ARE ALL MINORITY WOMEN EQUALLY BUFFERED FROM NEGATIVE BODY IMAGE? INTRA-ETHNIC MODERATORS OF THE BUFFERING HYPOTHESIS

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Body dissatisfaction is normative among European American women, and involvement with predominant culture or linking self-worth to weight may intensify the association between body dissatisfaction and drive for thinness for women of color. Our study investigated whether orientation to other ethnic groups (Multigroup Ethnic Identity Measure) and weight-based contingency of self-worth moderate the relationship between body satisfaction and drive for thinness (Eating Disorder Inventory) among college-age African American, Asian American, and European American women. Survey responses from undergraduates (N = 905) were collected, and multiple regression analyses showed that, for African Americans, appearance esteem was positively associated with drive for thinness among those who defined their self-worth as contingent on weight or who identified with ethnic outgroups. Appearance esteem was independently associated with drive for thinness among Asian Americans and European Americans, but no moderation was found. European American women who define self-worth as contingent on weight were higher in drive for thinness, regardless of their body mass index or appearance esteem. Identifying the mechanisms through which some women may be at risk for internalizing restrictive body ideals is key for understanding experiences of the body for diverse women.

A great deal of research documents how widespread body dissatisfaction has become among young women in the United States (Grabe & Hyde, 2006; Nichter, 2000). Much of this dissatisfaction is focused on achieving a thin ideal (Smolak & Murnen, 2008). Body dissatisfaction has negative consequences for women's mental health (Fredrickson & Roberts, 1997), including increased risk of disordered eating (Tiggemann & Kuring, 2004; Tylka & Hill, 2004). However, recent work suggests this preoccupation with thinness may be confined to European American women (Gluck & Geliebter, 2002; Wildes, Emery, & Simons, 2001). African American women, for example, experience comparatively less body dissatisfaction and disordered eating on average (e.g., Grabe & Hyde, 2006; Roberts, Cash, Feingold, & Johnson, 2006). Similarly, European American women are more likely than either African American or Asian American women to assess their self-worth in terms of their appearance, and such contingencies are also associated with poor mental health outcomes, including symptoms of eating disorders (Sanchez & Crocker, 2005).

Some researchers have argued that the relative body satisfaction and lower incidence of disordered eating reported by women of color, particularly young African American women, suggests that some aspects of ethnic culture could be buffers against this otherwise normative discontent (Abrams, Allen, & Gray, 1993; Molloy & Herzberger, 1998; Root, 1990). In this article, we extend the premise of the buffering hypothesis by looking at the role of weight-based contingencies of self-worth and ethnic orientation as moderators of the relationship between body dissatisfaction and disordered eating among young African American, Asian American, and European American women.

Women and Body Image
For women, feelings of low appearance esteem may lead to negative mental health outcomes such as depression and disordered eating (Sanchez & Crocker, 2005; Shea & Pritchard, 2006). Furthermore, women link their appearance to their overall self-worth more than men, possibly because women are often encouraged to draw...
feelings of self-worth from their appearance. In addition, European Americans have higher average scores than both Asian American and African American women on a measure of appearance-based contingency of self-worth (Sanchez & Crocker, 2005). Many women believe that possessing a thin, conventionally attractive body will lead to happiness and overall success (Evans, 2003). Similarly, physical attractiveness is thought to be associated with positive personality characteristics, including intelligence and kindness. The association between physical attractiveness with competence and success has been termed the “what-is-beautiful-is-good” phenomenon and helps to explain why some women equate their overall worth with the presentation of their body (Dion, Berscheid, & Walster, 1972). Consequently, for many women, feelings of self-worth are tied to feelings about the body, and it is likely that changes in weight or appearance may affect overall self-esteem.

However, this need not be the case for all women. For women who do not feel that their self-worth is related to their weight, low appearance esteem might not be associated with negative outcomes such as striving to be thin. To account for the link between self-esteem and outcomes such as depression and disordered eating, researchers (e.g., Sanchez & Crocker, 2005) have drawn upon the concept of contingencies of self-worth, defined as “what people believe they need to do to have value and worth as a person” (Crocker & Knight, 2005, p. 200). Contingencies of self-worth motivate behavior, as people try to achieve in these areas and gain a sense of validation (Crocker & Wolfe, 2001). When women view their bodies as objects to be evaluated by others, they are more likely to define their self-worth in terms of attractiveness and are motivated to seek feelings of accomplishment in this domain (Breines, Crocker, & Garcia, 2008). Consequently, women who do not link their self-worth to their weight might not feel motivated to control their weight, even if they also report low appearance esteem.

**Ethnicity and Body Image: Comparisons Across Three Groups**

Given the emphasis on thinness in American culture, we expect that, among women who feel their self-worth is defined by their body size, the association between appearance, self-esteem, and the motivation to achieve thinness may be exacerbated, that is, weight-based contingencies of self-worth may moderate the association between appearance esteem and drive for thinness. However, there is reason to believe this pattern may vary for women of different ethnicities, specifically African American, Asian American, and European American women.

**African American women.** In a meta-analysis, Grabe and Hyde (2006) found that, on average, African American women are more satisfied with their bodies than women of other ethnic groups, although this difference was not large. Similarly, a meta-analysis conducted by O’Neill (2003) found that, although African American women and European American women were not significantly different in their rates of bulimia and binge-eating disorder, African American women who had similar levels of drive for thinness as their European American counterparts reported significantly lower rates of eating disturbances.

Ofusu, Lafreniere, and Senn (1998) identified several reasons that African American women might experience greater satisfaction with their bodies compared to European American women. First, larger body sizes are preferred and associated with health and prosperity in Africa, its Diaspora, and much of the world, and this preference may be reinforced by African American culture. This observation was supported by Perez and Joiner’s (2003) findings that African American women who expressed body dissatisfaction tended to see themselves as under- rather than overweight. Second, African American women tend not to compare themselves to women of other ethnic groups, despite their prevalence in idealized media portrayals (Frisby, 2004; Poran, 2006). Third, qualitative research suggests that African American women are more likely to define physical attractiveness in terms of body shape and stylishness rather than size (Webb, Looby, & Fults-McMurtery, 2004). Moreover, African American communities support acceptance of different body shapes and sizes (Craig, 2006; Lovejoy, 2001; Parker, Nichter, Vuckovic, Sims, & Ritenbaugh, 1995). Finally, Ofusu et al. (1998) suggested that some African American women view the rejection of the thin ideal as a rejection of European values. Thus, knowledge of and identification with African American culture may enhance girls’ willingness and ability to ignore and critique dominant culture (Rubin, Fitts, & Becker, 2003; Turnage, 2004).

Conversely, Williamson (1998) argued that, for some women of color, upward class mobility entails a rejection of their own ethnic group’s values, leading to body dissatisfaction. This link was supported by research finding that involvement with majority culture, as operationalized by the other-group orientation subscale of Phinney’s Multigroup Ethnic Identity Measure (1992), was associated with increased disordered eating for Latinas and mixed-race girls as well as with depressive symptoms for girls of all ethnicities (Bisaga et al., 2005). This suggests that differences among African American girls based on their orientation toward their own and other ethnic groups may moderate the extent to which they are protected from the negative consequences of the predominant culture’s investment in thinness among women.

**Asian American women.** Much research on body image has focused on European American women as the unmarked norm or on Black women as the “other,” and less attention has been paid to these issues among Asian American women (Lee & Vaught, 2003). Compared
with African American women, Asian American women’s endorsement of mainstream beauty standards (Evans & McConnell, 2003) and body dissatisfaction are similar to European American women’s (Grabe & Hyde, 2006). Yet when asked to compare themselves to European American women, Asian American women reported dissatisfaction with features distinctive to their ethnic group (Mintz & Kashubeck, 1999). Most notably, many Asian American women reported desiring cosmetic eyelid surgery. Kaw (1994) argued that this specific body dissatisfaction is a reflection of Asian American women’s desire to distance themselves from negative stereotypes of Asians, including being seen as foreign and unable to assimilate.

High levels of ethnic identity may intensify, rather than buffer, the association between pressure for thinness and body preoccupation among Asian American women (Phan & Tylka, 2006). Phan and Tylka (2006) proposed that Asian American women who identify with their ethnic group may experience more pressure to behave in ways that reflect well on their community, and body shape and size may be one such reflection. Similarly, one study showed that undergraduate Asian American women who identified strongly with traditional Asian values reported greater body dissatisfaction than those who did not (Lau, Lum, Chronister, & Forrest, 2006). Thus, Asian American women face distinct pressures concerning their bodies, and strong identification with their own ethnic group may lead some Asian American women to greater motivation to achieve a thin body. However, research has yet to investigate whether involvement with and interest in other cultures could moderate the association between appearance esteem and motivation to achieve a thin body among Asian American women.

European American women. The literature on body image among European American women suggests that this group also has a distinctive set of values and concerns about their bodies and beauty. The thin ideal promoted by predominant standards of beauty can have a damaging effect on the mental and physical health of European American women. Women who are unhappy with their bodies or who have low appearance esteem are at risk for drive for thinness (Stice, Nemeroff, & Shaw, 1996). Further, European American women who feel pressure to be thin tend to equate self-esteem with body size as well as to experience a host of negative outcomes, including self-objectification, depression, and disordered eating (Fredrickson & Roberts, 1997; Tiggemann & Kuring, 2004). Body image concerns are central to self-esteem and self-concept for many European American women because they equate beauty and thinness with positive traits and outcomes, such as intelligence, happiness, and success (Dion et al., 1972; Evans, 2003). Thus, for European American women, feelings of self-worth are often contingent on their perceptions of weight (Sanchez & Crocker, 2005).

The Buffering Hypothesis

Researchers have speculated that women who identify as members of ethnic minority groups, particularly African American women, may be protected from internalizing prescriptive ideals and/or attempting to change their bodies to fit an ideal, which is often described as a buffering effect (Grabe & Hyde, 2006; Poran, 2006; Root, 1990). The buffering hypothesis holds that ethnic minority culture has a protective effect to prevent or reduce body dissatisfaction or disordered eating. This buffering may work by lessening the impact of the thin ideal, thus reducing body dissatisfaction, or by lessening the association between body dissatisfaction and disordered eating behavior (e.g., Lovejoy, 2001; Molloy & Herzberger, 1998; Poran, 2006; Rubin et al., 2003). However, meta-analyses have indicated that ethnic group differences on measures of body dissatisfaction and disordered eating are small or nonexistent (e.g., Grabe & Hyde, 2006; O’Neill, 2003), suggesting that not all members of specific minority groups are buffered.

Additionally, a review of the literature on body image and ethnicity reveals that researchers have most commonly made comparisons between ethnic groups based on self-reported ethnic group membership (e.g., Gluck & Geliebter, 2002; Molloy & Herzberger, 1998) and then posited the buffering hypothesis to explain mean differences found among ethnic groups. This group-based approach does not address the specific aspects of ethnic minority group membership, identification, and/or culture that might serve as buffers (Helms, Jernigan, & Mascher, 2005), nor does it address the experiences of ethnic minority women who report body dissatisfaction and disordered eating. If variables associated with culture do impact body image for ethnic minority groups, there should be a differential effect based on individuals’ involvement in different cultures rather than on simple group membership.

Other-Group Orientation

Exposure to predominant culture may act as an intensifier of the association between body dissatisfaction and drive for thinness. Phinney (1992) conceptualized “other-group orientation” as attitudes toward and interactions with ethnic groups other than one’s own. For European American women, other-group orientation may act as a buffer because disengagement with predominant culture (and consequently, exposure to other cultural standards of beauty) could have a protective effect. However, for African American women, especially for those in predominantly European American settings, engagement with other ethnic groups may indicate a high level of acculturation and, consequently, negative body image and disordered eating (Abrams et al., 1993; Roberts et al., 2006). Researchers have looked at minority women’s body image in relation to involvement with majority culture, such as exposure to mainstream (and primarily European American) media (Poran, 2006; Rubin et al., 2003), and acculturation.
(Arnguete, Nickelberry, & Yates, 2004; Gowen, Hayward, Killon, Robinson, & Taylor, 1999; Sussman, Truong, & Lim, 2006). These authors theorized that engagement with majority culture as a result of acculturation places individuals at risk for body dissatisfaction and disordered eating (Bisaga et al., 2005; Cachelin, Veisel, Barzegarnazari, & Striegel-Moore, 2000).

The Current Study

Overall, many European American women have demonstrated high levels of body dissatisfaction and disordered eating. Although some researchers have assumed that ethnic minority women are protected from these negative experiences of the body, previous research has shown mixed support for large group differences on body image and dieting measures. Our study evaluated differences between ethnic groups on measures related to body image and engagement with different ethnic groups among college-age women. Additionally, rather than assuming that all ethnic minority women are protected from low body esteem and drive for thinness, our study examined moderators that could account for varying levels of drive for thinness within ethnic groups. The variables proposed to affect this relationship were (a) attitudes toward and degree of engagement with ethnic/racial groups other than one's own (other-group orientation) and (b) the degree to which women associate their self-worth with their weight (weight-based contingency of self-worth).

Our first research question addressed the existence of ethnic group differences on measures of body image, other-group orientation, and weight-based contingency of self-worth. We hypothesize that African American women will show greater appearance esteem and lower drive for thinness than European American and Asian American women and that the latter two groups’ means will be comparable. Given the belief among European American women that thinness and happiness are related (Evans, 2003), we hypothesize that this group will be highest on the measure of weight-based contingency of self-worth.

Hypothesis 1a: African American women will have higher scores on appearance esteem than Asian American or European American women.

Hypothesis 1b: African American women will have lower drive for thinness than Asian American or European American women.

Hypothesis 1c: European American women will have higher scores on weight-based contingency of self-worth than Asian American or African American women

Our second research question asked whether other-group orientation and weight-based contingency of self-worth would act as moderators between appearance esteem and drive for thinness. Due to others’ findings that some aspects of acculturation may place African American women at risk for negative body image outcomes (Cachelin et al., 2000; Sussman et al., 2006), we hypothesize that other-group orientation will moderate the relationship between appearance esteem and drive for thinness in African American women such that African American women high on other-group orientation will experience greater drive for thinness. In contrast, because research has found that, among Asian American women, variables related to ethnic identity are either unrelated to body satisfaction and disordered eating (Reddy & Crowther, 2007) or intensify the association between dissatisfaction and eating (Phan & Tylka, 2006), we predict that Asian American women will not experience a moderating effect for other-group orientation. We predict that, for European American women, engagement with ethnic outgroups could provide a buffering effect because doing so might lessen the impact of the messages from predominant culture. This outcome may be because exposure to different ethnic group’s beauty standards provides an opportunity for European American women to develop an awareness of and appreciation for multiple forms of beauty.

Hypothesis 2a: Among African American women, other-group orientation will moderate the relationship between appearance esteem and drive for thinness such that this relationship will be stronger among African American women who score high on other-group orientation than for those who score low on other-group orientation.

Hypothesis 2b: Other-group orientation will not moderate the relationship between appearance esteem and drive for thinness among Asian American women.

Hypothesis 2c: Among European American women, other-group orientation will moderate the relationship between appearance esteem and drive for thinness such that this relationship will be weaker among European American women who score high on other-group orientation than for those who score low on other-group orientation.

Last, because thinness is central to European American women’s definition of beauty (Poran, 2006) and feelings of happiness and success (Evans, 2003), we hypothesize that European American women low in appearance self-esteem will be high in drive for thinness. However, because contingencies of self-worth external to the self render self-esteem vulnerable (Sanchez & Crocker, 2005), we also expect that this association will be intensified among European American women who link their self-esteem to their weight; in other words, these women will be more highly motivated to achieve thinness if their appearance esteem is low.

Hypothesis 3: Among only European American women, weight-based contingency of self-worth will moderate the relationship between appearance
esteem and drive for thinness such that the relationship between appearance esteem and drive for thinness will be stronger among European American women who score high on weight-based contingency of self-worth than for those who score low on weight-based contingency of self-worth.

METHOD

Participants

Participants included 905 women from three different ethnic backgrounds, including African American women (n = 68), Asian American women (n = 123), and European American women (n = 714) who had spent most of their childhood years in the United States. A power analysis indicated that, with the seven predictors in our model and a statistical power level of .80 and an alpha of .05, the sample size for African American participants would be sufficient to detect an effect of .25, which is considered to be between a medium and a large effect, and the sample size for Asian American participants would be sufficient to detect an effect of .15, which is considered to be a medium effect (Cohen, 1988; Soper, 2009).

The women ranged in age from 17 to 24 years, with an average age of 18.86 (SD = .93). Maternal education level was used as a proxy for socioeconomic status because this variable has been shown to have good predictive power and is a commonly used proxy for social class (Bornstein & Bradley, 2002). Overall the sample reported that their mothers completed an average of 16.12 (SD = 2.35) years of schooling (i.e., being a college graduate). However, when examined separately by ethnic group, mothers of European American women averaged 16.31 years of schooling, which is significantly more than African American mothers (M = 15.29 years) but not significantly different from Asian American mothers (M = 16.12 years), F(2, 978) = 7.75, p < .001. Maternal education did not significantly affect the results reported in the current study, and therefore it was not included as a covariate in the reported analyses.

Procedure

Participants completed an anonymous survey in one of three introductory psychology classes at a large, predominantly European American midwestern university between the winter of 2000 and the spring of 2002. Each participant received a packet of measures in class, which they filled out at their convenience and returned in a sealed envelope. Overall, 79% of the students enrolled in the classes returned the Institutional Review Board–approved survey, for which they received extra credit. The measures appeared in the following order: appearance esteem; ethnic identity and other-group orientation; drive for thinness; weight-based contingency of self-worth; and demographic questions, including body mass.

Measures

Body mass index (BMI). Participants were asked to self-report their height and weight, and BMI was calculated as weight in pounds divided by height in inches squared, multiplied by 703. BMI is a commonly used index that classifies adults as underweight (<18.5), normal weight (18.5–24.99), overweight (25–29.99), and obese (>30) (Centers for Disease Control and Prevention, 2009). BMI criteria have been based primarily on measurements from European American adults, and researchers have found that using BMI cutoff scores may overestimate overweight and obesity among African American adults (Jackson, Ellis, McFarlin, Sailors, & Bray, 2009). However, in the present study all three ethnic groups’ mean scores on the BMI fell within the normal range. BMI was included as a control variable in all analyses.

Appearance esteem. The appearance subscale of the State Self-Esteem Scale (Heatherton & Polivy, 1991) contains six items that measure self-esteem in the domain of appearance. This particular domain of self-esteem was assessed because self-esteem may vary significantly from one domain to another (e.g., athletics, academics, social, etc.; Gentile, Grabe, Dolan-Pascoe, Twenge, & Wells, 2009), and assessing self-esteem in this domain is most relevant for the present study. We modified all of the items on the measure to assess appearance esteem as a trait. The modified items included, “I am pleased with my appearance,” “I feel satisfied with the way my body looks,” “I feel that others respect and admire me,” “I am dissatisfied with my weight” (reverse scored), “I feel good about myself,” and “I feel unattractive” (reverse scored). Each item was scored on a 5-point scale ranging from 1 (hardly ever) to 5 (extremely). Mean scores were calculated, with higher scores representing greater self-esteem on the subscale. Heatherton and Polivy (1991) demonstrated good overall reliability (α = .92), although they did not report alphas for the subscales of the measure. They also provided support for the validity of the subscale, and they reported that it was significantly correlated with items that assessed satisfaction with height (r = .42), figure (.72), and dietary restraint (−.45). Our coefficient alphas for appearance esteem and the following measures appear in Table 1.

Ethnic identity and other-group orientation. Ethnic identity and other-group orientation were assessed with the Multigroup Ethnic Identity Measure (Phinney, 1992). Ethnic identity was assessed using three subscales containing 14 items total, measuring positive ethnic attitudes and sense of belonging, ethnic identity achievement, and ethnic behaviors or practices. Items, such as “I feel good about my cultural background,” were rated on a 4-point scale, ranging from 1 (strongly disagree) to 4 (strongly agree). The other-group orientation subscale contained six items, measuring attitudes toward and interactions with ethnic
Table 1: Means, Standard Deviations, and Intercorrelations Among Body Image Variables for African American, Asian American, and European American Participants

<table>
<thead>
<tr>
<th>Subscale</th>
<th>M</th>
<th>SD</th>
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<td><strong>African American (n = 68)</strong></td>
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<td>1. Body Mass Index</td>
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<td>2. Ethnic Identity</td>
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<td>.06</td>
<td>.88</td>
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<td>3. Appearance Esteem</td>
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<td>.84</td>
<td>-.13</td>
<td>.39</td>
<td>.88</td>
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<td>4. Other-Group Orientation</td>
<td>3.19</td>
<td>.45</td>
<td>-.05</td>
<td>-.03</td>
<td>.80</td>
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<td>5. Weight-Based Contingency of Self Worth</td>
<td>1.81</td>
<td>.96</td>
<td>.32</td>
<td>-.07</td>
<td>-.41</td>
<td>-.02</td>
<td>.79</td>
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<td>6. Drive for Thinness</td>
<td>2.53</td>
<td>1.33</td>
<td>.27</td>
<td>-.21</td>
<td>-.63</td>
<td>.18</td>
<td>.55</td>
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<td>2. Ethnic Identity</td>
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<td>-.43</td>
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<td>6. Drive for Thinness</td>
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<td>4. Other-Group Orientation</td>
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<tr>
<td>5. Weight-Based Contingency of Self Worth</td>
<td>2.18</td>
<td>.74</td>
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<td>.04</td>
<td>-.53</td>
<td>-.04</td>
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Note. Means that do not share subscripts differ at p < .01 in the Tukey post hoc test. Alpha coefficients for each measure are presented along the diagonal. *p < .05. **p < .01. ***p < .001.

groups other than one’s own. A sample item is “I often spend time with people from ethnic groups other than my own.” Means were calculated for participants, with higher scores indicating greater exposure to and engagement with other ethnic groups. Phinney (1992) reported an alpha of .74 among college students on this measure. Additionally, a factor analysis performed by Phinney (1992) revealed two distinct factors: ethnic identity and other-group orientation. The ethnic identity subscale was included in the moderation analyses to assess the effect of other-group orientation independent of the effect of ethnic identity and to ensure that feelings about one’s own ethnic group were accounted for in the model tested.

Weight-based contingency of self-worth. A subscale from the Gordon and Ward (2000) measure was used to assess the degree to which overall feelings about self-worth were influenced by feelings about body weight. The subscale contained three items that are judged on a scale ranging from −3 (Ugh! I would feel worthless) to +3 (Wow! I would feel really great about myself). The items assess how participants would feel if they gained 10 pounds, gained 30 pounds, or lost 10 pounds. Higher scores, based on mean absolute values, reflected that weight has a high impact on feelings of self-worth.

Drive for thinness. The drive for thinness subscale of the Eating Disorder Inventory (EDI; Garner, Olmstead, & Polivy, 1983) contained seven items assessing the degree to which an individual is concerned with dieting and weight in the pursuit of thinness (e.g., “I am terrified of gaining weight” and “If I gain a pound, I worry that I will keep gaining”). This subscale has previously been used on its own because it measures attitudes about dieting and thinness and is distinct from the other subscales of the EDI (e.g., Schooler, Ward, Merriweather, & Caruthers, 2004; Smolak & Murnen, 2008). Items were scored on a 6-point scale anchored by 1 (always) and 6 (never). Mean scores were computed, with higher scores indicating a greater drive for thinness. Garner et al. (1983) reported an alpha of .85 among female college students. Additionally, they reported that the drive for thinness subscale had the highest correlation (of all EDI subscales) with the Eating Attitudes Test (Garner & Garfinkel, 1979) and Restraint Scale (Herman & Polivy, 1975), and they provided evidence of validity among college-age women both diagnosed with anorexia and bulimia as well as a comparison group.

RESULTS

First, to test for ethnic group differences on the predictor and dependent variables, we ran a multivariate analysis of variance (MANOVA) with follow-up post hoc tests to determine which groups differed on these variables. Second, we examined correlations among all variables separately by ethnic group. Third, we followed the steps outlined by
Aiken and West (1991) to test for moderation. We centered the independent variables included in the interactions separately by ethnic group and then created interaction terms by multiplying the specified centered variables. We then regressed the dependent variable, drive for thinness, on these predictors separately by ethnic group. Finally, we graphed the significant interactions by calculating values based on scores of one standard deviation above and below the mean for these variables.

**Ethnic Group Differences**

First, to test whether the three ethnic groups differed significantly on measures of BMI, appearance esteem, other-group orientation and ethnic identity, weight-based contingency of self-worth, and drive for thinness, we ran a MANOVA. As expected, this MANOVA was significant, Pillai’s trace $F(935) = 17.62, p < .001$, $\eta^2 = .102$. A test of Box’s M was significant, $F = 2.34, p < .001$, indicating that the variances of the variables were not equal; however, this violation is not of concern because the overall MANOVA is significant at the $p < .001$ level, acceptably reducing the possibility of committing a Type I error (Stevens, 1986).

As shown in Table 1, the three groups differed significantly in terms of BMI, $F = 4.40, p = .013$, $\eta^2 = .009$, ethnic identity, $F = 37.91, p < .001$, $\eta^2 = .075$, other-group orientation, $F = 17.49, p < .001$, $\eta^2 = .036$, appearance esteem, $F = 20.28, p < .001$, $\eta^2 = .042$, weight-based contingency of self-worth, $F = 12.80, p < .001$, $\eta^2 = .027$, and drive for thinness, $F = 18.37, p < .001$, $\eta^2 = .038$. We followed up with Tukey post hoc analyses, which indicated where there were significant differences among the three groups.

As shown in Table 1, Asian American women had the lowest average BMI, and African American women had the lowest average BMI scores on other-group orientation, and African American women had the highest average scores on other-group orientation, and African American women had the highest scores on ethnic identity. As expected, African American women had the lowest scores on drive for thinness and weight-based contingency of self-worth. Similarly, African American women had the highest average scores on appearance esteem. Interestingly, European American and Asian American women’s scores did not differ significantly on drive for thinness, weight-based contingency of self-worth, or appearance esteem. Thus, our prediction that European American women would have higher average scores than the other two groups on weight-based contingency of self-worth was not fully supported.

Next, we examined differences by ethnic group in correlations between the variables (Table 1). For all three groups, appearance esteem was significantly negatively correlated with both drive for thinness and weight-based contingency of self-worth, and drive for thinness and weight-based contingency of self-worth were positively correlated. Only for European American women was drive for thinness significantly negatively correlated with other-group orientation.

**Moderation Analyses**

To test whether other-group orientation and weight-based contingency of self-worth moderated the effects of appearance esteem on drive for thinness, we ran multiple regression analyses separately by ethnic group. As recommended by Aiken and West (1991), continuous predictor variables (appearance esteem, other-group orientation, and weight-based contingency of self-worth) were centered by subtracting the mean for these variables separately for each ethnic group. Next, interaction terms (other-group orientation $\times$ appearance esteem and weight-based contingency of self-worth $\times$ appearance esteem) were calculated by multiplying the centered variables. BMI was included as a covariate. Additionally, to assess the unique association between other-group orientation and drive for thinness independent of ethnic identity, we included ethnic identity as a control variable.

As shown in Table 2, among African American women, low appearance esteem, high other-group orientation, and high weight-based contingency of self-worth were each independently associated with high scores on drive for thinness. Additionally, there was a significant interaction between appearance esteem and other-group orientation as well as between appearance esteem and weight-based contingency of self-worth, indicating moderation. Graphs of these interactions (Figures 1 and 2) revealed that African American women high in appearance esteem demonstrated low levels of drive for thinness, regardless of their weight-based contingency of self-worth and other-group orientation. However, African American women who were low in appearance esteem showed differential effects based on their level of weight-based contingency of self-worth and other-group orientation, such that those low in appearance esteem and high in weight-based contingency of self-worth or other-group orientation reported the highest levels of drive for thinness. For these women, drive for thinness increased as weight-based contingency of self-worth or other-group orientation increased.

Results for Asian American women indicated a different pattern. As expected, having self-worth contingent on weight was associated with higher drive for thinness. Low appearance esteem also was associated with drive for thinness; however, the interaction between the two variables was not significant. Surprisingly, other-group orientation was not a significant predictor of drive for thinness for this group, nor was the interaction between appearance esteem and other-group orientation.

Findings for European American women followed a similar pattern. Appearance esteem was negatively and weight-based contingency of self-worth was positively associated
Table 2
Regression Analysis Summary for Other-Group Orientation, Weight-Based Contingency of Self Worth, and Body Image Variables Predicting Drive for Thinness Among Ethnic Groups

<table>
<thead>
<tr>
<th>Variable</th>
<th>African American</th>
<th></th>
<th></th>
<th></th>
<th>Asian American</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>European American</th>
<th></th>
<th></th>
<th></th>
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<tr>
<td></td>
<td>B</td>
<td>SE B</td>
<td>β</td>
<td></td>
<td>B</td>
<td>SE B</td>
<td>β</td>
<td></td>
<td>B</td>
<td>SE B</td>
<td>β</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body Mass Index</td>
<td>.01</td>
<td>.03</td>
<td>.02</td>
<td>.03</td>
<td>.04</td>
<td>.03</td>
<td>.08</td>
<td></td>
<td>-.02</td>
<td>.01</td>
<td>-.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethnic Identity</td>
<td>.31</td>
<td>.25</td>
<td>.11</td>
<td>.13</td>
<td>.28</td>
<td>.13</td>
<td>.12*</td>
<td></td>
<td>.14</td>
<td>.07</td>
<td>.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appearance Esteem</td>
<td>-.11</td>
<td>.03</td>
<td>-.41***</td>
<td>-.11</td>
<td>-.11</td>
<td>-.41***</td>
<td>-.12</td>
<td>-.44***</td>
<td>-.12</td>
<td>.01</td>
<td>-.44***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other-Group Orientation</td>
<td>.47</td>
<td>.22</td>
<td>.16*</td>
<td>-.13</td>
<td>-.14</td>
<td>-.05</td>
<td>-.07</td>
<td>-.08</td>
<td>-.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight-Based Contingency of Self Worth</td>
<td>.53</td>
<td>.12</td>
<td>.38***</td>
<td>.68</td>
<td>.11</td>
<td>.38***</td>
<td>.83</td>
<td>.06</td>
<td>.46***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appearance Esteem x Weight-Based Contingency of Self Worth</td>
<td>-.07</td>
<td>.03</td>
<td>-.25*</td>
<td>.03</td>
<td>.02</td>
<td>.09</td>
<td>-.02</td>
<td>.01</td>
<td>-.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appearance Esteem x Other-Group Orientation</td>
<td>-.12</td>
<td>.05</td>
<td>-.19*</td>
<td>-.01</td>
<td>.03</td>
<td>-.03</td>
<td>-.01</td>
<td>.02</td>
<td>-.01</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Note. For African American women, $R^2 = .64$; for Asian American women, $R^2 = .55$; for European American women, $R^2 = .59$.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Finally, we tested an additional model for all three ethnic groups, which included the interaction between ethnic identity and appearance esteem; however, the coefficient for this interaction was not significant for any of the three groups (e.g., for Asian American women, $\beta = -.06, p = .40$) and thus was not included in the analyses reported here.

DISCUSSION

Our study assessed ethnic group differences in levels of appearance esteem, other-group orientation, weight-based contingency of self-worth, and drive for thinness. Additionally, our study extends the literature on ethnicity and body dissatisfaction because we examined within-group differences by testing moderators of the relationship between appearance esteem and drive for thinness for young women.

As predicted in our first set of hypotheses, of the three ethnic groups studied, African American women reported the highest mean levels of appearance esteem, and the lowest levels of drive for thinness and weight-based contingency of self-worth. This pattern is consistent with previous findings that African American women are more satisfied with their bodies and may overall have less investment in achieving the thin ideal (Duke, 2000; Lovejoy, 2001). European American women, on the other hand, scored the highest on measures of drive for thinness and weight-based contingency of self-worth, although their scores did not differ significantly from those of Asian American participants.

Like European American women, Asian American women reported relatively low levels of appearance esteem; however, they also had relatively lower scores on drive for thinness and weight-based contingency of self-worth. Asian American women fell in between the other two groups on a measure of drive for thinness, indicating that Asian American women did not experience drive for thinness to the
same extent that European American women did. Further, low scores on appearance esteem indicated that this group reported considerable body dissatisfaction. Compared with the other ethnic groups, Asian American women scored highest on a measure of other-group orientation. The distinct pattern that emerged for Asian American women indicated that body image concerns and related behaviors need to be considered separately from other ethnic groups. This conclusion is in line with previous research that has found distinct patterns among ethnic identity, body dissatisfaction, and disordered eating for women in this ethnic group (Phan & Tylka, 2006; Root, 1990).

Our second set of hypotheses proposed that other-group orientation will moderate the relationship between appearance esteem and drive for thinness for African American women and European American women such that African American women who scored higher on other-group orientation would experience an exacerbating effect, and European American women high in other-group orientation would experience a buffering effect. We predicted that other-group orientation will not act as a moderator for Asian American women. We found mixed support for our hypotheses: The expected moderation pattern was found for the African American women, but there was no moderation for the European American women.

For African American women high in appearance esteem, individual differences in the extent to which they are involved with other cultures appear to act as a buffer. Our results showed that, for African American women high in other-group orientation, appearance esteem had a greater association with drive for thinness than for African American women low in other-group orientation. Given the context of this data collection at a predominantly European American university, this finding suggests that African American women who are most engaged with the predominant group and are the lowest in appearance esteem experience the highest drive for thinness. For those with lower appearance esteem—and it must be noted that this group enjoys higher average appearance esteem than either of the other two groups—involvement with ethnic out-groups in a predominantly European American setting appears to render them vulnerable to preoccupation with dieting and weight.

The implications of this finding are profound, particularly in the area of research pertaining to African American women’s health. As shown by the results confirming our first hypothesis, African American women reported greater appearance esteem and lower levels of drive for thinness, confirming a pattern that many have interpreted as indicating that women in this group are immune to body dissatisfaction and disordered eating. However, this assumption does not consider African American women who do not report satisfaction with their bodies. The assumption that women in this group are protected from body dissatisfaction and disordered eating may have important consequences for women’s health if clinicians and health care providers mistakenly assume that these issues are not relevant to African American women.

Cultural explanations of mean differences between ethnic groups may in some ways be useful as the buffering hypothesis holds true for some African American women; yet generalizing across an ethnic group may overlook other forms of disordered eating and health issues. For example, obesity is a concern among African American women (Lovejoy, 2001), and African American women are at no less risk for bulimia and binge eating than their European American counterparts (O’Neill, 2003). Among overweight women, African Americans are less likely than European Americans to correctly perceive their status (Paeratakul, White, Williamson, Ryan, & Bray, 2002), and higher weight has been associated with increased body image concern and binge eating among African American women (Hrabosky & Grilo, 2007). Additionally, for women in this ethnic group the association between being overweight and depression was stronger among women who reported high levels of ethnic identity (Siegel, Yancey, & McCarthy, 2000). Taken together, this evidence indicates that sensitivity about issues of weight and eating patterns is needed, and some (e.g., Davis, Clance, & Gailis, 1999) have suggested implementing an Afrocentric approach that integrates cultural support into body image and weight treatment programs for women in this ethnic group.

Additionally, researchers have recently begun to question the meaning and measurement of BMI for different ethnic groups of women. Jefferson and Stake (2009) suggest controlling for body size, because failing to do so may result in an underestimation of differences in body dissatisfaction when comparing African American and European American women who have equal body size. We must be careful to not assume that a particular body size is equated with body satisfaction for women in any ethnic group.

The discontent that European American women feel with regard to their bodies was not buffered by involvement with other cultures, as we had predicted. This finding may be because, for European American women, preoccupation with weight, diet, and exercise is normative (Nichter, 2000), speaking to the pervasiveness and powerfulness of the thin ideal to women in this ethnic group. However, it may also be the case that a variable based on the experience of ethnic group membership such as other-group orientation may not have the same meaning for members of different ethnic groups. For ethnic minorities, such as African American or Asian American women, ethnic identity may measure acculturation to the dominant group. Given that European American women are part of the dominant group, we may not be able to think about their ethnic identity in equivalent ways (Cole, 2009). We speculated that European American women who are high in other-group orientation may appreciate multiple and varying forms of beauty, offering a protective effect. Because this proposal was not supported by our data, future research might test this hypothesis directly. It would also be important to look more closely at
the meaning and impact of relationships with other ethnic groups for European American women.

Our third hypothesis proposed that, for European American women, weight-based contingency of self-worth would moderate the relationship between appearance esteem and drive for thinness. This hypothesis was not supported; however, for both European and Asian Americans there was a significant main effect such that, if feelings of self-worth were tied to their weight, women experienced greater drive for thinness, regardless of their level of appearance esteem. This finding is particularly striking because the average BMI of the sample fell within the normal range, indicating that this pattern exists for young women who, presumably, do not need to lose weight for health purposes. To examine this pattern more closely, a three-way interaction term including BMI, appearance esteem, and weight-based contingency of self-worth was calculated for these two groups and included in regressions predicting drive for thinness separately for each group. In neither case was the interaction significant, indicating that there was not a differential effect for BMI. That is, if Asian and European American women linked their self-esteem to weight, they reported a preoccupation with the desire to achieve and maintain a thin body type, and this pattern was true even for women who were not overweight and who liked their appearance. Again, this finding attests to the power and pervasiveness of the thin ideal among young European and Asian American women. It also supports Sanchez and Crocker’s (2005) theorization of the link between external contingencies of self-worth and poor mental health outcomes, particularly as they relate to gendered ideals.

Unexpectedly, for African American women there was a significant interaction between appearance esteem and weight-based contingency of self-worth, such that African American women who did not consider their overall worth contingent on their weight were less likely to report investing a lot of thought and effort monitoring their diet and exercise regardless of their appearance esteem. In other words, African American women who did not have weight as a central part of their feelings of self-worth were buffered from drive for thinness. This conclusion provides a new way to think about the meaning of weight for African American women and gives insight into the way a cultural buffer might operate for this group. By not associating overall self-worth with weight, some African American women experienced a protective effect against drive for thinness. This finding confirms the claim, often based on qualitative data, that African American women and girls receive more positive cultural messages about their self-worth and their bodies, and this support may cause them to evaluate their self-worth in terms other than those related to appearance and weight (e.g., Duke, 2000; Parker et al., 1995).

Overall, Asian American women reported dissatisfaction with their appearance, but as noted above, this finding is independent of BMI. It is possible that Asian American women are dissatisfied with other aspects of appearance, and more research in this area is needed. Additionally, the multiple regression analysis showed that for Asian American women, both lower appearance esteem and weight-based contingency of self-worth were associated with reporting spending a great deal of effort and thought on monitoring diet and exercise.

Some have suggested that “model minority” status may create a situation for Asian American women wherein association with their ethnic group confers a protective effect against body dissatisfaction (Root, 1990), but pressure to reflect well on the community may drive women to strive for an “ideal” body and to fail to voice their dissatisfaction or seek help for eating and body image disturbance (Lau et al., 2006; Phan & Tylka, 2006). In support of this latter assertion, we found that Asian American women who strongly identified with their ethnic group reported greater drive for thinness. This conflict between possible protection and pressure may constitute a double bind for Asian American women, and further research is needed to understand the nuances of this ethnic group’s experience.

**Limitations**

Our study has several limitations. First, our measure of other-group orientation did not ask participants to report with which ethnic groups they were involved. This information may help us understand the mechanisms by which feelings of body dissatisfaction and disordered eating are buffered. However, given the predominantly European American composition of the campus on which these data were collected, it is reasonable to assume that ethnic minority group members were engaged in interactions with at least some members of the predominant group.

Second, the sample size for African American participants was small. Although our sample size for this group was small, we had enough African American participants to detect a sizeable effect, and indeed, our sample proved sufficient to detect the hypothesized effects. However, the small sample size for African Americans prevented us from statistically testing the differential prediction in the regressions across ethnic groups. Future research with a larger sample might address this point.

Third, we collapsed individuals from a broad range of backgrounds with various histories and cultural differences into one category labeled “Asian Americans” (Cummins, Simmons, & Zane, 2005). Participants self-identified in this manner and in doing so may share similar cultural values; however, the heterogeneity of this group should not be overlooked. Variation within the group may confound issues of body image and culture as they are currently conceptualized and studied. Future research with larger samples should investigate diversity within this category. We also need to test the model for other populations, for example, Latinas, Native American women, and recent immigrants to the United States because research has indicated that these groups may have distinctive body image issues (e.g.,...
Lopez, Bilx, & Bilx, 1995; Perez, Voelz, Pettit, & Joiner, 2002). Finally, the results are only generalizable to middle to upper class, college-age women, a minority of the population, and thus we cannot generalize the findings beyond this population. However, risk of disordered eating and body image disturbance are so high in college women (Tyllka & Hill, 2004) that it is an appropriate sample in which to study these issues.

Conclusion

Our study indicates that considering cultural interactions experienced by different ethnic minority groups can help clarify the conflicting findings of previous studies. Comparing African American women with European American women, rather than understanding the variation within each groups’ experiences of the body may have created this confusion. Identifying the mechanisms through which some groups of women may be at risk for internalizing and responding to restrictive body ideals is a key step in understanding experiences of the body for women in different ethnic groups. Finally, these findings suggest the importance of considering European American’s experiences in terms of race and ethnicity. As this study suggests, we need to think more deeply about how experiences particular to different ethnic groups are related to body perceptions for women.

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