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# The Swimsuit Becomes Us All: Ethnicity, Gender, and Vulnerability to Self-Objectification

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*Self-objectification theory posits and past research has found that Caucasian women's body image is negatively affected by a stigma of obesity and sociocultural norm of thinness that leads women to self-focus from a critical external perspective. However, research in this area is limited by its methodology and the restricted demographic composition of its study participants. The current study tested 176 men and 224 women of Caucasian, African American, Hispanic, and Asian American descent in a situation that induced a state of self-objectification (e.g., wearing a one-piece Speedo bathing suit) or that served as a control condition (e.g., wearing a sweater). Contrary to previous research, when put in a self-objectifying situation, men and women of every ethnicity experienced negative outcomes (e.g., lower math performance) that parallel those previously found for Caucasian women.*

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**Keywords:** obesity; self-objectification; ethnicity; body image

**D**espite the increasing prevalence of obesity in the United States, it remains one of the few stigmas unaffected by trends toward "political correctness" (Crandall & Biernat, 1990). Overweight individuals continue to be discriminated against in both professional and interpersonal domains. At work, overweight individuals are penalized in salary, employment, and promotion decisions (Pingitore, Dugoni, Tindale, & Spring, 1994; Roehling, 1999; Sobal & Stunkard, 1989). In the social domain, being overweight is associated with being lazy, undisciplined, and gluttonous (DeJong & Kleck, 1981; Harris, Harris, & Bochner, 1982; Hebl & Kleck, 2002). Even heavy individuals hold negative attitudes toward obesity and blame themselves for their condition (Crandall & Biernat, 1990; Crocker, Cornwell, & Major, 1993). Of importance, the intensity of this negative stigma seems to differ by gender and ethnicity.

Self-objectification theory (Fredrickson & Roberts, 1997) may provide a plausible explanation for gender and ethnic differences in the stigma of obesity. Objectification theory posits that "in American culture, girls and women tend to see themselves through a veil of sexism, measuring their self-worth by evaluating their physical appearance against our culture's sexually objectifying and unrealistic standards of beauty" (Fredrickson, Roberts, Noll, Quinn, & Twenge, 1998, p. 269). The authors suggest that learned cultural practices of sexual objectification lead women to self-objectify at a trait level; that is, because of societal norms, women can be characterized by a greater tendency to objectify themselves. Although research has not yet considered ethnic differences in trait levels of self-objectification, this theory may hold explanatory power. For instance, because subcultural norms regarding thinness are not as strict for African American women as they are for Caucasian women (see Hebl & King, 2004), African American women may have lower levels of trait self-objectification. Thus, the current study considers the generalizability of self-objectification theory across ethnic groups by assessing levels of trait self-objectification in a diverse sample.

In addition to operating at a chronic or trait level, self-objectification theory also encompasses situations in which individuals may experience state-level self-

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objectification. In a self-objectification state, individuals may be vulnerable to its negative effects (see Fredrickson et al., 1998). It remains unclear how individuals with different levels of trait self-objectification react to equivalent states of self-objectification. It follows that we do not yet know whether men and women, or individuals of diverse ethnic backgrounds, experience the same consequences when in situations that are equally self-objectifying. The present research examines this question by inducing parallel states of self-objectification across gender and ethnicity.

In sum, the current study is an experimental investigation of gender and ethnic differences in trait and situation-induced self-objectification. By measuring trait self-objectification in addition to self-reported and behavioral effects of state self-objectification as they vary across gender and ethnicity, we extend previous research in this area and test the generalizability of the theory of self-objectification.

#### *Gender and Ethnic Differences in the Stigma of Obesity*

There is a great deal of evidence suggesting that the stigma associated with being overweight is more negative for women than for men. For example, research shows that women may be judged on their weight more than are men (Fallon, 1990; Jackson, 1992). In addition, a recent meta-analysis of 222 studies demonstrates that compared to men, women report much higher rates of body-related and eating disorders (Feingold & Mazzella, 1998). The gender discrepancy in the manifestation of these disorders may be linked to the increasing proportion of women who have poor body image (Feingold & Mazzella, 1998). Overall, then, it appears that obesity is more stigmatized in women than in men (see also Hebl & McGuire, 2004).

In addition to gender, researchers have begun to consider ethnic differences in the stigma of obesity. Although they tend to be somewhat larger, African American women report feeling less guilty and more accepting of their body size than do Caucasian women (Stevens, Kumanyika, & Keil, 1994). In a study investigating subcultural differences in the stigma associated with obesity, Hebl and Heatherton (1998) found that African American women do not stigmatize obese individuals to the same extent as do Caucasian women. More specifically, Caucasian women rated photographs of large Caucasian and African American women less positively than they rated women of smaller sizes across six evaluative dimensions. In contrast, African American women rated large Caucasian targets marginally lower only for intelligence, relationship success, and happiness; they rated large African American targets significantly lower only in attractiveness. These results provide strong support for the hypothesis that Caucasian women stigmatize obesity

more so than do African American women. Similarly, it appears that although both African American and Caucasian men stigmatize obesity in men and women, the harshness of stigmatization seems to be less for African American men than for Caucasian men (Hebl & McGuire, 2004). Supporting research on ethnic differences in the stigma of obesity for women, Caucasian men stigmatize both heavy and medium women relative to thin women, whereas African American men find medium and thin women to be equally desirable.

Although research on the stigma of obesity for other ethnic groups is scarce, there is some evidence that Asian American women are more likely than African American women to endorse mainstream cultural norms (Barnett, Keel, & Conoscenti, 2001). Whereas African American women reported positive self-evaluations about their bodies, Asian American women experienced greater dissatisfaction. There is also some evidence that Hispanic women may face similar challenges as do Caucasian women in regard to negative body image (Altabe, 1998; Crandall & Martinez, 1996). Further investigation of ethnic differences in the stigma of obesity is essential in gaining a more thorough understanding of its intricacies.

One element of subcultural variations in the stigma of obesity that should be considered is the potential for change. An important study determined that despite African American women's apparent ability to avoid stigmatization of obesity, they may be vulnerable in situations where they believe that African American women succeed in the domain of thinness (Hebl & King, 2004). In this experimental study, both African American and Caucasian women were given information that their ingroup succeeded or failed in the domain of thinness relative to the outgroup. African American women responded to this described success in thinness by becoming less positive about their bodies and more likely to stigmatize obesity. This finding suggests that even individuals who do not consistently face particular stigmas can still be affected by situations in which the stigmas are activated. Despite these initial findings, many questions about the stigma of obesity, its potential for change, and its consequences remain unanswered.

#### *Self-Objectification Theory*

One mechanism that might explain the causes and consequences of stigmatizing individuals' bodies is self-objectification (Fredrickson & Roberts, 1997). According to self-objectification theory, individuals may see themselves from a critical, external perspective and, in turn, compare their own bodies to an unrealistic ideal that encompasses social norms and stigmas. In particular, the sexual objectification of women that derives from mass media and interpersonal encounters may lead

women to objectify themselves. This appearance monitoring against unrealistic cultural standards of thinness and beauty promoted by the media may result in the adverse psychological consequences of increased body shame and anxiety (Miner-Rubio, Twenge, & Fredrickson, 2002), which in turn, may serve as antecedents to a host of other mental health risks, such as disordered eating and depression.

To test the potential consequences of experiencing self-objectification, Fredrickson et al. (1998) manipulated state self-objectification by having participants try on a swimsuit or a sweater. The experimenters then took measures of participants' body shame, math performance, and other discrete emotional states to test whether increased physical self-awareness would lead to increased self-objectification and negative affective responses. In the first of two experiments, only women were included, but the second experiment was expanded to include men. They found an effect of condition for women, but not for men. In both experiments, women in the swimsuit condition reported increased self-consciousness, greater body shame, and lower self-esteem than women in the sweater condition. The women in the swimsuit condition also exhibited diminished math performance and more restrained eating than women in the sweater condition. As hypothesized, men in the second experiment appeared to show no effect of swimsuit or sweater condition except in the manipulation check, and overall, men performed better on the math test than did women. These results are consistent with self-objectification theory that suggests increased self-objectification can have detrimental psychological consequences for women, which also puts them at greater risk for other mental health problems.

There are, however, a few limitations to the Fredrickson et al. (1998) study. The first involves the unbalanced physical and psychological nature of the experimental situations in which male and female participants were tested. Although both male and female participants were asked to try on either a swimsuit or a sweater, the swimsuit condition did not reflect equal conditions of exposure for the genders. Female participants were required to try on one-piece swimsuits that clung to them, whereas their male counterparts tried on swim trunks. For men, wearing swim trunks is not so very different from wearing shorts and, thus, may not be a comparable self-objectifying situation. Such disparate situations may provide a partial reason for the lack of experimental effects in male participants. The current study attempts to remedy this limitation by placing men in comparable objectifying conditions experienced by their female counterparts. Rather than trying on swim trunks in the swimsuit condition, male participants will be asked to try on Speedos, which we believe will place

male participants into similar psychological conditions as female participants. This should help clarify whether women experience self-objectification to a greater extent than do men when placed in comparable situations and whether this self-objectification affects women more negatively than it does men.

Fredrickson et al.'s (1998) research suggests that women tend to internalize others' perceptions of their physical selves more than do men. Little is known, however, about ethnic differences in levels of self-objectification. Thus, another limitation to the Fredrickson et al. study is the homogeneous participant sample. The results of Fredrickson et al.'s study rely predominantly on data from Caucasian participants, restricting generalization of their results to other ethnic populations in this society. The current research attempts to pull together the pieces of research that have looked at ethnic and gender differences separately. It is possible that men and women of other ethnic backgrounds are protected from chronic experiences of self-objectification. Despite different levels of trait self-objectification, men and women of various ethnic backgrounds may react similarly to situations in which self-objectification is induced. Thus, we expand the investigation of body image issues by encompassing African American, Caucasian, Asian American, and Hispanic women and men into a single study to allow for direct comparisons of similarities and differences by ethnicity and gender.

Although the Fredrickson et al. (1998) study showed that the effects of condition on psychological and behavioral outcomes depended in part on gender, we believe that the modifications in the methodology will put all participants in the experimental condition on the same level. In other words, we expect that all participants, regardless of gender or ethnicity, will be vulnerable to the negative effects of induced self-objectification. We feel that although there will likely be gender and ethnic differences in trait-level objectification, when placed in similar situations, all individuals (regardless of gender and ethnicity) will experience similar effects from the state of self-objectification. In this way, consequences of state self-objectification can be clarified and the theory could be extended to include the experiences of men and ethnic minorities. More specifically, this advancement in self-objectification theory may explain psychological and behavioral outcomes.

*Psychological outcomes.* We believe the current research will support previous findings regarding body shame and bolster these findings with the inclusion of state self-esteem as another component of psychological outcomes. Following self-objectification theory, we predict that individuals in the experimental (i.e., swimsuit) condition will have higher levels of state self-objectification

than will individuals in the control (i.e., sweater) condition. We also expect that the experience of state self-objectification will lower body shame and lower self-esteem for individuals in the swimsuit relative to individuals in the sweater. However, we do not expect that the effects of the experimental manipulation will affect men and women or individuals from different ethnic backgrounds differently. Instead, we expect that all participants will be negatively affected by a state of self-objectification.

*Behavioral outcomes.* Past research has determined that being in an induced state of self-objectification can affect an individual's behavior. Specifically, Fredrickson et al. (1998) found that women's math scores and eating behaviors were affected by self-objectification. Because the process of self-objectification requires mental faculties, the math performance of those individuals in the highest state of self-objectification is expected to be negatively affected. Thus, we predict that individuals in the experimental (i.e., swimsuit) condition will have lower math scores than those in the control (i.e., sweater) condition as a direct result of increased state self-objectification. Another behavioral outcome that is likely to be affected by a state of self-objectification is food consumption. In a state of high self-objectification, individuals are predicted to have a heightened sense of their own bodies and weight and thus may be less likely to consume food than will those participants not in an objectified state.

## METHOD

### *Participants*

A total of 400 undergraduate students (56% women, 44% men) from two southern universities volunteered to participate in this experiment. There were 93 African American, 130 Caucasian, 88 Hispanic, and 89 Asian American participants.<sup>1</sup> Participants were recruited through psychology classes for extra credit or experimental credit, through various sororities and fraternities as a form of community service, and through individual recruiting.

### *Written Materials*

*Demographic information.* Participants were asked to provide information concerning their ethnicity, gender, height, and weight.

*Marketing questionnaire regarding scent, garment, and food.* Consistent with Fredrickson et al. (1998), a bogus four-item questionnaire asked participants to respond to four marketing questions (e.g., "How positive does this make you feel?" and "How likely would you be to purchase this product for yourself?"). These questions

corresponded to each product (a fragrance, a sweater or swimsuit, and chocolate) and lent credence to the marketing cover story.

*Trait self-objectification.* The 10-item version of the Self-Objectification Questionnaire (Noll & Fredrickson, 1998) was used to assess trait self-objectification to determine participants' concerns with their physical appearance. Participants were asked to rank order 10 body attributes for greatest to least impact on their physical self-concept, regardless of how satisfied they were with each particular body attribute. Their total score of trait self-objectification was calculated by summing their score for five appearance-based items (i.e., weight, sex appeal, physical attractiveness, muscles, measurements).

*State self-objectification.* A measure of state self-objectification was taken with a shortened version of the Twenty Statements Test (TST) used by Fredrickson et al. (1998). Specifically, 10 items were included and served as a manipulation check to assess whether participants in the swimsuit condition experienced heightened physical awareness as compared to participants in the sweater condition. The instructions followed Fredrickson et al. and fit the cover story as follows:

Clothing and style of dress can often have an impact on people's views of themselves. Please take a moment to think about how wearing this particular item of clothing makes you feel about yourself and your identity. In the ten blanks below, please make ten different statements about yourself and your identity that complete the sentence "I am \_\_\_\_\_." Complete the statements as if you were describing yourself to yourself, not to somebody else.

Three independent coders, naïve to the study's purpose and experimental conditions, classified the free responses into six separate categories: (a) body size and shape, (b) other physical appearance, (c) physical competence, (d) traits and abilities, (e) states and emotions, and (f) uncodable or illegible. Examples of the statements belonging to each category were taken from Fredrickson et al. (1998). For the purpose of measuring state self-objectification, we focused on the number of times that participants generated statements in the body shape and size category. Any two of the three raters were in complete agreement for 94% of the participants, whereas all three raters agreed on the number 67% of the time. A single measure of the intraclass correlation among the raters was .92. The average number of times the raters noted such a response was used to demonstrate state self-objectification for each participant.

*Body shame.* An indirect measure of body shame, identical to that used by Fredrickson et al. (1998), was taken

in two parts. Body shame phenomenology was assessed from 20 items (e.g., “I feel angry, embarrassed, disgusted, ashamed, silly”). Participants were instructed to respond using a 5-point Likert-type scale (1 = *not at all*, 5 = *extremely*) that indicated the extent to which statements described how the participants felt about themselves as they looked into the mirror. Ratings were summed into one subscore.

A second measurement of body shame phenomenology involved participants reporting their desires to change 28 specific attributes of their body (e.g., weight, thighs, body build; from *no change* to *completely change*), with what intensity their desires for change were, and how frequently they thought about changing each respective part of their body. To further support the cover story and to decrease participants’ defensiveness, before indicating desired body changes, participants were asked to indicate changes they wished to make to the garment that they were asked to wear. Two separate subscores were derived from this second measurement: (a) total number of desired body attribute changes and (b) total intensity of desires for change. In sum, the three subscores were separately standardized and then summed together to create a composite body shame score, with higher scores indicating greater body shame ( $\alpha = .80$ ).

*State self-esteem.* Five items from the State Self-Esteem Scale developed by Heatherton and Polivy (1991) were selected a priori as being the most relevant to the current study. Three of the items load as social factors (e.g., “I feel self-conscious,” “I feel inferior to others at this moment,” and “I am worried about what other people think of me”), and two of the items load as appearance factors (e.g., “I feel unattractive” and “I am pleased with my appearance right now”). Participants were asked to respond on a 5-point Likert-type scale (1 = *not at all*, 5 = *extremely*) that indicated the extent to which each of the five statements was true for them at the present moment.

*Math test.* Ten items from a sample Graduate Record Examination (GRE) problem-solving test were used to assess math performance. Sample items of varying levels of difficulty were taken from the 2000 online practice questions provided by the Educational Testing Service (ETS). The number of items that each participant answered correctly during the allotted time comprised their math score.

### Procedure

Using the procedures outlined by Fredrickson et al. (1998), participants were recruited by sign-up sheets to participate in a study titled “Emotions and Consumer Behavior.” They were tested individually in 1-hour laboratory sessions. Upon arrival, participants were greeted

by one of 11 female experimenters,<sup>2</sup> told that the experiment would entail sampling three products, and asked to provide their informed consent.

The first product to sample and evaluate was a scent (Calgon body spray). The sole purpose of this task was to bolster the cover story. Participants were asked to answer a set of questionnaires after sampling the scent, including demographic information, state self-esteem items, and bogus marketing items.

The second product to sample and evaluate was an article of clothing. Participants received verbal instructions from the experimenter as well as step-by-step instructions via audio tape. Female participants were randomly assigned to try on either a one-piece swimsuit (available in seven sizes ranging from small to very large, including sizes between 30 and 40 and XXX) or a sweater (available in five sizes: S, M, L, XL, and XXL). Male participants were randomly assigned to try on either a Speedo (available in four sizes: 32-38) or a sweater (available in five sizes: S, M, L, XL, and XXL). Participants completed this portion of the study alone in a dressing room with a full-length mirror. To ensure their privacy, participants were guided through this part of the task via audio tape. Participants were instructed to find the appropriate size garment and (while pausing the audio tape) to wear it. Next, participants were instructed to look at themselves in the mirror and to “evaluate the garment as if you were really shopping and deciding whether to purchase it.” Still wearing the garment, participants were asked to complete a set of questionnaires, including items measuring trait self-objectification, body shame, and attitudes toward obesity.

After completing the set of questionnaires in Folder 1, consistent with Fredrickson et al. (1998), participants were told,

Often it takes time for people to feel comfortable in a new item of clothing. We are testing whether varying amounts of time to habituate to a new garment might alter people’s judgments about the garment or the likelihood of purchasing it. You have been assigned to the “moderate habituation” condition. This means that we would like you to continue wearing the garment for at least 10 minutes. We will have more questionnaires for you to complete after the 10 minutes have passed. In the meantime, in order to make full use of the experimental hour efficiently, we ask that you complete the packet marked “2” for another experiment.

This packet contained the 10-item math test. Participants were told to leave the audiotape on while they completed this portion of the task. The audiotape gave a 2-minute warning before the end of the math test. When the 10 minutes had passed, participants were instructed to stop work on the questionnaire and to complete an-

other set of questionnaires in Folder 3. The questionnaires in Folder 3 included items measuring body esteem and bogus marketing items. When participants completed this questionnaire packet, they were instructed by the audiotape to change into their original clothes and to notify the experimenter that they were ready to move on to the next task.

The third product to sample and evaluate was a generic brand of M&Ms called "Choco-Buttons." Participants were told that this last task was a taste test. The experimenter poured the individually packaged candy onto a paper plate and instructed participants to taste the food and then to complete a last set of questionnaires. The questionnaires included items measuring state self-esteem and body image identification; bogus marketing items; and a free-response, four-item, "opinions" questionnaire.

After completing the last set of questionnaires, participants were debriefed and given the opportunity to ask any questions regarding the study that they had. Participants also were asked not to share with other potential participants the true nature of the study. After participants left, the experimenter counted how many pieces of candy were left and subtracted this number from the number of pieces in each package to determine the proportion of candy consumed for each participant. Thus, eating behavior is operationalized as the proportion of candy eaten after the manipulation.

## RESULTS

### *Trait Self-Objectification*

We tested gender and ethnic differences in reports of appearance-based trait self-objectification using a 2 (gender)  $\times$  4 (ethnicity) ANOVA. A marginal main effect was obtained for gender,  $F(1, 360) = 2.87, p = .08$ , such that women tended to have higher levels of trait self-objectification ( $M = 25.30, SD = 6.92$ ) than did men ( $M = 24.09, SD = 6.42$ ). There was also a main effect for ethnicity,  $F(1, 360) = 3.69, p < .05$ , such that Hispanic individuals reported the highest levels of trait self-objectification ( $M = 26.75, SD = 6.27$ ) and African American individuals reported the lowest ( $M = 23.69, SD = 6.62$ ). These effects were qualified by a significant interaction between gender and ethnicity,  $F(3, 359) = 3.13, p < .05$ , such that women reported higher levels of self-objectification than did men across all ethnicities except Asian American. Asian American men ( $M = 25.42, SD = 6.20$ ) reported higher levels of trait self-objectification than did Asian American women ( $M = 23.30, SD = 7.29$ ).<sup>3</sup>

### *Outcomes of State Self-Objectification*

A series of 2 (condition)  $\times$  2 (gender)  $\times$  4 (ethnicity) ANOVAs were performed on five dependent variables:

state self-objectification, body shame, self-esteem, math performance, and eating behaviors.<sup>4</sup> The respective means for each dependent variable are reported in Table 1.

### *Psychological Outcomes*

*State self-objectification.* Congruent with self-objectification theory, we expected participants in the swimsuit condition to generate more statements concerning body shape and size on the modified TST than those generated by participants in the sweater condition. Tests of between-subjects effects revealed that participants in the swimsuit condition ( $M = 2.29, SD = 1.77$ ) generated more statements about their bodies than did participants in the sweater condition ( $M = 0.97, SD = 1.29$ ),  $F(1, 331) = 61.66, p < .01$ . Furthermore, women made more statements about their bodies ( $M = 2.11, SD = 1.80$ ) than did men ( $M = 1.15, SD = 1.41$ ),  $F(1, 331) = 32.83, p < .01$ . The interaction between gender and condition did not approach significance ( $p = .21$ ), and neither did the interaction between ethnicity and condition ( $p = .15$ ). The overall  $R^2$  was .26.

*Body shame.* Following our hypotheses, participants had greater levels of body shame when they wore a swimsuit ( $M = .13, SD = 2.53$ ) than when they wore a sweater ( $M = -.40, SD = 2.41$ ),  $F(1, 375) = 4.57, p < .05$ . A main effect for gender revealed that women had higher rates of body shame ( $M = .50, SD = 2.61$ ) than did men ( $M = .76, SD = 2.08$ ),  $F(1, 375) = 26.03, p < .01$ . There was also a marginal main effect for ethnicity such that Hispanic participants tended to report the most overall body shame ( $M = .15, SD = 2.91$ ) and African American participants reported the least ( $M = -.71, SD = 2.14$ ),  $F(3, 375) = 2.45, p = .06$ . This effect was qualified by a significant two-way interaction between gender and ethnicity that demonstrated that African American men ( $M = -.83, SD = 2.15$ ) and women ( $M = -.58, SD = 2.15$ ) tended to report similar rates of body shame, whereas women from other ethnicities tended to have higher body shame than did men,  $F(3, 375) = 3.07, p < .05$ . Neither the interaction between gender and condition nor the interaction between ethnicity and condition approached significance ( $p = .37$  and  $p = .43$ , respectively). The overall  $R^2$  was .15.

*Self-esteem.* Confirming our hypothesis, the self-esteem of participants in the swimsuit condition ( $M = 20.22, SD = 3.60$ ) was lower than that of participants in the sweater condition ( $M = 20.87, SD = 3.07$ ), although the results were only marginally significant,  $F(1, 380) = 3.57, p = .06$ . A main effect,  $F(1, 380) = 4.17, p < .05$ , for gender revealed that women tend to have lower esteem ( $M = 20.20, SD = 3.50$ ) than men ( $M = 20.90, SD = 3.13$ ). A main effect also emerged for ethnicity,  $F(3, 380) = 4.99, p < .01$ ,

TABLE 1: Means Across Gender, Ethnicity, and Condition For All Dependent Variables

	African American				Caucasian				Hispanic				Asian American			
	Sweater		Swimsuit		Sweater		Swimsuit		Sweater		Swimsuit		Sweater		Swimsuit	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
State self-objectification	.33	1.00	1.82	3.23	.88	1.14	1.75	2.59	.56	1.93	1.36	2.62	.62	1.32	1.89	3.04
State self-esteem	22.06	21.72	21.20	21.46	21.81	20.04	21.00	19.75	21.50	20.19	19.64	19.04	20.56	19.08	19.39	20.29
Body shame	-1.32	-.34	-.34	-.82	-1.64	.21	-.84	1.75	-.58	.56	-.21	.84	-1.01	.93	-.17	.82
Math score	4.83	4.00	3.84	3.59	6.67	4.39	6.21	4.63	5.67	4.44	3.93	3.89	7.81	5.63	6.94	4.68
Eating behavior	.38	.25	.50	.28	.51	.31	.57	.45	.36	.34	.47	.35	.43	.35	.44	.24

NOTE: M = male, F = female.

such that African American participants reported the highest self-esteem ( $M = 21.61$ ,  $SD = 2.88$ ) and Asian American participants reported the lowest ( $M = 19.83$ ,  $SD = 3.71$ ).<sup>5</sup> The interaction between gender and condition was not significant ( $p = .13$ ), and neither was the interaction between ethnicity and condition ( $p = .52$ ); the overall  $R^2$  was .08.

#### Behavioral Outcomes

**Math performance.** Confirming our hypothesis, participants in the swimsuit condition ( $M = 4.72$ ,  $SD = 2.49$ ) scored worse than participants in the sweater ( $M = 5.43$ ,  $SD = 2.50$ ) condition,  $F(1, 381) = 9.17$ ,  $p < .01$ . Furthermore, men scored better ( $M = 5.74$ ,  $SD = 2.66$ ) than women ( $M = 4.41$ ,  $SD = 2.19$ ),  $F(1, 381) = 31.67$ ,  $p < .01$ . A main effect for ethnicity,  $F(3, 381) = 16.61$ ,  $p < .01$ , showed that Asian American participants scored highest on the math test ( $M = 6.27$ ,  $SD = 2.60$ ), whereas African American participants scored lowest ( $M = 4.07$ ,  $SD = 2.14$ ). These effects were qualified by a two-way (Gender  $\times$  Ethnicity) interaction that suggested that the difference between men and women's math performance varies by race,  $F(3, 381) = 3.32$ ,  $p < .05$ .

Of particular importance are tests of our hypothesis that men and members of multiple ethnic groups would experience decrements in math performance that are parallel to those experienced by Caucasian women. The results support our predictions, revealing that neither the interaction between gender and condition ( $p = .21$ ), nor the interaction between ethnicity and condition ( $p = .39$ ), approached significance. These findings demonstrate that the performance of all participants, regardless of their gender or ethnicity, will suffer when they are subjected to a state of self-objectification (overall  $R^2 = .22$ ).

**Eating behavior.** Contrary to our prediction, there was no main effect for condition on eating behavior ( $p = .21$ ,  $R^2 = .08$ ). A main effect for gender verified that men tended to eat proportionally more candy ( $M = .48$ ,  $SD =$

.36) than did women ( $M = .32$ ,  $SD = .32$ ),  $F(1, 375) = 14.01$ ,  $p < .01$ . There were no significant interactions.

#### Mediation Analyses

To test the hypothesis that state self-objectification would account for the effects of the manipulation of condition, we conducted a series of mediation analyses using hierarchical regression analyses for each dependent variable following the steps outlined by Baron and Kenny (1986). First, we regressed the mediating variable (i.e., state self-objectification) on the independent variable (i.e., condition). Second, we regressed the dependent variable (i.e., body shame, self-esteem, math score, eating behavior) on the independent variable. Third and last, we regressed the dependent variable on the mediating and independent variables together. We can conclude that state self-objectification mediated the relationship between condition and the dependent variables when the measure of their relationship ( $\beta$ ) lost significance between the second and third steps of the Baron and Kenny procedure. In this case, we could not test mediation for eating behavior because no direct relationship between condition and eating behavior existed. As outlined in Table 2, full mediation was found for math score, body shame, and state self-esteem.

#### DISCUSSION

Overall, the results of the current research support our major hypotheses and show that although Caucasian women are generally more susceptible to negative experiences related to body image, men and members of other ethnic groups more typically resilient to these experiences can be negatively affected by situations that induce a state of self-objectification. Both psychological and behavioral outcomes were affected by induced self-objectification for women and men of African American, Hispanic, Asian American, and Caucasian descent. Specifically, the results indicate that across gender and ethnicity, the relationship between experimental condi-



**TABLE 2: Results of Mediation Analyses Using Hierarchical Regression**

<i>Criterion</i>	<i>Predictor</i>	$\beta$	$R^2$	$\Delta R^2$ From 1 to 2
State self-objectification	1. Condition, direct effect	.39**	.16**	
Body shame	1. Condition, direct effect	.12*	.01*	
	2. Condition, controlling for state self-objectification	.02	.06**	.05**
State self-esteem	1. Condition, direct effect	-.10 <sup>†</sup>	.01 <sup>†</sup>	
	2. Condition, controlling for state self-objectification	-.04	.02*	.03*
Math performance	1. Condition, direct effect	-.10*	.01*	
	2. Condition, controlling for state self-objectification	-.05	.02*	.03*

<sup>†</sup> $p < .10$ . \* $p < .05$ . \*\* $p < .01$ .

tion and body shame, self-esteem, and math performance could be accounted for by varying levels of state self-objectification. Thus, self-objectification serves as a mechanism through which the experience of wearing a swimsuit affected psychological and behavioral outcomes.

The results help to clarify self-objectification theory and inform research on ethnic differences in body image and self-esteem. Specifically, the current research supports previous findings that demonstrate African American individuals have high levels of self-esteem (e.g., Twenge & Crocker, 2000) and more positive attitudes toward their bodies than do individuals of other ethnicities (e.g., Stevens et al., 1994). As predicted, women tended to have lower esteem and body image than did men. It also seems that although African American men and women have similar attitudes toward their bodies, men from other ethnic groups have more positive attitudes than women. This pattern of results indicates that Hispanic individuals face challenges that are similar to those of Caucasians and that African American individuals are typically resilient to these challenges.

However, participants' self-esteem and body shame tended to be more negative when forced to endure a self-objectifying situation. This finding may appear to contradict findings reported by Fredrickson et al. (1998), who found that Caucasian women bear the burden of self-objectification alone. Conversely, the current study actually lends support to previous research that demonstrates that women have higher levels of trait self-objectification than do men (e.g., Fredrickson et al., 1998; Fredrickson & Roberts, 1997). Furthermore, the results also suggest that Hispanic individuals tend to have higher levels of trait self-objectification than do individuals of other ethnic backgrounds. By improving Fredrickson et al.'s (1998) experimental manipulation, the current research also shows the effects of state self-objectification when the social situation has been leveled: All individuals can be vulnerable to the consequences of self-objectification. If men or African American individuals found themselves in the same types of situations as do Caucasian women, the current results

suggest that they would experience similar negative consequences. This finding may encourage the elimination of self-objectifying situations for men and women of every ethnicity and may make the effects more tangible to those individuals who consider themselves or certain subgroups to be immune.

In addition to results on psychological measures, gender, ethnicity, and state self-objectification also produced divergent patterns on behavioral outcomes. As expected, male participants tended to score higher than female participants, and Asian American individuals performed better on the math test than did any other ethnic group. Of particular interest, and again confirming our hypothesis, is that all participants tended to perform worse when they were in a self-objectifying situation than when they were in the control condition. Although Caucasian and Hispanic women may be the most likely to find themselves in such a situation, it appears that any individual who experiences a state of self-objectification is vulnerable to detriments in their performance. However, it is important to note that we did not find that individuals in a state of self-objectification consumed more candy than did individuals who were not self-objectified. One explanation for this result is that the cover story required participants to taste a generic brand of candy. Comments from participants and our own sampling of the candy revealed that it did not compare positively with its name-brand counterpart. Participants may have anticipated the candy to taste more like the name-brand version, and their disappointment may have created a restriction of range in consumption.

In sum, the results of the current study support previous research on the stigma of obesity. African American women do seem to have a certain degree of resilience to the stigma as substantiated by their low levels of trait self-objectification (e.g., Hebl & King, 2004; Hebl & Mannix, 2003). However, the results also inform previous studies by determining that even African American individuals are vulnerable to states in which self-objectification is induced. The current study also extends past research by including Asian American and Hispanic participants.

The results suggest that Hispanic individuals experience particularly challenging expectations in regard to their body image, similar to those typically faced by Caucasian individuals.

As with any experimental design, the current study is not without limitations. One potential limitation is that in our attempt to equalize the experimental conditions for self-objectification by requesting male participants to wear Speedo swimsuits, we may have instead introduced a novel situation to men. However, we argue that the experience of wearing a revealing, skin-tight bathing suit in a laboratory setting is equally unique for both men and women and suggest that this equalization is actually a strength of the current study. Another potential limitation is that when looking at math performance as a dependent variable, we could not control for the participants' ability, a possible confounding factor. However, participants were randomly assigned to experimental conditions, and the pattern of scores is consistent with the pattern of other dependent variables. Future research might assess ability prior to experimental manipulations. One final limitation of the current study is the reliance on undergraduate participants, which is a limiting characteristic of most experimental research. Future research might examine noncollege samples as well as people of varying ages to see how these factors potentially moderate the effects of self-objectification.

In sum, the current research clarifies and refines the theory of self-objectification. Previous research theorized that Caucasian women tend to "internalize an objectifying observer's perspective on their own bodies" (Fredrickson et al., 1998, p. 270) more often than men and that there are relevant negative consequences of this self-objectification. The results of this study elucidate that men and ethnic minorities can experience equivalent consequences when subjected to a state of self-objectification, thus generalizing the theory of self-objectification and research of its consequences across gender and ethnicity.

### Conclusions

The current study investigated the differential effects of state self-objectification, gender, and ethnicity on psychological and behavioral consequences. The results indicate that individuals, regardless of gender or ethnicity, are vulnerable when placed in a state of self-objectification. Future research should further examine these vulnerabilities and explore avenues geared toward reducing the frequency with which all individuals, particularly women, face self-objectifying situations. Given the number of individuals facing problems with their weight and the potentially detrimental effects of social stigma, this and future studies are both timely and essential.

### NOTES

1. On average, the participants were near the end of their college careers (age,  $M = 21.89$ ,  $SD = 4.47$ ; year,  $M = 2.59$ ,  $SD = 1.17$ ). African American (body mass index [BMI],  $M = 24.35$ ,  $SE = .43$ ) and Hispanic (BMI,  $M = 24.61$ ,  $SD = .45$ ) participants tended to be slightly heavier than Caucasian (BMI,  $M = 23.55$ ,  $SD = .36$ ) and Asian American (BMI,  $M = 22.45$ ,  $SD = .45$ ) participants,  $F(3, 392) = 4.72$ ,  $p < .05$ . Male participants (BMI,  $M = 24.21$ ,  $SE = .32$ ) also tended to be heavier than female (BMI,  $M = 23.26$ ,  $SE = .27$ ) participants,  $F(1, 392) = 5.05$ ,  $p < .05$ .
2. All experimenters were individually trained and were given a detailed script to standardize the experimental sessions.
3. Asian American women's average body size may be closer to the mainstream ideal for women than Asian American men's average body size is to the ideal for men (Barnett, Keel, & Conoscenti, 2001).
4. Analyses also were conducted with BMI and trait self-objectification as covariates. The results for the ANCOVAs were almost identical to those reported in the text. To maintain a parsimonious model and to avoid confounding gender and BMI effects, however, we report the analyses without covariates.
5. Because we measured state self-esteem before and after the manipulation, we also performed a repeated-measures ANCOVA. This test did not reveal any meaningful findings over and beyond those that focused on the postmanipulation measure of esteem.

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