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IMPACTS OF RACE/ETHNICITY AND SELF-ESTEEM ON BODY DISSATISFACTION IN
WOMEN

A Thesis
presented in partial fulfillment of requirements
for the degree of Master of Arts
in the Department of Clinical Psychology
The University of Mississippi

by

KRISTIE VAIL SCHULTZ

May 2012

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ABSTRACT

In the United States, there is a push for individuals to be of a particular size, and for women, that ideal size is extremely thin (Katzmarzyk & Davis, 2001). Overall, females indicate a greater drive for thinness and put more emphasis on weight and shape salience than do men (Anderson & Bulik, 2001), and they prefer a less muscular body type than men as well (Oehlhof, Musher-Eizenman, Neufeld, & Hauser, 2009). Among women, Caucasian females report more body dissatisfaction than do African American women (e.g., Kelly et al., 2011). Body dissatisfaction can be influenced by many factors; in addition to gender and race/ethnicity, those factors can include low self-esteem and high body mass index (Wojtowicz & von Ranson, 2012). This study further examines the relationship among the factors that potentially predict body dissatisfaction. 295 undergraduate females, from age 18 to age 25, participated in an online survey, in which five measures were administered. This study examines the relationship between body dissatisfaction and global self-esteem across ethnicities, in addition to exploring the impacts of race/ethnicity, body mass index, global self-esteem, contingent self-esteem, and need to belong on body dissatisfaction.

LIST OF ABBREVIATIONS AND SYMBOLS

F	F distribution, Fisher's F ratio
M	Mean
n	Number of cases in subsample
N	Total number of cases
p	Probability
r	Estimate of the Pearson product-moment correlation coefficient
R^2	Multiple correlation squared
SD	Standard deviation
t	Student's t distribution
Δ	Increment of change
α	Cronbach's alpha
χ^2	Chi-square distribution

ACKNOWLEDGMENTS

I express my deepest appreciation to my advisor, Dr. Karen A. Christoff, for all of her encouragement and suggestions throughout the past two years. I would also like to thank my committee members, Drs. Stefan E. Schulenberg and Carrie V. Smith, for their guidance during this process.

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I. LITERATURE REVIEW

A. Introduction

As of June 2010, Mississippi ranks first in the nation in terms of its obesity rates, with 33.8 percent of the adults in the state categorized as obese. Mississippi's women are more obese than men (34.9 percent versus 32.6 percent, respectively). In addition to gender differences, there are also differences and disparities for race. In fact, among Mississippi's adults, the obesity rate for African Americans is 42.9 percent, while the rate for Caucasians is 29.3 percent. Perhaps more alarmingly, Mississippi's obesity problem begins at a young age, and Mississippi also ranks first in the nation for childhood obesity rates, with a rate of 21.9 percent (Trust for America's Health).

While a variety of obesity prevention programs are in place in schools, the results of these programs have not significantly impacted the problem (Cook-Cottone, Casey, Freeley, & Baran, 2009). One possible explanation for the lack of effectiveness for these programs may be that they target the wrong populations. Instead of solely targeting weight-loss in obese populations, some research suggests that programs should target children who are considered to be of normal weight, or somewhat overweight, for weight-gain prevention programs (Barlow, 2007). It is possible taking a preventative approach rather than a reactive approach would reach more children in schools who are at risk for obesity.

Furthermore, another reason that such interventions are not particularly effective may be that they are generalized for all students and thus do not take into account racial differences,

despite knowledge that risk factors differ across ethnic and racial groups (Meininger, 2000). By ignoring the cultural factors of obesity, researchers are not only making a gross overgeneralization but also doing a disservice to their communities.

While a significant percentage of Americans of all ages are obese, there seems to be a cultural value for individuals to be of a particular size. For example, from 1959 to 1978, the weights of *Playboy* centerfolds decreased significantly (Garner, Garfinkel, Schwartz, & Thompson, 1980), and then from 1978 to 1998, 70 percent of the *Playboy* centerfolds were underweight, emphasizing that the 'ideal' woman is extremely thin (Katzmarzyk & Davis, 2001). Research does suggest that the media advances a thin female standard, and while this does impact some women's body perspectives, it does not seem to impact others. Posavac, Posavac, & Posavac (1998) found that female undergraduates who were exposed to thin versus neutral images displayed a higher concern about their weight. However, this effect was not uniform among all participants; in fact, these researchers found that body dissatisfaction was a moderator for this relationship, such that female students with low body dissatisfaction were less influenced by the media images than were the students with high body dissatisfaction.

B. Sex Differences and Early Influences

Gender differences exist in a drive for thinness, as well as weight and shape salience, such that females indicate a greater drive for thinness and put more emphasis on weight and shape salience than do men (Anderson & Bulik, 2001). Similar gender differences are also present in the definition of the ideal body shape in that women prefer a less muscular body type and men prefer a more muscular body type (Oehlhof, Musher-Eizenman, Neufeld, & Hauser, 2009). On the whole, then, it is no surprise that women are typically more dissatisfied with their outward appearance than men (Calden, Lundy, & Schlafter, 1959).

Fallon & Rozin (1985) used a measure with body figures ranging from very thin to very heavy and found that undergraduate men ranked their current figure, ideal figure, and the most attractive figure as almost identical. However, undergraduate women ranked the current figure as heavier than the most attractive figure, which was still heavier than the ideal image. In addition, women tend to believe that men are attracted to women who are thinner than men actually report, which is consistent with their disordering thinking. This disordered thinking is evident across the literature, and some researchers have indicated that it is so prevalent that it is actually now “normative discontent” (Rodin, Silberstien, & Striegel-Moore, 1985).

As a whole, women encounter more negative messages regarding body image than do men (Gillen & Lefkowitz, 2009). Among the influences on body image, one cannot neglect the impact of television commercials on mood and eating styles for women; one study (Anschutz, Engels, Becker, & Strien, 2009) found that undergraduate women who watched commercials with models who were extremely thin were more likely to eat less and be in a more negative mood than women who witnessed commercials with merely thin models. Women also tend to compare themselves to unrealistic targets, like models, more than men do (Strahan, Wilson, Cressman, & Buote, 2006). Threatening current sociocultural norms by showing women commercials with heavier women, who are happy and successful or who their peers have deemed appropriate, helps to reduce the negative impact of the solely thin women (Strahan, Spencer, & Zanna, 2007).

C. Racial/Ethnic Differences

Body dissatisfaction has been the topic of many research studies over the past decades. One study (Demarest & Allen, 2000) used figure drawings to allow undergraduate participants to rank their current and ideal body figures, as well as which figure they believed that members of

the opposite sex would find most attractive. These researchers found that overall body dissatisfaction was the greatest among women, regardless of ethnicity. However, ethnic differences were found among women, which showed that African American females had the most realistic notions of what males expected, whereas Caucasian females had the most distorted views. The researchers hypothesized that this discrepancy may lead to the differences among cultures related to eating disorders as well.

Another study (Wagner, 2009) looked at sociocultural factors that could impact body image and eating disorders in Caucasian and African American undergraduate women. This study found that Caucasian women found their appearance to be more important to them than did African American women, but that African American women have higher rates of body satisfaction compared to Caucasian women. Furthermore, African American women have more positive feelings regarding their current weight, even though they are dieting less, and also exercising less, than Caucasian women. Thus, the finding that Caucasian participants have a higher level of disordered eating compared to their African American counterparts comes as no surprise. Additionally, Gluck and Geliebter (2002) also found cultural differences in undergraduates, where Caucasians had a greater body discrepancy between their current and their ideal bodies than did Asian Americans; after controlling for body mass index (BMI), they found that Caucasians and Asian Americans both had a greater body discrepancy than African American students. Overall, African American participants chose a larger ideal body than either of the other groups.

Caucasian women perceive a higher romantic appeal of thinness and restrict their diet to a greater extent than do African American females (Vaughn, Sacco, & Beckstead, 2008). African American females are less likely to endorse body dissatisfaction (Kelly et al., 2011) and are more

content with a larger body image than are Caucasian females (Becker, Yanek, Koffman, & Bronner, 1999). African American females not only report lower body dissatisfaction, but also lower eating disordered behavior than do Caucasian females. For these reasons, eating disorders are argued to be “culture-bound syndromes,” as they are more prevalent in Western cultures, and among ethnic majority groups (Crago, Shisslak, & Estes, 1996; Wildes, Emery, & Simons, 2001).

The differences found among race in regards to body image are not localized to undergraduates, or even urban populations. Jones, Fries, and Danish (2007) found differences among rural adolescents that suggest that even at a young age, Caucasian females reported more body dissatisfaction than did African American females. In addition, African Americans indicated larger ideal and current ratings than did their Caucasian counterparts. Yet, regardless of race, females as a whole reported more body dissatisfaction than did the male sample. While the afore mentioned studies found significant differences in for culture and body images, Baugh, Mullis, Mullis, Hicks, and Peterson (2010) claim that such cultural differences do not exist. This study measured attitudes towards body image in Caucasian and African American undergraduate females in one traditionally white and one historically black university. Even though Caucasian women had higher scores on body dissatisfaction measures, they conclude that neither culture shields young women from body dissatisfaction, despite the contrary evidence from other related studies.

The findings also seem to be different for obese girls than for the population in general (Kelly, Bulik, & Mazzeo, 2011). Both Caucasian and African American obese girls reported an ideal figure that was smaller than her current size, and many girls in each group underrepresented their current size. Thus, in this instance, obesity might actually negate cultural differences that

typically help to shield young African American girls from the presence of body dissatisfaction. This finding is especially important due to the fact that over a third of children in the United States between the ages of 6 and 11 are either overweight or obese (Ogden, Carroll, Curtin, Lamb, & Flegal, 2010).

Perhaps the evidence that such differences do not exist is part of the belief that such differences are shrinking. Roberts, Cash, Feingold, and Johnson (2006) performed a meta-analysis to examine this belief further. They examined ethnic differences as they pertain to body dissatisfaction and found that African American women do have more positive body images than do Caucasian females, and that difference is most prominent in young women. The results showed that racial differences decreased only with measures focused on weight; in fact, those differences became more prominent when attitudes were measured with more global measures of body image. The meta-analysis ultimately showed that the typically found relationships among ethnicity, body image, and dissatisfaction do exist and could actually be even more complicated than once believed.

D. Body Dissatisfaction, Its Influences, and Its Impacts

Body dissatisfaction is a construct that relates to an individual's dissatisfaction with certain aspects of his or her body, and it can occur in degrees along a continuum (Cook-Cottone & Phelps, 2003). Body dissatisfaction is encompassed under body image, a multidimensional construct which contains an individual's perception and attitude related to his or her body (Cash, Fleming, Alindogan, Steadman, & Whitehead, 2002). Body dissatisfaction can be either a trait (where it is stable and applicable in any number of circumstances) or a state (where it can fluctuate due to the context or a mood), with most of the research on this area focusing on the trait aspect and its contributors (Colautti et al., 2011).

According to Higgins's self-discrepancy theory (1987), inconsistencies between the actual and ideal self can lead to disappointment, dissatisfaction, or other negative outcomes, which puts individuals at risk for other serious conditions, like depression (Albertini & Phillips, 1999). Such discrepancies in body image are associated with both maladaptive eating and exercise habits (Anton, Perri, & Riley, 2000). Body dissatisfaction increases as body mass index (BMI) (Jones, Vigfusdottir, & Lee, 2004), perceptions of how other people view their body (Cash, Theriault, & Annis, 2004), and upward social comparisons (Dittmar & Howard, 2004; Engeln-Maddox, 2005) increase, and these results are found not only in the United States, but in international samples as well (Lu & Hou, 2009).

Body dissatisfaction can be influenced by negative mood (Haedt-Matt, Zalta, Forbush, & Keel, 2012), as well as encouragement to control one's weight from an appearance-focused family (Kluck, 2010). Low self-esteem and high BMI are also important risk factors associated with body dissatisfaction (Wojtowicz & von Ranson, 2012). A negative body image, which could include body dissatisfaction, a drive for thinness, and low self-esteem, can be a predictor for symptoms related to eating disorders (Leon, Fulkerson, Perry, & Cudeck, 1993). Eating disorders, in return, can lead to serious health problems or death, likely by starvation, suicide, or electrolyte imbalance (American Psychiatric Association, 2000).

Body image disturbance, which includes body dissatisfaction but also encompasses its resulting distress, is often linked to a desire to be perfect (Bardone-Cone, Cass, & Ford, 2008), but it is important to note that this connection may actually mean that individuals with this disturbance possess a strong desire to avoid seeming imperfect to others (Sherry et al., 2009). Thus, in this case, distress caused by body image is reliant not only on what the individual him/herself thinks, but also on how the individual feels that he/she comes across to others.

One reason that body dissatisfaction is important is that it is a strong predictor of disordered eating (Stice, 2002). Research has shown that a sociocultural model helps to explain disordered eating, in which family, peers, and the media provide pressure for the individual to reach a certain ideal (Stice, 1994). When women internalize these pressures and the thin ideal, negative consequences can occur (Thompson, van den Berg, Roehrig, Guarda, & Heinberg, 2004).

In Western society, where these pressures are increasingly evident, Fitzsimmons-Craft et al. (2012) call for more studies to explore the link between social comparison and body dissatisfaction. It is known that the social comparison theory (Festinger, 1954) indicates that humans engage in comparisons with each other when objective comparisons are not present. Comparing oneself to another becomes a normative aspect of society, especially on college campuses, where females encounter and interact with many other females daily (Lindner, Hughes, & Fahy, 2008). When a woman compares herself to another's appearance, she normally compares herself to someone who she deems is better off in some way, or in an upward comparison (Morrison, Kalin, & Morrison, 2004; Leahey, Crowther, & Mickelson, 2007). However, making these sorts of comparisons, related to body image or even performance in general, normally lead to body dissatisfaction (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999; Morrison et al., 2003).

In addition, objectification theory (Fredrickson & Roberts, 1997) suggests that sociocultural norms regarding physical appearance impact individuals' views of their own bodies and that these evaluations, in turn, impact self-worth. These norms that dictate such important evaluations can be found everywhere in westernized cultures, from friends and family to media

and strangers. In addition, as expected, such norms are more salient and more relevant to appearance for women than for men.

When conducting a study that examined individuals' body dissatisfaction, self-esteem, and relationship satisfaction, Paap and Gardner (2011) found that, overall, females had greater body dissatisfaction and lower self-esteem than did males. They also found that women overestimate their body size, while men underestimate theirs, and overall, male participants place more emphasis on the attractiveness of their partner than do females. However, contrary to their hypothesis, body dissatisfaction did not predict relationship satisfaction (or dissatisfaction). Yet, participants who have a distorted view of their current size perceived their partners to be less satisfied in the relationship, even though their beliefs were not accurate. In another study, an individual's weight was positively correlated with relationship satisfaction, but only for men; women's relationship satisfaction and weight were negatively correlated (Sheets & Ajmere, 2005).

While it may be normative for body dissatisfaction to exist in women (Rodin, Silberstein, & Striegel-Moore, 1985), it is important to note that a college setting may foster body dissatisfaction, as well as patterns of dieting (Heatherton, Mahamedi, Striepe, Field, & Keel, 1997; Heatherton, Nichols, Mahamedi, & Keel, 1995). In fact, these studies have estimated that 82% of women wanted to lose weight during college, compared to 68% ten years later, possibly due to the social influences and peer expectations during the college setting. Stress due to college or the transition (Compas et al., 1986) may also play a role in the reasons why disordered views of the self exist. Women in college are more likely to view themselves as overweight and endorse higher body dissatisfaction than they did in high school (Vohs, Heatherton, & Herrin, 2001).

Granted, the extent of one's body dissatisfaction is based largely on where one is currently located in terms of weight and shape (Neighbors & Sobal, 2007), even though 87% of the females in this sample desired to weigh less. Undergraduate females who were of normal weight wanted a thinner, lighter body, while underweight females expressed little body dissatisfaction, identifying that they liked their current BMI classification. Overweight females expressed the highest body dissatisfaction among all categories, but their desired weight and shape was at the high end of the normal BMI range, suggesting that the pursuit of the cultural ideal may be too unrealistic.

The thin ideal that is held so dear is not something that merely appears in adulthood; rather, Brown and Slaughter (2011) found that it is already present in school-aged children. The children, regardless of sex, rated thinner adult females as more attractive than normal females. Once this ideal is present, it remains stable into adulthood. This ideal, or body dissatisfaction in general, can be made more salient based on parental comments and influences. In fact, direct comments from parents regarding appearance is linked with body dissatisfaction and problems with eating habits in males and females (Baker, Whisman, & Brownell, 2000). While most of the research in this area focuses on negative comments from parents (e.g., Hanna & Bond, 2006), limited research on positive comments from parents (Gross & Nelson, 2000) shows that positive messages lead to higher body satisfaction in college-aged females. Thompson and Sargent (2000) further argue that women's concerns about weight are positively correlated with factors such as body dissatisfaction, negative attitudes toward obesity, and also a parent's criticism of her appearance as a child. Perceptions about weight do not begin in adulthood, nor are they isolated events. They are impacted first and foremost by parents' expectations and expressions about weight.

Much of the research on body dissatisfaction relies on self-report measures. However, Spresser, Keune, Filion, and Lundgren (2012) have examined the application of startle-based measures of emotional reactions to body image cues in order to determine if another type of method could better determine body dissatisfaction. The participants were shown normal pictures of themselves, as well as pictures that were simulated to show weight gain, and their reactions were measured simultaneously with the presentation of the pictures. After the presentation, they were also given self-reports measures on body dissatisfaction. Their overall results show that the startle-based measure may be more sensitive to body dissatisfaction than self-reports measures, although more studies will be needed to confirm their findings.

Body image distortion, regardless of how it is measured, is pervasive, and treatments are needed. Some psychoeducational interventions are currently used to reduce body image dissatisfaction (Springer, Winzelberg, Perkins, & Taylor, 1999; Stice & Ragan, 2002), but Peterson, Tanteff-Dunn, and Bedwell (2006) wanted to introduce a new method of treating body image dissatisfaction, one that would offer adaptive, rather than maladaptive, ways of decoding the messages related to appearance that they constantly receive. They introduced a feminist perspective intervention, and they compared it to a psychoeducational intervention and a control group. Those women in the new feminist intervention experienced positive changes in body image and greater body satisfaction, which indicates a promising new focus for treatment.

E. Body Dissatisfaction and Self-Esteem

Rosenberg (1989) states that self-esteem is a positive or negative approach in regards to one's own persona. This approach is related to how well the individual believes that he or she can do something and to the value that the individual believes that he or she holds. Individuals with high self-esteem seem themselves as no lower than others, but individuals with low self-

esteem are dissatisfied with themselves and lack respect for themselves. When presented with difficulties, individuals with high self-esteem approach them with fortitude, while individuals on the other side of the spectrum are more likely to give up.

Self-esteem has been negatively correlated with the thin-ideal internalization in a Caucasian sample (Cordero & Israel, 2009), and it accounts for a significant amount of variance when predicting the thin-ideal internalization in a Latina population (Cordero, 2011). This study suggests that self-esteem could potentially be turned from a risk factor to a protective factor against this thin-ideal internalization. In addition, self-esteem was positively correlated with satisfaction with social support among the participants.

Klaczynski, Goold, and Mudry (2004) explored concepts related to obesity in both children and adults, specifically looking at negative stereotypes of obesity, global self-esteem, and body satisfaction. One of the most important findings is the notion of the thin ideal, which was found to mediate the negative correlation between one's perceived control of weight and global self-esteem, as well as the relationship between body satisfaction and gender. These researchers also found a negative correlation between self-esteem and negative views of obesity, which was mediated by a belief that personality inadequacies can actually cause obesity.

Regardless of how one's perceptions of weight are formed—whether by cultural influences, parental impact, or other factors—research has shown that body dissatisfaction is linked to low self-esteem and eating disorders (Grossbard, Lee, Neighbors, & Larimer, 2009). Taking the research about body image and self-esteem one step further, Ah-Kion (2006) looked at the relationship between body image and self-esteem across genders in adolescents. The study found that, as expected, adolescent girls do have lower body image and self-esteem scores than do same-aged males.

While body dissatisfaction and self-esteem are linked, the exact relationship is still being explored. One study (Paxton, Neumark-Sztainer, Hannan, & Eisenberg, 2006) found that body dissatisfaction successfully predicted depressive mood and low self-esteem five years later for early-adolescent girls, but not for mid-adolescent girls. They further indicate that a potential spiral relationship between low self-esteem and body dissatisfaction may be present in adolescents, such that low self-esteem impacts body dissatisfaction, and then body dissatisfaction impacts low self-esteem, thus further increasing body dissatisfaction. In other populations, self-esteem helped to predict body image dissatisfaction among obese men and women (Grilo, Masheb, Brody, Burke-Martindale, & Rothschild, 2005), and treatments for individuals with anorexia aim to increase self-esteem during treatment (Karpowicz, Skursuter, & Nevonon, 2009). Furthermore, body dissatisfaction plays a more significant role in self-esteem for females than males in an undergraduate population (Pokrajac-Bulian & Zivcic-Becirevic, 2005). Other situational aspects could influence body image as well. In fact, Forbes, Jobe, and Richardson (2006) examined the relationship between body satisfaction, self-esteem, and whether or not the participant had a boyfriend. They found that college undergraduates who were in a relationship with a steady boyfriend experienced higher body satisfaction than those without a boyfriend.

Grossbard, Lee, Neighbors, and Larimer (2009) further examined the relationship between body image and contingent self-esteem, a term that, as defined by Kernis (2003), refers to how much one's positive self-regard is related to, or contingent upon, the approval of others rather than the approval of oneself. The study found that females have higher concerns about their weight compared to males, as well as higher scores on the scale for contingent self-esteem.

Bailey and Ricciardelli (2010) found that contingent self-esteem was correlated with both frequency of negative appearance-related comments and upward comparisons. However,

overall, self-reported social comparisons were more important than was contingent self-esteem, even though contingent self-esteem predicted eating disturbance in young women. In another study of college-aged students (Grossbard, Lee, Neighbors, & Larimer, 2008) found that gender moderates both contingent self-esteem and body image concerns. Females indicated a higher contingent self-esteem, as well as greater concerns about weight, thus resulting in a stronger relationship between contingent self-esteem and weight concerns for females than for males.

While most of the research mentioned supports significant relationships between body image and self-esteem, one study (Caldwell, Brownell, & Wilfley, 1997) did not find the expected relationship between body dissatisfaction and self-esteem in ethnic populations. They instead found that African American and Caucasian dieters showed no significant differences among body dissatisfaction, self-esteem, or the relationship between self-esteem and body dissatisfaction.

Based on the research that racial differences in body dissatisfaction exist (Roberts, Cash, Feingold, & Johnson, 2006), and the research that body dissatisfaction is linked to low self-esteem (Grossbard, Lee, Neighbors, & Larimer, 2009), this current study expected that body dissatisfaction would be linked to both racial differences and global self-esteem. This study hypothesized that there would be a relationship between high body dissatisfaction (as measured by the discrepancy between ideal and actual body image) and low self-esteem across ethnicities, but that this discrepancy would be more pronounced in Caucasian populations. In addition, while it is known that body dissatisfaction is impacted by race, global self-esteem, and contingent self-esteem, it is unclear which variable is the most important predictor of body dissatisfaction. This current study investigated these relationships and hypothesized that global

self-esteem and racial group membership would account for more of the variance in body dissatisfaction than will contingent self-esteem, need to belong, or body mass index.

II. METHODS

A. Participants

For this study, 295 undergraduate female psychology students between 18-25 years of age at a public university located in the southeastern United States participated in exchange for extra credit. These students were of Caucasian and African American race/ethnicities. The students were selected from a student population that encompasses the following demographics: 82.9% Caucasian, 13.2% African American, 1.1% Asian American, 0.8% Hispanic American, and 2.0% other (Education-Portal.com). Each participant completed the study individually.

368 undergraduate females originally completed the questionnaire. Of the 368 total, 73 participants were excluded from the analysis: 30 due to ethnicities than Caucasian or African American, 14 due to incorrect answers to qualifiers, 3 for incomplete questionnaires, 19 for being outside of the designated age range, and 7 for inaccurate weights or heights (i.e., listing one's height in feet rather than inches). The remaining 295 undergraduate females were used for the analysis, with 88 African Americans and 207 Caucasians.

B. Measures

The Survey of Weight Related Attitudes (Johnson et al., 2012) is a 48 item measure created by William G. Johnson that assesses demographic information, number of times one engages in sedentary and active behaviors each week, and opinions on who is responsible for managing a child's weight. It also includes sliding scales from 0 to 100 paired with silhouettes (from emaciated to morbidly obese) to measure how the participant views her body currently, her

own ideal body shape, and at what point she views males and females (both adult and children) as overweight. Questions are presented in a multiple-choice and Likert format. Scores on this measure indicate the participant's current body size and her ideal body size, which in turn results in her body dissatisfaction, as well as general weight-related attitudes.

Because the participant also provides her weight and height, the individual's Body Mass Index (BMI) was also determined using the following formula: $(\text{Weight in Pounds}/(\text{Height in Inches} \times \text{Height in Inches})) \times 703$. Once BMI was calculated, the following categories were established: Underweight (<18.5), Normal Weight (18.5 to 24.9), Overweight (25 to 29.9) and Obese (>30). The distribution of participants is as follows: 6 Underweight, 200 Normal, 48 Overweight, and 41 Obese.

Next, the Rosenberg Self-Esteem Scale is a 10 item measure of self-esteem (Rosenberg, 1965) with four answers per question ranging from "Strongly Agree" to "Strongly Disagree." After reverse coding, the items were summed, with higher scores indicating a higher global self-esteem. Possible scores on this scale range from 10 to 40, with a range of 16 to 40 in this sample. This scale is a widely-used and reliable self-esteem measure, and it has shown excellent convergent validity with other self-esteem measures that use it as their standard (Robbins, Hendin, & Trzesniewski, 2001). In addition, this scale is one of the most valid measures of global self-esteem (Byrne, 1983).

The Revised Janis and Field Feelings of Inadequacy Scale (Fleming & Courtney, 1984; Janis & Field, 1959) is a 36 item multidimensional measure of global self-esteem. This survey allows the participant to respond in a multiple-choice format with five options, from "Very Often" to "Practically Never," for example. After reverse coding, item scores are summed, and higher scores indicate higher self-esteem. Scores on this scale range from 36 to 180, with a

range of 55 to 178 in this sample. A component analysis shows that the original scale measures more specifically three aspects: concern about self-evaluation, self-regard, and interaction anxiety (Church, Truss, & Velicer, 1980). The revised version also includes questions regarding academic ability (Heatherton & Wyland, 2003). This scale is regarded as a valid measure of multidimensional scale of self-esteem, with split-half reliability of .83 and Spearman-Brown reliability of .91 (Heatherton & Polivy, 1991).

The Kernis and Paradise Contingent Self-Esteem Scale (Kernis, 2003; Paradise & Kernis, 1999) is a 15 question measure that examines an individual's contingent self-esteem, which is a gauge of self-esteem stability. Items are presented in a Likert scale type format (1 = "Not at All Like Me" to 5 = "Very Much Like Me"). Higher scores on this scale indicating higher contingent self-esteem, and scores range from 15 to 75. In this sample, scores ranged from 21 to 73. The scale is reliable, with internal reliabilities ranging from .83 to .85 (Knee, Canevello, Bush, & Cook, 2008).

The Need to Belong Scale (Leary, Kelly, Cottrell, & Schreindorder, 2007) is a 10 question measure that examines an individual's need to belong, which is the importance one places on being accepted by others. The participant answers each question with one of five responses, ranging from "Strongly Disagree" to "Strongly Agree," with scores ranging from 10 to 50. Scores on this scale ranged from 14 to 50 in this sample. After reverse scoring, the higher the score on this scale, the higher one's need to belong. This measure is both adequately valid and reliable, with Cronbach's alpha of .83 (Pickett, Gardner, & Knowles, 2004). While this construct is new and thus not yet thoroughly studied, preliminary findings show that a higher need to belong is correlated with extraversion and the need for affiliation (Leary, Kelly, Cottrell, & Schreindorder, 2007), and the discrepancy between need to belong and satisfaction with

relationships can be contributed for by loneliness (Mellor, Stokes, Firth, Hayashi, & Cummins, 2008). Because body dissatisfaction is linked to the objectification theory and sociocultural norms impact one's behavior (Fredrickson & Roberts, 1997), one who strives for the cultural thin ideal likely also has a high need to belong, so this measure was included.

Refer to Table 1 in regards to the ranges, means, standard deviations, and reliabilities found for each measure in this study. Table 2 details the reliabilities for each scale in this sample for the total sample, the Caucasian sample, and the African American sample.

Table 1

Statistics for Scales

Scale	<i>N</i>	<i>M</i>	<i>SD</i>	α	Range	
					Potential	Actual
Rosenberg Self-Esteem Scale	294	31.97	4.96	.88	10-40	16-40
Janis and Field Scale	278	122.81	22.26	.94	36-180	55-178
Contingent Self-Esteem Scale	285	48.72	9.06	.86	15-75	21-73
Need to Belong Scale	294	33.70	6.75	.80	10-50	14-50

Table 2

Reliabilities for Scales, by Groups

Scale	α		
	Total	African American	Caucasian
Rosenberg Self-Esteem Scale	.88	.82	.88
Janis and Field Scale	.94	.93	.93
Contingent Self-Esteem Scale	.86	.84	.84
Need to Belong Scale	.80	.78	.75

C. Procedures

Participants for this study were recruited from introductory psychology courses. Participants earned course credit for volunteering for the investigation. The questionnaires were administered online in a campus computer lab, with approximately 18 participants per session. Dates of data collection ranged from April 2011 to March 2012. The dates and times of the collection were varied, such that the data were collected at different points in the semester, during the spring, summer, and fall terms.

Once participants arrived at the lab, informed consent was administered to each participant; participants then answered the questions after demographic information was collected. The questions were presented online with Qualtrics software, with qualifiers (such as “Choose true for this question”) to ensure that the participants were paying attention to the content of each question. Three qualifiers were placed throughout the survey, and the data from the participants who answered the qualifiers incorrectly were removed from the analysis. In this study, 4.75% of the participants were removed for incorrect answers.

After the student completed all of the survey questions, she was thanked for the time spent on the survey and awarded extra credit for her class. The questionnaires took approximately thirty minutes to complete.

III. RESULTS

A. Analysis of Self-Esteem Scales

For global self-esteem, two independent measures were used. The Janis and Field Feelings of Inadequacy Scale was included in this study in addition to the Rosenberg Self-Esteem Scale because in previous usages of the Rosenberg Self-Esteem Scale, undergraduates have largely obtained high self-esteem, with a skewed distribution. Thus, there was question that the Rosenberg, while generally considered the ‘gold standard’ for measuring self-esteem, may not be the most sensitive measure for our population.

When examining the reliability statistics for each measure, the Cronbach’s alpha for the 10 items on the Rosenberg Self-Esteem Scale is .88 and for the 36 items on the Janis and Field Feelings of Inadequacy Scale is .94, indicating that both scales produce reliable scores. The two scales are correlated at $r = .719, p < .001$. Each scale was then examined for its relationship to body dissatisfaction, defined for this study as a participant’s desire to have a smaller body shape than she currently has. This score was obtained by determining the discrepancy between ideal and current body shapes. (Individuals who wished to have a larger body shape than she currently has was excluded from the body dissatisfaction analysis, with $n = 30$.) The Janis and Field Feelings of Inadequacy Scale was significantly related to body dissatisfaction ($r = -.274, p < .001$), as was the Rosenberg Self-Esteem Scale ($r = -.309, p < .001$). Both relationships indicate that as one becomes more satisfied with her body, her overall self-esteem increases. Because

both measures produce similar results in this study, the Rosenberg Self-Esteem Scale was used for the analysis, as it is considered the ‘gold standard’ in this area.

B. Body Dissatisfaction

A correlation matrix was computed for the following variables: BMI, body dissatisfaction, self-esteem (as measured by both the Rosenberg Self-Esteem Scale and the Janis and Field Feelings of Inadequacy Scale), contingent self-esteem (as measured by the Kernis and Paradise Contingent Self-Esteem Scale), and need to belong (as measured by the Need to Belong Scale). Table 3 details the correlations for the total sample, and Table 4 details the correlations as broken down by race/ethnicity. The results do show that body dissatisfaction is linked to self-esteem in the overall sample, as expected.

Table 3

Summary of Correlations for Total Sample

	Rosenberg	Janis and Field	Contingent Self-Esteem	Need to Belong	Body Dissatisfaction	BMI
Rosenberg	---	.71**	-.55**	-.43**	-.31**	.06
Janis and Field	.71**	---	-.62**	-.50**	-.27**	-.01
Contingent Self-Esteem	-.55**	-.62**	---	.65**	.22**	-.13*
Need to Belong	-.43**	-.50**	.65**	---	.26**	-.08
Body Dissatisfaction	-.31**	-.27**	.22**	.26**	---	.32**
BMI	.06	-.01	-.13*	-.08	.32**	---

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 4

Summary of Correlations by Race/Ethnicity

	Rosenberg	Janis and Field	Contingent Self-Esteem	Need to Belong	Body Dissatisfaction	BMI
Rosenberg	---	.69**	-.48**	-.36**	-.34**	-.04
Janis and Field	.66**	---	-.59**	-.46**	-.29**	-.06
Contingent Self-Esteem	-.50**	-.58**	---	.64**	.25**	-.02
Need to Belong	-.29**	-.43**	.46**	---	.28**	.07
Body Dissatisfaction	-.18	-.21	.11	.16	---	.36**
BMI	-.12	-.23*	.11	.17	.54**	---

Note: Correlations for Caucasians are listed above the diagonal, with African Americans listed below the diagonal.

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Next, the relationship between body dissatisfaction and race was explored. An independent samples *t*-test revealed that African Americans ($M = 11.41$, $SD = 9.74$) and Caucasians ($M = 13.08$, $SD = 9.32$) do not report significantly different levels of body dissatisfaction, $t(99.95) = .234$, $p = .23$, with a small effect size of $r = -.09$. This finding suggests that there are no racial differences in body dissatisfaction in our sample, which is contrary to the initial prediction.

However, when the sample is divided into individuals who are not overweight (i.e., in the underweight and normal weight categories) and who are overweight (i.e., in the overweight and obese categories), significant differences between races do emerge. In the normal weight sample ($n = 179$), African Americans ($M = 5.75$, $SD = 7.09$) and Caucasians ($M = 11.83$, $SD = 9.41$) report significantly different levels of body dissatisfaction, $t(28.20) = 3.47$, $p < .05$, with a moderate effect size of $r = .34$, such that African Americans are more satisfied with their bodies

in this weight range. For the overweight sample though ($n = 68$), African Americans ($M = 14.05$, $SD = 9.74$) and Caucasians ($M = 17.70$, $SD = 7.38$) do not exhibit a significantly different level of body dissatisfaction, $t(78.29) = 1.96$, $p = .05$.

To explore the relationship between body dissatisfaction and global self-esteem across ethnicities, a Fisher's R to Z test was used to examine the difference. The relationship for African Americans ($r = -.18$ for $n = 62$) was compared to the relationship for Caucasians ($r = -.34$ for $n = 202$), resulting in a non-significant difference between the two, such that $Z = -1.16$, $p = .25$. Thus, in this case, the relationship for body dissatisfaction and global self-esteem does not differ between race/ethnicities, which is contrary to the initial expectation.

However, when looking at what size African American and Caucasian females expressed they would like to be, on average, African American females indicated that they would like to look like the shape that corresponds with 41.15 ($SD=13.15$) on the silhouette scale, while Caucasian females indicated that they would like to look like the shape the corresponds with 29.81 ($SD=10.92$) on the same scale. Thus, their ideal body shapes are significantly different, $t(140.38) = -7.116$, $p < .001$, with a medium effect size ($r = .42$). African American women in this sample have a bigger ideal shape than do Caucasian women.

Another aspect of body image that was explored looked at the accuracy of individuals in this sample to be able to determine whether or not they are overweight. A chi-square analysis showed that individuals are accurate in detailing whether or not they are overweight at a significant level, $\chi^2(1, N = 295) = 51.32$, $p < .001$. Not only is the entire sample accurate in this perception, but so are African Americans, $\chi^2(1, N = 88) = 15.09$, $p < .001$, and Caucasians, $\chi^2(1, N = 207) = 43.69$, $p < .001$.

C. Regression Analyses

A stepwise multiple regression analysis was also conducted. Body dissatisfaction served as the criterion variable with five independent variable predictors. Race was entered at step one, BMI at step two, and self-esteem, contingent self-esteem, and need to belong at step three. Table 5 details the results of this regression analysis. Significant predictors for the model, in order of the amount of variance that each contributes, are BMI (14.37%), self-esteem (4.20%), and race (1.28%). Thus, with this model, BMI contributes the most variance. While it was expected that self-esteem and race would be significant predictors, BMI emerges as the strongest predictor.

Table 5
Regression Table for Total Sample

Variable	Body dissatisfaction		
	Model 1 <i>B</i>	Model 2 <i>B</i>	Model 3 <i>B</i>
Constant	13.13**	-5.40	2.88
Race	-1.184	-6.28**	-3.20*
BMI		.80**	.77**
Self-Esteem			-4.69**
Contingent Self-Esteem			.636
Need to Belong			1.353
R^2	.00	.16	.091
F	.71	24.29**	16.86**
ΔR^2		.16	.09
ΔF		47.74**	10.14**

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

In order to explore the factors that contribute to body dissatisfaction within certain weight classes, individuals were divided into those who are underweight or normal weight and then those who are overweight or obese. Table 6 details the correlation matrix for these individuals. Table 7 details the results of the regression analysis for this population, in which a stepwise regression was used with race in step one and self-esteem, contingent self-esteem, and need to belong in step two. The significant predictor for this model was self-esteem, contributing 9.24% of the variance. However, for the overweight population, as detailed in Table 8, the regression analysis did not reveal any significant predictors for body dissatisfaction.

Table 6
Summary of Correlations by Weight Category

	Rosenberg	Janis and Field	Contingent Self-Esteem	Need to Belong	Body Dissatisfaction	BMI
Rosenberg	---	.66**	-.55**	-.42**	-.45**	-.10
Janis and Field	.81**	---	-.61**	-.50**	-.37**	-.00
Contingent Self-Esteem	-.52**	-.66**	---	.63**	.33**	-.08
Need to Belong	-.43**	-.61**	.68**	---	.35**	-.07
Body Dissatisfaction	-.19	-.14	.20	.22*	---	.20**
BMI	-.05	-.12	.09	.05	.30**	---

Note: Correlations for individuals who are not overweight (i.e., Underweight and Normal Weight) are listed above the diagonal, with those who are overweight (i.e., Overweight and Obese) listed below the diagonal.

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 7

Regression Table for Normal Weight Individuals

Variable	Body dissatisfaction	
	Model 1 <i>B</i>	Model 2 <i>B</i>
Constant	11.83**	22.83**
Race	-5.13*	-.51
Self-Esteem		-7.16**
Contingent Self-Esteem		.98
Need to Belong		2.12
R^2	.03	.23
F	4.70*	12.04**
ΔR^2		.20
ΔF		14.12**

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 8

Regression Table for Overweight Individuals

Variable	Body dissatisfaction	
	Model 1 <i>B</i>	Model 2 <i>B</i>
Constant	17.91**	17.10
Race	-3.83*	-2.56
Self-Esteem		-1.56
Contingent Self-Esteem		.80
Need to Belong		.86
R^2	.05	.08
F	4.09*	1.67
ΔR^2		.03
ΔF		.87

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

IV. DISCUSSION

A. Implications

In this study, the hypothesis that body dissatisfaction and self-esteem are related was confirmed, such that individuals with higher self-esteem are more satisfied with their bodies. However, the hypothesis that race/ethnicity would be related to body dissatisfaction was not confirmed, nor was the hypothesis that the relationship between body dissatisfaction and self-esteem varies across ethnicities. Thus, in this study, both Caucasians and African Americans detail similar beliefs in that they both wish that they were thinner. Perhaps this finding is because neither race/ethnicity protects individuals from exposure to the thin ideal, as was suggested in the study by Baugh, Mullis, Mullis, Hicks, and Peterson (2010).

This study did reveal though that African Americans have a higher ideal body shape, such that their ideal body shape is larger than the ideal body shape that Caucasians wish for. Thus, while they may be dissatisfied and wish to be thinner, they have a more realistic view of an attainable weight. Their push is not for an extremely thin body shape, but a healthy one instead. As noted before, African American women are more content with a larger body image than their Caucasian peers (Becker, Yanek, Koffman, & Bronner, 1999). Thus, the finding from this study that Caucasian women chose an ideal body type that is smaller than the ideal body type for African Americans was expected, and it is consistent with past findings.

In regards to social aspects, as predicted, both contingent self-esteem and need to belong are significantly related to body dissatisfaction. Thus, as these results show, individuals with

more body dissatisfaction have a higher need to belong, as well as a higher contingent self-esteem. These results indicate that females who are more dissatisfied with their bodies place more emphasis on what others think of them overall than do females who are satisfied with their bodies. However, while this relationship is defined, it is not as prominent a relationship as between body dissatisfaction and global self-esteem, indicating that the value that one places on herself is more important than the value that she places on what others think of her.

When looking at the regression results, the most significant predictor of body dissatisfaction is not race or self-esteem, as predicted, but rather BMI. In this study, one's weight class contributed the most variance to body dissatisfaction. Thus, if one is overweight, for example, that aspect would contribute more to her dissatisfaction than does her race or self-esteem. Her perception of her body size may lead to the dissatisfaction. The notion of BMI becomes more salient than race when looking at body dissatisfaction in this sample, and the relationship between BMI and body dissatisfaction should be a focus in future research.

B. Limitations

For this study, there are two main limitations. First of all, the measures were not counterbalanced, so the Perceptions of Weight Related Attitudes Scale was administered before the self-esteem measures. It is possible that an individual's reaction to this scale could have impacted their beliefs about their self-esteem in some manner. The second main limitation is that this study took place in a university setting with a restricted age range, and it was located in rural Mississippi. Thus, because Mississippi is an outlier in the sense of its obesity rates, the results may not be generalizable to the larger American population. Individuals in Mississippi may be more content with a larger body image as a whole, because the size of the individuals around them is above the national average. Being exposed to this environment may impact not

only ideal body size and current body dissatisfaction, but also one's motivation to change. Body dissatisfaction for individuals who are overweight could be a motivator to change and engage in healthy living; however, if they are complacent and see themselves as normal, then they likely will not engage in change. This setting is a unique location for this a study examining body dissatisfaction.

C. Future Research

In regards to future research, this study could be executed in an environment where obesity is considered abnormal. For example, this study could be run again, in a state such as Colorado for example, in order to determine if these results are generalizable. A change in setting could determine whether these results are localized to the South, specifically Mississippi. Furthermore, future studies should include other variables to determine their impact on body dissatisfaction. These additional variables could be included in the regression analysis to determine what factor is most significant. Other variables to consider in order to explore impacts of body dissatisfaction are one's insight (such as one's perceptions of whether she is overweight and the types of health concerns it could cause), the impacts of stress and stressful situations, the impacts of social groups (such as Greek organizations), and the implications of family values for body dissatisfaction. The current model helps to indicate what important factors for body dissatisfaction are, but it leaves much variance unaccounted for. Thus, more research will help to detail what exactly those other factors are.

Another direction for future research would be to examine a sample of individuals who are dissatisfied with their bodies in the opposite direction of this study. Thus, these would be individuals who wish that they were of a larger size. The various factors for that type of body dissatisfaction should be explored in more detail.

While race in this study meant Caucasian or African American, future studies should explore the impacts of many other race/ethnicities. A sample that includes a greater diversity of ethnic minorities can help to detail what factors are important for each race. This type of research could be especially beneficial for clinicians, as knowing what types of factors impact body dissatisfaction (and potentially eating disorders) for individuals of specific ethnicities could aid in culturally competent treatment options.

Finally, instead of just looking at body dissatisfaction through the lens of race/ethnicity, it is important to consider the impacts of BMI as well. While undergraduate females may seem like a relatively cohesive group, much variability exists, especially in regards to BMI. Future research should explore more specifically the link between BMI and body dissatisfaction, especially as applied to different ethnic groups. This field of research is extremely important, as understanding what contributes to body dissatisfaction can ultimately lead researchers and clinicians to aid in successfully promoting a healthy body image for women.

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