ETHNIC IDENTITY DEVELOPMENT AND SOCIAL COMPARISON AND THEIR RELATIONSHIP TO BODY IMAGE AND DISORDERED EATING

by

Clarissa M. Johnson

An Abstract
of a thesis submitted in partial fulfillment
of the requirements for the degree of
Master of Science
in the Department of Psychological Science
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December, 2012
ABSTRACT

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Clarissa M. Johnson

The goal of the present study was to investigate the relationship ethnic identity development and social comparison had with body image and disordered eating. Participants (88 Caucasian and 14 African American women) completed measures assessing their level of ethnic identity development, level of social comparison, level of internalization of beauty ideals (internalization), as well as measures of body image and disordered eating. Results revealed significant relationships between (a) ethnic identity and internalization, (b) ethnic identity and disordered eating, and (c) internalization and body image for African Americans. Results also showed that African Americans compared their appearance more often to other African American women versus women from other ethnic groups. Also, lower levels of social comparison were related to higher body image scores for Caucasian Americans, indicating that the more these women compared their appearance of other women, the more dissatisfied they were with their own bodies.
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CHAPTER 1
NATURE AND SCOPE OF THE STUDY

The purpose of the current study was to examine the relationship between ethnic identity development and social comparison with regard to appearance norms, as well as to investigate whether these variables are significantly related to body image satisfaction and disordered eating in women. Historically speaking, disordered eating has been a problem in many Westernized countries (Brown, Cachelin, & Dohm, 2009). Eating disorders carry the risk of high rates of psychiatric comorbidity, including high rates of depression, anxiety disorders and abuse of alcohol and drugs (Treasure, Claudino, & Zucker, 2010). The two most commonly known eating disorders are anorexia nervosa and bulimia nervosa; however, it has been found that binge eating disorder (BED), which is classified as an Eating Disorder Not Otherwise Specified, is more prevalent than both anorexia and bulimia nervosa combined (Swanson et al., 2011). Furthermore, eating disorders are a tremendous concern because of the increased psychological and physiological health risks that accompany them (Striegel-Moore & Franko, 2008).

The link between eating disorders and body image has been well documented. Body image is generally thought of as a multidimensional construct that encompasses a multitude of components. Simply put, body image refers to a person’s positive and negative affect that is directed toward his or her body (Bergstrom & Neighbors, 2006). Having a negative body image has been found to be a precursor to eating disorders (Garner, 2002; Stice, 2002). In a study conducted by Cooley and Toray (2001), results indicated that body dissatisfaction was a significant predictor of eating pathology. Mendelson, McLaren, Gauvin and Steiger (2002) showed that as body esteem decreases, a person’s propensity towards disordered eating increases. Although the relationship between disordered eating and body image is well established, there are other variables that can influence a person’s body image and, in turn, the
development of eating disorders. Two such factors are ethnic identity development and social comparison.

Although the current study included ethnic identity development as a factor in the relationship between body dissatisfaction and disordered eating, previous research in this area that has examined ethnicity has focused mainly on ethnic differences in body image and eating disorders. When speaking of ethnic differences in body image, the “thin beauty ideal” needs to be considered. In mainstream society, being thin is equated with being beautiful, wealthy, and healthy (Jackson, 2002). It has been found that internalizing these thin beauty ideals can lead to body dissatisfaction and later disordered eating (Striegel-Moore & Franko, 2002). Although mainstream society (White society) suggests that thinness is ideal, for African Americans, body image and beauty are often thought of in a more flexible manner. In general, African Americans are more likely to view women of heavier weights, as well as a wider range of body shapes and sizes, as still being attractive (Celio, Zabinski, & Wilfley, 2002). There are also ethnic differences in the prevalence rates of various forms of disordered eating. African Americans have been found to be more likely, in general, to present symptoms of bulimia nervosa and binge eating disorder than they are symptoms of anorexia nervosa, but are less likely to be diagnosed with an eating disorder of any kind (Brown, Cachelin, & Dohm, 2009). Caucasians display higher rates of anorexia, bulimia, and binge eating disorder than do African Americans (Brown et al., 2009). These differences could be due to the level of internalization of the “thin beauty ideal,” with Caucasians being more susceptible than African Americans to internalizing such ideals.

Ethnic identity comprises a person’s sense of belonging to and the positive and negative feelings one has toward his or her chosen ethnic group (Wakefield & Hudley, 2007). When
researchers have examined ethnic identity as a variable, it has typically been included only as a demographic variable such that participants merely identify their ethnicity from a given list. In the current study, ethnic identity will be approached from a developmental viewpoint (i.e., how strong a person identifies with his or her ethnic culture). The majority of the theories surrounding ethnic identity development are stage models. The most renowned model for African Americans’ ethnic identity development is the Cross model of Nigrescence (1971). Cross’s model consists of five stages: (1) pre-encounter, (2) encounter, (3) immersion-emersion, (4) internalization and (5) internalization-commitment. As individuals progress through these stages, they become more attached to their culture and more accepting of others (Cross, 1971; Cross, 1991). There is also a model for White identity which was developed by Janet Helms (1990). Helms’ model proposed six stages in which Whites move away from racism and learn to embrace and accept those of other backgrounds (Helms, 1990). Lastly, Jean Phinney (1996) proposed a stage model for the development of ethnic identity designed to apply to those of all ethnicities. In her model, Phinney proposed that all ethnicities move from an unexamined identity to an achieved ethnic identity (Wakefield & Hudley, 2007).

Social comparison has also been indicated as a potential factor in the development of body dissatisfaction and eating disorders (Corning, Krumm, & Smitham, 2006; Tantleff-Dunn, & Gokee, 2002). Social comparison refers to how people process information about their environment and social situations by comparing themselves to others (Festinger, 1954). Every culture has standards and expectations for how people should look and behave. Social comparison provides an instrument for deciding whether a person measures up to that standard (Jackson, 2002). In most Western cultures, thinness is considered the ideal for females when it comes to physical beauty. Many studies have shown that those who engage in social comparison
tend to rate their own attractiveness as being lower and in a study done by Tantleff-Dun and Gokee (2002), it was found that the more one engages in social comparison, the higher that person’s risk for body dissatisfaction. Social comparison has also been found to be related to the development of eating disorders. Corning, Krumm, and Smitham (2006) conducted a study examining the relationship between social comparison processes and disordered eating symptoms. Results of this study indicated that there was a greater tendency overall for those with disordered eating symptoms to engage in everyday social comparison (Corning et al., 2006).

One aspect of social comparison that has been overlooked is the extent to which ethnic identity influences social comparison. Guimond et al. (2007) found that women tend to compare themselves to their in-group (those similar to them) as well as their out-group (those dissimilar to them). If applied to the context of ethnic identity, African American women might be expected to compare themselves to other African Americans as well as to those of other ethnic groups. If African American women were more inclined to compare themselves to other African American women, this would help explain why they tend to be more satisfied with their own bodies than are Caucasians.

The present study was designed to investigate whether the level of an individual’s ethnic identity development was correlated with the internalization of society’s beauty ideals, and whether that internalization was related to cultural and cross-cultural social comparison. This study also investigated the extent to which ethnic identity development and social comparison are correlated with an individual’s body satisfaction and disordered eating.
Statement on Use of Terms

Throughout the following paper, the terms White, Black, Caucasian, and African American will be used when referring to an individual’s ethnic identity. White and Caucasian will be used for those of European descent whereas Black and African American will be used for those of African descent. The terms utilized in the “Theories of Ethnic Identity Development” section reflect the language of the authors who developed each respective theory. Throughout the rest of the paper, Black/African American and White/Caucasian are used interchangeably.
Eating Disorders

Eating disorders are a serious problem in many Westernized countries including the United States. Brown, Cachelin, and Dohm (2009) noted that eating disorders are “chronic and debilitating” (p. 182). Although there are differences between the types of eating disorders, there are also some commonalities. While eating disorders can appear in adulthood, most appear between the ages of 10 and 19. Some common occurrences include restrictive eating behaviors, binge eating, excessive exercising, limited or excessive drinking of alcohol, body checking behaviors, body avoidance behaviors, weight and body shape concerns, and fear of weight gain (Treasure, Claudino, & Zucker, 2010). Another aspect eating disorders have in common is their high rates of psychiatric comorbidity. Individuals with an eating disorder are more likely to show signs of depression, obsessive-compulsive disorder, anxiety disorders or abuse of alcohol and/or other drugs. It is also true that women are more often affected than men when it comes to eating disorders. The three disorders discussed in this paper are anorexia nervosa, bulimia nervosa, and binge eating disorder. The prevalence rates for women with anorexia, bulimia, and binge eating are estimated to be approximately .9%, 1.5%, and 3.5% respectively (Treasure et al., 2010).

Anorexia Nervosa. There are three crucial features that accompany the presence of anorexia nervosa: the intense fear of weight gain, the exhibition of distorted body image, and a refusal to maintain a normal/healthy body weight (American Psychiatric Association [APA], 2000). Most people who develop this disorder do so in mid-adolescence and the disorder becomes noticeable when there is failure to reach or maintain an acceptable body weight. Individuals with anorexia have an excessive fear of gaining weight, so most try to control their weight by decreasing their caloric intake, using laxatives, or increasing their exercising. Because
their body weight and shape is extremely distorted, many with anorexia have lowered self-esteem, and their self-esteem becomes completely dependent on their body perception (APA, 2000). They may also experience symptoms of anxiety, depression, obsessive-compulsive disorder, headaches, fatigue, and hair loss (APA, 2000; Pomeroy, 2004). Individuals with anorexia nervosa will often try to deny that their weight loss is significant and will go to great lengths to hide that loss (Pomeroy, 2004).

**Bulimia Nervosa.** Similar to its developmental link to anorexia nervosa, body image disturbance also has a developmental link to bulimia. Body image disturbance is, in fact, one of the most potent risk factors for bulimia (Stice, 2002). The most widely accepted theory is that dissatisfaction with one’s body leads to elevated dieting because of the belief that the dieting is an effective weight control technique. The dieting can then lead to the onset and maintenance of bulimic pathology because individuals might binge eat to counteract the effects of dieting. Binge eating might also be used to manage negative emotions. To reduce anxiety about the overeating and possible weight gain, individuals often begin to use compensatory behaviors as an emotional release (Stice, 2002).

In terms of diagnostic criteria, bulimia nervosa has two essential features. These are binge eating and compensatory behaviors which serve to counteract the binging in an effort to prevent weight gain. Similar to those with anorexia nervosa, those with bulimia are also extremely concerned with their body weight and shape. For the purpose of diagnosis, a binge is described as eating during a confined period of time (usually less than two hours) more than most people normally would consume (APA, 2000). An episode of binge eating is usually accompanied by a lack of control over eating and the individual eats until uncomfortable or painfully full. To compensate for the binging, 80-90% of individuals with bulimia will employ
the method of vomiting in order to purge. Vomiting not only provides an immediate relief to their discomfort, but also psychologically reduces the fear of weight gain. Other purging methods include the use of laxatives, diuretics, and enemas (APA, 2000). Similar to those with anorexia, those with bulimia often show signs of depression as well as other mood disorders, anxiety disorders, stress, or somatic complaints or bloating/pain. These individuals are usually embarrassed about their purging behaviors and, as such, are secretive and reluctant to share details of their illness to doctors (Pomeroy, 2004).

**Binge Eating Disorder (BED).** The diagnostic criteria for BED include consumption of unusually large amounts of food in a short amount of time while at the same time experiencing a lack of control over eating. There is also marked distress regarding the binge eating, the binging occurs at least twice a week for six months and there are no compensatory behaviors designed to prevent weight gain (APA, 2000; Striegel-Moore & Franko, 2008). This disorder has become a cause for public health concern because it is associated with physical health problems, psychological distress, and increased risk for obesity (Striegel-Moore & Franko, 2008).

Binge eating disorder is technically diagnosed as an “Eating Disorder Not Otherwise Specified (EDNOS)” (APA, 2000). Most diagnosed eating disorders (20-60%) actually fall into this category (Frank, Wonderlich, Little & Herzog, 2004). Binge eating has typically been studied only in the context of bulimia nervosa or anorexia nervosa and BED itself has been generally overlooked (Striegel-Moore, 2000; Striegel-Moore & Franko, 2008). However, it has been found in adult population studies which have included measures of EDNOS subtypes that binge eating disorder was more prevalent than anorexia and bulimia combined (Swanson et al., 2011).
Body Image

Body image, and how it relates to the human experience, has been studied by scholars, medical doctors, and philosophers for close to one hundred years (Pruzinski & Cash, 2002). The study of body image began with a biopsychosocial approach with a focus on neuropathology and how body posture and movement were coordinated (Pruzinski & Cash, 2002). From there, research moved to include a more psychodynamic viewpoint with Seymour Fisher as the leading figure (Pruzinski & Cash, 2002). Fisher examined body image boundaries, assigning significance to specific areas of the body and distortions in body image. As noted by Pruzinski and Cash (2002), much of Fisher’s work was overlooked because of the growth of the cognitive-behavioral approach which emphasized information processing, cognitive theory, and “perceptual dimensions of body experience” in studying body image (p. 5).

The study of body image continued to grow with the 1990’s being a “pivotal era” in terms of scholarship (Pruzinski & Cash, 2002, p. 5). Pruzinski and Cash (2002) pointed out that as eating disorders and obesity became of great interest to scientist and clinicians, so too did body image and body image problems. The 1990’s also represented a time of conceptual, psychometric and therapeutic developments in relation to body image assessment, prevention and treatment (Pruzinski & Cash, 2002). With the continued study of body image, it became apparent that body image is influenced by many things and “has the potential to dramatically influence our quality of life” (Pruzinski & Cash, 2002, p. 7).

Despite its long history and the ever growing literature in this area, the concept of body image has been hard to define due to the fact that it has been described in a multitude of ways and means different things to different people (Pruzinski & Cash, 2002). What has become a point of general agreement is that body image is multidimensional in nature and includes a wide
range of components (Bergstrom & Neighbors, 2006; Pruzinski & Cash, 2002). Grogan (1999) defined body image as “a person’s perceptions, thoughts and feelings about his or her body” (as cited in Bergstrom & Neighbors, 2006, p. 976). Thompson and colleagues (1999) listed 16 different definitions or components of body image, including but not limited to, body concern, body distortion, appearance satisfaction, weight satisfaction, and appearance evaluation (as cited in Pruzinski & Cash, 2002). For the purposes of this paper the term “body image” will be used to refer to the positive and negative affect that is directed toward one’s own body.

**Body image as a predictor of eating disorders.** A primary reason why body image has garnered so much attention among theorists and researchers is because it has been found to have an influence on the development of disordered eating. Negative body image has been said to be a precursor to anorexia and bulimia nervosa (Garner, 2002; Stice, 2002). Specifically, when women internalize the thin beauty ideal, they are automatically set up to fail in their attempts to meet social standards because only a very few can ever attain such an ideal (Striegel-Moore & Franko, 2002). Weight dissatisfaction or even the fear of gaining weight will often prompt girls and women to diet, exercise or even go to extremes, such as binge eating and purging (Gamer, 2002; Stice, 2002; Striegel-Moore & Franko, 2002). Another risk factor for developing eating disorders is dieting, which has been found to be predictive of binge eating and to contribute to obesity. Since it seems that body concerns can lead to greater weight gain as well as weight loss, researchers have concluded that body dissatisfaction “is one of the most potent risk factors for eating disturbances” (Striegel-Moore & Franko, 2002, p. 185).

In a study done by Cooley and Toray (2001), the eating attitudes and behaviors of college women were assessed over a period of seven months. At the beginning of an academic school year, 225 first year college students were assessed on mood states, eating restraint, eating
pathology, body dissatisfaction, and situational appetite. Body mass index was also measured. Seven months later, 104 of the original participants were reassessed on the same measures. Results of the study indicated that body dissatisfaction was a significant predictor of eating pathology (Cooley & Toray, 2001). In another study conducted by Mendelson, McLaren, Gauvin and Steiger (2002), the relationship between self-esteem and body esteem in women with and without eating disorders was investigated. A clinical sample (those with an eating disorder) of 74 women and a non-clinical sample (university students with no eating disorder) of 103 women were the participants of the study. Results showed that body esteem and self-esteem were interrelated and those individuals without eating disorders had higher self-esteem and body-esteem (Mendelson, McLaren, Gauvin, & Steiger, 2002). The results of these studies reinforce the notion that how an individual perceives his or her body can influence the development of eating disorders.

Factors influencing body image. Many factors have been shown to have an impact on the female body image, including, for instance, the mass media, ethnic identity, and interpersonal relationships (Levine & Murnen, 2009; Roberts, Cash, Feingold, & Johnson, 2006; Rogers Wood & Petrie, 2010; Tantleff-Dunn, & Gokee, 2002; Tiggemann, 2002). Social standards for physical attractiveness are readily available through avenues such as television, movies and magazines, and they exert pressure on girls to fit those standards. Studies have shown that there is a link between the amount of media exposure and a female’s body image (Levine & Murnen, 2009; Tiggemann, 2002). Martin and Gentry (1997) investigated the effects of model advertisements on adolescent females’ self-perception and self-esteem. These authors hypothesized that the type of motivation (self-evaluation, self-improvement or self-enhancement) for comparison would influence the effects of such exposure to model advertisements on the adolescents’ self-
perception and self-esteem. A total of 268 female adolescents (82 fourth graders, 103 sixth graders, and 83 eighth graders) participated in this study. Each participant, after being directed to study an advertisement using a particular motivation, completed three different scales measuring (1) self-perceptions of physical attractiveness, (2) self-perceptions of body image, and (3) state self-esteem. Results from the study revealed that model advertisements had an effect on adolescents’ self-perception and self-esteem. Results also indicated that motivations for the comparison also play a role. Specifically, self-evaluations temporarily lowered self-perceptions and self-esteem, whereas self-improvement and self-enhancement motivation increased self-perception and self-esteem (Martin & Gentry, 1997).

In another study, Morry and Staska (2001) investigated the relationship between magazine exposure, self-objectification, body shape dissatisfaction, and eating disorder symptomatology in men and women. Participants were a total of 150 men and women between the ages of 18 and 42. Magazine exposure was assessed using the Magazine Exposure Scale (MES; Morry & Staska, 2001), which examined participants’ exposure to ideal body images presented in the media. Eating disorder symptomatology was measured using the Eating Attitudes Test-40 (EAT-40; Garner & Garfinkel, 1979) and the Self-Objectification Questionnaire (SO; Noll & Fredrickson, 1998) was used to measure concern with personal appearance. The Sociocultural Attitudes Towards Appearance Questionnaire (SATAQ; Heinberg, Thompson, & Stormer, 1995) was used to measure recognition and acceptance of societal standards of appearance and the Body Shape Questionnaire (BSQ; Cooper, Taylor, Cooper, & Fairburn, 1987) was used to measure concerns about the body. Results from the study indicated that participants who read magazines showed greater internalization of beauty and fitness standards, showed greater concern for their physical appearance, and exhibited more
disordered eating symptoms (Morry & Staska, 2001). These results, along with those from Martin and Gentry (1997), help illustrate the potential influence that the mass media can have on an individual’s perception of her body.

Another factor that has been studied in relation to a person’s body image is ethnic identity. Studies have shown that African American women and Latina women tend to have more positive body images than their Caucasian counterparts. For some, identifying with their ethnic group might shield them from some of the societal pressures to conform to unrealistic and unhealthy appearance norms (Breitkopf, Littleton, & Berenson, 2007; Roberts et al., 2006; Rogers Wood & Petrie, 2010). Roberts, Cash, Feingold and Johnson (2006) conducted a meta-analytic study to determine whether the differences in the amount of body dissatisfaction between Black and White females’ were decreasing over time. The authors were investigating whether Blacks and Whites were becoming equally dissatisfied with their bodies as the thin ideal of beauty has become more widely disseminated. They examined 80 effect sizes from 55 studies and several different variables (temporal trends, method of assessment, age of sample, and publication bias). Across all effect sizes, Blacks displayed greater satisfaction with their bodies than their White counterparts. The authors found support for the notion that there had been some changes in the two ethnic groups’ levels of body satisfaction over the years, suggesting that the gap between Black and White women’s body satisfaction has narrowed. Group differences remained significant, however, with Blacks continuing to report greater body satisfaction than Whites. Although there have been changes, the relationship between ethnicity and body satisfaction is more complex than previously believed and is influenced by many factors. The authors did find that when assessed with questionnaire methods, body image differences between
ethnicities are most pronounced in college populations as compared to both older and younger age groups (Roberts et al., 2006).

Breitkopf, Littleton, and Berenson (2007) examined the evaluative, affective, and behavioral components of body image in a sample of low income Latina, African, and European American women. Studying women from lower income households allowed the researchers to assess ethnic differences while avoiding confounds due to socioeconomic status. A total of 1,217 women participated in the study. As well as evaluating their weight, ethnic differences in how women believed their bodies were viewed were assessed in accordance with objectification theory. The researchers specifically assessed the women’s appearance surveillance, which refers to how much people are concerned with whether or not their body meets cultural appearance standards and how their appearance is viewed by others. The women’s levels of appearance shame (how much people are ashamed of their appearance) and appearance control (how much they believe their appearance can be modified or controlled) were also assessed. Results revealed that there were differences between the three ethnic groups with regard to body image and that there were interactions between culture, weight status, and how long women had lived in the U.S. in relation to body image. European Americans had the highest levels of appearance surveillance, and European and Latina American women with higher Body Mass Indices (BMI) reported higher levels of appearance shame than African Americans of the same BMI or their peers with lower BMI’s. Overall, African Americans had a more positive body image than both Latina and European American women (Breitkopf et al., 2007).

Interpersonal influences, such as reflected appraisals, feedback on personal appearance, and social comparison also play a role in how one view’s his/her body. Reflected appraisals refer to others’ opinions, or what someone believes others think about him/her (Tiggemann, 2002).
Feedback on personal appearance can come in the form of comments, criticisms, or subtle body language. Friends, family, peers or even strangers can comment on an individual’s personal appearance, and all of this feedback aids individuals in developing a sense of how they are perceived by others. Social comparison, another type of interpersonal influence, which will be outlined further in a later section, is the process by which people compare their appearance to those in their surrounding environment. Within the realm of body image, social comparison theory refers to a person’s tendency to compare his/her body to others and can influence the extent to which the thin as attractive ideal leads to body dissatisfaction (Tiggemann, 2002).

A study conducted in 2004 by Jones and colleagues investigated how magazine exposure, conversations with friends and peers, and Body Mass Index related to internalization of appearance ideals and body satisfaction. The authors hypothesized that the relationship between appearance factors and body image would be mediated by levels of internalization. Participants were 266 (151 girls, 115 boys) seventh graders, 322 (187 girls, 135 boys) eighth graders, and 192 (95 girls, 97 boys) ninth and tenth graders. Participants completed the SATAQ internalization subscale (Heinberg, Thompson, & Stormer, 1995), the body dissatisfaction subscale of the Eating Disorder inventory, and their BMI was recorded. To assess magazine exposure each participant was instructed to record his or her three favorite magazines and how often he or she read those magazines. Appearance conversations and appearance criticisms were assessed by having participants complete a survey. The results showed that females versus males were far more engaged in viewing magazines and conversing with friends about body expectations, had greater internalization, and were more dissatisfied with their bodies. Overall, the results of this study indicated that experiences with peers are associated with the extent to which one internalizes appearance ideals and his/her body satisfaction (Jones, Vigfusdottir, & Lee, 2004).
This study also suggests that peers and friends could play an important role with regard to internalizing beauty ideals and being satisfied (or dissatisfied) with one’s body.

**Ethnic Identity Development**

Ethnic identity, which has also been linked to body satisfaction, has been defined in many different ways. Tajfel (1981) defined ethnic identity as “that part of an individual’s self-concept which derives from his knowledge of his membership of a social group (or groups) together with the value and emotional significance attached to that membership” (as cited in Phinney, 1990, p. 500). Wakefield and Hudley (2007) defined ethnic identity as “the sense of belonging that [a person] feels toward a racial or ethnic group as well as the significance and qualitative meaning that the [person] assigns to that group membership” (p. 148). Overall, ethnic identity is comprised of a sense of belonging and the feelings one has (whether positive or negative) toward his or her chosen group.

According to Wakefield and Hudley (2007), individuals from ethnic minority groups in the United States must take into consideration how much they will identify with their ethnic group, and how much they will identify with the dominant group in order to succeed in their society. It is these different identity negotiations that can determine whether a person will develop a strong ethnic identity or assimilate more into the dominant culture (Wakefield & Hudley, 2007). The strengthening of identity in the dominant culture (acculturation) simultaneously weakens the identity with the ethnic culture (Phinney, 1990). Much of the research investigating ethnic identity indicates that ethnic identity plays a large role in adolescent adjustment. A strong, positive sense of ethnic identity is linked to higher self-esteem, a more positive self-concept and lower rates of depression and anxiety (Wakefield & Hudley, 2007). It would seem that the more a person identifies with the dominant culture and the less one
identifies with his or her ethnic culture, the more likely one is to experience problems (Phinney, 1990).

**Theories of ethnic identity development.**

*Cross’s model of nigrescence.* Most theories of ethnic identity development are stage or sequential models. Stage models approach the development of ethnic identity in steps. That is, in order to progress to the next stage, the previous stage must first be completed. The most widely cited model of ethnic identity for African Americans is the Cross 1971 model of Nigrescence (the process of becoming Black). Cross’s model attempts to describe how African Americans move from self-hate to self-love (Cross, 1971; Cross, 1978; French et al., 2006). His model consists of five stages: (1) pre-encounter, (2) encounter, (3) immersion-emersion, (4) internalization and (5) internalization-commitment. In 1991, Cross revised his original model (Vandiver, 2001). Both the original model and the revised model are described below.

In Cross’s 1971 model, the *pre-encounter* stage described the state of the old identity in which Blacks adopt a pro-White identity and are anti-Black. Blacks in this stage were said to feel self-hatred and therefore have low self-esteem and function poorly in terms of mental health. In the 1991 model, Cross asserted that it is a mistake to assume that the *pre-encounter* stage is a form of mental illness and that those in this stage are probably just as healthy mentally as those in other stages of the model (Cross, 1991; Vandiver, 2001). Cross made some significant changes to his conceptualizations of the *pre-encounter* stage with the 1991 model. One revision was the use of the term “race salience” instead of the term “pro-White” to describe how important race is to those in the *pre-encounter* stage. Race salience in this stage is usually low, neutral, or anti-Black (Cross, 1991; Vandiver, 2001). Another change incorporated into the 1991 model was the inclusion of two identities available to Blacks in the *pre-encounter* stage: Pre-
Encounter Assimilation and Pre-Encounter Anti-Black. Those with an Assimilation identity personally adopt a pro-American identity in which they do not view race as important. Those with an Anti-Black identity hate Blacks and hate being Black. They have experienced some type of miseducation and believe the myths and stereotypes that they have heard about Blacks. These individuals personalize these stereotypes which, in turn, fuel their self-hatred as well as their hatred for Blacks as a group (Cross, 1991; Vandiver, 2001).

The encounter stage is the second stage in the Cross model of nigrescence. In this stage the individual experiences some type of episode or event (it can be one large event, or a series of small events that are usually prejudicial in nature) that shocks him or her into thinking that the old view might not be right. This leads individuals to question the views, values and beliefs of American society and begin to search for their Black identity (Cross, 1971; Cross, 1978; French et al., 2006; Vandiver, 2001). No changes were made to the encounter stage in Cross’s 1991 model (Vandiver, 2001).

The immersion-emersion stage is different from the other stages in this model in that it is a two-part transition period. The transition is the struggle to transform from the old racial identity to the new one. In the first part of this stage (immersion) individuals begin to immerse themselves into Black culture, so much so that they romanticize it (Cross, 1991; Vandiver, 2001). Blacks in this stage have impractical expectations regarding the efficacy of Black Power and they tend to degrade White people. At the same time, individuals in this stage also deify other Blacks and Black culture and are attracted to symbols of that culture (e.g., hairstyles, types of dress, national colors, etc.). This stage is characterized by large amounts of artistic and political energy, high risk taking, euphoria and sometimes rage (Cross, 1971; Cross, 1978; Cross, 1991). The second half of this stage, the emersion phase, is characterized by calmer emotions,
which begin to level out and allow for a more critical analysis of what it means to be Black. The individual abandons the anti-White idea and moves toward the *internalization* stage (Cross; 1971; Cross, 1978; Vandiver, 2001).

For the 1991 model, two revisions were made to the *immersion-emersion* stage. The first change was the movement of Black Nationalism from the *immersion-emersion* stage to the internalization stage. In the 1971 model, Black Nationalism was a sign of the individual becoming more involved in cultural causes and events, but in the updated model, it is viewed as positive internalization of being Black and having high pride and self-acceptance. The second revision involves the identity aspects that emerge in this stage, specifically the pro-Black and the anti-White aspects. These two identities of *immersion* are now considered separate rather than one identity made up of two parts (Vandiver, 2001).

The *internalization* stage is the point where the individual emotionally and intellectually accepts his or her Black identity and what it means to him or her (Vandiver, 2001). All conflicts between new and old identities will be resolved, and anti-white feelings will decline to the point where friendships with Whites can evolve. Although people in this stage will still use other Blacks as a reference group, they move toward a more nonracist standpoint (Cross, 1971; Cross, 1978; Cross, 1991).

The last stage in Cross’s model is the *internalization-commitment* stage. People in this stage take their newfound self-acceptance and identity and use it to become active in social change and civil rights issues (Cross, 1971; Cross, 1978; Vandiver, 2001). In the 1991 revised model, two changes were made to the internalization stages. Because there were few differences between the fourth and the fifth stages, those two stages were collapsed together and called *internalization*. Similar to the changes made in the *pre-encounter* and *immersion-emersion*
stages, the possible identities within the *internalization* stage were also revised. Cross identified three identities that a person could have in the internalization stage: Black Nationalist (or traditional nationalists), Biculturalist, and Multiculturalist. All “internalized” individuals are comfortable with and accept their Blackness. The difference between these internalized individuals is the type of identity at this stage beyond just being Black. With the Black Nationalist identity, the only significant identity is the Black one and this can border on the obsessive. The Bicultural identity fuses two cultural identities, usually a sense of Blackness with a sense of Americanness. The Multiculturalist identity includes three or more cultural identities or frames of reference, such as Black identity, gender, or racial groups other than Black (Cross, 1991; Vandiver, 2001).

*Helms’ model of White identity development.* It is the opinion of Helms (1990) that the development of White racial identity is intricately tied with the development and progress of racism in the United States and the more that racism exists and is denied, the less likely Caucasians are to develop a positive White identity. According to Jones (1981), racism can come in three different forms: individual, institutional, and cultural. Individual racism has to do with a person’s attitudes, beliefs and behaviors used to convince oneself of his/her superiority; institutional racism refers to the social law and policies used to establish and maintain the advantages that Whites have over non-Whites; and cultural racism refers to the beliefs and customs of society that endorse the assumption that White culture is superior to all other cultures (Jones, 1981). Each of these types of racism is so intertwined with society that they can easily become a part of a White person’s identity. To form a positive or healthy White identity, a White person must learn to overcome at least one of those aspects of racism. To do this includes
accepting one’s own “Whiteness,” and learning to define one’s “self” in terms not dependent on being superior to other racial groups (Helms, 1990).

In the past, models and theories of White identity development have focused on defining racism, and operated under the assumption that racism was only detrimental to those on the receiving end of racism and oppression. Recently, theorists have begun to assert that racism is detrimental to not only the victims but also the perpetrators, and thus have begun to speculate on the harmful effects of racism on racists. Many authors have investigated the defense mechanisms that Whites employ to pretend that they are not White. Katz and Ivey (1977) explained that when asked to identify their race, Whites would deny often that they were white and would instead say they were Jewish, Italian, English, or Catholic. Another author, Terry (1981), noted that, “To be white in America is not to have to think about it. Except for hard-core racial supremacists, the meaning of being White is having the choice of attending to or ignoring one’s own Whiteness” (p. 120). If what these authors say is true, then it can be concluded that many Whites have no stable or clear conception of a positive White identity. In fact, according to Helms (1990), most probably have a negative identity. Karp (1981) has even suggested that negative feelings, such as self-hate, guilt, shame, or feeling bad about being White, are all emotional consequences of racism.

Although socialized toward racism, some Whites appear to have developed a consciousness that is not dominated by racial distortions and a need to be superior to those who are non-White. There have been a few authors and theorists who have tried to describe the process by which a White person can move from being a racist to having a positive White identity that is non-racist. Helms was one such author and she proposed a linear developmental model of White racial identity in 1984. This proposed process involved an attitudinal
development wherein the White person progresses through a series of stages involving the acknowledgment of racism and consciousness of one’s Whiteness (Helms, 1990).

One of the associated benefits of being White in America is that Whites are members of the majority and members of the socioeconomic and politically dominant group. Even more important is that there is no need to acknowledge being White; it is simply accepted. Indeed, it is not until confronted with a Black person or someone who is non-White that this issue of Whiteness becomes an issue. Contact with other racial/ethnic groups forces Whites to confront their own identity (Helms, 1990). There are two ways in which Whites can come into contact with Blacks or other racial groups, vicariously or directly. Vicarious contact comes in the form of media, peers, or family members telling someone about the existence of Blacks and what one should think of them. Direct awareness comes from interactions that a person him or herself has with a Black person. These two forms of contact are not necessarily mutually exclusive and can occur together, and it is possible for these two forms of contact to be used as socialization tools to develop individual racism (Helms, 1990). The goal of developing a positive White identity is to break free of the racist socialization with which many Whites were raised.

Helms’ (1990) model proposes two phases and six stages. The first phase is the Abandonment of Racism phase and it includes the contact, disintegration, and reintegration stages. The contact stage begins as soon as one comes across the idea of a Black person or actually meets a Black person. Most enter the contact stage with curiosity or trepidation as well as an artificial awareness of what it means to be White. Most will also exhibit signs of individual racism while all will benefit (unconsciously) from institutional and social racism. Because these persons have not had to deal with any moral dilemmas regarding their identity, a person in this stage might enjoy being “racist.” Although, initially, people in this stage are blind
to the differences in how Blacks and Whites are treated in America, through continued interaction with Blacks, this difference becomes more apparent. With continued socialization a person will pass on to the next stage, *disintegration* (Helms, 1990).

*Disintegration* is the second stage in Helms’ (1990) model. Those entering this stage are consciously aware of their Whiteness but it is a conflicted awareness. Whereas in the contact stage they were unaware of their Whiteness and the moral dilemmas associated with it, in this stage, recognition of those dilemmas is triggered. Questions about racial realities begin to arise as well the knowledge that there are inequalities between the races. A person in this stage will most likely feel caught between two racial groups. In accordance with one’s desire to fit in with his or her racial group, the person will begin to take on the belief of White superiority and Black inferiority. This reforming of beliefs leads to the stage of *reintegration* (Helms, 1990).

The *reintegration* stage is the third stage in Helms’ (1990) model. The person consciously acknowledges his/her White identity and takes on the belief of White superiority and Black inferiority. Institutional and cultural racism are Whites’ right and the negative conditions in which Blacks find themselves are their own fault. Feelings of shame, guilt, or anxiety are turned into fear and anger towards Blacks and these feelings can be expressed either overtly or covertly. The *reintegration* stage is easy to become fixated in and usually requires some kind of jarring event to make someone begin to question his or her identity. Once that questioning starts to occur, the individual begins to move into the next stage of *pseudo-independent* (Helms, 1990).

The second phase of Helms’ (1990) model, *Defining a Nonracist White Identity*, begins with stage four, *pseudo-independent*. This stage begins a person’s redefining his or her previous identity into a positive identity. A person begins to question the assumption that Whites are superior to Blacks, accepts responsibility for the racism he or she has perpetuated, and becomes
curious about Blacks. Although those in this stage may depart from their belief of superiority, they may still unintentionally perpetuate that belief by trying to help Blacks function more like Whites and interpret racial differences according to White standards. While some Whites will treat those in this stage as if they have betrayed the White race and Blacks may treat them with suspicion, if the personal rewards are seen as being great enough, many will continue on in their pursuit of a positive White identity (Helms, 1990).

The fifth stage of the model is the immersion/emersion stage. This stage requires that a person begin to replace old stereotypes and myths about Blacks and Whites with accurate information. Changing Black people is no longer the goal in this stage, but rather changing White people is the goal. People in this stage work toward abandoning all racism and acknowledging a White consciousness (Helms, 1990).

The last stage in Helms’ model is the autonomy stage. The goal of this stage is to “internalize, nurture, and apply the new definition of Whiteness that evolved in the earlier stages…” (Helms, 1990, p. 62). People in this stage no longer feel as if they need to oppress or disparage people because of their race. A person in this stage is also able to do away with individual racism as well as institutional and cultural racism. Although autonomy is the highest level of White racial identity, it is best to think of it as an enduring process in which the person is continually learning and open to new ways of thinking about cultural and racial variables (Helms, 1990).

Phinney’s model of ethnic identity development. One of the most widely known and used models of ethnic identity is a stage model developed by Jean Phinney in 1996 which is theoretically applicable to all ethnicities. This model proposes a discovery process in which adolescents build their ethnic identity along the two dimensions of exploration and commitment.
The dimension of exploration entails seeking out information concerning one’s culture (e.g., language, beliefs and customs). Individuals also explore what that cultural information will mean to their personal identity. The commitment dimension symbolizes how strongly individuals embrace and value their ethnicity as a part of their identity (Wakefield & Hudley, 2007).

Phinney’s model includes 3 stages: unexamined ethnic identity, ethnic identity search, and achieved ethnic identity. Unexamined ethnic identity is much like the pre-encounter stage in Cross’s (1971) model. In this stage, individuals have yet to assign any value to their ethnicity and have spent little to no time learning about their group membership. They have not explored their ethnic group and have little to no understanding of issues that relate to said group. Ethnic identity search is comparable to Cross’s immersion-emersion stage. Those in this stage begin to explore their ethnic identity. This can include exploring the language of their culture, their customs and practices, as well as their beliefs. Many become immersed in the history of their culture while they learn what their identity means in relation to other ethnic groups (Wakefield & Hudley, 2007). Achieved ethnic identity is similar to Cross’s internalization stage. Individuals who have achieved ethnic identity are more knowledgeable about their heritage, take pride in their ethnic group, and understand the effects their identity has in their daily lives (French et al., 2006; Wakefield & Hudley, 2007).

**Ethnic identity and body image.** African American women’s conceptions of beauty and body image are viewed as being more flexible than those promoted in mainstream society. A wider range of body types, sizes, and weights are considered more acceptable in the African American community than in mainstream society (Celio, Zabinski, & Wilfley, 2002). Whereas the Caucasian ideal body shape is based mostly on a slender shape, African Americans look at beauty as including a combination of factors such as body shape, grooming, skin tone, and ethnic
pride. Whereas larger Caucasian women are looked upon as being unattractive, African American women are more likely to view heavier women as being physically attractive (Celio et al., 2002; Breitkopf et al., 2007).

There are many factors that contribute to the view African Americans have of their bodies, including social economic status, maternal influences, peer influences and ethnic identity (Celio et al., 2002). Women of lower economic status tend to be heavier but are more satisfied with their bodies than their upper class compatriots. A mother’s encouragement to be strong, independent and self-reliant sets different expectations for young African American females compared to their Caucasian counterparts. African American mothers are also more tolerant of their daughters’ heaviness than are Caucasian mothers (Celio et al., 2002). Lastly, as will be discussed in detail later in this literature review, ethnic identity also relates to African American women’s body image, such that those who have a stronger sense of ethnic identity tend to have healthier body images (Celio et al., 2002; Rogers Wood & Petrie, 2010).

**Ethnic Identity and Eating Disorders.** It used to be widely assumed that eating disorders were a disease that only afflicted White middle or upper class women who were unnaturally preoccupied with being thin (Anderson-Fye & Becker, 2002; Brown, Cachelin, & Dohm, 2009). Because of this belief, eating disorders have mainly been studied among samples of White adolescent or adult females, while ethnic minorities have been largely overlooked (Brown et al., 2009). When minority samples were included in studies, they were typically limited to small samples or collapsed into one minority group (Striegel-Moore & Franko, 2002). This typecasting of disordered eating as a problem of only White women has hindered the acknowledgment that eating disorders can occur in minority populations, and many with these disorders have gone undiagnosed and untreated. For the past decade or so, researchers have
seriously begun to study minority populations and disordered eating. They have come to appreciate that the consideration of culture is crucial to understanding the developmental context for these disorders when examining different ethnicities (Brown et al., 2009).

Researchers who have examined disordered eating among African Americans have generally reported that anorexia nervosa is less prevalent among African American versus Caucasian Americans (Anderson-Fye & Becker, 2002; Brown et al., 2009). Some research has also suggested that African Americans are less likely to report symptoms of bulimia, whereas the results of other studies indicate that the rates are the same for both African Americans and Caucasians (Anderson-Fye & Becker, 2002). Other studies suggest that within the African American community, bulimia and binge eating disorder occur more frequently than anorexia, with binge eating being the most prevalent (Brown et al., 2009).

In an attempt to examine the relationship between ethnicity and eating disturbances, Shannon O’Neill (2003) conducted a meta-analytic review of data from 18 studies involving Black and White women. Results of the meta-analysis indicated that African Americans had lower prevalence rates of anorexia, were not significantly different from Whites in their prevalence rates of bulimia, and did not significantly differ from Whites in their prevalence rates of binge eating disorder. The overall results of the meta-analysis revealed that African American women had lower prevalence rates of disturbed eating than did White women (O’Neill, 2003).

Binge eating disorder was introduced in the *DSM-IV* (APA, 2002) as a psychiatric disorder, and since its introduction, it has been found that this disorder is prevalent in both African Americans and Caucasian Americans. Pike, Dohm, Striegel-Moore, Wilfley, and Fairburn (2001), examined the relationship between ethnicity and clinical functioning in those with and without binge eating disorder. A sample of 150 women with binge eating disorder (98
white, 52 black) were matched with 150 healthy subjects from the community. The results indicated that Black and White women differed significantly on all accompanying features of BED, including binge frequency, weight, shape, concern with eating and restraint. Even though these women were diagnosed with the same disorder, ethnic differences in symptoms of eating pathology emerged when looking at weight, shape and eating concerns. The authors suggested that the differences in BED between Black and White women indicate that there are ethnic/racial influences which need to be explored when researching eating disorders in these populations (Pike, Dohm, Striegel-Moore, Wilfley, & Fairburn, 2001).

**Social Comparison Theory**

**Sociocultural theory and social comparison theory.** Festinger (1954) introduced social comparison theory to explain how people process information from social situations by comparing themselves to others. Festinger’s theory delineated social comparison in a broader context, encompassing many social situations in terms of abilities and opinions. He stipulated that humans have a need to evaluate their opinions and abilities: they do this through comparing themselves to others (Festinger, 1954). Festinger’s theory has given rise to the evaluation of social comparison in different situations, and for the purposes of this study, the social comparison process is examined in relationship to body image.

Before going into detail about social comparison and body image, it is necessary to first discuss sociocultural theory and its relation to social comparison and body image. The sociocultural approach attempts to understand human behavior and people’s perceptions and opinions of themselves and others as well as how individuals are influenced by the surrounding culture. The sociocultural approach to body image encompasses three different but related
theories: social expectancy theory, implicit personality theory, and status generalization theory (Tantleff-Dunn, & Gokee, 2002).

Social expectancy theory asserts that behavior affects self-perceptions in a chain reaction pattern. An individual’s behavior influences others’ behavior and, in turn, affects self-perceptions of everyone involved (Jackson, 2002). In this respect, social expectancy theory is similar to a self-fulfilling prophecy. Social expectancy theory offers a few hypotheses relating to physical attractiveness, one being that there are known expectations within each culture about what constitutes beauty and attractiveness, and there is also variability in what is considered attractive between different cultures. Another hypothesis is that people react and behave differently toward people who are deemed unattractive than those who are attractive. Lastly, it is these behavioral differences that cause differences in people’s self-concepts (Jackson, 2002). For example, Wilson (1978) found that women who were deemed more attractive were more likely to receive a response when asking for assistance. The subtle message that an individual is unworthy of help because of his or her physical appearance can have a great impact on that individual’s self-concept.

Implicit personality theory “focuses on the knowledge structures that people use to make sense of their social world [and to] understand and predict the behavior of others” (Jackson, 2002, p.15). Implicit theories are posited to be mental constructions that involve the interaction between a person’s beliefs and what the individual infers from others’ personality traits (Jackson, 2002). For example, if someone believes that all happy people are friendly, then whenever s/he sees a happy person, the individual will also assign that person the personality attribute of friendliness. In relation to body image, the term ‘physically attractive’ is presumably connected with many different attributes (e.g., hip and waist size, hair color, eye color and height), and if a
The last theory that relates to the sociocultural approach in relation to body image is status generalization theory. This theory evolved from other sociological theories examining how a person’s external status (i.e., one’s status in society) influences one’s social interactions. The characteristics of a person’s social status are used by people to develop certain expectations about how that person should perform. People can do this consciously or unconsciously. Physical attractiveness is seen as a “diffuse” characteristic because it is used to differentiate between people seen as attractive or unattractive, and expectations are made about performance even when a person’s attractiveness has nothing to do with his or her performance in a certain situation. Status generalization theory asserts that physical attractiveness is more often associated with positive, versus negative, features and that people have more positive expectations for those seen as attractive, versus unattractive (Jackson, 2002).

All of the above theories are similar in that they predict people will behave differently (usually more favorably) toward attractive people than unattractive people, and these treatments influence a person’s self-concept. These theories collectively form the sociocultural approach to body image (Jackson, 2002). Because people usually compare themselves to others around them (or within the same culture), there is a connection between social comparison and sociocultural theory. Every culture has expectations for how people should appear and behave, and social comparison provides a mechanism for determining whether someone measures up to the cultural standard (Jackson, 2002).

**Social comparison and body image.** It is general knowledge that body ideals, or ideas about what constitutes physical beauty, vary among different cultures (Jackson, 2002). In
contemporary Western (i.e., Euro-American) cultures, thinness is considered ideal for females. Being thin is equated with wealth and leisure, it reflects a desire to look younger, and there is a professed relationship between being thin and being healthy (Jackson, 2002). Several studies have shown that those who engage in social comparison with others they see as attractive will rate their own attractiveness as being lower. Studies have also shown that the more people engage in social comparison, the higher the risk for body dissatisfaction (Tantleff-Dunn, & Gokee, 2002).

Morrison, Kalin, and Morrison (2004) found that females who engaged in universalistic social comparison (i.e., comparing oneself to distant influences such as the mass media) were more likely to report lower body satisfaction than those who did not engage in universalistic social comparison. It was also found that engaging in more universalistic social comparison was related to more dieting and weight control behaviors. In a study conducted in 2004, Tiggemann and McGill investigated the role that social comparison plays in women’s responses to “thin-idealized female beauty” (p. 23). A participant sample of 126 female undergraduate students between the ages of 18 and 28 viewed magazine advertisements that contained either full body photos, photos of body parts, or photos of products. Participants’ tendency for comparison, internalization of the thin beauty ideal, and their state mood, body dissatisfaction and weight anxiety were assessed at different times. Mood and body dissatisfaction were assessed before and after viewing the advertisements, whereas appearance comparison and weight anxiety were only measured after viewing the advertisements. Results from the study indicated that viewing either body parts or full body images increased negative mood and body dissatisfaction. Results also revealed that thin ideal images elicited greater amounts of appearance comparison than did other images (Tiggemann & McGill, 2004).
Myers and Crowther (2009) examined the relationship between social comparison and body dissatisfaction by conducting a meta-analysis using data from 156 studies. The results of this analysis showed that there was a relationship between social comparison and body dissatisfaction in that the higher the levels of comparison, the higher the levels of dissatisfaction. The findings also indicated that women, as compared to men, might be more affected by social comparison, and that women tended to have higher levels of body dissatisfaction. It was also found that age was inversely related to social comparison, such that the younger one is, the more likely he or she is to engage in this process.

The studies mentioned previously are just a few of the many that lend credence to the argument that the process of social comparison might indeed have an effect on how an individual views his or her body. In addition to its potential effect on body image, social comparison has also been studied as a component in the development of eating disorders. Corning, Krumm, and Smitham (2006) conducted a study examining the relationship between social comparison processes and disordered eating symptoms. The authors hypothesized that there would be differing social comparison processes between women with eating disorders and those without eating disorders. One hundred and thirty undergraduate women participated in this study and were asked to view images of models and regular women. They were told to rate the women on a nine point Likert scale comparing the women in the images to their own body. The participants were then given two social comparison scales, a self-esteem inventory, and a disordered eating inventory. Results of this study indicated that there was a greater tendency overall for those with disordered eating symptoms to engage in everyday social comparison. In addition, social comparison between those with and without disordered eating symptoms differed when it came to comparing one’s body to images of other women. Those with disordered eating symptoms
gave more self-defeating self-appraisals than those without disordered eating symptoms (Corning, Krumm, & Smitham, 2006).

In 2010, Tylka and Sabik conducted a study integrating social comparison theory, self-esteem, and objectification theory to predict disordered eating in a sample of 274 women. Participants completed measures of appearance feedback, self-esteem, body surveillance, body comparison, body shame, and eating disorder symptomatology. Results of the study indicated that having low self-esteem was linked to increased levels of body surveillance, body comparison, and body shame. This, in turn, was linked to higher levels of eating disorder symptomatology (Tylka & Sabik, 2010a).

**Conclusions.** In summary, body image, ethnic identity and social comparison have all been studied separately a great deal. Some studies have even examined Caucasian and ethnic minority women’s body image in relation to ethnic identity. Social comparison and body image have been examined together as well; fewer studies have been conducted combining all three of these areas, and even fewer have looked at social comparison and body image in ethnic minority women. In the study conducted by Breitkopf et al. (2007) mentioned previously, African Americans reported higher body satisfaction than either Latinas or European Americans. Also, Latina and European American women whose body types deviated from cultural conceptions of attractiveness (i.e., the thin-ideal) felt more body dissatisfaction and more social rejection than African American women. Breikopf and colleagues (2007) proposed that ethnic minority women do not stringently follow mainstream social norms, and this may, in fact, shield them from developing negative body images. These authors suggested that future studies should incorporate the role of cultural factors when studying body image in ethnic minority women (Breitkopf et al., 2007). Although their study examined ethnic identity, the researchers only asked the participants
with which ethnicity they identified. More studies should examine how ethnic identity
development relates to social comparison and body image. In one such study, Rogers Wood and

Rogers Wood and Petrie (2010) conducted a study investigating body dissatisfaction,
etnic identity and disordered eating in African American women. They hypothesized that (1)
those who reported higher levels of social pressures to be thin would be more likely to internalize
society’s view of beauty; (2) higher levels of ethnic identity development would be linked to less
internalization of society’s beauty ideals; (3) internalization of beauty ideals would be positively
related to body image concerns; and (4) higher levels of body image concerns would be related
to higher levels of disordered eating. All of their hypotheses were supported by the data.
Although these authors examined mainstream societal norms in relation to ethnic identity and
body image, they failed to examine the role of social comparison.

In a study that investigated the role of social comparison, Guimond et al. (2007) found
that women tend to compare themselves to members of their in-group as well as to members of
out-groups. Franzoi and Klaiber (2007) conducted a study investigating which reference group
people used when comparing themselves to others. The researchers hypothesized that people
would compare themselves to people most like them. There were three categories (i.e., reference
groups) examined in this study: elite athletes (Olympic speedskaters), professional models, and
the general population (college students). Participants were 24 female, Olympic speedskaters, 25
female professional models, and 55 female college students. Body esteem, body change interests,
and body comparison were assessed. Results of the study indicated that people are more likely to
compare themselves with others of the same sex in their reference group (e.g., professional
models compare themselves to other professional models).
If the findings regarding social comparison are applied to the context of ethnic identity, African American women would be expected to compare themselves to their in-group (i.e., other African Americans) as well as other out-groups (i.e., everyone else). Knowing to what degree African Americans compare themselves to their in-groups and out-groups could aid in efforts to determine why African American women tend to hold more positive views of their bodies than do women of other ethnicities. Rogers Wood and Petrie (2010) hinted at a social comparison aspect when they spoke about societal beauty ideals and how some African American women do not internalize such ideals, but instead might adhere to other cultural values. While it is possible to make the assumption that African American women compare themselves to other African American women more than they do to women of other ethnicities, there is no definitive evidence that this is the case (Rogers Wood & Petrie, 2010).

Given the limitations of the extant literature, the purpose of the present study is to investigate ethnic identity development, social comparison and internalization of beauty ideals and their relationship to disordered eating and body dissatisfaction. Previous research has indicated that ethnic identity and sociocultural variables (internalization of beauty ideals) are important factors to consider in understanding African Americans’ body image (Rogers Wood & Petrie, 2010). The tendency to engage in social comparison has also been implicated as a factor in body dissatisfaction (Tantleff-Dunn, & Gokee, 2002). What has not been taken into account is social comparison in relation to an individual’s sub-culture and ethnic group. Thus, the present study included measures of social comparison that take into consideration the context of an individual’s ethnic group. This study also investigated how one’s ethnic identity, internalization of beauty ideals, and social comparison relate to disordered eating. The literature on disordered eating has concentrated mostly on Caucasian women with symptoms of anorexia and bulimia.
(Brown et al., 2009; Striegel-Moore & Franko, 2002). In contrast, researchers have only recently begun to examine symptoms of disordered eating among ethnic minority women. Moreover, symptoms of binge eating disorder (BED), which could be more prevalent among certain ethnic minority women, have gone largely unexamined (Brown et al., 2009). Thus, the proposed study targeted ethnic minority women and included measures of BED symptoms in addition to measures of anorexic and bulimic symptoms. The hypotheses investigated in this study were as follows:

**H1:** African American women with higher levels of ethnic identity development would report less internalization of social appearance standards. Due to the lack of research regarding Caucasian women’s ethnic identity development in relation to body image, this analysis remained exploratory for Caucasian participants (i.e., no specific directional hypothesis was predicted for Caucasians).

**H2:** African American women would compare themselves to a greater extent to other African American women than to women of other ethnic groups

**H3:** Those who reported less internalization of social appearance standards would also report a more positive body image.

**H4:** Those who reported greater internalization of social appearance standards would report more disordered eating symptoms.

**H5:** Caucasian Americans would report higher levels of anorexic and bulimic symptoms than would African Americans.

**H6:** African Americans would report more binge eating versus anorexic and bulimic tendencies.

**H7:** African Americans reporting higher levels of ethnic identity development would report a more positive body image.
**H8:** African Americans who reported less social comparison tendencies would report more positive body image

**H9:** African Americans who reported greater ethnic identity development would report fewer disordered eating symptoms

**H10:** African Americans who reported less social comparison tendencies would report fewer disordered eating symptoms

**H11:** Caucasians reporting less social comparison tendencies would have a more positive body image.

**H12:** Caucasians reporting less social comparison tendencies would report fewer disordered eating symptoms.
CHAPTER 3
METHOD

Participants

A total of 144 individuals participated in the study. Data from some of these individuals were excluded from the analyses for the following reasons; the participant was male (12), the participant did not complete the survey (17), or the participant was of an ethnicity other than Caucasian or African American (14). Thus, data from 102 participants were included in the analyses. All participants were either recruited from a midsized Midwestern university or from the general population. When applicable, those from the university received course credit in their psychology class for participating. The final sample ranged in age from 18 to 56 years of age ($M = 21.7, SD = 6.29$), and was 86.3% Caucasian (88 women) and 13.7% African American (14 women). A detailed description of participant recruitment procedures is provided later in this chapter, under the section titled “Procedures.”

Measures

**Ethnic identity.** The Multigroup Ethnic Identity Measure (MEIM) developed by Jean Phinney (1992) was used to measure participants’ ethnic identity development (see Appendix A). Phinney developed the MEIM to measure ethnic identity development and its components, recognizing a problem in the literature such that most of the research on ethnic identity only studied one ethnic group at a time. Phinney recognized that identity formation is an important task in adolescence and that ethnic identity is particularly important in identity development for adolescents of all ethnicities. Phinney’s goal was to develop a scale that would measure some of the key components of ethnic identity. These components are as follows: self-identification, ethnic behaviors and practices, affirmation and belonging, and ethnic identity achievement (Phinney, 1992).
Self-identification in ethnicity refers to the ethnic label one assigns to him or herself. It is different from one’s ethnicity, which is assigned based on one’s parents’ heritage. For people of mixed heritage, self-identification can be different from ethnicity. Ethnic behaviors and practices refer to one’s involvement in the social activities and traditions of his/her culture. Affirmation/belonging refers to the attitude and feelings (pride) one has toward his/her ethnic group. Ethnic identity achievement is the process by which people explore what it means to be part of a given ethnic group and the extent to which individuals then commit to accept that identity as part of themselves.

Phinney (1992) administered the original version of the MEIM to 417 high school students and 136 college students of varying ethnic backgrounds. The MEIM is a 14 item measure that assesses three facets of ethnic identity: attitudes and sense of belonging, ethnic identity achievement, and ethnic behaviors and practices. The items are rated on a 4-point scale, with 1 being strongly disagree, and 4 being strongly agree. Scores on the measure are obtained by reverse scoring negatively worded items (questions 7, 8, 10, and 15) and then summing responses to the items and dividing by the number of items in each scale. Scores can range from 1 (low identity) to 4 (high identity). There are two items assessing self-identification and ethnicity, which are not included as part of the overall score. Also, there are six items that assess Other Group Orientation, which refers to one’s attitudes toward other ethnic groups (Phinney, 1992).

For the original measure (Phinney, 1992) factor analysis identified a single factor for ethnic identity and another distinct factor for other group orientation. However, in a newer version of the MEIM that was developed by Roberts and colleagues in 1999, factor analysis determined that ethnic identity included two factors, ethnic identity exploration and ethnic
identity commitment. Also, on the newer version of the MEIM, the other group orientation items, as well as two other items were removed, so that the measure now consists of 12 items. They are essentially scored the same as the original scale except there are no questions that require reverse scoring. In addition, a 5-point scale is used to add a neutral option. As with the original measure, there are a few items about the participants’ ethnicity and their parents’ ethnicity that are not used in calculating the overall score (Roberts, Phinney, Chen, Roberts, & Romero, 1999).

Reliability coefficients (Cronbach’s alpha) were calculated for each of the samples for the measure of ethnic identity, its two subscales, and the Other Group Orientation scale (an embedded scale within the MEIM; Phinney, 2002). The overall reliability for the original 14 item MEIM was .81 for high school students and .90 for college students. For the Affirmation/Belonging sub-scale, the reliability was .75 for high school students and .86 for college students. For the Ethnic Identity Achievement sub-scale, the reliability was .79 and .80 for the high school and college participants, respectively. There was no reliability information reported for the Ethnic Behaviors subscale because reliability cannot be calculated with only two items. For the Other Group Orientation scale, the reliability was .71 for high school students and .74 for college students. In terms of construct validity, there were significant correlations between the different ethnic identity components. For both the high school and college sample, ethnic identity achievement was significantly correlated with affirmation/belonging. Ethnic behaviors were significantly correlated with the Affirmation/Belonging scale as well as the ethnic identity achievement scale for both college and high school students. The Other Group Orientation scale was significantly correlated with ethnic identity achievement and ethnic behavior, but only in the high school sample. Correlations between self-esteem and ethnic identity were also computed. There was a significant correlation between ethnic identity and self-
Ethnic identity and social comparison (Linville, 1985) have been shown to influence body image and body esteem (Linville, 1985). A high body esteem is associated with higher self-esteem (Linville, 1985). The Body Esteem Scale (BES) was used to measure participants’ body image (see Appendix B). Stephen Franzoi and Stephanie Shields developed the BES in 1984. Previous measures of body esteem, namely The Body Cathexis Scale (Secord & Jourard, 1953), have presented body esteem as being unidimensional. The BES was developed under the assumption that body esteem was not unidimensional, but was instead a multidimensional construct (Franzoi & Shields, 1984).

Before construction of the BES, the Body Cathexis Scale was given to 366 female and 257 male undergraduate students at a large university. A principle component factor analysis with varimax rotation for males and females resulted in 3 main factors for each gender. For males, the factors were general health, physical attributes that contribute to the appearance of balanced body proportions or awkwardness and upper body strength. The factors for females were weight control, general health and physical strength, and facial features (Franzoi & Shields, 1984). These results were then used to create the BES. Any items with low factor loadings were excluded from the new scale, and new items were added if they were deemed relevant to the 3 factors for males and females. The new BES was composed of 23 items from the Body Cathexis Scale and 16 new items, to create a 39 item scale. The scale was then given to 301 female and 182 male undergraduate students and a factor analysis was again performed. Because of low factor loadings, four of the items were dropped from the measure. The overall female factors became physical attractiveness, weight control, and physical condition; the male factors became upper body strength, physical attractiveness, and general physical condition (Franzoi & Shields, 1984).
To test the final version and to attempt to replicate previous findings, the BES was administered to 331 males and 633 female undergraduate students at a university. Results of the factor analysis from the previous studies were replicated and the gender differences between the factors were also upheld. The final version of the BES includes a total of 35 items and the responses to each item can range from 1 to 5 (1 = Have strong negative feelings, 5 = Have strong positive feelings). The higher individuals score on a given subscale, the more positive their esteem on that dimension (Franzoi & Shields, 1984).

Reliability coefficients (Cronbach’s alpha) were calculated for all of the factors for the final sample. For males, the internal consistencies for physical attractiveness, body strength and general physical condition were .81, .85, and .86, respectively. For females, the internal consistency for attractiveness, weight concern, and general physical condition were .78, .87, and .82, respectively. To assess convergent validity, scores on the BES were correlated with scores on the Rosenberg Self-Esteem scale (Rosenberg, 1965). The researchers’ prediction that there would be a moderate correlation between general self-esteem and all the factors of body esteem was supported except for weight concerns for females. Discriminant validity tests between women with and without anorexia nervosa were also conducted. As predicted, only the weight concern factor was a discriminant factor between the two groups. A discriminant validity test was also conducted for males, comparing weightlifters to non-weightlifters. As predicted, upper body strength was the only significant discriminant between the two groups (Franzoi & Shields, 1984).

**Sociocultural Attitudes Towards Appearance Questionnaire-3.** The Sociocultural Attitudes Towards Appearance Questionnaire-3 was used to measure the extent to which a person internalizes dominant society’s view of beauty (see Appendix C). The SATAQ-3 was
developed by J. Kevin Thompson, Patricia van den Berg, Megan Roehrig, Angela S. Guarda, and Leslie J. Heinberg in 2003. Around that time, much of the research surrounding eating disorders and body image was focused on identifying risk factors leading to eating disturbance and body dissatisfaction and one of the proposed risk factors was the internalization of the thin beauty ideal. At the time of the development of the SATAQ-3, there were two scales in existence that measured internalization, the SATAQ-Revised, and the Ideal Body Internalization Scale-Revised (IBIS-R) that was developed by Eric Stice and colleagues (Stice, 2001; Stice & Agras, 1998; Stice & Bearman, 2001). Although there have been many scales that have examined the influences of media consumption and pressure and the internalization of those ideals, Thompson and colleagues did not believe that those constructs had been well defined, nor had any scale incorporated multiple aspects of said constructs. Another form of media influence had also come to be important and that was the popularity of fitness magazines. No longer were glamour magazines the only ones girls and women looked to for such body image ideals, but fitness magazines were also becoming of interest in the quest for the ideal body. The purpose of developing a new version of the SATAQ was to (1) update the measurement of the sociocultural influence of media and incorporate a new focus on athleticism, (2) examine media information and media pressures, and (3) evaluate the distinctiveness between the SATAQ-R Internalization subscale and the IBIS-R (Thompson, van den Berg, Roehrig, Guarda, & Heinberg, 2004).

The first study conducted involved 175 female undergraduates at the University of South Florida, all between 17 and 25 years of age (Thompson et al., 2004). While reading the literature it was determined that four different dimensions of media influence (awareness, internalization, pressures, and information) should be created for the SATAQ-3. Also, because athleticism was growing in popularity, items pertaining to that category were included as well. An exploratory
principle factor analysis was run on the SATAQ-3 and the IBIS-R to determine the distinctiveness of the new dimensions on the SATAQ-3 and the relationship between the internalization items on both measures (Thompson et al., 2004).

The results of study one showed that a five factor model was the best fit for the model. All of the SATAQ-3 internalization items loaded cleanly onto one factor and did not cross load onto any others. None of the IBIS-R items loaded onto the internalization subscale so it was determined that the IBIS-R was not a measure of internalization. Information, Pressures, and Athlete Internalization were also established as individual dimensions of media influences. Because of elimination criteria, the Awareness items were deleted and a four factor model was used instead. The resulting measure consists of 30 items total with 9 items on the Internalization-General subscale, 9 items on the Information subscale, 7 items on the Pressures subscale, and 5 items on the Internalization-Athlete subscale. Reliability coefficients (Cronbach’s alphas) were calculated for the subscales and were as follows: Information was .96, Pressures was .92, Internalization-Athlete was .95, Internalization-General was .96, and Total was .96. To assess convergent validity, scores on the SATAQ-3 were correlated with scores on the Eating Disorder Inventory Body Dissatisfaction (EDI-BD) subscale and the Eating Disorder Drive for Thinness (EDI-DT) subscale from the Eating Disorder Inventory (Garner, 1991). There was significant convergence on all subscales (Thompson et al., 2004).

Study two included a sample of 195 undergraduate women from the University of South Florida ages 18 to 22 (Thompson et al., 2004). A comparison sample of 15 inpatients with eating disorders (8 with bulimia nervosa and 7 with anorexia nervosa) was also included. The same analyses that were conducted in study one were conducted in study two and all the scales were replicated cleanly. The internal consistency reliability estimates for Information, Pressures,
Internalization-Athlete, Internalization-General, and Total were .94, .94, .89, .92, and .94, respectively. Convergent validity was again tested by correlating scores on the SATAQ-3 with scores on the EDI-BD and the EDI-DT, and there was significant convergence across all subscales. Thirty-three participants that made up an eating disturbed sample, and 15 participants who were actually inpatients with eating disorders were compared to a sample of 160 participants from a control sample. One way ANOVA’s were conducted to see if there were significant differences between the groups in terms of the SATAQ-3 subscales. The analyses indicated that eating disturbed participants and those with diagnosed eating disorders had significantly higher scores on the Information, Pressures, and Internalization-General subscales than control group participants (Thompson et al., 2004).

Respondents rate their level of agreement with each item using a Likert scale, with 1 = Definitely Disagree, and 5 = Definitely Agree. For each subscale, responses to the items are totaled, with higher scores reflecting higher levels on the construct being measured. For example, the higher a person’s Internalization-General score, the more that person internalizes society’s beauty ideals. There is also a total score calculated by summing responses to all the items, including the few reversed items. Items 3, 6, 9, 12, 13, 19, 27, 28 are reversed (Thompson, 1999).

Disordered eating. The Eating Disorder Diagnostic Scale (EDDS), developed by Eric Stice, Christy Telch, and Shireen Rizvi (2000), was used to measure disordered eating (symptoms of anorexia, bulimia, and binge eating; see Appendix D). At the time of the measure’s development, Stice and colleagues were aware that, although there were structured interviews available to diagnose eating disorders, there were no self-report questionnaires that were diagnostic as well. The purpose of the EDDS was to provide a measure that would not only
be diagnostic of anorexia, bulimia, and binge eating, but would also provide greater evidence of reliability and validity than previous self-report measures (Stice, Telch, & Rizvi, 2000).

In the development process of the scale, two studies were conducted. The first study was done in three steps, the first of which consisted of assessing the *Diagnostic and Statistical Manual of Mental Disorder*’s (APA, 1994) diagnostic criteria for bulimia, anorexia, and binge eating disorder. These criteria were adapted from the *DSM-IV* and from psychiatric interviews used to assess eating disorders. The authors made sure to word the questions so that the criteria were accurately captured. The second step was to send the compiled document of diagnostic criteria for the three eating disorders to twenty-six eating disorder experts. The experts were mailed a draft of the EDDS and were asked to (1) check that the *DSM-IV* criteria were accurately measured, (2) eliminate any criteria that did not reflect *DSM-IV* symptoms, (3) make suggestions on how to improve the instrument with regard to wording of items and instructions, and (4) give suggestions on any additional items they believed should be included. After receiving feedback from the experts, a revised draft of the EDDS was given to a sample of patients from an eating disorder clinic, as well as to undergraduate and high school students to assess the clarity of the items and the questionnaire instructions. The feedback gained was then used to develop the final measure, which includes 22 items combining Likert type, “yes-no,” frequency, and write-in response questions (Stice, Telch, & Rizvi, 2000).

While the purpose of the first study was to construct the EDDS, the aim of the second study by Stice, Telch and Rizvi (2000) was to establish the reliability and validity of the scale. Participants in this study consisted of 367 females between the age of 13 and 65 who were recruited from San Francisco, New York, Minneapolis-St. Paul, and Austin. There were two testing periods, and at baseline, all participants completed the EDDS and a structured diagnostic
interview. The structured diagnostic interview was based on either the Eating Disorder Examination (Fairburn & Cooper, 1993) or the Structured Clinical Interview for the *DSM* (SCID; Spitzer et al., 1990). At the baseline period, participants also completed the Three-Factor Eating Questionnaire (TFEQ; Stunkard & Messick, 1985) and the Yale-Brown-Cornell Eating Disorder scale (YBC-EDS; Mazure, Halmi, Sunday, Romano, & Einhorn, 1994). The Three-Factor Eating Questionnaire measured cognitive dietary restraint and emotionally based eating and the Yale-Brown-Cornell Eating Disorder scale measured participants’ obsessions and rituals concerning food, eating, weight, and shape. After completing these instruments, a random sample of participants (*N* = 55) was selected to return and complete the EDDS a second time so as to provide data on the test-retest reliability of the scale (Stice et al., 2000).

Two types of reliability and two types of validity were examined in this study. For the EDDS, the test-retest reliability kappa coefficient for anorexia nervosa diagnosis was .95. The kappa coefficient for bulimia nervosa diagnosis was .71 and the kappa coefficient for binge eating disorder diagnosis was .75. The overall test-retest reliability for these three disorders were .98, .91, and .89, respectively. Internal consistency reliability was calculated for the EDDS symptom composite and was .91 for the full sample and .86 for the small sample who completed the EDDS at Time 2 (Stice et al., 2000).

Criterion validity for the EDDS was tested by examining whether the scale could accurately distinguish between participants who had been interviewed and identified as having one of the three disorders versus participants who did not have a disorder. Kappa coefficients were calculated for sensitivity, specificity, positive predictive value, negative predictive value, and overall accuracy for each eating disorder. Kappa coefficients for sensitivity, which refers to the proportion of participants who were positively diagnosed in the interview and correctly
identified by the EDDS, were .93, .81, and .77 for anorexia, bulimia, and binge eating disorder, respectively. Kappa coefficients for specificity, which was the proportion of participants who were negatively diagnosed in the interview and correctly identified by the EDDS, were 1.0, .98 and .96 for anorexia, bulimia and binge eating disorder, respectively. Coefficients for positive predictive value, which was the proportion of participants who had a positive diagnosis on the EDDS and met criteria for a diagnosis on the interview, were .93, .86, and .80 for anorexia, bulimia, and binge eating disorder, respectively. Coefficients for negative predictive value, which was the proportion of participants who had negative diagnosis (no diagnosis) on the EDDS and did not meet criteria on the structured interview, were 1.0 for anorexia, .97 for bulimia, and .95 for binge eating disorder. Coefficients for accuracy, which was the proportion of participants whose positive and negative diagnoses on the EDDS matched the diagnoses on the structured interview, were .99, .96, and .93 for anorexia, bulimia, and binge eating disorder, respectively (Stice et al., 2000).

Convergent validity was examined by testing to see whether EDDS groups identified as having an eating disorder displayed expected elevations on the different eating disorder measures compared to EDDS groups identified as not having an eating disorder. Stice and colleagues (2000) hypothesized that the eating disorder groups would show elevations on all the measures except for two. They believed that those with anorexia would not show elevations in disinhibited eating, and that individuals with binge eating disorder would not show elevations in dietary restraint. The authors’ hypotheses were supported in that the eating disorder groups overall showed elevations in dietary restraint, weight and shape concerns, eating, cognitive restraint, eating and weight preoccupation and rituals, and hunger disinhibition on the eating disorder measures. Also consistent with their hypotheses, those with anorexia did not show elevations in
disinhibited eating and those with binge eating disorder did not show elevations in dietary restraint. To test for convergent validity for the EDDS symptom composite, the authors evaluated whether the composite score was positively correlated with other validated eating disorder measures. Significant correlations were found between the measures and the symptom composite, with the exception of the cognitive restraint scale (Stice et al., 2000).

Scoring for the Eating Disorder Diagnostic Scale is similar to scoring of the Eating Disorder Examination (EDE). Scores are normally calculated by a computer and the scoring statements are organized in a way that bulimia diagnoses preempt binge eating diagnoses, and anorexia diagnoses preempt bulimia diagnoses. For someone to be categorized as having anorexia, the individual must report (1) a BMI of less than 17.5, as indicated from the height and weight data from EDDS items 19 and 20, (2) a score of 4 or more on item 2, indicating a fear of weight gain or becoming fat, (3) a score of 4 or more on item 3 or 4 on the EDDS, showing undue influence of body weight/shape on self-evaluation, and (4) a 3 on item 21, indicating amenorrhea in postmenarcheal females. Individuals who meet criteria 1 and 4 are automatically diagnosed as anorexic without needing to meet criteria 2 and 3. Also, because the use of contraceptives can result in regular menstrual cycles, those taking oral contraceptives but who meet the low weight criteria are categorized as amenorrheic (Stice et al., 2000).

For someone to be diagnosed as having bulimia, the individual must report (1) an answer of yes to EDDS items 5 and 6 as well as score 2 or more on item 8, indicating regular binges with a perceived loss of control and consumption of large amounts of food; (2) an 8 or greater on the sum of items 15-18, indicating regular use of compensatory behavior; and (3) a score of 4 or greater on either item 3 or 4, indicating undue influence of body weight/shape on self-evaluation (Stice et al., 2000). A diagnosis of binge eating disorder is made if the individual reports (1) an
answer of yes to EDDS items 5 and 6 as well as a score of 2 or more on item 7, indicating regular binges with a perceived loss of control and consumption of large amounts of food; (2) a response of yes to at least three of items 9, 10, 11, 12, and 13 indicating endorsement of features associated with binge eating; (3) a response of yes to item 14 indicating distress about binge eating; and (4) a response of 0 on items 15, 16, 17, and 18, reflecting the absence of compensatory behaviors (Stice et al., 2000).

Social comparison: This is a 5-item Likert type questionnaire that was developed for this study. The questionnaire asks, "On a scale of 1-5, in terms of physical appearance, I compare myself to _____?" (see Appendix E). There were five questions, each asking individuals to indicate the extent to which they compare themselves to African Americans, Caucasian Americans, Latina Americans, Asian Americans, or Native Americans, using a Likert-type response scale ranging from 1 to 5, with 1 = strongly disagree and 5 = strongly agree. A sixth question, similar to the preceding five, prompted participants to indicate if there were another, unlisted, ethnic group with which they compared themselves, and, if so, to indicate the extent to which they compared themselves to that ethic group using the response format described previously. .. Finally, an open-ended question asked participants to indicate with which of the groups they most frequently compared themselves and why.

Procedure

Participants registered for the study either by email or through the SONA Systems website, maintained by UCM’s Department of Psychological Science. SONA Systems is an electronic bulletin board and participation recording system through which students and faculty can post information about their research. After registering for the study, participants were provided a link through which they were able to complete the study. Participants completed the
study through Survey Methods, an external (external from the university) web-based system that allows researchers to conduct studies online. After accessing the link to the study, participants read an informed consent form. Before progressing to the measures, participants either had to check a box indicating that they consented to participate or check a box indicating they did not consent to participate. If they did not consent to participate, they were taken to the end of the study and thanked for their initial participation (see Appendix F). If they agreed to participate, they then progressed to measures, which included the BES, Social Comparison measure, MEIM, SATAQ-3, and EDDS. After completing the measures, participants were asked to respond to a brief demographic survey (see Appendix G). They were then taken to the end of the survey where they were presented with a debriefing statement, thanked for their participation and were given information on whom to contact should they have any questions about the study (see Appendix H). Participants were also recruited through the social media site Facebook. A link to the survey website was posted on the researcher’s personal profile along with a brief statement on the purpose of the study and the eligibility requirements. Once participants clicked on the link, they were taken to the survey website where they would follow the procedure outlined above.

**Completed Analysis**

**Hypothesis 1:** African American women with higher levels of ethnic identity development would report less internalization of social appearance standards. Due to the lack of research regarding Caucasian women’s ethnic identity development in relation to body image, this analysis remained exploratory for Caucasian participants (i.e., no specific directional hypothesis is predicted for Caucasians). This hypothesis was tested by performing a Pearson Product-Moment correlation between scores on the MEIM - *ethnic*
identity commitment subscale and SATAQ3-Internalization subscale for African American women.

**Hypothesis 2:** African American women would compare themselves to other African American women to a greater extent than to women of other ethnic groups. This hypothesis was tested by performing a repeated measures ANOVA comparing the ratings on the Social Comparison Scale across the different ethnic groups.

**Hypothesis 3:** Those who report less internalization of social appearance standards would also report a more positive body image. This hypothesis was tested by performing a Pearson Product-Moment correlation between scores on the SATAQ-3 Internalization subscale and scores on the Body Esteem Scale separately for African American versus Caucasian participants.

**Hypothesis 4:** Those who report greater internalization of social appearance standards would report more disordered eating symptoms. This hypothesis was tested by performing Spearman correlations, separately for African American versus Caucasian participants, between scores on the SATAQ-3 and the three EDDS variables with the latter coded as ordinal variables with three levels (none, sub-threshold, and full threshold).

**Hypothesis 5:** On average, Caucasian Americans would report higher levels of anorexic and bulimic symptoms than will African Americans. This hypothesis was tested by performing a Mann-Whitney U test using the scores on the EDDS.

**Hypothesis 6:** African Americans would report more binge eating tendencies than they would anorexic and bulimic tendencies. This hypothesis was tested by performing a Friedman ANOVA using the scores from the EDDS.
Hypothesis 7: African Americans who report greater ethnic identity development would report a more positive body image. This hypothesis was tested by performing a Pearson Correlation between scores on the MEIM and scores on the BES.

Hypothesis 8: African Americans who report less social comparison tendencies would report more positive body image. This hypothesis was tested by performing a Pearson Correlation between scores on the Social Comparison Scale and scores on the BES.

Hypothesis 9: African Americans who report greater ethnic identity development would have less disordered eating symptoms. This hypothesis was tested by performing a Spearman Correlation between scores on the MEIM and scores on the EDDS.

Hypothesis 10: African Americans who report less social comparison would have less disordered eating symptoms. This hypothesis was tested by performing a Spearman Correlation between scores on the Social Comparison scale and the EDDS.

Hypothesis 11: Caucasians with less social comparison tendencies would have a more positive body image. This hypothesis was tested by performing a Pearson Correlation between scores on the Social Comparison Scale and the BES.

Hypothesis 12: Caucasians with less social comparison tendencies would have less disordered eating symptoms. This hypothesis was tested by performing a Spearman Correlation between scores on the Social Comparison Scale and scores on the EDDS.
Hypothesis 1

It was first hypothesized that, for African American women, higher scores on the MEIM-Ethnic Identity Commitment (MEIM-EIC) subscale would be negatively correlated with scores on the SATAQ-3 Internalization subscale. To test this hypothesis, a Pearson Product Moment correlation between scores on the MEIM-EIC subscale and SATAQ-3 Internalization subscale was performed. Results from this analysis revealed the expected negative correlation, \( r(12) = -0.466, p = 0.047 \), indicating a significant moderate relationship between these two variables. Therefore, hypothesis one was supported. This same analysis (i.e., Pearson Product Moment correlation between MEIM-EIC and SATAQ-3 Internalization subscale scores) was performed for Caucasian Americans, but was left exploratory as little research has been done in this area in relation to White ethnic identity development. Results of this analysis showed a weak, but non-significant, positive correlation, \( r(86) = 0.030, p = 0.780 \).

Hypothesis Two

Hypothesis two predicted that African American women would compare themselves to a greater extent to other African American women on the Social Comparison scale than they would to women of other ethnic groups. Only data from the African American respondents were used in this analysis. On the Social Comparison scale, these individuals rated the extent to which they agreed that they compared themselves to other ethnic groups (African American, Caucasian American, Native American, Asian American, or Latina American), with \( 1 = \text{strongly disagree} \) and \( 5 = \text{strongly agree} \). Ratings that participants provided regarding each ethnic group (e.g., African American versus Asian American) were then compared to each other by performing a repeated measures ANOVA to investigate whether there were any significant differences in the
ratings. The Mauchly’s test indicated that the assumption of sphericity was violated, \( \chi^2(9) = 43.33, p < .001 \). This indicates that the variances of difference scores for the three conditions were unequal. As a result, the Greenhouse-Geiser estimate of sphericity (\( \varepsilon = .529 \)) was used to correct the degrees of freedom. A significant difference was found between the comparison groups, \( F(2.117, 27.526) = 51.462, p < .001 \). Post hoc analyses using the LSD post hoc criterion for significance indicated that there were significant differences in the comparison ratings for “African American” versus the others ethnic groups listed on this measure. Specifically, the rating scores for comparison with other African Americans (\( M = 4.43 \)) were significantly higher than the rating scores for comparison with other ethnic groups. As can be seen in Table 1, on average, African Americans indicated greater agreement with the statement that they compared their physical appearance to other African Americans than to women of other ethnic groups. These results indicate that hypothesis two was supported in that African Americans did, in fact, report comparing their physical appearance more to that of other African Americans versus other ethnic groups.

Table 1
*Means and Standard Deviations on the Social Comparison Scale*

<table>
<thead>
<tr>
<th>Comparison Group</th>
<th>African Americans</th>
<th></th>
<th>Caucasian Americans</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( M )</td>
<td>( SD )</td>
<td>( M )</td>
<td>( SD )</td>
</tr>
<tr>
<td>1. African American</td>
<td>4.43</td>
<td>.646</td>
<td>1.94</td>
<td>1.11</td>
</tr>
<tr>
<td>2. Caucasian American</td>
<td>1.43</td>
<td>.852</td>
<td>4.19</td>
<td>.861</td>
</tr>
<tr>
<td>3. Latina American</td>
<td>1.50</td>
<td>1.02</td>
<td>2.08</td>
<td>1.15</td>
</tr>
<tr>
<td>5. Native American</td>
<td>1.36</td>
<td>.929</td>
<td>2.03</td>
<td>1.14</td>
</tr>
</tbody>
</table>

Note: African Americans (\( n = 14 \)). Caucasians (\( n = 86 \)).
Hypothesis Three

Hypothesis three predicted that those who reported less internalization of social appearance standards would also report having a more positive body image. This hypothesis was tested by conducting a Pearson Product correlation between the scores on the SATAQ-3 Internalization subscale and the BES for both African Americans and Caucasians. Results from the analysis for African Americans revealed a moderate and significant negative correlation between Internalization scores and BES scores, \( r(12) = -0.496, p = .035 \). Results from the analysis for Caucasians revealed that there was a positive, but non-significant, relationship between the Internalization scale and the BES, \( r(86) = -0.173, p = .053 \). These results indicate that hypothesis three was supported for African American women but not for Caucasian women.

Hypothesis Four

It was also hypothesized that those who reported less internalization of social appearance standards would report fewer disordered eating symptoms. This hypothesis was tested by conducting a Spearman Correlation, separately for African Americans and Caucasians, between scores on the SATAQ-3 Internalization scale and scores on the EDDS. The EDDS scores were coded as ordinal and ranked into three groups: none, sub-threshold, and full-threshold. Results from the analysis for the African Americans revealed there was a weak positive, but non-significant, correlation between Internalization scores and EDDS scores, \( r(12) = 0.339, p = .079 \). Results from the analysis for Caucasians revealed a weak, negative and non-significant correlation between Internalization scores and EDDS scores, \( r(86) = -0.023, p = .417 \). Thus, hypothesis four was not supported.
Hypothesis Five

Hypothesis five stated that Caucasian American women would report more disordered eating symptoms (specifically, those related to anorexia and bulimia) than would African American women. This hypothesis was tested by performing a Mann-Whitney U test on EDDS scores. The two ethnic groups were compared in terms of their anorexic and bulimic symptoms. Results revealed that there was no significant difference between Caucasians and African Americans in terms of anorexia nervosa symptoms, $U = 62.50, p = .415$. The mean rank for anorexia nervosa symptoms in Caucasian Americans was slightly higher (19.11) than that of African Americans (18.13). A second analysis revealed that there was also no significant difference between Caucasian and African American women in terms of bulimia nervosa symptoms $U = 16.50, p = .195$. As with the anorexia nervosa symptoms, the mean rank for bulimia nervosa symptoms in Caucasian Americans was also slightly higher (9.32) than that of African Americans (7.50). Thus, the hypothesis that Caucasian Americans would report more disordered eating symptoms was not supported.

Hypothesis Six

It was also hypothesized that African Americans would report more binge eating versus anorexic or bulimic tendencies. This hypothesis was tested by using the scores from the EDDS. Each participant was given a 1 if they had each disorder or 2 if they did not. The independent variable was eating disorder diagnosis: AN/BU (anorexia or bulimia), BED (binge eating disorder) and No Eating Disorder. A Friedman ANOVA was then performed using those categories of independent variable and the diagnostic score (1 or 2) which was the dependent variable. Results revealed a significant difference in the African American participants’ eating tendencies, $\chi^2 (2) = 7.00, p = .030$, but not in the hypothesized direction. Post-hoc analysis with
Wilcoxon Signed-Rank Tests was conducted with a Bonferroni correction applied. There were no significant differences between the No Eating Disorder group and the AN/BU group ($Z = .000, p = 1.000$). There was a significant difference between the AN/BU group and the BED group ($Z = -2.646, p = .008$) and between the BED group and the No Eating Disorder group ($Z = -2.646, p = .008$). Although the results were significant, this hypothesis was not supported because there were no instances of BED.

**Hypothesis Seven**

Hypothesis seven predicted that higher scores on the MEIM would positively correlate with BES scores for African American women. This hypothesis was tested by conducting a Pearson Correlation between MEIM and BES scores. The relationship between the MEIM and the BES scores was positive, but weak and non-significant, $r(12) = .090, p = .380$. Thus, this hypothesis was not supported.

**Hypothesis Eight**

It was next hypothesized that African Americans who reported less social comparison tendencies would report a more positive body image. A “Total score” was computed for the Social Comparison Scale by summing participants’ comparison rating for each ethnic group. Scores could range from 5 to 25. This hypothesis was tested by performing a Pearson Correlation between Total scores on the Social Comparison Scale and scores on the BES. Results of this analysis revealed that there was a weak, but non-significant, positive relationship between scores on the Social Comparison scale and the BES, $r(12) = .040, p = .447$. Therefore, this hypothesis was not supported.

**Hypothesis Nine**
It was hypothesized that higher scores on the MEIM would negatively correlate with scores on the EDDS for African American women. Scores on the EDDS were coded as ordinal variables and participants were grouped into one of three levels: no diagnosis, full threshold eating disorder, and sub-threshold eating disorder. This hypothesis was tested using a Spearman Rho Correlation. Results of this analysis revealed a strong significant negative correlation between scores on the MEIM and scores on the EDDS, \( r(12) = -0.882, p < .001 \). Therefore, this hypothesis was supported in that MEIM scores were related to disordered eating symptoms.

**Hypothesis Ten**

It was also hypothesized that African Americans who reported less social comparison would report less disordered eating symptoms. This hypothesis was tested by performing a Spearman Correlation between the totaled scores on the Social Comparison scale and the EDDS (once again, coded as ordinal variables). Results of this analysis revealed a weak positive correlation between Social Comparison scores and EDDS scores, \( r(12) = 0.018, p = .475 \), that was non-significant. These results indicate that this hypothesis was also not supported.

**Hypothesis Eleven**

It was similarly hypothesized that lower Total Social Comparison scores would correlate with higher BES scores for Caucasian women. This hypothesis was tested by running a Pearson Correlation between these scores on these two scales. Analysis revealed that there was a significant negative correlation between scores on the Social Comparison scale and scores on the BES, \( r(86) = -0.253, p = .009 \). Thus, hypothesis eleven was supported.

**Hypothesis Twelve**

Finally, it was hypothesized that for Caucasian Americans the Totaled scores on the Social Comparison scale would be positively correlated with scores on the EDDS. Again, scores
on the EDDS were coded as ordinal variables and participants were grouped into one of three levels based on their level of diagnosis. This hypothesis was tested by conducting a Spearman Rho correlation. The analysis revealed that there was no significant relationship between scores on the Social Comparison scale and the EDDS $r(86) = -.023, p = .417$. In light of these results, it is concluded that this hypothesis was not supported. See Table 2 for intercorrelations, means and standard deviations for scores on all scales.

Table 2

Summary of Intercorrelations, Means, Standard Deviations and Ranges for Scores on the BES, EDDS, SATAQ-3 Internalization Scale, the Social Comparison Scale, and the MEIM as a function of Ethnicity

<table>
<thead>
<tr>
<th>Measure</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Mean</th>
<th>SD</th>
<th>Range</th>
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<tbody>
<tr>
<td>1. SATAQ-3-I</td>
<td>-</td>
<td>-.466*</td>
<td>.212</td>
<td>.399</td>
<td>-.496</td>
<td>26</td>
<td>4.19</td>
<td>13</td>
</tr>
<tr>
<td>2. MEIM</td>
<td>.300</td>
<td>-</td>
<td>.308</td>
<td>-.822 ***</td>
<td>.090</td>
<td>4.40</td>
<td>.45</td>
<td>1.33</td>
</tr>
<tr>
<td>3. SC</td>
<td>.149</td>
<td>-.303 **</td>
<td>-</td>
<td>.018</td>
<td>.040</td>
<td>9.86</td>
<td>2.51</td>
<td>8</td>
</tr>
<tr>
<td>4. EDDS</td>
<td>-.023</td>
<td>-.056</td>
<td>-.003</td>
<td>-</td>
<td>.735</td>
<td>1</td>
<td>1.41</td>
<td>5</td>
</tr>
<tr>
<td>5. BES</td>
<td>-.173</td>
<td>.152</td>
<td>-.253 **</td>
<td>.138</td>
<td>-</td>
<td>115.14</td>
<td>21.13</td>
<td>65</td>
</tr>
</tbody>
</table>

Mean          28.08 3.51 12.03 1.28 103.30  
SD            3.69  .66  4.09  1.79 18.16  
Range         21 3.71 20 6 90

Note: Intercorrelations for African American participants ($n = 14$) are presented above the diagonal, and intercorrelations for Caucasian participants ($n = 88$) are presented below the diagonal. Means, standard deviations and ranges for African American participants are presented in the vertical columns, and the means, standard deviations and ranges for the Caucasian participants are presented in the horizontal rows. For all scales, excluding the EDDS, higher scores are indicative of more extreme responding in the direction of the construct being assessed. SATAQ-3-I = Social Attitudes Towards Appearance Questionnaire-3- Internalization; MEIM = Multigroup Ethnic Identity Measure; SC = Social Comparison Scale; EDDS = Eating Disorder Diagnostic Scale; BES = Body Esteem Scale.
*p < .05, *p < .01, ***p < .001
Additional Findings

Finding One: An Independent Samples t-test between the African American and Caucasian American participant scores on the BES looking at differences in body image within this sample was performed. A significant difference on the overall BES score was found between the two groups, \( t(100) = -2.217, p < .001 \). The mean for the African American group was significantly higher \( (M = 115.14) \) than the mean for the Caucasian group \( (M = 103.30) \).

Finding Two: An Independent Samples t-test between African American and Caucasian American participant scores on the BES-WC (Body Esteem Scale- Weight Concern) was performed. A significant difference was revealed, \( t(100) = -2.471, p = .015 \), with results indicating that African Americans are less concerned with their weight than are Caucasians.

Finding Three: An Independent Samples t-test was also conducted between African American and Caucasian American participant scores on the MEIM to determine the differences on level of ethnic identity development. In terms of ethnic exploration, there was a significant difference, \( t(100) = -4.626, p < .001 \) with African American women were more likely to explore their culture. A significant difference was also found in terms of ethnic commitment, \( t(100) = -4.908, p < .001 \), with African Americans being more committed to their culture.

Finding Four: A Pearson Correlation was run between scores on the MEIM and the Social Comparison scale for Caucasian American women. A significant relationship between the two measures was found, \( r(86) = -.303, p = .004 \).
The purpose of the present study was to examine the relationships among ethnic identity development, internalization of mainstream social standards regarding appearance (internalization), and the tendency to engage in social comparison with regard to one’s physical appearance. This study also investigated whether these variables were correlated with body satisfaction as well as disordered eating in Caucasian and African American women. Participants completed measures of internalization, the extent to which they identified with their chosen ethnic group, eating disorder symptoms, body satisfaction, and the extent to which they compared their own physical appearance to that of women from various ethnic groups.

There were twelve hypotheses tested in this study. The first two were more general hypotheses regarding ethnic identity development and social comparison, respectively. The first general hypothesis examined ethnic identity development in relation to the internalization of beauty ideals. Results indicated that African American women, who identified more with the African American subculture, were less likely to internalize mainstream standards regarding physical appearance. This finding lends credence to the hypothesis that African American women might be shielded from some of society’s pressures to conform to appearance norms by adhering to and identifying with their own subculture (Breitkopf et al., 2007). Results of the present study also indicated that there was no relationship between Caucasian American women’s ethnic identity development and their level of internalization. This was an exploratory analysis because little to no research has been conducted in this area. Another interesting finding was that African Americans and Caucasians actually differed in their levels of ethnic identity development. Much of the previous research regarding ethnic identity development has revolved around ethnic minorities and how they identify with their ethnic culture as well as the dominant
culture (Wakefield & Hudley, 2007). Results showed there was difference in all aspects of ethnic identity development between these two populations. In terms of ethnic exploration, African American women were more likely to explore what being African American meant, including exploring its history and customs. There was also a difference between the groups in terms of ethnic commitment. African Americans were more likely to commit to, embrace African American culture, and accept it as a part of them than were Caucasians.

The second general hypothesis was that African American women would, essentially, compare their physical appearance to that of other members of their in-group (i.e., other African American women) more than they would to women of other ethnic groups. According to Guimond et al. (2007) and Franzoi and Klaiber (2007), people tend to compare themselves to their “in-group” as well as to their “out-group,” and they also tend to compare themselves to those of the same sex. Results revealed that this was the case. These results confirm what Guimond et al. (2007) and Franzoi and Klaiber (2007) speculated. Essentially, African American women compared their own physical appearance to other women who looked like them (i.e., other African American women). That is not to say that they did not compare themselves to individuals from other ethnic groups (out-group members) at all, but they compared themselves to a greater extent to those similar to them in appearance (in-group members).

Hypotheses three and four examined the relationship between internalization of beauty ideals and (a) body satisfaction as well as (b) symptoms of eating disorders. Research has shown that body image and consequently the development of eating disorders can be influenced by the internalization of beauty ideals (Levine & Murnen, 2009). Results from hypothesis three revealed that, for African American women, there was a significant relationship between their level of internalization and their feelings about their body. That is, the more they internalized
society’s view on what is considered beautiful, the less positive they felt towards their bodies; conversely, the less they internalized society’s views, the more positive they felt about their bodies. Conversely, results indicated that, although scores were approaching significance, there was no relationship between internalization of beauty norms and body satisfaction for Caucasian women, indicating that, for this sample of women, internalizing societal beauty ideals was not predictive of body image. This is contrary to what previous research has indicated. Results from hypothesis four revealed that internalization was not related to eating disordered symptomatology in African American or Caucasian women. Internalization of beauty ideals has been consistently found to be predictive of body dissatisfaction, which, in turn, is believed to be a major risk factor for the development of eating disorders. Having a negative body image and internalizing beauty ideals have been implicated as precursors to anorexia and bulimia, but internalization alone may not be indicative of an eating disorder (Garner, 2002; Stice, 2002; Striegel-Moore & Franko, 2002). Most of the women in the African American sample scored in the middle range on the internalization scale, which may have affected the results; therefore, it is difficult to determine whether level of internalization was actually related to the disordered eating in this sample of women. With regard to the Caucasian women, more than half of the women in the sample scored in the higher ranges of the internalization scale, giving a slight skew to the data, which may have affected the results; therefore, it is difficult to determine whether level of internalization was truly related to eating disordered symptomatology in this sample of Caucasian women.

Hypotheses seven, eight, and eleven were related to body image. Ethnic identity and the tendency to engage in social comparison with regard to appearance have also been identified as potentially influential factors with regard to body image (Roberts et al., 2006; Tigeman, 2002).
Also, previous research has indicated that the more African American women identified with their ethnic group, the less likely they were to internalize society’s beauty standards and, concomitantly, the more likely they were to have a more positive body image (Rogers Wood & Petrie, 2010). Research has also shown that there is an overall difference in the body satisfaction between Caucasian and African Americans. The present study found that African Americans were more likely to have a better body image than their Caucasian counterparts were. It was also found that African Americans are less concerned with their weight than Caucasian American women. These results are in accordance with previous research and could be due to African American women’s differing conceptions of what constitutes beauty, as well as how much they identify with the African American sub-culture.

The present study tested the hypothesis that African American women who identified more with their ethnic group and who compared their bodies less often to women from other ethnic groups, would have a more positive body image. Results revealed that there was not a significant relationship between ethnic identity development and body image, nor was there a relationship between ethnic identity development and the tendency to engage in cross-cultural social comparison. The extent to which African American women compared themselves to others (i.e. all ethnicities, not just other African Americans) was not predictive of their body image. This may be because African American women compared their bodies mostly to other African American women, as seen in the results of hypothesis two. If African American women have similar ideas as to what constitutes physical beauty (Celio et al., 2002), then comparing their own bodies to those of other African American women who look like them might not affect their body image, positively or negatively. Additionally, a possible explanation for the failure to find an association between ethnic identity development and African American women’s body
image could be the limited number of participants in this group, as well as the restricted range of scores on the MEIM and the BES. That is, all of the African American women in this study scored in the higher ranges (no lower scores) on the MEIM (i.e., the ethnic identity measure) and scored in the higher ranges on the BES (i.e., the body image measure). These combined constricted ranges could have affected the outcome of the results. Therefore, it would appear that hypothesis seven, which predicted a relationship between ethnic identity development and body image might not have been adequately tested.

A similar hypothesis (eleven) was proposed for Caucasian Americans in that it was predicted that higher levels of social comparison would be related to a more negative body image. Previous research has suggested that engaging in higher levels of social comparison might contribute toward holding more negative views of one’s body (Tantleff-Dunn, & Gokee, 2002). Findings from the present study indicated that there was a relationship between the extent to which Caucasian American women compare themselves to others (i.e. all other ethnic groups, not just other Caucasians) and how they feel about their own bodies. That is, the more they engage in social comparison behavior the more dissatisfied they are with their own bodies. This result supports what previous research has found. Another interesting finding related to social comparison was that, for Caucasian American women, social comparison was inversely related to ethnic identity development. This would mean that the less that Caucasian Americans identify with “white” culture, the more likely they are to engage in social comparison and vice versa. However, this might not actually be the case. Very little research has been done with regard to the development of “White” identity. The term “White” actually encompasses many ethnicities and cultures, all of which might influence the development of an individual’s identity. This
makes it difficult to accurately determine how the ethnic identity development of Caucasian Americans is related to social comparison.

The next set of hypotheses (nine, ten, and twelve) in this study was related to disordered eating. Ethnic identity and social comparison have been cited as important factors in the development of disordered eating (Brown et al., 2009; Corning et al., 2006; Striegel-Moore & Franko, 2002). It was therefore hypothesized that there would be a relationship between level of ethnic identity, level of social comparison and the development of disordered eating symptoms in African American women. Results from this analysis indicated that the extent to which women compare their appearance to others was not significantly related to symptoms of eating disorders. The results regarding social comparison might be attributed to the extent to which African American women engage in social comparison with women of other ethnicities. Breikopf et al. (2007) postulated that ethnic minority women do not stringently follow mainstream social norms, while Guimond et al. (2007) found that women were more likely to compare themselves to other women in their reference group. If operating under these assertions, African Americans might be expected to compare themselves to a greater extent to other African American women with similar beliefs about beauty than to women of other ethnic groups, and it is possible that social comparison is not such a critical factor in the development of disordered eating for this ethnic group. Although there was no relationship between the other variables and disordered eating, there was a significant relationship between ethnic identity development and eating disordered symptomatology. African American women who identified more with their ethnic group were less likely to report symptoms of an eating disorder than those who identified less with their ethnic group. This finding is in accordance with research which shows that African Americans exhibit less symptoms of disordered eating than do women from other ethnic groups.
(Anderson-Fye & Becker, 2002). Hypothesis twelve was similar to hypothesis ten except that it was examining the relationship between these two variables for a sub-sample of Caucasian American women. It was hypothesized that if Caucasian women engaged in more social comparison with those within their ethnic group and those in other ethnic groups, they would be more likely to report symptoms of disordered eating. Results revealed that there was no relationship between social comparison and disordered eating symptoms, which is contrary to the results of previous research in this area (Corning et al., 2006; Striegel-Moore & Franko, 2002).

While internalization has been known to be a risk factor in the development of eating disorders, so too has ethnicity. For years it was assumed that eating disorders afflicted only Caucasian women. That notion has been rejected, and the study of eating disorders among ethnic minority populations has become more frequent, with researchers now focusing on the differences and similarities across various ethnic groups. The results of previous research have suggested that African Americans report fewer symptoms of anorexia and bulimia than their Caucasian counterparts. It has also been suggested that African Americans report higher rates of binge eating than any other eating disorder (Anderson-Fye & Becker, 2002; Brown et al., 2009). Both of these hypotheses were tested in this study, but neither was supported. The test of hypothesis five revealed that Caucasian and African American women were not significantly different in their rates of anorexia and bulimia, which is contrary to the results of most previous research in this area. However, this null finding is most likely due to the fact that there were only 14 African Americans in the study, whereas there were 88 Caucasian Americans. In regards to hypothesis six, although the results of the analysis were significant, the findings indicated that there was a difference between instances of anorexia/bulimia and BED. In actuality, there were no instances of binge eating reported within the African American group of women included in
the present sample, which is counter to the findings of Brown et al (2009), who reported that binge eating is more prevalent than anorexia and bulimia in African American women. It is likely that the present results are due to the small number of African American women in this sample, and that the results are therefore not indicative of actual prevalence rates. Had there been a more substantial sample of African American women, it is possible that the findings would have been different.

**Limitations**

It is important that the limitations of this study be discussed so that future work can improve and build upon what has been done here. Approximately 86.3% (88 participants) self-reported as being Caucasian/White, whereas only 13.7% (14 participants) self-reported as being African American/Black. This represents one of the major limitations of this study. With such a disparity in numbers, it is difficult to have confidence in the accuracy of these findings. Much of the research in this field suggests that there are differences in both body satisfaction and the presentation and prevalence of eating disorders between Caucasians and African Americans (Brown et al., 2009; Celio et al., 2002). But that is difficult to accurately gauge in this study because of the large discrepancy between the number of African Americans and the number of Caucasians in this sample. While there was effort made to recruit participants from the African American community online, future researchers should endeavor to find ways of reaching out to this population through a more hands-on approach. I would recommend that in the future that in addition to recruiting participants online, participants could also be recruited in person. This could be accomplished by handing out flyers in the student union, posting flyers in the student dorms, or attending student organization meetings to promote the study.
Another limitation of this study was the use of an Internet-based survey for the purpose of data collection. While presenting the study in an online forum has its benefits, it also comes with its problems. There were 144 people who participated in the study, but 17 (11.8%) did not complete it. Part of this data could have been used had the participants completed the MEIM or the demographic questionnaire, which were essential for determining the ethnicity and gender of the participants. While participants were given the option to skip questions that made them uncomfortable, there were entire sections that were incomplete on some participants’ questionnaires. These individuals might have been more inclined to complete the materials had they been presented in an in-person setting. In the future, the study could be given online and in person, so participants have the option and can choose which is more convenient for them.

Another limitation of this study was that some of the data had to be discarded which may have led to a less representative sample in some cases. The data from those who did not complete essential parts of the survey (17 participants) were disregarded. Participant responses to certain questions on the survey were necessary in order to complete the analyses for this study. If those questions were not answered the data could not be used. If those 17 participants had answered the essential parts of the survey (namely the ethnic identity questions) their responses could have been utilized and the study may have had a slightly more representative sample. One last limitation of this study was that, even though the online forum allowed for the recruitment of participants in a short period of time, it did not allow for the verification of certain demographic information, nor did it allow prohibiting certain individuals, who did not meet the selection criteria for the study, from participating. For instance, there were 12 males who participated in the study, whereas the study was designed to only include female participants. The data from
these individuals had to be disregarded because it did not meet the inclusion criteria for participation.

**Future Directions**

One future recommendation for research would be to conduct a replication or an extension of this study. One of the limitations of this study was the low number of African American women that were recruited to participate. Future studies could potentially be conducted with a larger sample that, in turn, might be more likely to yield more significant results. Having a larger sample of African Americans would greatly increase the chances of accurately assessing levels of ethnic identity development, body satisfaction, social comparison tendencies and the development of disordered eating. Another recommendation would be to consider using a different eating disorder measure. The measure utilized in this study, while it may be ideal for diagnosing eating disorders in a clinical setting, was not ideal for use in this study. A measure that assessed more of the behaviors people may engage in and the attitudes they hold towards food and eating may have been more appropriate for this study.

African American women often define beauty not only in the physical sense but also in terms of self-image and personal style and do not fully internalize mainstream society’s views of beauty. While these weight accepting or tolerant attitudes, according to some, might serve as a protective factor against the development of eating disorders, they also put African Americans at risk for obesity (Crago, Shisslak, & Estes, 1995; Rogers Wood, & Petrie, 2010). Future research, while continuing to explore and expand upon the existing knowledge base regarding anorexia, bulimia and BED, should also include studies on the development of obesity in this population. Obesity is a major concern within the African American community. Prevalence rates of overweight and obesity among African American women over age 20 hover around 78%
Compulsive eating or binge eating without purging behaviors, along with factors mentioned by Crago and colleagues (1995), might contribute to the development of obesity in African Americans. Future studies should be conducted to determine whether a potential eating disorder, as well as other co-morbid factors, is related to the development of obesity.

Relating back to the issue of eating disorders, one of the factors that perpetuates the false notion that African Americans do not often develop such disorders is the belief that African Americans have higher levels of body satisfaction than their Caucasian counterparts (O’Neill, 2003). Another avenue for future research is the development of a body satisfaction scale specifically designed for African American women. Much of the research regarding body image and body satisfaction has revolved around Caucasian women or the comparison of Caucasian and African American women. As previously mentioned in this paper, what is considered beautiful by these two populations differs significantly. For Caucasians, having a slender body shape is considered beautiful (Breitkopf et al., 2007), whereas skin tone, personal style, larger body size and grooming are considered signs of beauty for African Americans (Celio et al., 2002; Crago et al., 1995). If these differences are so readily apparent, why are there no scales that take into account the cultural aspect of what makes up Black women’s body image? Having a body image/satisfaction scale geared toward African Americas might provide a clearer picture of how they view their bodies and not just assume that it is positive and healthy.

**Conclusion**

In summary, the current study investigated ethnic identity development and social comparison in relation to body image and disordered eating. Prior to the current study, little, if any, of the extant research had combined all four of these variables. One thing that had
specifically not been taken into account was social comparison in relation to an individual’s sub-
culture and/or ethnic group. Also, the development of eating disorders in ethnic minority groups 
has not been as widely researched as the development of eating disorders in Caucasian 
Americans. Results from this study indicated that African Americans who identified more with 
their ethnic group were less likely to internalize society’s ideals of beauty. These lower levels of 
internalization were also related to a more positive body image. African Americans, when 
compared to Caucasian Americans, also indicated having a more positive body image and having 
a more comfortable view of their physical appearance. It was also found that African American 
women compared themselves to a greater extent to other African American women than to 
individuals of any other ethnic group. In relation to ethnic identity development and eating 
disorders, it was found that higher levels of ethnic identity development were associated with 
lower levels of disordered eating in African Americans. Despite the limitations of the study 
discussed previously, these indicate that this is an area of research that warrants further 
investigation.
References


In this country, people come from many different countries and cultures, and there are many different words to describe the different backgrounds or ethnic groups that people come from. Some examples of ethnic groups are Latino, African American, Mexican, Asian American, Chinese, and many others. These questions are about your ethnicity or your ethnic group and how you feel about it or react to it.

Please fill in: In terms of ethnic group, I consider myself to be__________________

Use the numbers below to indicate how much you agree or disagree with each statement.

(5) Strongly Agree  (4) Agree  (3) Neutral  (2) Disagree  (1) Strongly Disagree

1- I have spent time trying to find out more about my ethnic group, such as its history, traditions and customs. ______

2- I am active in organizations or social groups that include mostly members of my own ethnic group

3- I have a clear sense of my ethnic background and what it means to me.

4- I think a lot about how my life will be affected by my ethnic group membership

5- I am happy that I am a member of the ethnic group I belong to

6- I have a strong sense of belonging to my own ethnic group

7- I understand pretty well what my ethnic group membership means to me

8- In order to learn more about my ethnic background, I have often talked to other people about my ethnic group

9- I have a lot of pride in my ethnic group

10- I participate in cultural practices of my own group, such as special food, music or customs

11- I feel a strong attachment towards my own ethnic group

12- I feel good about my cultural or ethnic background

13- My ethnicity is
1. Asian or Asian American, including Chinese, Japanese and others
2. Black or African American
3. Hispanic or Latino, including Mexican American, Central American and others
4. White, Caucasian, Anglo, European American; not Hispanic
5. American American/Native American
6. Mixed; Parents are from two different groups
7. Other (write in)______________

14- My father’s ethnicity is (use numbers above) _____
15- My mother’s ethnicity is (use numbers above) _____
## APPENDIX B
### THE BODY ESTEEM SCALE

Instructions: On this page are listed a number of body parts and functions. Please read each item and indicate how you feel about this part or function of your own body using the following scale:

1 = Have strong negative feelings  
2 = Have moderate negative feelings  
3 = Have no feeling one way or the other  
4 = Have moderate positive feelings  
5 = Have strong positive feelings  

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<td>14.</td>
<td>body build</td>
</tr>
<tr>
<td>15.</td>
<td>physical coordination</td>
</tr>
<tr>
<td>16.</td>
<td>buttocks</td>
</tr>
<tr>
<td>17.</td>
<td>agility</td>
</tr>
<tr>
<td>18.</td>
<td>width of shoulders</td>
</tr>
<tr>
<td>19.</td>
<td>arms</td>
</tr>
<tr>
<td>20.</td>
<td>chest or breasts</td>
</tr>
<tr>
<td>21.</td>
<td>appearance of eyes</td>
</tr>
<tr>
<td>22.</td>
<td>cheeks/cheekbones</td>
</tr>
<tr>
<td>23.</td>
<td>hips</td>
</tr>
<tr>
<td>24.</td>
<td>legs</td>
</tr>
<tr>
<td>25.</td>
<td>figure or physique</td>
</tr>
<tr>
<td>26.</td>
<td>sex drive</td>
</tr>
<tr>
<td>27.</td>
<td>feet</td>
</tr>
<tr>
<td>28.</td>
<td>sex organs</td>
</tr>
<tr>
<td>29.</td>
<td>appearance of stomach</td>
</tr>
<tr>
<td>30.</td>
<td>health</td>
</tr>
<tr>
<td>31.</td>
<td>sex activities</td>
</tr>
<tr>
<td>32.</td>
<td>body hair</td>
</tr>
<tr>
<td>33.</td>
<td>physical condition</td>
</tr>
<tr>
<td>34.</td>
<td>face</td>
</tr>
<tr>
<td>35.</td>
<td>weight</td>
</tr>
</tbody>
</table>
APPENDIX C

SOCIOCULTURAL ATTITUDES TOWARDS APPEARANCE SCALE - 3 (SATAQ-3)

Please read each of the following items carefully and indicate the number that best reflects your agreement with the statement.

Definitely Disagree = 1
Mostly Disagree = 2
Neither Agree Nor Disagree= 3
Mostly Agree =4
Definitely Agree = 5

1. TV programs are an important source of information about fashion and "being attractive."_____
2. I've felt pressure from TV or magazines to lose weight.____
3. I do not care if my body looks like the body of people who are on TV.____
4. I compare my body to the bodies of people who are on TV.____
5. TV commercials are an important source of information about fashion and "being attractive."____
6. I do not feel pressure from TV or magazines to look pretty.____
7. I would like my body to look like the models who appear in magazines.____
8. I compare my appearance to the appearance of TV and movie stars.____
9. Music videos on TV are not an important source of information about fashion and "being attractive."____
10. I've felt pressure from TV and magazines to be thin.____
11. I would like my body to look like the people who are in movies.____
12. I do not compare my body to the bodies of people who appear in magazines.____
13. Magazine articles are not an important source of information about fashion and "being attractive."____
14. I've felt pressure from TV or magazines to have a perfect body.____
15. I wish I looked like the models in music videos.____
16. I compare my appearance to the appearance of people in magazines.____
17. Magazine advertisements are an important source of information about fashion and "being attractive."____
18. I've felt pressure from TV or magazines to diet.

19. I do not wish to look as athletic as the people in magazines.

20. I compare my body to that of people in "good shape."

21. Pictures in magazines are an important source of information about fashion and "being attractive."

22. I've felt pressure from TV or magazines to exercise.

23. I wish I looked as athletic as sports stars.

24. I compare my body to that of people who are athletic.

25. Movies are an important source of information about fashion and "being attractive."

26. I've felt pressure from TV or magazines to change my appearance.

27. I do not try to look like the people on TV.

28. Movie stars are not an important source of information about fashion and "being attractive."

29. Famous people are an important source of information about fashion and "being attractive."

30. I try to look like sports athletes.
APPENDIX D
EATING DISORDER DIAGNOSTIC SCALE
Eating Screen

Please carefully complete all questions.

<table>
<thead>
<tr>
<th>Over the past 3 months…</th>
<th>Not at all</th>
<th>Slightly</th>
<th>Moderately</th>
<th>Extremely</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Have you felt fat?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2. Have you had a definite fear that you might gain weight or become fat?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3. Has your weight influenced how you think about (judge) yourself as a person?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4. Has your shape influenced how you think about (judge) yourself as a person?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

5. During the past 6 months have there been times when you felt you have eaten what other people would regard as an unusually large amount of food (e.g., a quart of ice cream) given the circumstances? YES NO

6. During the times when you ate an unusually large amount of food, did you experience a loss of control (feel you couldn't stop eating or control what or how much you were eating)? YES NO

7. How many DAYS per week on average over the past 6 MONTHS have you eaten an unusually large amount of food and experienced a loss of control? 0 1 2 3 4 5 6 7

8. How many TIMES per week on average over the past 3 MONTHS have you eaten an unusually large amount of food and experienced a loss of control? 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14

During these episodes of overeating and loss of control did you…

9. Eat much more rapidly than normal? YES NO

10. Eat until you felt uncomfortably full? YES NO

11. Eat large amounts of food when you didn't feel physically hungry? YES NO

12. Eat alone because you were embarrassed by how much you were eating? YES NO

13. Feel disgusted with yourself, depressed, or very guilty after overeating? YES NO

14. Feel very upset about your uncontrollable overeating or resulting weight gain? YES NO
15. How many times per week on average over the past 3 months have you made yourself vomit to prevent weight gain or counteract the effects of eating? 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14

16. How many times per week on average over the past 3 months have you used laxatives or diuretics to prevent weight gain or counteract the effects of eating? 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14

17. How many times per week on average over the past 3 months have you fasted (skipped at least 2 meals in a row) to prevent weight gain or counteract the effects of eating? 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14

18. How many times per week on average over the past 3 months have you engaged in excessive exercise specifically to counteract the effects of overeating episodes? 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14


20. How tall are you? _Please specify in inches (5 ft. = 60 in.)__________ in.

21. Over the past 3 months, how many menstrual periods have you missed? 0 1 2 3 n/a

22. Have you been taking birth control pills during the past 3 months? ____________ YES NO
APPENDIX E
SOCIAL COMPARISON SCALE

Please read each of the following items carefully and indicate the number that best reflects your agreement with the statement.

Strongly Disagree  = 1
Disagree  = 2
Neither Agree Nor Disagree= 3
Agree =4
Strongly Agree = 5

1. In terms of physical appearance, I compare myself to African Americans. ______
2. In terms of physical appearance, I compare myself to Caucasian Americans. ______
3. In terms of physical appearance, I compare myself to Latina Americans. ______
4. In terms of physical appearance, I compare myself to Asian Americans. ______
5. In terms of physical appearance, I compare myself to Native Americans. ______
6. Is there another group to which you compare yourself? Yes____ No___
   If yes please identify that group: _______
7. If you answered yes to the above question, please indicate how strongly you agree that you compare yourself to, in terms of physical appearance to that group. ______
8. With which of the ethnic groups listed to you compare yourself to the most and why?
Identification of Researchers: This research is being done by Clarissa Johnson a graduate student in the Department of Psychological Science at the University of Central Missouri under the supervision of Kim Stark-Wroblewski.

Purpose of the Study: The purpose of this study is to examine one’s self-concept and self-comparison processes are related to feelings about one’s body and eating habits.

Request for Participation: I am inviting you to participate in a study examining how one’s self-concept, ethnic identity and self-comparison processes are related to women’s feelings about their body and their eating habits. It is up to you whether you would like to participate. If you decide not to participate, you will not be penalized in any way. You can also decide to stop at any time without penalty. If you do not wish to answer some of the questions, you may simply choose to skip them. You may choose to not submit your data at the end of the study. Once you submit the materials, I will not know which survey or test is yours as the data are anonymous.

Exclusions: You must be at least 18 years of age and female to participate in this study.

Description of Research Method: This study involves completing a series of surveys that pertain to body image, eating habits, what ethnicity you identity as, and how you compare yourself to others. You will also be given brief demographic questionnaire. This study will take about 40 minutes to finish. After you finish, you will be given information about whom to contact should you have any questions. Please note that I cannot give you your individual results because the data are being used for research purposes and are being analyzed only as a group.

Privacy: All of the information I collect will be anonymous. I will not record your name or any information that could be used to identify you and this data is not being used for diagnostic purposes. All of the information I collect will also be stored in a locked and secure area and a password protected computer file accessible to the researchers only.

Explanation of Risks: Some of the questions may cause you to feel uncomfortable. If this occurs, you may stop at any time. If you feel uncomfortable emotionally or physically, please feel free to stop. If your discomfort is unusually strong, you may wish to speak with a professional at the campus counseling center. Here is the number should you like to do that: (660-543-4060).

Explanation of Benefits: You might benefit from participating in this study by getting firsthand experience in psychological research. You might also enjoy completing the surveys. You might also receive course credit for your participation, depending on your instructor’s course policy.
Questions: If you have any questions about this study, please contact Clarissa Johnson at cmj93610@ucmo.edu. You may also contact Kim Stark-Wroblewski at (660) 543-4982 or stark@ucmo.edu. If you have any questions about your rights as a research participant, please contact the Human Subjects Protection Program at (660) 543-4621.

☐ By checking this box I agree to participate in the following study

☐ By checking this box I decline to participate in the following study
APENDIX G
DEMOGRAPHIC QUESTIONNAIRE

1. What is your age? ______
2. What is your sex? ______
3. What is your combined annual household income?
   i. <$20,000
   ii. $21,000-$40,000
   iii. $41,000-$60,000
   iv. $61,000-$80,000
   v. $81,000-$100,000
   vi. >$100,000
Thank you for completing this study. The purpose of this project is to determine how a woman's ethnic identity development and her tendency to compare herself to others are related to her body image and eating behaviors. We are also interested in discovering whether these issues differ for African American versus Caucasian women. For instance, we would like to find out whether African American women who strongly identify with Black culture tend to feel better about their bodies and experience fewer symptoms of eating disorders as compared to Caucasian women who strongly identify with White culture. If you have any questions regarding any of the surveys you have just taken please feel free to contact me, Clarissa Johnson, at cmj93610@ucmo.edu, or Dr. Kim Stark-Wroblewski at stark@ucmo.edu. If you have significant concerns about yourself or another person after participating in this study, please note that the UCM counseling center, located in Humphreys 131 (660-543-4060) provides free and confidential services to UCM students.