prior to making the picture ratings, participants read one of three articles ostensibly published in a leading, credible magazine. The neutral (control) article concerned a NASA space station and stated that some people thought the International Space Station was a success whereas other people thought it was a failure. The experimental article concerned body weight and stated that a recent NIH empirical investigation found members of the participants' respective race to be much thinner, on average, than members of the other race. There were two versions of this article,[5] one given to Black women (stating that Black women were thinner; i.e., "removal of threat") and one given to White women (stating that White women were thinner). After reading the article, participants completed a bogus memory test to maintain the cover story and serve as a manipulation check for article comprehension. All 99 participants correctly answered the manipulation questions. As in Study 1, participants then evaluated the same pic-

[4] Medium-sized targets were not used in Experiment Two because they were rated slightly higher than anticipated in Experiment One and their omission helped reduce the complexity of the design.

[5] To pretest the notion that women in the control condition would know that Black women were heavier than White women, 10 women in a pretesting session all correctly identified that Black women, indeed, tend to be heavier than White women.

ture set and a Positivity Composite was calculated for each of the photos (average Cronbach's alpha = .92).

Results

Overall effects

A mixed model [2 (Type of Article: Control, Experimental) × 2 (Participant Race: Black, White) × 2 (Target Race: Black, White) × 2 (Target Size: Thin, Heavy)] ANOVA was conducted on the Positivity Composite; Type of Article and Participant Race were between-subjects factors and the Target Race and Target Size were within-subjects factors. A significant Target Race effect emerged, $F(1, 90) = 22.72$, $p < .001$ ($\eta^2 = .19$), indicating that Black targets as a whole were generally evaluated more positively ($M = 6.72$, $SD = 1.17$) than White targets ($M = 6.20$, $SD = 1.48$). A significant Target Size main effect also emerged, $F(1, 90) = 19.56$, $p < .001$ ($\eta^2 = .17$), indicating that images of thin targets ($M = 6.65$, $SD = 1.32$) were rated more positively than heavy targets ($M = .28$, $SD = 1.31$). Finally, an interaction between Target Size and Condition emerged suggesting that the manipulation affected ratings of heavy targets ($M_{diff} = .45$) to a greater extent than thin targets ($M_{diff} = .05$), $F(1, 90) = 6.26$, $p < .05$, $\eta^2 = .06$.

Most relevant to our expectations, there was a significant three-way interaction between Type of Article, Participant Race, and Target Size, $F(6, 90) = 9.59$, $p < .01$, $\eta^2 = .09$. Consistent with the data in Experiment 1, we originally intended to present participant ratings of same-race targets. However, the patterns did not differ significantly as a function of Target Race (i.e., a four-way interaction did not emerge) and thus we collapsed across Target Race for the subsequent analyses.

To probe the three-way interaction, we conducted separate ANOVAs on positivity ratings for White and Black participants with Type of Article and Target Size as independent variables. For White participants, a significant main effect of Target Size emerged, $F(1, 42) = 8.60$, $p < .01$, $\eta^2 = .17$, which suggested that White participants evaluated thin targets more positively ($M = 6.71$, $SD = .89$) than heavy targets ($M = 6.38$, $SD = .98$). The effect of Target Size on positivity ratings did not differ across Type of Article, $F(1, 42) = .20$, $p = .66$. Thus, the general pattern (see Table 2) reveals that White female participants' evaluations of heavy targets did not differ as a function of the article they read; targets were rated similarly in the experimental ($M = 6.50$, $SD = .95$) and control condition ($M = 6.54$, $SD = 1.04$), $t < 1$, $p > .10$.

For Black participants, the pattern was different. An ANOVA on Black participants' ratings of heavy and thin targets as a function of Target Size and Type of Article yielded a main effect of Target Size, $F(1, 53) = 11.48$, $p < .01$, $\eta^2 = .18$. However, this effect was qualified by a significant Target Size × Type of Article interaction, $F(1, 53) = 14.96$, $p < .01$, $\eta^2 = .22$, that was explored through t-tests. Consistent with Study 1, Black participants rated thin and heavy targets similarly when they received the control article, $t = 1.45$, $p > .10$. However, when they read the experimental article revealing that Black women were ostensibly less likely to be overweight than were White women, they stigmatized obesity and rated heavier targets more negatively ($M = 6.36$, $SD = 1.04$) than thinner ones ($M = 6.74$, $SD = .88$), $t = 2.98$, $p < .01$. As a whole, then, Black participants who had the threat removed by learning that their ingroup achieved a thin standard were more likely to use weight as a basis for evaluation.

Table 2
Study 2: participants' Positivity Composite ratings of targets varying in size and ethnicity.

Participant race	Target race	Target size	Condition	Condition
			Control *M* (*SD*)	Experimental *M* (*SD*)
White	White	Thin	6.57 (1.10)	6.38 (1.13)
		Heavy	6.29 (1.05)	6.27 (.92)
	Black	Thin	6.90 (1.00)	6.98 (1.07)
		Heavy	6.42 (1.22)	6.53 (1.14)
Black	White	Thin	5.98 (1.75)	6.36 (1.69)
		Heavy	6.09 (1.26)	5.66 (1.74)
	Black	Thin	7.05 (1.29)	6.96 (1.57)
		Heavy	7.05 (1.44)	5.91 (1.65)

Discussion

The results of Study 2 provide support that Black women do not necessarily evaluate others negatively on the basis of size. If they are not given any size-related information, then they (unlike White women) disengage from the thin ideal and do not stigmatize obesity. However, if they are given size-related information, informing them that they, rather than White women, are more likely to be thin, they re-engage and begin to evaluate heavier women more negatively. Such results confirm that individuals tend to self-affirm in domains in which they succeed (Steele, 1988) and that beauty standards are societal norms that can be personalized even to those who may initially seem resistant.

It is interesting to note that White women began to relax their stigma of obesity when they were in the experimental condition. Differences between their ratings of thin and large were not significantly different from each other on the Positivity Composite in the experimental condition, $t(19) = 1.45$, $p = .16$. Although the means are certainly in the expected direction, a significant difference was clearly anticipated for White women. It is possible that White women may internalize the "thin is in" ideology and may react against it when a salient, explicit reminder that they should be thin and tend to be thinner is given to them.

Study 2 demonstrates that Black women stigmatize obesity more when they believe that Black women are thinner than White women, than when they believe that the opposite is true. Although this pattern is consistent with a re-engagement framework, it does not directly test the impact of beliefs about thinness on conceptions of the self. It is not yet clear, then, whether Black women's perceptions of thinness affect the way they see themselves. It is these self-perceptions that may be central to the notion of re-engagement. In the case of competence in mathematics, for example, re-engagement might be demonstrated by women who evaluate themselves by a higher standard compared to women who have disengaged with the domain of mathematics and evaluate themselves in a neutral manner. Re-engagement in the domain of thinness would be evidenced by a decrease in Black women's positive body image as a function of a changed belief in the average body size of Black women compared to White women. In other words, Black women who have re-engaged with thinness will see their own bodies more negatively than Black women who disidentify with the thin ideal. Thus, the purpose of Study 3 is to extend the results of Study 1 and 2 by considering the manner in which Black women evaluate their own bodies when their beliefs about the relative thinness of White women compared to Black women are confirmed or challenged.

In Study 3, we did not include the control group comparison because it had different meanings for Black and White participants. That is, the control was a "threat" condition for White participants and a "no threat" condition for Black participants, as the status quo belief (established through pretesting) is that White women are thinner than Black women. Therefore, White participants are never being subjected to a comparable condition. In Study 3, then, we try to make conditions equivalent by exposing Black and White participants to comparable experimental conditions to ensure an improved comparison. In other words, all participants read either statements that Whites were thinner or Blacks were thinner.

Study 3

Method

Participants

Fifteen undergraduate research assistants approached women in public locations (e.g., coffee shops, bookstores) in the Houston area and asked if they would be willing to participate in a brief research study. Eighty-three women (95 White, 41 Black) agreed to participate in the study. The median age of participants was 37 years. The highest level of education achieved by the majority of these participants was some college (47.1%), though an additional 36% had earned a bachelor's or graduate degree.

Procedure and measures

Similar to the procedures in Study 2, participants read one of two articles that described the relative weight of Black and White women before evaluating pictures of Black and White women who were both thin and heavy. Participants were randomly assigned to read an ostensibly scientific article stating that Black women are either thinner or heavier than White women. As in the previous studies, a Positivity Composite was calculated from their ratings (average Cronbach's alpha = .92).

Finally, participants completed an Implicit Association Test (Greenwald, McGhee, & Schwartz, 1998) designed to assess strength of association between the self and thinness. The Implicit Association Test (IAT) is a computer-based categorization task that uses response latencies as a proxy measure for the relative strength of association between two objects in memory. In the current experiment, the IAT is measuring the respondent's relative association of their own self with thinness compared to obesity. The IAT uses four categories total, two attribute categories (in this case, Small and Large, described below), and two target concept categories (Self and Other). The Self and Other categories were represented using words synonymous with those categories (I, Me, My, or Mine for the Self category, and They, Them, Their, or Theirs for the Other category). Small and Large were used as attribute category labels in order to reduce any potential influence due to labels that might be perceived as more strongly valenced. The Small and Large attribute categories were represented using line-drawn images that were identical in detail except for the size of the body represented in the drawings.

The IAT used in the current research was consistent with the general procedure described in Greenwald et al. (1998). Participants began by categorizing words appearing in the middle of the screen as either Self or Other (the target-concept discrimination task) by pressing one of two response keys on a computer keyboard as quickly and accurately as possible. This task was followed by a similar task requiring the categorization of the images described above representing the Small and Large categories (the attribute dimension discrimination task) as quickly as possible. Both of these categorization tasks included 40 trials each. After these initial tasks, the subjects complete an initial combined tasks that pairs one of the attribute categories with one of the target concept categories on each key. For example, respondents were instructed to quickly and accurately press the 'D' key whenever words representing the Self category or images representing the Small category appeared in the middle of the screen, while pressing the 'K' key whenever words representing the Other category or images representing the Large category appeared. Subjects completed 64 trials during this stage of the experiment. After completion of this initial combined task, the target concept attributes were reversed on the screen, and subjects completed 64 trials with the Self category assigned to the 'K' key and the Other category assigned to the 'D' key. This configuration is included in order to mitigate any learning effects due to the initial tasks. Finally, subjects completed a reversed combined task that required quickly and accurately pressing the 'D' key whenever words representing the Other category or images representing the Small category appeared in the middle of the screen, while pressing the 'K' key whenever words representing the Self category or images representing the Large category appeared.

The key dependent measure in the IAT is the relative speed with which the participant is able to categorize the two combined tasks. For example, to the extent that the Self is associated with a thin body image in memory, the average response should be faster (slower) when words representing Self share a response key with small (Large) images. As the strength of association between Self and a thin body image in memory increases, the latency difference between the two paired categorization tasks (or IAT effect) should also increase (Greenwald et al., 1998). Consistent with previous studies, the order of presentation of the two IATs, as well as which paring was presented to the participant first was randomized.

The raw millisecond data was converted using the D measure scoring algorithm (Greenwald, Nosek, & Banaji, 2003). The D measure is an improvement on the original scoring algorithm reported in Greenwald et al. (1998). The D measure rescales IAT effects by dividing each individual's millisecond-difference score (the original scoring algorithm) by the pooled standard deviation of the components of the difference score. Comparison to several alternative algorithms suggested that the D measure reduced the effect of individual response ability and better captured individual differences. The D measure is analogous to an effects size (Greenwald et al., 2003).

Results

The primary hypothesis of Study 3 was tested using a between-subjects ANOVA with Participant Race (White, Black) and Experimental Condition (Blacks Heavier, Whites Heavier) as independent variables and Self-Thinness IAT as a dependent variable. An interaction between Race and Condition ($F(1, 135) = 3.96$, $p < .05$), but no main effects, emerged (see Fig. 1). Consistent with our expectation, the association between self and thinness was slower for Black participants who read the statement that Black individuals are thinner than White individuals ($M = .34$, $SD = .41$) than the opposite ($M = .62$, $SD = .44$), $t = 2.07$, $p < .05$. Among White participants, however, there was no evidence that the speed of association between the self and thinness differed across the experimental conditions, $t = -.55$, $p = .58$. Thus, when Black (but not White) women read that Black women are thinner than White

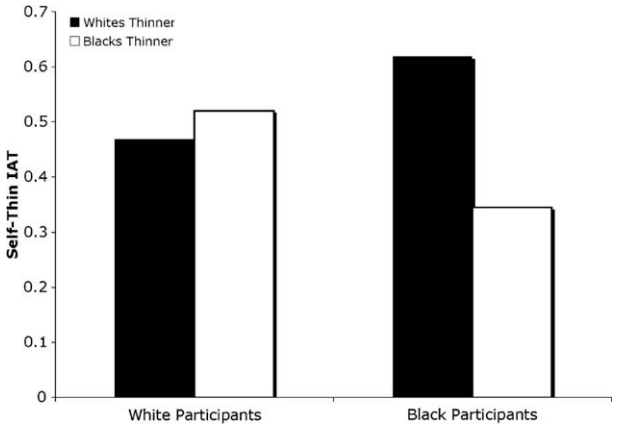

Fig. 1. Speed of association between constructs of self and thinness as a function of race and condition.

women, they indicated a weaker connection between their self-concept and thinness than when they read that White women are thinner than Black women. These results suggest that when Black (but not White) women believe that Black women are thinner than White women, they may begin to evaluate themselves according to a more stringent, thinner ideal.

In the interest of replicating the findings of Study 2, a mixed model [2 (Type of Article: Control, Experimental) × 2 (Participant Race: Black, White) × 2 (Target Race: Black, White) × 2 (Target Size: Thin, Heavy)] ANOVA was conducted on the Positivity Composite; Type of Article and Participant Race were between-subjects factors and the Target Race and Target Size were within-subjects factors (see Table 3). Main effects of Target Race ($F(1, 132) = 5.30$, $p < .05$) and Size ($F(1, 132) = 2.24$, $p < .05$) emerged, confirming that Black ($M = 6.04$, $SD = 1.12$) and thin ($M = 6.10$, $SD = 1.20$) targets were evaluated more positively than White ($M = 5.85$, $SD = 1.01$) and heavy ($M = 5.78$, $SD = 1.31$) targets (see Table 3). In addition, an interaction between these variables also emerged ($F(1, 132) = 6.49$, $p < .01$) that was qualified by a three-way interaction between Target Size, Target Race, and Participant Race ($F(1, 132) = 5.31$, $p < .01$). In addition, a four-way interaction between all of the independent variables also emerged ($F(1, 132) = 3.66$, $p = .06$). This effect was probed with separate ANOVAs for White and Black participants using Target Race, Target Size, and Type of Article as independent variables. For the purposes of replication, we are primarily interested in the ratings that participants made of same-race targets in each of the experimental conditions.

Among White participants, a significant main effect of Target Size ($F(1, 93) = 2.41$, $p < .01$) was qualified by a significant 2-way interaction between Target Size and Target Race ($F(1, 93) = 3.25$, $p < .01$) and a marginally significant 3-way interaction between Target Size, Target Race, and Article Type ($F(1, 93) = 3.45$, $p = .06$). This pattern was examined by testing the separate effects of Target Race and Target Size for individuals who read that Whites are thinner than Blacks and for those who read that Blacks are thinner than Whites. Among participants in the former condition, a significant interaction of Target Size and Target Race emerged, $F(1, 60) = 3.69$, $p < .01$. This interaction was also significant for participants in the latter condition, $F(1, 33) = 6.73$, $p = .01$. The pattern of means (see Table 3) suggest that for White participants who read that Whites are thinner than Blacks, thin Black targets were rated more positively than heavy Black targets ($t(61) = 7.30$, $p < .01$), but thin and heavy White targets were rated similarly ($t(60) = -1.56$, $p = .13$). Among White participants who read that Blacks are thinner than Whites, thin Black targets were rated more positively than heavy Black targets ($t(33) = 3.95$, $p < .05$), and thin White targets were rated similarly to heavy White targets ($t(33) = 1.05$, $p = .30$). Notably, however, the nature of the difference between ratings of thin and heavy White targets was *negative* for participants who read that Whites are thinner than Blacks, but *positive* for participants who read that Blacks are thinner than Whites. This implies that the experimental conditions had opposite effects on the relative ratings of White thin and heavy targets, and was confirmed by an ANOVA on White participants' ratings of heavy and thin White targets which suggested an interaction between Target Size and Type of Article, $F(1, 93) = 3.01$, $p = .09$.

For Black participants, significant main effects of Target Race ($F(1, 39) = 7.18$, $p < .05$) and Target Size ($F(1, 39) = 5.26$, $p < .05$) emerged. In addition, a Target Race × Target Size interaction also emerged, $F(1, 39) = 2.66$, $p < .05$. The pattern of means suggest that Black participants rated thin Black targets more positively ($M = 6.54$, $SD = 1.29$) than heavy Black targets ($M = 5.66$, $SD = 1.65$; $t(40) = 4.31$, $p < .01$), but heavy White targets were rated more positively ($M = 5.94$, $SD = 1.20$) than thin White targets ($M = 5.53$, $SD = 1.19$; $t(40) = -3.22$, $p < .01$). Although these effects were not qualified by an interaction with Type of Article ($F(1, 39) = 1.3$, $p = .20$), we conducted planned contrasts of means in line with the findings of the previous studies. Consistent with Study 1, when Black participants read that Black women are thinner than White women, heavy same-race targets were rated more negatively ($M = 5.29$, $SD = 1.88$) than thin same-race targets ($M = 6.54$, $SD = 1.25$), $t(41) = 3.19$, $p < .01$. In addition, comparisons of the ratings of heavy same-race targets by Black women in the different conditions suggest that ratings tended to be lower when Black participants read that Black women are thinner than White women ($M = 5.29$, $SD = 1.88$) than when Black participants read that White women are thinner than Black women ($M = 5.83$, $SD = 1.40$), $t(95) = 1.05$, $p = .15$. As such, the results of the Study 2 with regard to Black participants are supported in this independent sample.

Table 3
Study 3: participants' Positivity Composite ratings of targets varying in size and ethnicity.

Participant race	Target race	Target size	Condition	Condition
			Whites thinner *M* (*SD*)	Blacks thinner *M* (*SD*)
White	White	Thin	5.80 (1.30)	6.08 (1.57)
		Heavy	6.00 (1.20)	5.93 (1.30)
	Black	Thin	6.42 (1.41)	6.37 (1.55)
		Heavy	5.60 (1.44)	5.70 (1.59)
Black	White	Thin	5.65 (1.17)	5.41 (1.23)
		Heavy	6.07 (1.20)	5.81 (1.20)
	Black	Thin	6.53 (1.35)	6.54 (1.25)
		Heavy	5.83 (1.40)	5.29 (1.88)

Discussion

Consistent with Study 2, Black women began to stigmatize obesity in same-race women but only under conditions in which they were led to believe that Black women were more likely to be thin than were White women.[6] This pattern supports a re-engagement interpretation. However, central to theories of disengagement (and disidentification more generally) is the notion that individuals use these strategies for self-protection. For this reason, we also used the IAT ratings to capture a more self-centered measure; namely, we wanted to assess whether Black women might show a decrease in their implicit body image as a function of believing that in the average body size of Black women compared to White women. Indeed, this is exactly what the data showed. When Black women received information that confirmed the status quo (i.e., that White women are thinner than Black women), they showed a stronger connection between their concept of the self and thin images than when they received information that disconfirmed this belief (i.e., that Black women are thinner than White women). Thus, although Black women may generally have positive views of heavy bodies and of their own body size, these attitudes toward others and the self are vulnerable.

General discussion

The current findings support and extend research on disidentification theory (Steele, 1992). Individuals disengage because they perceive that their group is falling short of a standard that is eval-

[6] We note that in Study 3, White women given the "Whites thinner" condition no longer stigmatize obesity. However, we think that their lack of stigmatization here (which is inconsistent with our other two studies and a host of previous research) may be the result of reaction against explicitly stating something that is already known to them.

uative of their self-worth. In this case, the standard is the importance of being thin and Black women are significantly more likely to fall short of this standard than are White women. To counteract this threat, Black women disengage and reject White mainstream values concerning body preferences for women. In fact, they may even embrace the antithesis of White beauty, accepting largeness and even devaluing thinness (Hebl & Heatherton, 1997; Ogbu, 1995). The current results lend support to this idea. Across all three studies, Black women did not generally stigmatize obesity in the control conditions.

Given that all women are targets of widescale media depictions of thinness, it may seem surprising how relatively immune Black women are to such influences, particularly given the fact that they react to the singular manipulation used in Studies 2 and 3. However, much of their immunity from the media likely comes from their reaction to the threat – they disengage to avoid falling short of societal ideals and gain solidified reinforcement from their ingroup in using differing, fuller-range guides for body ideals. Disengaging, then, may enable them to reject the abundance of thin White models as attractive. Consistent with this, Black media figures (which are certainly less frequently depicted than White figures) tend to represent the gamut of sizes (e.g., Oprah Winfrey, Tyra Banks, Halle Berry, Jennifer Hudson).

In choosing to disengage from stigmatizing obesity, Black women may be winning their "struggles to form positive self-definitions in the face of denigrated images of Black womanhood" (Collins, 2000). Namely, if one does not value success in a particular domain, failure in that domain is not as important or indicative of self-worth. The domain becomes a non-entity and in James (1890) theory on self-esteem, it is irrelevant for one's composite self-esteem. Importantly, the current research shows that Black women who disengage may avoid high standards for self-judgments. That is, Study 3 shows that when Black women re-engage with the domain of thinness, they hold themselves to higher standards and are less likely to associate conceptions of the self with thinness. An indicator of re-engagement, then, is that Black women see themselves as heavier when they believe that Black women are thinner than White women than when they believe the opposite.

It is also feasible that some individuals may be chronically or permanently immune to norms of thinness. They may be permanently indoctrinated against the thinness ideology and simply never identify with such norms. Certainly the sample on which our results were based may have focused on those most likely to be vulnerable to changing social norms, Black women in a traditionally White college environment. Although Black women may be immune to the media pressures, it is very striking that the current study revealed that they are not immune to a manipulation involving the removal of stereotype threat in a college setting. Black women may feel particularly compelled to identify with a thinness norm in a setting where Black women may not be shielded by a strong ingroup and the dimension on which they learn that they excel is commensurate with success in dating and other social interactions (Halper, Udry, Campbell, & Suchindran, 1999). Similarly, Williams (1995) found that Black women who spend more time in culturally inconsonant environments, or predominantly White academic or other environments report behaviors that are consonant with valuing thinness and devaluing obesity. Future research might address how removal of threat impacts Black women at traditionally Black colleges, White women at traditionally Black colleges, Black women throughout developmental stages, and samples of older women who may be more indoctrinated against a thinness ideal. The level of acculturation is likely influential.

Similarly, future research might examine how the current results generalize to ethnic groups other than Black women. There is an ample amount of research that shows that Asian women may be just as, if not even more, concerned with thinness than White women (Cachelin, Rebeck, Chung, & Pelayo, 2003; Haudek, Rorty, & Henker, 1999; Neumark-Sztainer et al., 2002). Such research also suggests that Hispanic women may respond more similarly to Black women (Cachelin et al., 2003; Latner, Stunkard, & Wilson, 2005; Miller et al., 2000; Neumark-Sztainer et al., 2002; cf Cash & Henry, 2005). Thus, we might anticipate that Asian women might respond similarly to White women and be less likely to identify with departures from thin ideals whereas Hispanic women might be likely to identify and re-engage under certain situations. To test these predictions, however, future research is needed.

Finally, the current results also inform research on body image. Because of their higher rates of obesity, Black women may be more at greater risk for a variety of medical conditions (e.g., heart disease, diabetes). However, their disengagement also protects them from other medical conditions (e.g., eating disorders, depression related to body image concerns). Future research that capitalizes on Black women's positive views regarding their bodies and White women's actual lower rates of obesity would clearly be informative and therapeutic.

In sum, the current study demonstrates that Black women are not immutably untouched by the stigma of obesity. Given the removal of threat, they ascribe to it as well, providing evidence that disengagement facilitates more flexible standards for judgments of the self.

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