EXAMINING AN EATING DISORDER MODEL WITH AFRICAN AMERICAN WOMEN

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In the current study, I examined the general sociocultural model of eating disorders that suggests that sociocultural pressures leads to internalization, which in turn leads to body dissatisfaction and ultimately disordered eating. Because I am testing this model with a sample of African American women, I also am including acculturation as a variable of interest. Specifically, I hypothesized that (a) the experience of more societal pressure to be thin will be related to greater internalization, (b) higher levels of acculturation will be related to greater internalization, (c) internalization of the thin ideal will be directly and positively related to body image concern, and (d) body image concern will be associated with higher levels of disordered eating. It was determined that there is a direct, negative relationship between Level of Identification with Culture of Origin and Internalization. Perceived Pressure was directly and positively related to both Internalization and Body Image Concerns. Body Concerns and Internalization were both directly and positively related to Disordered Eating. These findings suggest that although many of the same constructs related to disordered eating in other ethnic groups are also related to disordered eating among African American women, the relationships between the factors differs across racial/ethnic groups. This information can help clinicians and researchers to better treat and understand the nature of disordered eating behavior and correlates among African American women.

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CHAPTER 1

INTRODUCTION

Description of Eating Disorders

In Western society, there appears to be two ideal body types: slender, like runway models (Furnham, Badmin, & Sneade, 2002), and athletically curvaceous, like Sports Illustrated swimsuit models (Hausenblaus & Carron, 1999). The focus on attaining these body types, often called the "beauty ideals," can lead women to be dissatisfied with the current size and shape of their bodies (Levine & Harrison, 2004; Polivy & Herman, 2004; Thompson, Heinberg, Altabe, & Tanteleff-Dunn, 1999). This dissatisfaction is likely an outgrowth of women comparing themselves to what they see in the media (Grabe, Ward, & Hyde, 2008). Research shows that during the latter part of the twentieth century, the ideal body size decreased (Silverstein, Perdue, Peterson, Vogel, & Fantini, 1986; Sypeck, Gray, & Ahrens, 2004; Wiseman, Gray, Mosimann, & Ahrens, 1992). Sypeck, Gray, and Ahrens (2004) noted that the size of women depicted in fashion magazines during the 1980's and 1990's decreased over time. At the same time, the size of the average American woman has increased (Fouts & Burggraf, 2000). The result is that research within Caucasian samples suggests that exposure to media images is related to thin-ideal internalization, body dissatisfaction, and disordered eating (Bradford & Petrie, 2008; Stice, Schupak-Neuberg, Shaw, & Stein, 1994; Thompson & Heinberg, 1999).

Body dissatisfaction often leads to dieting as a means of altering physical appearance (Thompson & Stice, 2001). However, in some cases, the desire to achieve

U.S. ideals of beauty can lead to eating disorders (Brumberg, 1988; Cavanaugh & Lemberg, 1999; Garner, 1993). Thompson and Stice (2001) found that internalization of the thin ideal was a risk factor in the development of eating disorders. Further, Low, Charanasomboon, Brown, Hiltunen, Long, Reinhalter, and Jones (2003) found that increased internalization of the thin ideal can lead to increased drive for thinness over time. Given that there is empirical evidence linking pressure to conform to the thin-ideal, internalization of the thin-ideal, and body dissatisfaction to eating pathology, further examination of models of eating disorder development seems warranted.

Eating Disorder Model

To gain more knowledge about the development and maintenance of eating disorders, researchers have acknowledged the need to develop models that the causal linkages among psychological variables related to eating disorders (Kashubeck-West & Mintz, 2001; Stice et al., 1994; Striegel-Moore & Cachelin, 1999). Central to most models are societal pressures to be thin, internalization, and body dissatisfaction. Although societal pressures to be thin, internalization, and body dissatisfaction have only been empirically validated within an eating disorder model examining Caucasian and Asian American women, research shows that African American women also are impacted by societal pressures to be thin, internalization, and body dissatisfaction (Lester & Petrie, 1998b; Root, 1990, 2001; Shaw, Stice, & Springer, 2004). For example, in a study of African American and biracial women in a large public university setting, two percent had EDNOS, and 23 percent had subclinical eating disorders (Mulholland & Mintz, 2001). Conversely, in a study conducted at a predominantly African American college,

bulimia occurred significantly less frequently among African American women than among Caucasian women at a predominantly Caucasian campus (Gray, Ford, & Kelly, 1987). These researchers suggested that being enrolled at a predominantly African American college may have served as a protective factor for their participants because, within the African American culture, there is considerably less pressure to adhere to the thin-ideal; in fact, a heavier physique is seen as socially acceptable. This protective factor, however, may not generalize to those African American women who are more exposed to the mainstream culture on a daily basis and integrated into predominantly White environments.

Race/Ethnicity

As with age and gender, the prevalence rates of eating disorders appear to vary based on race/ethnicity. Early research suggested that eating disorders only occurred among Caucasian women (Garner, 1993; Phelps & Bajorek, 1991) who were from high socioeconomic levels (Andersen & Hay; 1985; Brumberg, 1988), and dealt with pressure to conform to society's beauty ideal and to adhere to the high-achieving standards of their families (Stern, Dixon, Jones, Lake, Nemzer, & Sansone, 1989). Recent research suggests that eating disorders occur within minority groups, such as Hispanic, Native American, Asian American, and African American women at levels similar to and, in some cases, higher than Caucasians (Cavanaugh & Lemberg, 1999; Crago, Shisslak, & Estes, 1996; leGrange, Stone, & Brownell, 1998; Lester & Petrie, 1998a; Lester & Petrie 1998b; Mulholland & Mintz, 2001; Osvold & Sodowsky, 1993; Weiss, 1995).

Mulholland and Mintz (2001) found that in a group of African American and biracial women in a large public university setting, two percent had EDNOS, and 23 percent had subclinical eating disorders. When the same type of data was gathered from predominantly female, Caucasian participants at a large public university, eight percent had bulimia, and 27.8 percent had subclinical eating disorders (Green, Scott, DeVilder, Zeiger, & Darr, 2006). These findings suggest that the prevalence rates of eating disorder symptomatology are similar among both Caucasian and African American women. However, the lack of additional eating disorder research with African American women (Taylor, Caldwell, Baser, Faison, & Jackson, 2007) makes it difficult to understand the role of ethnicity in eating disorder symptomatology (O'Neill, 2003). Because the prevalence rates of African American women are similar to those of Caucasian women, more eating disorder research needs to be conducted with African American women.

Another limitation of the research on eating disorders in minority groups is that most of the research has consisted of between groups comparisons in which the eating attitudes and behaviors of minority women are compared to those of Caucasian women (Abrams, Allen, & Gray, 1993; Fisher, Pastore, Schneider, Pegler, & Naolitano, 1994; Gross & Rosen, 1988; Lucero, Hicks, Bramlette, & Brassington, 1992; Pumariega, Gustavson, Gustavson, & Motes, 1994; Smith & Krejci, 1991). Although between groups comparisons provide information regarding how the attitudes and behaviors of minority women compare to those of Caucasian women, these comparisons do not give information about the development and maintenance of eating disorders, or the psychological characteristics associated with eating disorders within different groups of

minority women. In the interest of learning more about minority women specifically, researchers need to conduct large within group studies to better understand how psychological variables relate to disordered eating among minority women. Although African American women are not the only minority group susceptible to disordered eating, they will be the focus of this study because, thus far, there have been few within groups studies of this racial ethnic group (e.g. Lester & Petrie, 1998b). For example, Lester and Petrie (1998b) found that in a sample of African American women, a higher level of internalization of the thin ideal was correlated with higher levels of body dissatisfaction and bulimic symptomatology. Conversely, Atlas, Smith, Hohlstein, McCarthy, & Kroll (2002) found that when compared to Caucasian women, African American women did not expect their lives to improve if they adhered to the thin ideal. Despite the differences in their findings, both Lester and Petrie (1998b) and Atlas et al. (2002) strongly support the need for further eating disorder research among African American women.

Gray et al. (1987) suggested that being enrolled at a predominantly African American college may have served as a protective factor for their participants because, within the African American culture, there is considerably less pressure to adhere to the thin-ideal. This protective factor, however, may not generalize to those African American women who are more exposed to the mainstream culture on a daily basis and integrated into predominantly White environments.

Sociocultural Influences for African American Women

Although African American culture does not espouse the thin ideal, African

American women, like Caucasian women, still feel pressure to have a pleasing body size and shape. For example, Greenberg and LaPorte (1996) found that, when compared to Caucasian men, African American men preferred to date larger women. However, Greenberg and LaPorte (1996) also found that both African American and Caucasian men tended to prefer thin female body shapes over large female body shapes. Thus, although the extent of the pressure African American women experience from men may be different from what Caucasian women experience from men, both Caucasian and African American women, appear to experience pressure to be attractive, as represented by a thin physique, to men. Further, although African American culture has historically accepted larger body sizes in women, a survery of an *Essence*, an African American beauty magazine, readers showed that African American women reported eating and body image concerns at levels similar to Caucasian women (Miller, Gleaves, Hirsch, Green, Snow, & Corbett, 2000). The findings of Greenberg and LaPorte (1996) and Miller et al. (2000) suggest that, similar to Caucasian women, African American women are experiencing pressure to fit a body ideal and dissatisfaction about their bodies when they do not fit the ideal.

Some research suggests that acculturation may account for the increased awareness of the thin ideal and body dissatisfaction among African American women (Brumberg, 1988; Hsu, 1987; Osvold & Sodowsky, 1993; Rucker and Cash, 1992). Acculturation is defined as the behavioral and psychological changes an individual of one ethnic/minority group undergoes as a result of prolonged interaction with persons from the majority group (Berry & Kim, 1988). Some researchers suggest that, among minority

groups, the risk of developing an eating disorder increases as acculturation (Osvold & Sodowsky, 1993) and social status do (Brumberg, 1988). For example, African American women may reject the very slender or very toned body that is the beauty ideal in the United States because African Americans are not well-represented in mainstream media. However, Rucker and Cash (1992) have suggested that, as African American women become more acculturated, their beauty ideals may shift to those of the mainstream culture. If this is the case, then acculturated African American women are susceptible to social pressure for thinness. Increased access to and acceptance of mainstream values may open African American women to an increased affliction with the disorders of the mainstream culture Hsu (1987).

It is noteworthy that not all research has found level of acculturation to be linked to elevated levels of disordered eating. For example, both Edwards-Hewitt and Gray (1993) Lester and Petrie (1998b) found that, in a sample of African American women, higher levels of acculturation were not linked to eating pathology. The fact that some studies suggest that acculturation has an impact on eating pathology in African American women (Brumberg, 1988; Hsu, 1987; Osvold & Sodowsky, 1993; Rucker and Cash, 1992) and some do studies did not find a correlation between acculturation and eating pathology in African American women (Edwards-Hewitt & Gray, 1993; Lester & Petrie, 1998b) suggests that the role of acculturation in eating pathology should be studied further. Given that acculturation may play a role in eating pathology among African American women (Brumberg, 1988; Hsu, 1987; Osvold & Sodowsky, 1993; Rucker and Cash, 1992) and the fact that African American women are susceptible to social messages

about body size (Greenberg & LaPorte, 1996), it seems likely that level of identification with culture of origin will impact the degree to which African American women internalize the thin ideal.

Internalization

Internalization refers to the degree to which individuals adopt a certain belief system as their own (Thompson & Stice, 2001). When an individual internalizes the United States' societal values about attractiveness, they come to believe that an extremely slender physique must be attained in order for them to be considered attractive (Thompson & Stice, 2001). They also take on the idea that, as women, if they achieve this beauty ideal they will be happier, appeal more readily to the opposite sex, and reach higher social status (Dittmar, 2005; Polivy & Herman, 2004; Stice et al., 1994; Striegel-Moore, Silberstein, & Rodin, 1986; Tiggemann, 2002). According to Thompson and Stice (2001), the more a woman internalizes the thin-ideal, the greater the risk she runs for decreased body satisfaction and the eventual development of disordered eating.

Body Dissatisfaction

Body dissatisfaction is defined as the degree to which individuals are unhappy with their bodies (Dittmar, 2005). Body dissatisfaction typically results from a discrepancy between what the individual views as her ideal body size or shape, and how she perceives the size and shape of her actual body (Thompson et al., 1999). The fact that body dissatisfaction is hypothesized to result from the internalization of a body ideal that is discrepant from one's actual body suggests that internalization mediates the relationship between societal pressure to be thin and body dissatisfaction (Ahern &

Hetherington, 2006; Polivy & Herman, 2004; Stice, 1994; Stice et al., 1994; Stice, Spangler, & Agras, 2001; Striegel-Moore et al., 1986; Thompson & Stice, 2001). The thin ideal is physically unattainable for most women (Brownell, 1991); therefore, this discrepancy can increase body dissatisfaction, as well as the perceived need to continue working toward the thin-ideal (Levine & Harrison, 2004; Polivy & Herman, 2004; Thompson et al., 1999).

In a meta-analysis, Stice (2000) observed that the link between body dissatisfaction eating pathology has been empirically validated. The fact that the thin ideal is physically unattainable for most women can increase body dissatisfaction, as well as her perceived need to continue working toward the thin-ideal (Levine & Harrison, 2004; Polivy & Herman, 2004; Thompson et al., 1999). According to Stice (2000), body dissatisfaction appears to lead to eating pathology because women perceive that dieting will enable them to control their weight. In addition to the research cited by Stice's (2000) meta-analysis, Phan and Tylka (2006), Trautmann, Worthy, and Lokken (2007), and Tylka and Subich (2004) also found body dissatisfaction to be strongly related to eating pathology.

Although most research has been conducted on Caucasian women, there is some research that suggests that body dissatisfaction is an important variable in the development of disordered eating in African American women. For example, Shaw et al. (2004) reported that African American and Caucasian women experience the same levels of eating disorder symptoms, such as fear of becoming fat and concerns about weight and shape; a finding supported by Caldwell, Brownell, and Wilfley (1997). However, there is

some research using between-groups comparisons that suggests that African American women experience lower levels of body dissatisfaction than Caucasian women (Russell & Cox, 2003; Schooler, Ward, Merriwether, & Caruthers, 2004). For example, Schooler et al. (2004) found that while television viewing increased body dissatisfaction among Caucasian women, it did not increase body dissatisfaction among African American women. Russell and Cox (2003) also found that African American women report experiencing lower levels of body dissatisfaction than do their Caucasian counterparts.

Although some research has shown that African American women experience less body dissatisfaction than Caucasian women (Russell & Cox, 2003; Schooler et al., 2004) studies have found that body dissatisfaction is a strong predictor of eating pathology (Lester & Petrie, 1998b; Phan & Tylka, 2006; Stice, 2000; Trautmann et al., 2007; Tylka & Subich, 2004). As such, it will be important to explore the impact of body dissatisfaction on a model of disordered eating within a sample of African American women.

Purpose of Study

In the current study, I examined the general sociocultural model of eating disorders that suggests that sociocultural pressures leads to internalization, which in turn leads to body dissatisfaction and ultimately disordered eating (Petrie & Greenleaf, 2007; Phan & Tylka, 2006; Tylka & Subich, 2004). Because I am testing this model with a sample of African American women, I also am including acculturation as a variable of interest. Specifically, I hypothesized that (a) the experience of more societal pressure to be thin will be related to greater internalization, (b) higher levels of acculturation will be

related to greater internalization, (c) internalization of the thin ideal will be directly and positively related to body image concern, and (d) body image concern will be associated with higher levels of disordered eating.

CHAPTER 2

METHOD

Participants

Participants were 322 African American female undergraduates drawn from 5 colleges and universities in the Southern region of the United States. Two of the universities were traditional public universities, two were Historically Black universities, and one was a Historically Black college. The average age of participants was 20.2 years (SD = 1.88). In terms of past education, 95.3% (*n* = 307) reported being high school graduates, 1.9% (*n* = 6) reported having their GED, 2.2% (*n* = 7) reported "other," and 0.6% (*n* = 2) did not respond. Ninety-four (29.2%) were freshman, 79 (24.5%) were sophomores, 86 (26.7%) were juniors, 61 (18.9%) were seniors, and 2 (.6%) participants did not respond. The sample was predominantly single (97.2%, *n* = 313), although some participants indicated they were married (1.6%, *n* = 5), divorced/separated (0.3%, n = 1), or widowed (0.3%, n = 1), and some participants did not respond (0.6%, *n* = 2). The range of family of origin income was as follows: below $10,000 (9.6%; *n* = 31), $10,000-$30,000 (17.7%; *n* = 57), $30,000-$50,000 (28.6%; *n* = 92), $50,000-$80,000 (22.4%; *n* = 72), $80,000-$100,000 (9.3%; *n* = 30), above $100,000 (7.1%; *n* = 23), no response (5.3%; *n* = 17).

The women's average real body mass index (BMI) was 26.1 kg/m2 (SD = 5.94), whereas the average ideal BMI was 23.3 kg/m2 (SD = 3.39). According to Center for Disease Control Guidelines (2008) 10 women (3.1%) were classified as being

underweight, 159 women (49.4%) were classified as being normal weight, 77 women (23.9%) women were classified as overweight, 70 women (21.7%) were classified as obese, and 6 (1.9%) women did not respond to items about height and weight. Most of the participants in the sample (99.1%, *n* = 319) reported having menstruated at least once, some participants reported never having menstruated (99.1%, *n* = 319), and one participant (.3%) did not respond. Only four participants (1.2%) reported that they had been diagnosed previously with an eating disorder, and only 29 (9 %) had attended mental health counseling (not specifically related to having an eating disorder). When asked if they wanted to change their weight, 11 (3.4%) of participants reported wanting a BMI that would make them underweight and 213 (66.1%) wanted a BMI in the normal range, 75 (23.3%), wanted a BMI in the overweight range, and 14 (4.3%) wanted a BMI in the obese range, and 9 (2.8%) participants did not respond. Despite these reports regarding ideal weight, only 17.1% reported dissatisfaction with their current appearance. Further, only a few (3.7%; *n* = 12) participants were at or below their lowest weight since age 16, while all other participants (96.3%; *n* = 310) had gained weight since age 16.

When using the BULIT-R as a screening tool, none of the women in the sample exceeded the stringent cutoff score of 104 for a possible diagnosis of bulimia, and only 7 participants (2.2%) scored at or above 85, a less stringent score for a possible diagnosis of bulimia (Thelen, Farmer, Wonderlich, & Smith, 1991). When using the EAT-26 as a screening tool, only 3.7% (*n* = 12) of women in the sample exceeded the recommended cutoff score of 20 for a possible diagnosis of bulimia, anorexia, or EDNOS (Garner,

Olmstead, & Polivy, 1983). These results show that the majority of African American women in this sample do not meet the diagnostic criteria for an eating disorder.

Instruments

Sociocultural Pressure

The 8-item Perceived Sociocultural Pressure Scale (PSPS; Stice, Ziemba, Margolis, & Flick, 1996) measures pressures individuals experience from family members, friends, romantic partners, and the media to be thin and attractive. Individuals respond using a 5-point Likert scale that ranges from 1, *never*, to 5, *always*. Total scores are the average of the items; higher scores indicate more perceived pressure to conform to the thin ideal. Two-week test-retest reliability and internal consistency reliability has been reported as .93 and 87, respectively, in a sample of females in high school and college (Stice et al., 1996); Cronbach's alpha for the current study was .85. When compared to retrospective reports of pressure from parents to be thin, the PSPS was found to have good construct validity (Stice et al., 1996).

The Perceived Sociocultural Influences on Body Image and Body Change Questionnaire (PSIQ-M; McCabe & Ricciardelli, 2001) measure how individuals perceive messages about their physical appearance from the media; for the current study, three-items were used (i.e., the media presenting the idea to be slimmer, the media presenting the idea to eat less, the media presenting the idea to exercise more). Respondents answer questions using a 5-point Likert-type scale that ranges from 1, *strongly agree*, to 5, *strongly disagree*. The total score for the media pressures was the average of the three items, and ranged from 1, low, to 5, high. In a sample of adolescent

girls, McCabe and Ricciardelli (2001) reported that the internal consistency reliability was good (.90). Cronbach's alpha for the current study was .89. McCabe and Ricciardelli (2001) provided detailed information about the scale's validity.

Level of Identification with Culture of Origin

The 47-item African American Acculturation Scale – Revised (AAAS-R; Klonoff & Landrine, 2000) measures the degree to which an individual identifies with traditional beliefs, values, and roles within the African American community, and was derived from the original AAAS (Landrine & Klonoff, 1994). Respondents use a 7-point Likert-type scale ranging from 1, *I totally disagree, this is not at all true of me,* to 7, *I totally agree, this is absolutely true of me*. Total scores are obtained by summing the scores from individual items, and range from 47 to 235. Higher scores are indicative of being more immersed in African American culture, whereas lower scores are indicative of being acculturated to the mainstream culture (Klonoff & Landrine, 2000). The AAAS-R is highly correlated with the original AAAS (r = .97) and, in a sample of adults aged 18 to 79, had good internal consistency (Cronbach's alpha = .93) (Klonoff & Landrine, 2000); Cronbach's alpha for the current study was .86. Klonoff and Landrine (2000) found that African American men and women scored significantly higher on the AAAS-R than did individuals from other ethnic groups, and that African American men and women who were more segregated scored higher on the AAAS-R, than did the individuals who were more integrated into Caucasian culture (Klonoff & Landrine, 2000), providing support for the scale's validity.

The 14-item Ethnic Identity subscale (EI) of the Multi-Group Ethnic Identity Measure (MEIM-EI; Phinney, 1992) assesses positive ethnic attitudes and belonging, exploration and resolution of ethnic identity issues, and ethnic behaviors and practices. Respondents answer questions using a 4-point Likert-type scale ranging from 1, *strongly disagree*, to 4, *strongly agree*. The total score of the EI subscale is the average of the items, and higher scores are indicative of a stronger ethnic identity (Bisaga, Whitaker, Davies, Chuang, Feldman, & Walsh, 2005; Phan & Tylka, 2006). Internal consistency reliability for the MEIM-EI was .90 in a college sample (Phinney, 1992); Cronbach's alpha for the current study was .86. The MEIM was shown to have acceptable concurrent validity when compared to measures of self-esteem among minority students in high school and college (Phinney, 1992).

Internalization

The 19-item Beliefs About Attractiveness Scale – Revised (BAAR) (Petrie, Rogers, Johnson, & Diehl, 1996) measures the degree to which an individual agrees with U.S. societal values regarding beauty and attractiveness along two dimensions: The Importance of Being Physically Fit (9 items) and Importance of Being Attractive and Thin (10 items). Each item is answered using a 7-point Likert scale ranging from 1, *strongly disagree*, to 7, *strongly agree*. Total scores are the average for each factor, and can range from 1, *low internalization*, to 7, *high internalization*. In a sample of female undergraduates, Petrie et al. (1996) reported internal consistency reliabilities of .85 for both factors; Cronbach's alphas for the current study were .83 (Importance of Being Physically Fit) and .86 (Importance of Being Attractive and Thin). They also found that

the two factors (Physically Fit and Attractive/Thin, respectively) were significantly related to bulimic symptoms (*r*s = .40 and .46 respectively), concern with the size and shape of one's body (*r*s = .44 and .42), behavioral investment in physical appearance (*r*s = .24 and .19), self esteem (*r*s = -.29 and -.32), and satisfaction with overall appearance (*r*s = -.25 and -.26) (Lester & Petrie, 1998b).

The 9-item Sociocultural Attitudes Toward Appearance Questionnaire-3 – Internalization General scale (SATAQ-3 – IG; Thompson, van den Berg, Roehrig, Guarda, & Heinberg, 2004) measures the influence the media has on an individual's internalization of the thin ideal. Respondents answer questions using a 5-point Likert-type scale ranging from 1, *completely disagree*, to 5, *completely agree*. Total scores range from 9 to 45, with higher scores being indicative of more internalization. Cronbach's alpha for the SATAQ-3, IG was .96; Cronbach's alpha for the current study was .91 for Internalization General scale. Thompson et al. (2004) found that, in the two studies they conducted, the correlations between the SATAQ-3, IG and the Drive for Thinness scale of the Eating Disorders Inventory were .55 and .57. They also found that, in their first study, the correlation between the SATAQ-3, IG and the Ideal Body Stereotype Scale - Revised (IBSS-R; Stice et al., 1996) was .53. These correlations suggest that the SATAQ-3 has good convergent validity.

Body Image Concern

The 10-item Body Shape Questionnaire – Revised (BSQ-10-R; Mazzeo, 1999) measures individuals' preoccupation with the size and shape of their body. For each item, respondents use a 6-point Likert scale ranging from 1, *never*, to 6, *always*. Total scores

are the average of the items, and can range from 1, low preoccupation, to 6, high preoccupation. The BSQ-10-R displayed high internal consistency in a sample of female college students (Cronbach's alpha = .96; Mazzeo, 1999); Cronbach's alpha for the current study was .96. The BSQ-R was found to correlate significantly with eating pathology as measured by the Eating Attitudes Test (EAT) (.74) and the Bulimia Test – Revised (BULIT-R) (.77). Also, the correlation between the BSQ-10-R and the original BSQ is .99 (Mazzeo, 1999).

The 11-item Body Parts Satisfaction Scale – Revised (BPSS-R; Petrie, Tripp, & Harvey, 2002) measures individuals' satisfaction with their bodies (7 items) and their faces (4 items). For the purposes of this study, only the Body subscale was used. Each item is answered using a 6-point Likert-type scale ranging from 1, *extremely dissatisfied* to 6, *extremely satisfied*. A total score is average of the items, and can range from 1, *less satisfaction*, to 6, *greater satisfaction*. In a sample of female college students, Cronbach's alpha was .90 (Petrie et al., 2002); Cronbach alpha for the current study was .86. Significant correlations have been found with BMI (r = -.32), the Multidimensional Body Self-Relations Questionnaire Appearance Evaluation subscale (r = .75), the Body Shape Questionnaire (r = -.75), and the Situational Inventory of Body Image Dysphoria (r = -.73).

Disordered Eating

The 36-item Bulimia Test – Revised (BULIT-R; Thelen et al., 1996) measures behaviors that are associated with a diagnosis of bulimia nervosa according to the DSM-IV (American Psychiatric Association [APA], 1994). The 28 items that contribute to the

total score are answered using 5 point Likert-type scale, with responses ranging from 1, *no bulimic symptoms*, to 5, *high bulimic symptoms*. Total scores can range from 28 to 140; higher scores indicate more bulimic symptoms. In a sample of female college students, Pelltier, Dion, and Levesque (2004) reported an internal consistency of .95; Cronbach's alpha for the current study was .89. In samples of female college students, 3-week and two-month test-retest reliabilities were .85 (Mazzeo, 1999) and .95 (Thelen et al., 1991), respectively. In a sample of 2,409 women, BULIT-R scores correctly identified 97.3% of the women who had been diagnosed with bulimia (Thelen et al., 1991).

The 26-item Eating Attitudes Test 26 (EAT-26; Garner et al., 1983) is the short form of the EAT-40, and measures disordered eating attitudes and behaviors concerning dieting, bulimia and food preoccupation, and oral control. Using a 6-point Likert-type scale, respondents answer each question. Three of the six possible responses that do not indicate eating pathology are given a score of 0 – never (0), rarely (0), sometimes (0). Responses that are indicative of an eating disturbance are given scores ranging from 1 to 3 – often (1), very often (2), always (3). Total scores range from 0 to 78; higher scores indicate more eating pathology. The internal consistency reliabilities have been reported as .91 in a sample of female undergraduates (Mazzeo, 1999); Cronbach's alpha for the current study was .72. Three-week test-retest reliability for a sample of female undergraduates was .86 (Mazzeo, 1999). The EAT-26 has been found to correlate significantly with the EAT-40 (r = .98; Berland, Thompson, & Linton, 1986), the Body Image Scale (r = .43; Koslowsky, Scheinberg, Bleich, Mark, Apter, Danon, & Solomon,

1992), the Thinness (r = .77), Bulimia (r = .37), and Body Dissatisfaction (r = .37) subscales of the EDI (Berland et al., 1986), and clinical diagnoses (r = .79; Mintz & O'Halloran, 2000).

Social Desirability

The 12-item Marlowe-Crowne Social Desirability Scale- Form B (MC-SDS; Reynolds, 1982) measures individuals' tendencies to portray themselves in a positive light. All items are presented in a True-False format, and total scores can range from 0, *low social desirability*, to 12, *high social desirability*. Reynolds (1982) found the internal consistency to be .75; Cronbach's alpha for the current study was .68. Reynolds (1982) reported that the scale was significantly correlated with the standard version of the Marlowe-Crowne Social Desirability Scale (r = .92) and with the Edwards Social Desirability Scale (r = .38).

Demographic Information

Participants provided information regarding their age**,** current educational level, year in school, family structure when they were children, socioeconomic status, marital status, current height and weight, ideal weight, menstrual status, current and previous psychological diagnoses, including history of counseling and psychiatric treatment, and a one-item measure about perceived acculturation status, the degree to which they have adapted to and adopted the values of the mainstream culture, that was created for this study

Procedure

Participants were recruited from undergraduate classes at all five colleges and

universities and, at two universities, participants were recruited from African American social groups. To recruit participants, I used the departmental website for psychology research at one university and classroom visitation at four of the colleges and universities. In all situations, participants were asked to complete a survey asking about the behaviors and attitudes of African American women. Individually or in small groups, the women completed the study's consent form indicating that their participation was voluntary and anonymous. Next, the completed the questionnaire packet that contained the demographic questionnaire, the AAAS-SF, MEIM-EI, PSPS, PSIQ, BAAR, SATAQ-3, BSQ-10-R, BPSS-R, BULIT-R, EAT-26, and the MCDS. The measures on the questionnaire were counterbalanced to control for ordering effect. When appropriate, the students received extra credit for their participation, as well as a debriefing page with a list of psychological referrals. Additionally, participants were entered into a raffle for a $200 cash prize.

Data Analysis

In order to examine the accuracy of the proposed models for disordered eating development in African American women, structural equation modeling (SEM), using the EQS Structural Equations Program (Bentler, 1995), was used. SEM is a statistical technique that is useful when comparing both the direct and indirect relationships among hypothesized variables. The statistical procedure provides information regarding how well the hypothesized model "fits" the data. Confirmatory factor analysis is used to examine the factor loadings of the hypothesized model, and thus test the measurement model. In order for SEM to work properly, the following assumptions must be met: the sample size must be large enough given the complexity of the hypothesized model and

the data must be normally distributed within each of the assessments measuring the variables.

In order to determine the appropriate sample size for this study, the number of free parameters was counted, including all pathways and error terms, and that number (65) was multiplied by five for a total of 325 participants needed for the sample. Another requirement for conducting SEM is that all cases must have complete data. Therefore, it was determined a priori that if more than 20 percent of the data values from any measured variable were missing, then that case would be removed from the dataset. Using this rule, 36 cases (10% of the total sample) were dropped from the dataset. For any other cases that had fewer than 20% missing data points on any measure, items would be replaced using the following decision rules: (1) missing data were replaced using the participant's mean score from the measure in question - for example, if a participant omitted 1 item from the 10-item BSQ 10-R, then the mean for the 9 remaining items was obtained and that number was used to fill in the missing response, (2) if using the mean was not possible, then items were replaced with the most neutral response, (3) if using a neutral response was not possible, then items were replaced with the least pathological response available. One hundred and forty-nine cases (46%) had variables with fewer than 20% missing items, but no participant had more than a total of six individual items missing across the entire questionnaire packet that required replacement. These 149 cases with missing data points were fixed using the above decision rules.

Once missing data points were replaced, total scores for each measured variable was calculated and descriptive statistics were run. Because some of the statistics for

skewness and kurtosis were significant, we examined the distributions visually (Fidell & Tabachnick, 2003). Upon visual inspection, I determined that the distributions were slightly skewed, though the higher values of the skewness statistic was likely caused by the large sample size. Thus, when running the SEM analyses, I examined the statistics for multivariate normality within the EQS program and found them to be within the acceptable range, so I did not transform any of the variables in the study.

EQS (Bentler, 1995) provides incremental, absolute, and predictive fit indices that are recommended for evaluating the adequacy of a model (Weston & Gore, 2006; Worthington & Whittaker, 2006). The specific fit indices used were: chi-square (χ^2) goodness of fit, the comparative fit index (CFI), the nonnormed fit index (NNFI), the standardized root mean square residual (SRMR), the root mean-square error of approximation with 90% confidence interval (RMSEA), and Akaike's information criterion (AIC), a relative fit index that enables comparisons between nonnested models – lower AIC values indicate a better fit (Henson, Reise, & Kim, 2007). A chi-square test was conducted to determine which of the nested models, Model A or Model B, provided the best fit to the data (Martens, 2005). Additionally, the maximum likelihood (ML) procedure was used to estimate the parameters of the evaluated models.

I used confirmatory factor analysis (CFA) to determine the measurement model for the study (Anderson & Gerbing, 1988). After the measurement model was finalized, I used SEM to test the relationships between the latent variables in the proposed structural models. The pathways tested in Model A included: (1) direct pathway between Level of Identification with Culture of Origin and Internalization; (2) direct pathway between

Perceived Pressure and Internalization; (3) direct pathway between Internalization and Body Image Concern; (4) direct pathway between Body Image Concern and Disordered Eating. The pathways tested in Model B included all of the pathways tested in Model A with one addition – a direct pathway between Perceived Pressure and Body Image Concern. Thus, Model A was nested within Model B and I could test their relative fit and determine which was the better model.

CHAPTER 3

RESULTS

Table 1 contains the correlations among all the measured variables used in this study as well as the measure of social desirability. A few correlations with social desirability were significant, but they generally were small, accounting for less than 7% of the variance in any variable. Based on these results, it did not appear that the measured variables that were to be used in the model were highly influenced by a socially desirable response set. Table 2 contains the means, standard deviations, skewness, kurtosis, and internal consistency reliability (Cronbach's alpha) of measured variables.

Measurement Model

Confirmatory factor analysis was used to test the measurement model. I started with the latent variable Identification with Culture of Origin, initially loading the 1-item face-valid acculturation measure, the AAAS-R, and the MEIM-EI on it. The 1-item measure was dropped due to poor fit and the error variance for the MEIM-EI had to be set using Bollen's (1989) method. Once the error value was set, the AAAS-R and MEIM-EI loaded positively on the Identification with Culture of Origin, suggesting higher scores on this latent variable were indicative of lower levels of acculturation with mainstream culture (or greater identification with African American culture; see Table 3).

The Perceived Pressure construct was the next factor added to the measurement model. The PSPS, SATAQ-3-P, and PSIQ-Media were tested on the Perceived Pressure factor. All three variables loaded positively on the Perceived Pressure factor, indicating

that it represented high levels of perceived pressure, from outside influences, to adhere to the thin ideal (see Table 3).

The next construct added to the measurement model was the Internalization construct. At first, the SATAQ-3-IG, the BAAR-Attractiveness, and the BAAR-Physical Fitness were tested on the latent construct. The SATAQ-3-IG had high residuals with several other variables and thus was dropped from the model. The BAAR-Attractiveness and the BAAR-Physical Fitness loaded positively on the Internalization construct, indicating that it represented increased internalization of the thin ideal (see Table 3).

The Body Image Concern Factor was then added to the existing measurement model. Initially the BSQ-10-R, BPSS-Body, and one-item overall body satisfaction were tested on this factor. The one-item measure caused problems in allowing the program to generate a solution, so it was dropped from the model. The other two variables loaded as expected on the factor, though a non-significant error variance emerged for the BSQ-10-R and it had to be set using Bollen's (1989) method. Based on the loadings of the two measured variables, the factor was designated as Body Image Concerns (i.e., body preoccupation and body image concern; see Table 3).

The next construct added to the measurement model was Disordered Eating. The BULIT-R and the EAT-26 were tested on this factor, and both loaded positively as expected. The factor thus represented disordered eating or increased levels of clinical eating pathology (see Table 3). The fit of the final measurement model was good (see Table 4).

Structural Models

Model A

For this model, the following relationships were hypothesized: (a) Societal Pressures would be positively related to Internalization, (b) Identification with Culture of Origin would be negatively related to Internalization, (c) Internalization of the thin ideal would be positively related to Body Image Concerns, and (d) Body Image Concerns would be positively related to Disordered Eating. Overall, the fit of the model was moderate, with some fit indices suggesting a good fit and others a poor fit (see Table 4).

All hypothesized pathways, however, were significant and in the expected direction (see Figure 4). Level of Identification with Culture of Origin and Perceived Pressure accounted for 27% of the variance in Internalization. Internalization, then, explained 20% of the Body Image Concern variance. Finally, Body Image Concerns accounted for 71% of the variance in Disordered Eating.

Model B

This model was the same as Model A, but included one additional pathway: Perceived Pressure was hypothesized to be positively related to Body Image Concerns. Thus, Model A was nested within Model B. Overall, the fit of this model was good (see Table 4). In addition, the chi-square difference test between the two models was significant, $\Delta\chi^2(1, N = 322) = 157.27$, $p < .001$, and the AIC decreased 155.27 with the addition of the pathway in Model B. These data suggest that Model B, although more complex, was a significantly better fitting model than Model A.

For Model B, the pathways between Level of Identification with Culture of Origin and Internalization, Perceived Pressure and Internalization, Perceived Pressure and Body Image Concern, and Body Image Concern and Disordered Eating were significant and in the expected direction. The pathway between Internalization and Body Image Concern, however, was nonsignificant (see Figure 5). Level of Identification with Culture of Origin and Perceived Pressure accounted for 18% of the variance in Internalization. Also, Perceived Pressure and Internalization and accounted for 59% of the Body Image Concern variance. Finally, Body Image Concern explained 71% of the variance in Disordered Eating.

Model B Respecification

Because Model B was the better fitting model, it was examined to determine if any changes were warranted to improve its fit with the data. Initially, the nonsignificant pathway between Internalization and Body Image Concerns was removed. Then, based on Lagrange multiplier (LM) Test (Bentler & Dijkstra, 1985; Lee, 1985), I made one additional change to the model. I added a pathway between Internalization and Disordered Eating. This change was consistent with past empirical research that has demonstrated relationships between the two variables (e.g., Griffiths, Mallia-Blanco, Boesenberg, Ellis, Kirrili, Taylor, Wyndhan, 2000; Halliwell & Harvey, 2006; Phan & Tylka; 2006), and resulted in a decrease in the AIC value by 25.98. The final fit of this respecified model was very good (see Table 4).

In the respecified model, all pathways were significant and in the expected directions. Level of Identification with Culture of Origin and Perceived Pressure

accounted for 18% of the variance in Internalization. Perceived Pressure accounted for 59% of the variance in Body Image Concern. Body Image Concern and Internalization explained 79% of the Disordered Eating variance.

Table 1

*Correlation Matrix of Measured Variables and Demographic Variables (*N = *322)*

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. AAAS-R	--													
2. MEIM - EI	.35**	--												
3. PSPS	.02	-.04	--											
4. PSIQ-M	.05	-.03	.55**	--										
5. SATAQ-3-P	-.02	-.06	.64**	.64**	--									
6. BAAR-PF	.03	-.07	.25**	.17**	.32**	--								
7. BAAR-AT	-.09	-.19**	.30**	.17**	.29**	.65**	--							
8. BSQ-10-R	.08	-.03	.65**	.49**	.60**	.26**	.28**	--						
9. BPSS-R-Body	.01	.17**	-.47**	-.38**	-.44**	-.20**	-.24**	-.69**	--					
10. BULIT-R	.11	-.03	.47**	.27**	.38**	.25**	.37**	.62**	-.43**	--				
11. EAT-26	.09	.11	.41**	.24**	.33**	.34**	.27**	.45**	-.27**	.41**	--			
12. MCSD	.01	.11*	-.15**	-.14*	-.19**	-.19**	-.14**	-.22**	.24**	-.19**	-.07	--		
13. Family Income	-.12*	.14*	.08	.01	<.00	.06	-.01	-.02	.04	-.05	.15**	.02	--	
14. BMI	.07	.07	.34**	.28**	.21**	-.09	.01	.39**	-.39**	.22**	.05	.07	-.10	--

Note. AAAS-R = African American Acculturation Scale – Revised; MEIM-EI = Multi-Group Ethnic Identity Measure - Ethnic Identity; PSPS = Perceived Sociocultural Pressure Scale; PSIQ-M = Perceived Sociocultural Influences on Body Image and Body Change Questionnaire; SATAQ-3-P = Sociocultural Attitudes Toward Appearance Questionnaire-3 – Pressure; SATAQ-3-IG = Sociocultural Attitudes Toward Appearance Questionnaire-3 – Internalization General; BAAR-PF = Beliefs About Attractiveness Scale – Revised - Importance of Being Physically Fit; BAAR-AT = Beliefs About Attractiveness Scale – Revised - Importance of Being Attractive and Thin; BSQ-10-R = Body Shape Questionnaire – Revised; BPSS-R-Body = Body Parts Satisfaction Scale – Body Factor; BPSS-R-Overall = Body Parts Satisfaction Scale – Overall Body Satisfaction; BULIT-R = Bulimia Test – Revised; EAT-26 = Eating Attitudes Test 26; MCSD = Marlowe-Crowne Social Desirability Scale- Form B; BMI = Body Mass Index. *Correlation is significant at the .05 level (2-tailed). **Correlation is significant at the .01 level (2-tailed).

Table 2

*Descriptive Statistics for Measured Variables (*N = *322)*

Variable	No. Items	*M*	*SD*	Skewness	Kurtosis	Internal Consistency
AAAS-R	47	210.81	34.09	-3.20	3.61	.86
MEIM - EI	14	3.21	.46	-2.74	-1.04	.86
PSPS	8	2.05	.85	4.37	-1.21	.85
PSIQ-M	3	3.49	1.40	-4.13	-3.69	.89
SATAQ-3-P	8	2.80	1.26	.18	-4.66	.93
BAAR-PF	9	4.15	1.25	-1.65	-.91	.83
BAAR-AT	10	2.14	1.01	10.38	10.04	.86
BSQ-10-R	10	2.56	1.33	6.29	-.57	.96
BPSS-R-Body	7	4.14	1.08	-2.71	-.93	.86
BULIT-R	36	44.86	13.45	11.10	7.94	.89
EAT-26	26	6.55	5.92	14.24	18.67	.72
MCSD	12	6.25	2.74	-.98	-2.07	.68

Note. AAAS-R = African American Acculturation Scale – Revised (degree to which individual identifies with African American culture: scores range from 47[*low identification*] to 235[*high identification*]); MEIM-EI = Multi-Group Ethnic Identity Measure - Ethnic Identity (level of positive ethnic identity: scores range from 1[*low ethnic identity*] to 4[*high ethnic identity*]); PSPS = Perceived Sociocultural Pressure Scale (outside pressure to be thin: scores range from 1[*low outside pressure*] to 5[*high outside pressure*]); PSIQ-M = Perceived Sociocultural Influences on Body Image and Body Change Questionnaire - Media (perception of messages about physical appearance from the media: scores range from 1[*low pressure to change physical appearance*] to 5[*high pressure to change physical appearance*]); SATAQ-3-P = Sociocultural Attitudes Toward Appearance Questionnaire-3 – Pressure (individual's attitude regarding the influence of the media: scores range from 8[*low pressure from the media to change body*] to 40[*high pressure from media to change body*]); SATAQ-3-IG = Sociocultural Attitudes Toward Appearance Questionnaire-3 – Internalization General (individual's attitude regarding the influence of the media: scores range from 8[*low internalization of media messages*] to 40[*high internalization of media messages*]); BAAR-PF = Beliefs About Attractiveness Scale – Revised - Importance of Being Physically Fit (agreement with U.S. societal values regarding beauty and attractiveness: scores range from 1[*low internalization*] to 7[*high internalization*]); BAAR-AT = Beliefs About Attractiveness Scale – Revised - Importance of Being Attractive and Thin (agreement with U.S. societal values regarding beauty and attractiveness: scores range from 1[*low internalization*] to 7[*high internalization*]); BSQ-10-R = Body Shape Questionnaire – Revised (preoccupation with body size and shape: scores range from 1[*low preoccupation*] to 6[*high preoccupation*]); BPSS-R-Body = Body Parts Satisfaction Scale – Body Factor (physical body satisfaction: scores range from 1[*low satisfaction*] to 6[*high satisfaction*]); BPSS-R-Overall = Body Parts Satisfaction Scale – Overall Body Satisfaction (overall body satisfaction: scores range from 1[*low satisfaction*] to 6[*high satisfaction*]); BULIT-R = Bulimia Test – Revised (behaviors associated with bulimia: scores range from 28[*no bulimic symptoms*] to 140[*high bulimic symptoms*]); EAT-26 = Eating Attitudes Test 26 (thoughts and beliefs related to eating habits and body weight: scores range from 0[*low disordered eating symptoms*] to 78[*high disordered eating symptoms*]); MCSD = Marlowe-Crowne Social Desirability Scale-Form B (socially desirable response pattern: scores range from 1[*low social desirability*] to 12[*high social desirability*]).

Table 3

*Standardized Parameter Estimates for the Measurement Model (*N = *322)*

Latent Variables	Observed Variables	Factor Loadings	Error Variance
Identification with Culture of Origin	AAAS-R	.376	.927
	MEIM-EI	.927	.375
Perceived Pressure	PSPS	.803	.596
	PSIQ-M	.709	.705
	SATAQ-3-P	.826	.564
Internalization	BAAR-PF	.740	.672
	BAAR-AT	.878	.479
Body Image Concern	BSQ-10-R	.980	.199
	BPSS-Body	-.706	.709
Disordered Eating	BULIT-R	.747	.665
	EAT-26	.546	.838

Note. AAAS-R = African American Acculturation Scale – Revised; MEIM-EI = Multi-Group Ethnic Identity Measure - Ethnic Identity; PSPS = Perceived Sociocultural Pressure Scale; PSIQ-M = Perceived Sociocultural Influences on Body Image and Body Change Questionnaire; SATAQ-3-P = Sociocultural Attitudes Toward Appearance Questionnaire-3 – Pressure; BAAR-PF = Beliefs About Attractiveness Scale – Revised - Importance of Being Physically Fit; BAAR-AT = Beliefs About Attractiveness Scale – Revised - Importance of Being Attractive and Thin; BSQ-10-R = Body Shape Questionnaire – Revised; BPSS-R-Body = Body Parts Satisfaction Scale – Body Factor; BULIT-R = Bulimia Test – Revised; EAT-26 = Eating Attitudes Test 26.

Table 4

Model Fit and Comparison (N = 322)

Model	*df*	χ^2	NNFI	CFI	AIC	SRMR	RMSEA (90% CI)	χ^2 Change [a]
Measurement Model	36	92.97*	.990	.994	20.97	.047	.070 (.053 - .088)	--
Model A	42	281.42*	.965	.974	197.41	.133	.133 (.118 - .148)	--
Model B	41	124.15*	.988	.991	42.15	.062	.079 (064 - .095)	157.27*
Respecified Model B	42	100.17*	.992	.995	16.17	.053	.066 (.049 - .082)	n/a [b]

Note. NNFI = Non-Normed Fit Index (> .95 indicates good fit); CFI = comparative fit index (> .90 indicates good fit); SRMR = standardized root mean squared residual (< .08 indicates good fit); RMSEA = ROOT MEAN SQUARE ERROR OF APPROXIMATION (<.06 indicates good fit); 90% CI = 90% confidence interval. [a] Chi-square change values reflect a comparison to Model A. [b] Respecified Model B represents a reparameterization of Model B, so it was not nested and chi-square comparisons could not be run. * = $p < .001$.

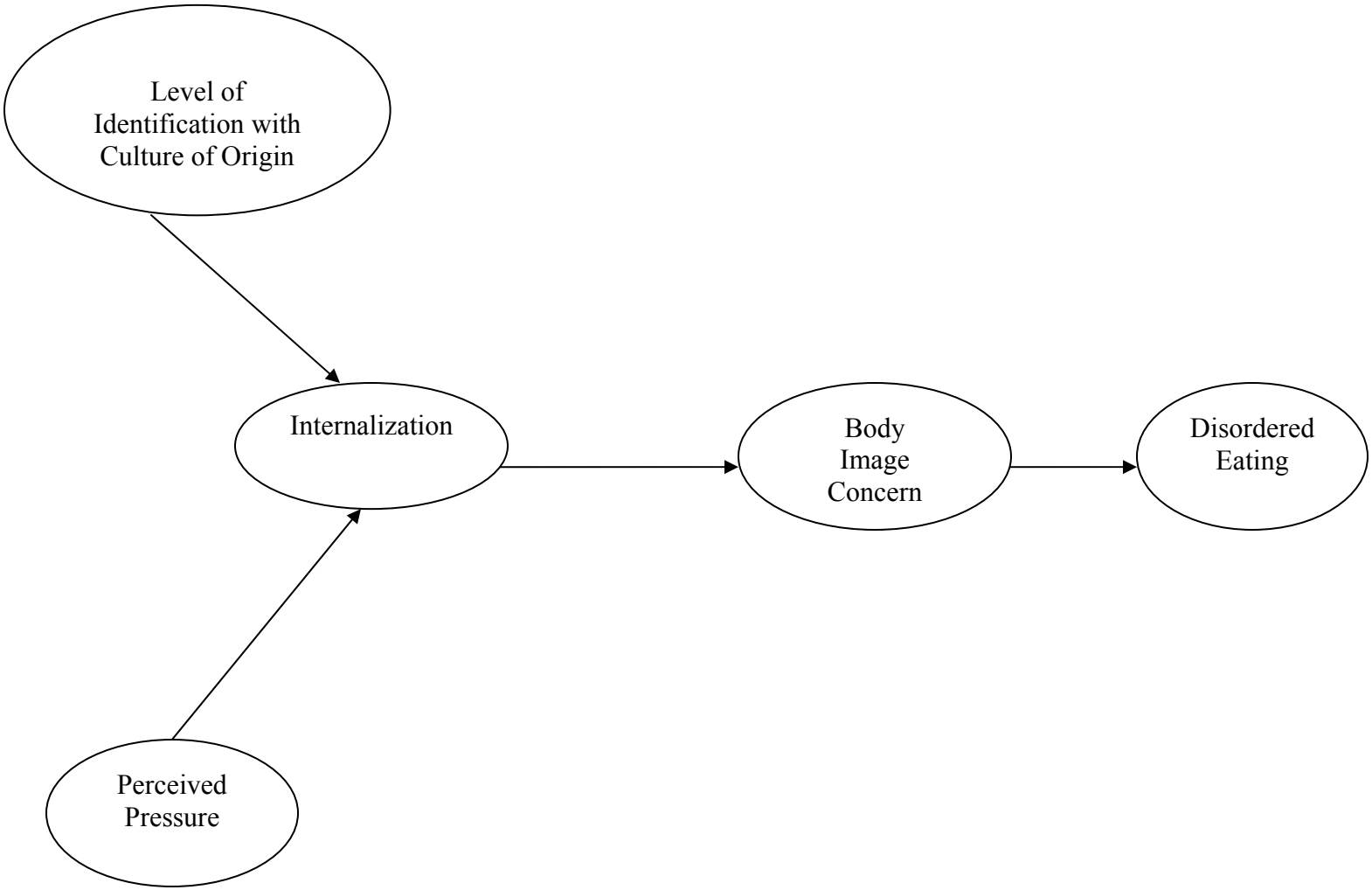

Figure 1. Basic diagram of Model A.

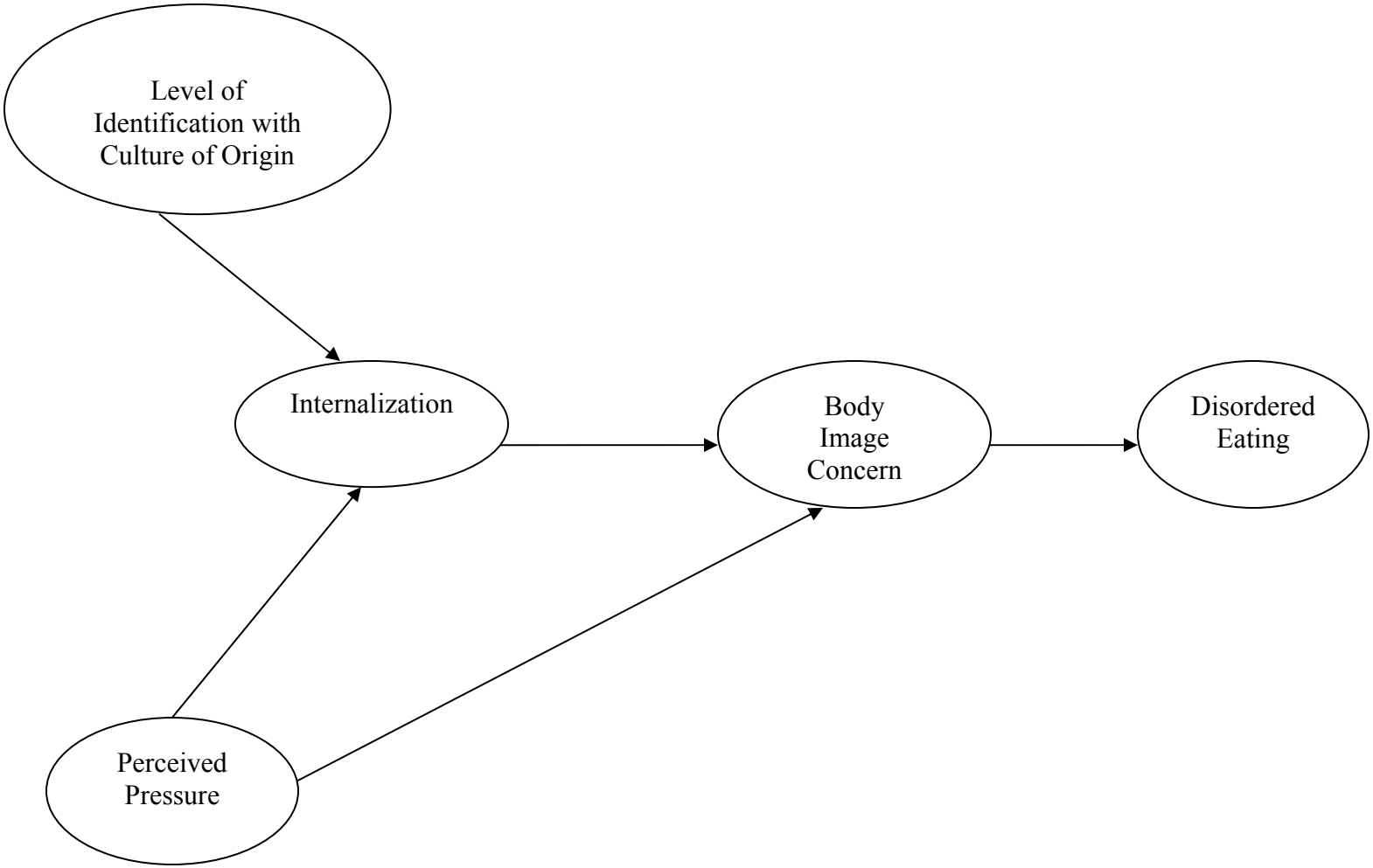

Figure 2. Basic diagram of Model B.

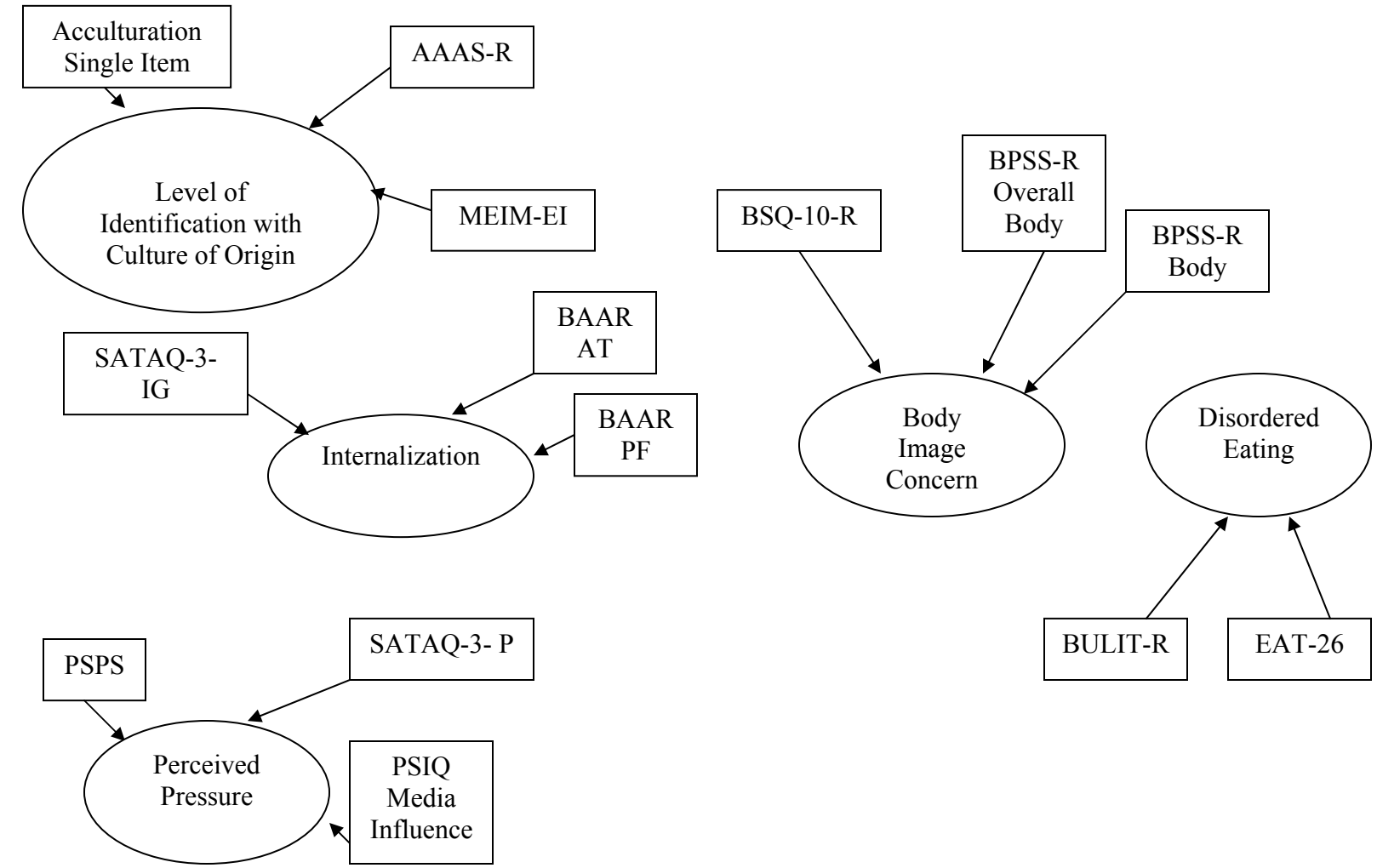

Figure 3. Diagram of the hypothesized measurement model.

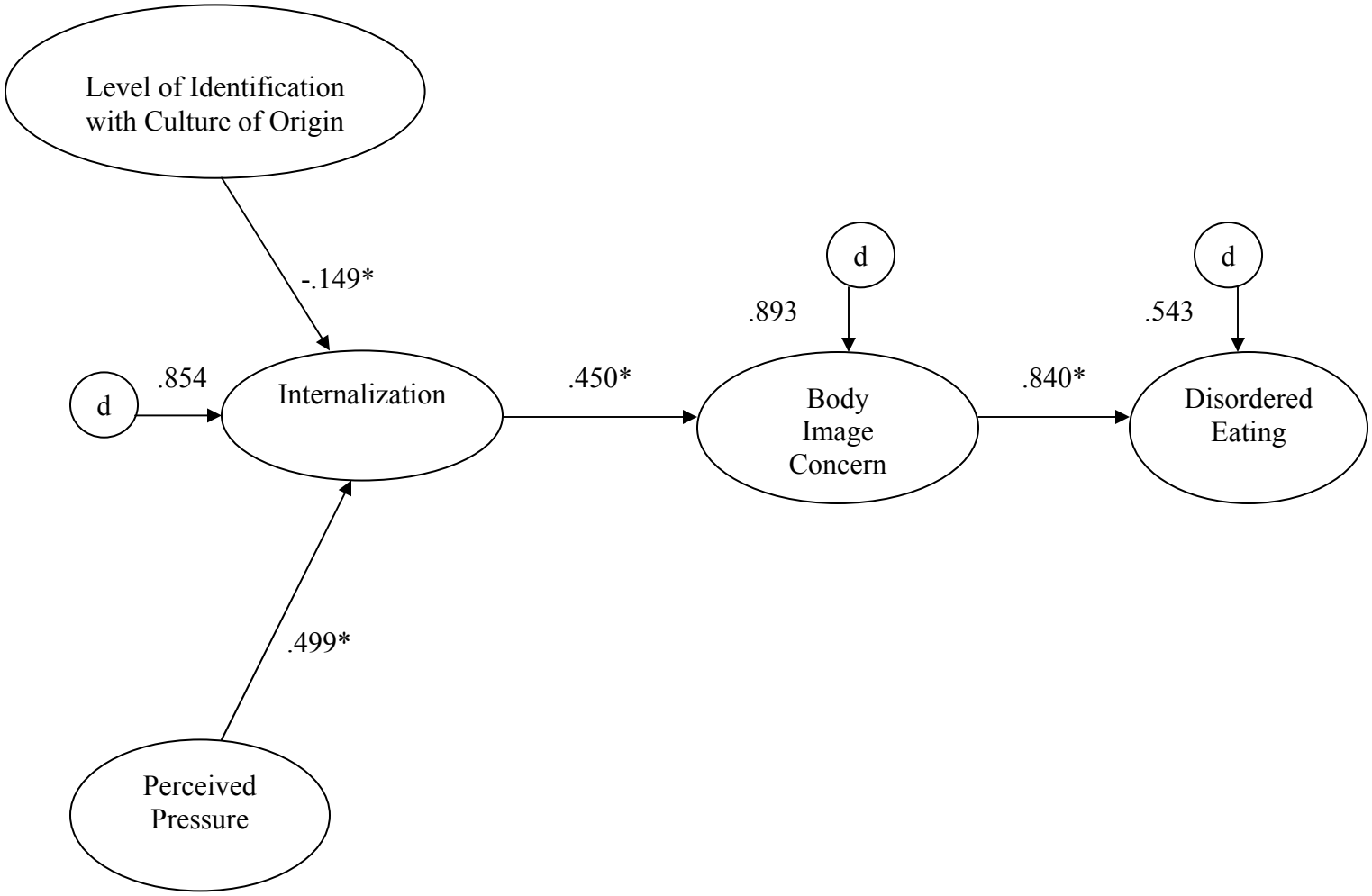

Figure 4. Diagram of structural Model A with the standardized parameter estimates and disturbance terms. * = $p < .05$.

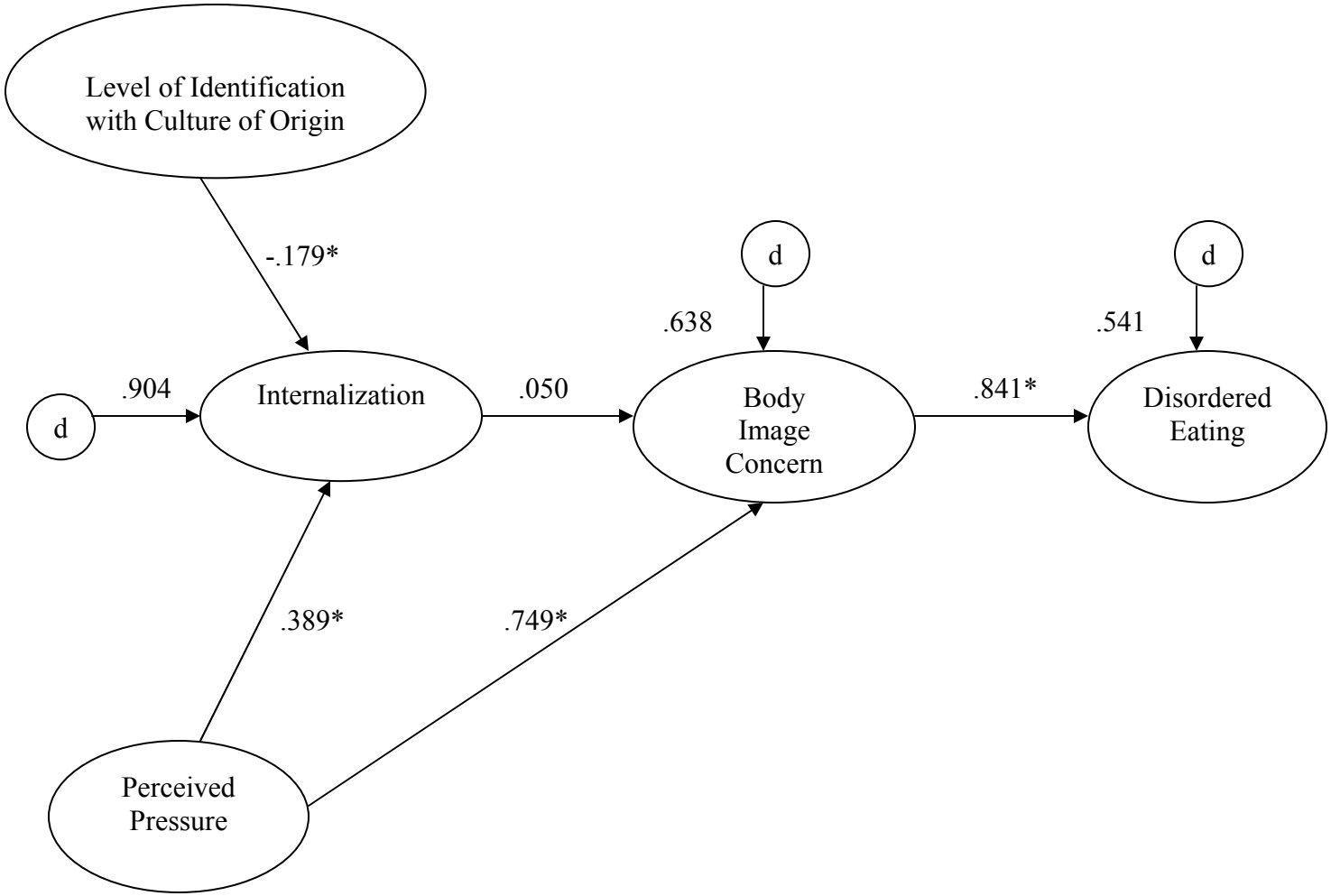

Figure 5. Diagram of structural Model B with the standardized parameter estimates and disturbance terms. * = $p < .05$.

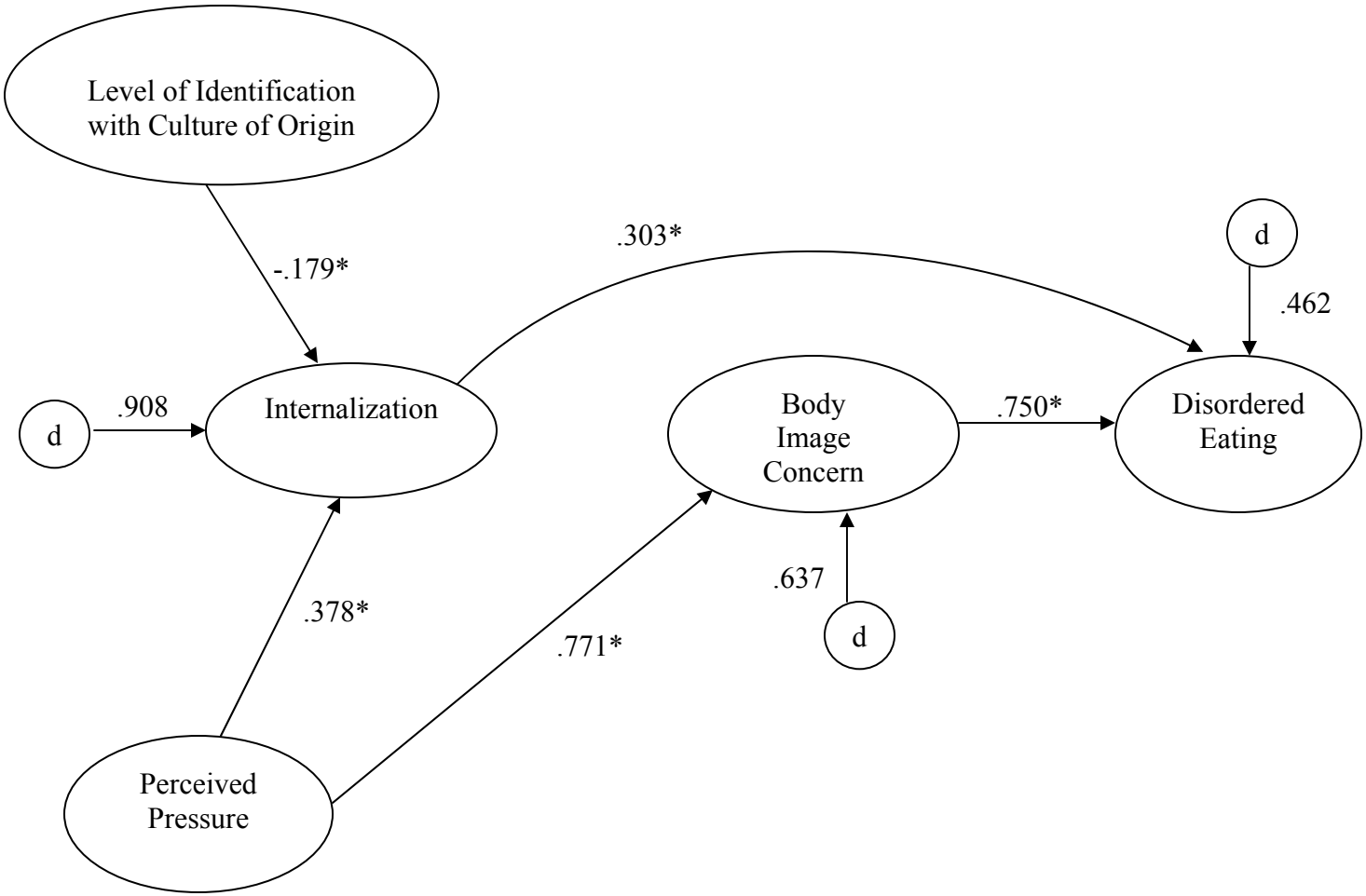

Figure 6. Diagram of respecified Model B with the standardized parameter estimates and disturbance terms. * = $p < .05$.

CHAPTER 4

DISCUSSION

Recent research has demonstrated that eating disorders occur within minority groups, such as Hispanic, Native Americans, Asian Americans, and African American women, at levels similar to and, in some cases, higher than Caucasians (Cavanaugh & Lemberg, 1999; Crago et al., 1996; leGrange et al., 1998; Lester & Petrie, 1998a; Lester & Petrie 1998 b; Mulholland & Mintz, 2001; Osvold & Sodowsky, 1993; Weiss, 1995). However, much of the eating disorder research involving minority women has been simple group comparisons between minority and Caucasian women (Abrams, Allen, & Gray, 1993; Fisher, Pastore, Schneider, Pegler, & Naolitano, 1994; Gross & Rosen, 1988; Lucero et al., 1992; Pumariega, Gustavson, Gustavson, & Motes, 1994; Smith & Krejci, 1991). Such studies are limited in two important ways. First, they assume that Caucasians are the "norm" against which other women should be compared. Thus, between group differences are viewed from a deficit perspective such that minority women often are pathologized if their responses differ from those of the Caucasian comparison group. Second, such studies generally fail to provide information about which psychosocial variables may contribute to the development and maintenance of disordered eating among minority women and thus should be the focus of future research and interventions. According to Root (2001), because the risk factors for eating disorders may vary across different groups of women, researchers need to utilize within subject designs and

examine predictive relationships in large groups of minority women so as to ascertain which variables produce what risk among which racial/ethnic groups.

In this study I tested two related models, one nested within the other, concerning the relationship of acculturation and psychosocial variables to the presence of eating disorder symptoms among African American women. Of these, Model B offered the better fit to the data, particularly when it was respecified by dropping a nonsignificant pathway and adding one pathway that was supported by previous research. For this respecified model, higher levels of identification with culture of origin were related to lowever levels of internalization of the sociocultural beauty ideal. That is, the more an African American woman identified with her culture's values, beliefs, practices, the less she internalized the thin ideal that is pervasive in U.S. society. Although this finding differs from that of Phan and Tylka (2006), who reported no relationship between ethnic identity and internalization among Asian American female undergraduates, it is consistent with other research (e.g., Greenberg & LaPorte, 1996; Striegel-Moore & Cachelin, 2001). For example, Striegel-Moore and Cachelin reported that upwardly mobile women belonging to minority groups adhere to the thin ideal as a means of acculturating. Further, Greenberg and LaPorte (1996) found that although both African American and Caucasian men tended to prefer thin over large female body shapes, the African American men's preferences were larger than their Caucasian counterparts. They suggested that identification with African American culture encourages women to appreciate their current body size, thereby empowering them to resist the thin ideal. It seems that, within African American culture, a thin body is not considered a prerequisite

for positive self- concept or improved social interactions. Therefore, there is no need for African American women to adhere to the thin ideal as a means of self-improvement.

Increased exposure to and pressure to conform to U.S. societal values regarding attractiveness (e.g., being thin is highly valued) that are communicated by family, friends and the media were related to an increase in the extent to which African American women internalize these values. This relationship between the perception of societal pressures to be thin and beautiful and internalization of those ideals found in this study is consistent with previous research (e.g., Phan & Tylka, 2006; Stice, 2000; Tylka & Subich, 2004). For example, in a sample of college women, Tylka and Subich (2004) found that perceived pressures accounted for 48% of the variance in internalization. In addition, in his meta-analysis, Stice (2000) reported that social pressures for thinness contributed to increased internalization of the thin ideal. Thus, the more women, regardless of their racial/ethnic background, are exposed to the unrealistic beauty ideals that are ubiquitous in U.S. society, the more likely they are to internalize those beliefs about the value of being thin and attractive. As they develop, girls receive the message that to be valued, successful and happy, they need to be thin and attractive. This message, through repeated exposure, becomes what the girls believe to be true, creating an image and an ideal that is internalized and used in their own evaluations of themselves and their bodies (Presnell, Bearman, & Stice, 2004).

Increased exposure to messages regarding U.S. society's beauty ideal also was related to increased body image concerns among African American women, accounting for 59% of the variance. In related studies, Groesz, Levine, ande Murnen (2002) found

that increased exposure to the thin ideal through the media was related to increased levels of body image concern in females, whereas Dittmar (2005) observed that pressure from a social group to adhere to the thin-ideal led to higher levels of body image concern. The findings from the current study and Groesz et al. (2002) and Dittmar (2005) are consistent with Grabe, Ward, and Hyde's (2008) meta analysis, which demonstrated that, across studies, media exposure was consistently and inversely related to body satisfaction. The socially accepted body ideal is one that is difficult or impossible for women to attain; however, there is still pressure to conform to that ideal (Presnell et al., 2004). When confronted the ubiquitous societal image of female beauty and attractiveness, African American women evaluate their bodies as not measuring up. This ideal-real discrepancy in body size and shape likely leads to them being dissatisfied. Although the thin ideal is not part of their cultural values, greater exposure to this mainstream cultural ideal appears to increase not only African American women's internalization of it, but also the extent to which they feel dissatisfied with how their bodies look.

In the original model, I hypothesized a pathway between internalization and body image concerns. However, this pathway became nonsignificant when the path from pressures to internalization was added, and thus was dropped in the respecified model. This nonsignificant pathway is inconsistent with past research that has demonstrated relationships between the two variables among Asian American (Phan & Tylka, 2006) and Caucasian (Stice, 2001) women. It may be that differing cultural values regarding body size and shape between racial/ethnic groups might account for the differences seen

between Caucasian women (Stice, 2001), Asian American women (Phan & Tylka, 2006), and the African American women sampled for this study. In those cultures where the thin ideal is predominant and accepted (Caucasian) or in which women have smaller body sizes (Asian American) (Kawamura, 2002), it makes sense that internalization would play a central role in determining body image concerns. However, in cultures where the thinness is not valued or where a larger body size is idealized (i.e., African American culture), the likelihood of the thin ideal being internalized and thus influential in determining body image concerns is small. In fact, in cultures where a larger body size is valued, it appears that the extent to which women are exposed to pressures to be thin is significantly more important in determining their body dissatisfaction than the extent to which they have internalized the that ideal.

Although not originally hypothesized, in the respecified model, higher levels of internalization were related to higher levels of disordered eating, a path that has been shown to be significant in previous research (e.g., Phan & Tylka, 2006; Piran & Cormier, 2005; Stice, 2000; Stice, Schupak-Neuberg, Shaw, & Stein, 1994). The significant pathway between internalization and disordered eating suggests that women who have adopted U.S. societal values regarding attractiveness as their own report higher levels of disordered eating attitudes and behaviors. Stice (2000) noted that internalization of the thin ideal might prompt dieting behavior without the involvement of body dissatisfaction. Women who have internalized the beauty ideal are indicating a strong desire for social approval, which may serve as the impetus to change their bodies. These women may engage in behaviors, such as restricting their food intake or increasing their level of

exercise, in an effort to reshape their bodies to more closely approximate the societal ideal. However, because this ideal is unattainable for most women (Brownell, 1991), and because they are unlikely to be able to sustain the rigid dietary restriction and workout regimen necessary to actually cause significant changes in their bodies, they are likely to experience disinhibition (Heatherton & Baumeister, 1991) and binge eat in response to their state of extreme caloric deficiency. When followed by some form of purging, which is done to cope with the feelings of guilt and shame that often accompany binge eating, these women may develop the cycle that is the immediate precursor to disordered eating, in particular bulimia nervosa.

Body image concerns also were related to disordered eating such that the more concerns the African American women expressed, the greater their level of eating pathology. This finding is consistent with past research that has been conducted with minority and nonminority women (e.g., Levine & Harrison, 2004; Phan & Tylka, 2006; Polivy & Herman, 2004; Thompson et al., 1999; Tylka & Subich, 2004), and underscores the importance of body dissatisfaction in the prediction of disordered eating behaviors. In fact, research has shown that body dissatisfaction is the best predictor of disordered eating (Phan & Tylka; Stice, 2001; Tylka & Subich, 1999). For example, in a sample of female high school students, Stice (2001) found that an increase in body dissatisfaction predicted an increase in dieting and negative affect which, in turn, predicted an increase in bulimic symptoms. Stice (2001) stated that dieting can be an outcome of body dissatisfaction because women perceived dieting to be an effective form of weight control and a mechanism they could use to change the size and shape of their bodies.

Additionally, Western culture evaluates women based on appearance (Stice, 2001). Consequently, women who are dissatisfied with their bodies because they do not conform to the thin ideal tend to experience negative affect. Although dieting and negative affect are different constructs, Stice (2001) has hypothesized that both are causally related to disordered eating. Women who diet often engage in binge eating, as a result of depriving themselves of calories, and then they use means, such as purging, to compensate for the binge (Stice, 2001). Additionally, Stice (2001) found that women experiencing negative affect may binge eat as a way of comforting themselves. Given that body image concern has been seen to predict behaviors and feelings directly related to eating pathology (Stice, 2001), it follows that body image concern is an integral element in the development of eating pathology.

Overall, this study replicates and extends prior research by demonstrating that, among African American women, perceived pressures, internalization, and body image concerns are related to disordered eating symptomology (Brumberg, 1988; Cavanaugh & Lemberg, 1999; Charanasomboon et al., 2003; Garner, 1993; Levine & Harrison, 2004; Low et al., 2003; Polivy & Herman, 2004; Stice, 2000; Stice, 2001; Thompson et al., 1999; Thompson & Stice, 2001). In addition, this study showed that level of identification with culture of origin plays an important role in understanding the relationships among the psychosocial variables and disordered eating. In the respecified model, the following relationships between the aforementioned psychosocial correlates of disordered eating were supported: (a) higher levels of identification with culture of origin were related to lower levels of internalization (b) higher levels of perceived pressure were

related to higher levels of internalization (c) higher levels of perceived pressure were related to higher levels of body image concern (d) higher levels of body image concern were related to higher levels of disordered eating, and (e) higher levels of internalization were related to higher levels of disordered eating.

Weight and Bulimic Symptomatology

Based on the weight guidelines set forth by the Centers for Disease Control (2008), only 3.1% could be classified as underweight. The remainder were either in the normal weight range (49.4%), or were classified as overweight (23.9%) or obese (21.7%). Despite a large percentage of overweight/obese women, very few reported being dissatisfied with their current appearance (17.1%). The percentages of women in each weight range and the general level of body satisfaction among African American women found in this study is consistent with past research (Gray et al., 1987; Hsu, 1987; Nelson, Gortmaker, Subramanian, Cheung, & Wechsler, 2007; Rubin, Fitts, Becker, 2003). For example, Hedley, Ogden, Johnson, Carroll, Curtin and Flegal (2004) found that 49% of African American women were obese, whereas only 38.4% of Mexican American women and 30.7% of Caucasian women were classified as such. In addition, in an analysis of focus group data, Rubin et al. (2003) found that, when compared to mainstream ideals of Caucasian women, African American women generally rejected the thin ideal in favor of accepting their bodies' larger size and greater weight. Further, the African American women in Rubin et al.'s (2003) study expressed a beauty ideal that was focused on self-care, spirituality, and individual style. Overall, previous research and the results of the current study suggest that African American women tend to be satisfied

with their bodies even if their bodies, on average, are larger than is found among other racial/ethnic groups of women and what is portrayed as the ideal in different media outlets (e.g., TV, magazines).

Based on their BULIT-R or EAT responses, only 2.2% to 3.7% of participants could be considered at serious risk for presence of an eating disorder (i.e., bulimia nervosa, anorexia nervosa, or eating disorder, not otherwise specified), which is consistent with past research (e.g., Edwards-Hewitt & Gray, 1993, Fernandez, Malacrne, Wilfley, & McQuaid, 2006; Gray et al., 1987; Maceyko & Nagelberg, 1985; Mulholland & Mintz, 2001). For example, Fernandez et al. (2006) reported a prevalence rate of 2.1% for bulimia nervosa among African American women who had taken the BULIT-R. Similar prevalence rates have been reported among primarily Caucasian samples as well. For example, Cohen and Petrie (2005) found that 9.6% of their primarily Caucasian sample was classified as eating disordered. These findings indicate that African American women are at similar risk for developing an eating disorder as their Caucasian counterparts, and suggest that proper eating disorder prevention and treatment is as important for African American women as it is for Caucasian women.

Treatment Implications

The results of this study have several implications for counseling and treatment of disordered eating among African American women. First, the experience of sociocultural pressures is important in the development of disordered eating, and thus becomes a factor that can be targeted to reduce women's risk. Psychoeducation, either in a group or individual therapy setting, about the presence of the thin-ideal, the myths attached to it,

and the cost associated with adhering to it may assist women in thinking more critically about the messages they receive and may inoculate them against their adoption by decreasing the need to compare themselves and their bodies to others. This approach was found to be effective in decreasing both social comparison and the negative impact of viewing media presenting the thin ideal (Posavec, Posavec, & Weigel, 2001). Also, therapy focused on educating African American women about positive ways to build self-worth while providing them with support as they combat social pressure to be thin might be helpful. Stice, Presnell, Gau, and Shaw (2007) found that having women of various racial/ethnic backgrounds critique the thin ideal resulted in a decrease in internalization of the thin ideal, body dissatisfaction, negative affect, dieting, and bulimic symptoms. Though not as consistently efficacious, Stice et al. (2007) also found that having women plan for and engage in healthy eating as a means of balancing their need for energy and intake of food resulted in a decease in body dissatisfaction, negative affect, bulimic symptoms. Thus, therapeutic interventions should focus on getting African American women actively involved in contesting the value of the thin ideal and using food to care for their bodies.

Second, given the weight status of the women in the study as well as the fact that the majority reported binge eating at some point in time, clinicians who work with African American women may want to focus on binge, as opposed to restrictive, type behaviors. Therefore, it will be important for clinicians to ask their African American clients about binge eating in addition to the other behaviors typically associated with disordered eating. For example, if African American women are binge eating as a means

of managing negative emotions, then it will be important for clinicians to perform interventions that address more healthy ways of navigating difficult affect. Additionally, educating African American women on the dangers of binge eating, such as adult onset diabetes, high cholesterol, and high blood pressure (Feresu, Zhang, Puumala, Ullrich, & Anderson, 2008), will be important as well.

Last, identification with culture of origin was the only construct that reduced some of the other risk factors in the model. Given that maintaining the values, beliefs, characteristics, and behaviors associated with their culture of origin provides protection against internalizing the thin ideal, and thus from developing disordered eating behaviors, it may be useful for counselors to talk with African American women about how they can nurture these beliefs while still adopting mainstream cultural values. For example, helping African American women appreciate and accept what their culture values about women's body shape and size may provide them with a more realistic and accepting standard for female beauty. Such discussions and education may occur in small group settings, where African American women can explore, in a supportive environment, their cultural values and beliefs and consider the real, health-related costs associated with abandoning them and adopting those of the mainstream culture.

Limitations and Implications for Future Research

There were several limitations in this study that warrant discussion. First, all data were collected via self-report, so participants may have underreported symptoms or simply chosen to present themselves in a more positive light. Although possible, correlations between the psychosocial variables and a measure of social desirability were

low, suggesting that the participants' responses were not strongly influenced by this type of responding. In addition, prevalence rates of disordered eating were similar to what has been found in past research with African American women, suggesting that this sample's reporting of symptoms at least was consistent with that found among other groups. Second, the Perceived Pressure Factor was examined through measures that asked about the general influence of the media and peers on the individual's perception of their need to adhere to the thin ideal. Although there was an attempt to measure the specific roles family members may play, the PSIQ did not allow a usable score for inclusion on this factor. Thus, future research may want to expand how the pressures construct is conceptualized, including usable measures of family influences.

Third, this study included only African American women who were in college. Although the study provided valuable information about the relationship between psychosocial correlates of disordered eating, the results only generalize to other African American women who are of a similar age and educational background. Thus, future research may want to examine the current study's model among other groups of female African American (e.g., high school students; women without a college education) to see if the relationships among the factors hold. In addition, because disordered eating risk factors may be different for different racial/ethinc groups, future eating disorder research should explore models in other minority groups, such as Mexican American women (Kuba & Harris, 2001; Warren, Gleaves, Cepeda-Benito, del Carmen Fernandez, & Rodriguez-Ruiz, 2005).

Fourth, 46% of the participants had to have at least one data point replaced. Large numbers of missing data points can be problematic because if the missing data are systematic, meaning that there is a pattern to the omissions, then the analysis of the data set will be inaccurate. Also, it is possible that the manner in which the data were replaced could have artificially reduced the total scores, thereby causing the relationships in the model to be underestimated. Although the number of missing data points is potenially problematic, it is unlikely that the pattern of missing data is sytematic because no more than six data points, out of a possible two hundred and fifty data points, were replaced for a single participant. Additionally, in order to keep total scores as accurate as possible, the missing data points were replaced using the participant's mean score from the incomplete measure.

Lastly, the best fitting model was a respecified model, though the changes made to the model were limited and were supported by past research. Even so, this model has not been confirmed with an independent sample, and thus the relationships among the factors may or may not be valid. It is important to note, though, that the all the relationships in the model have empirical support from past studies. Finally, the current study was based on cross-sectional data, thus no statement about the variables as true risk factors can be made. Future research should examine these relationships using longitudinal data so determinations can be made about their predictive utility. In addition, in such studies, it may be useful to consider other eating disorder outcomes, such as binge eating, because that may be more relevant to the experiences of African American women.

Conclusions

The results of this study have provided information about the nature of the empirically validated eating disorder model within African American women, as well as the role of Level of Identification with Culture of Origin in the eating disorder model. It was determined that there is a direct, negative relationship between Level of Identification with Culture of Origin and Internalization. Perceived Pressure was directly and positively related to both Internalization and Body Image Concerns. Body Concerns and Internalization were both directly and positively related to Disordered Eating. These findings suggest that although many of the same constructs related to disordered eating in other ethnic groups are also related to disordered eating among African American women, the relationships between the factors differs across racial/ethnic groups. This information can help clinicians and researchers to better treat and understand the nature of disordered eating behavior and correlates among African American women.

APPENDIX

LITERATURE REVIEW

In Western society, there appears to be two ideal body types: slender, like runway models (Furnham, Badmin, Sneade, 2002), and athletically curvaceous, like Sports Illustrated swimsuit models (Hausenblaus & Carron, 1999). With these images so pervasive in United States (U. S) society, many women internalize them from an early age. The focus on attaining these body types, often called the "beauty ideals," can lead women to be dissatisfied with the current size and shape of their bodies (Levine & Harrison, 2004; Polivy & Herman, 2004; Thompson et al., 1999), and engage in behaviors such as dieting and excessive exercising to achieve them. In some cases, the desire to achieve U.S. ideals of beauty can lead to eating disorders.

Description of Eating Disorders

According to the *Diagnostic and Statistical Manual of Mental Disorders-IV* (*DSM-IV*; American Psychiatric Association [APA], 1994), anorexia nervosa and bulimia nervosa are the two major classifications of eating disorders. The symptoms of anorexia nervosa include: intense fear of becoming fat, abnormally low weight given the individual's height and weight, a distorted body image, and loss of menstrual periods. Individuals who are experiencing bulimia nervosa have the following symptoms: recurrent episodes, on average twice a week for at least three months, of bingeing followed by purging through vomiting, laxative, diuretic, fasting, or enema abuse. Individuals with bulimic symptoms also evaluate themselves based on their weight and size.

The *DSM-IV* (APA, 1994) also includes a catch-all category for individuals who are experiencing significant levels of eating pathology, but do not meet criteria for anorexia or bulimia. This category is called eating disorder not otherwise specified (EDNOS). Individuals who have EDNOS (a) meet criteria for anorexia but still continue to menstruate or who maintain a normal weight, (b) meet criteria for bulimia but do not purge often enough or who have not been purging for a long enough period of time, (c) purge without bingeing first, engage in oral expulsion (chewing food and spitting it out before swallowing), and binge eating. In general, researchers have viewed the EDNOS category as clinicially significant (Bunnell, Shenker, Nussbaum, Jacobson, & Cooper, 1990; Dancyger & Garfinkel, 1995; Franko & Omori, 1999).

Researchers also have described a group of individuals who exhibit symptoms of eating disorders, but who cannot be clinically diagnosed. This group of individuals is referred to as being subclinical or symptomatic. According to Drewnowski, Yee, Kurth, and Krahn (1994), individuals with subclinical eating disorders often diet and binge eat, may use purging as a means of controlling their weight (Mintz & Betz, 1988), and are likely to be dissatisfied with their bodies. Like clinical eating disorders, there are different classifications of subclinical eating disorders. For example, using the Questionnaire for Eating Disorder Diagnoses (Q-EDD; Minz, O'Halloran, Mulholland, & Schneider, 1997), identified specific subtypes of subclinical disorders, including: low-weight anorexia in which the individual meets the criteria for anorexia except that their weight is not low enough, behavioral bulimia in which the individual meets the criteria for bulimia but reports that their body shape does not influence them and that they feel in

control during a binge, and chronic dieter in which the individual diets strictly but does not binge or compensate for eating in excessive ways such as purging. These and other specifications (e.g., normative dieting, moderate levels of overeating, eating low-calorie foods, and counting calories) (Lowe et al., 1996; Mintz & Betz, 1988) suggest that there is a wide range of subclinical conditions.

It is important to note that although varying levels of eating pathology are increasing in prevalence in Western society, there are still individuals who engage in healthy levels of diet and exercise. These individuals have higher levels of body satisfaction than do women who have eating disorders or subclinical levels of eating disorders (Drewnowski, Yee, Kurth, & Krahn, 1994), and they neither fast nor binge eat (Drewnowski et al., 1994; Franko & Omori, 1999). Researchers refer to these women as normal or asymptomatic (Drewnowski et al., 1994; Franko & Omori, 1999).

Prevalence

Eating disorders primarily affect women who are in adolescence or at college-age (Cavanaugh & Lemberg, 1999; Drewnowski, Yee, & Krahn, 1988; Mintz & Betz, 1988; Phelps & Bajorek, 1991; Pyle, Neuman, Halvorson, & Mitchell, 1991; Stein, 1991; Striegel-Moore, Silberstein, Frensch, & Rodin, 1989). Due to stringent criteria for clinical diagnosis, within the general population only about 1 percent of individuals are classified with anorexia (Lappalainen & Tuomisto, 1999). Of that 1 percent, approximately 90 to 95 percent are women (Brumberg, 1988; Cavanaugh & Lemberg, 1999; Garner, 1993). The number of individuals who can be diagnosed with bulimia is a bit higher, between 3 and 8 percent, than the number of individuals who can be diagnosed with anorexia (White,

2000). Like anorexia, there is approximately a 10 to 1 ratio of women to men with respect to diagnosis (Connors & Johnson, 1987; Stein, 1991). Given that more women than men experience eating disorders, this literature review, as well as this study, will focus on women.

Eating disorders have the highest mortality rate of any psychological disorder (Striegel-Moore & Smolak, 2001). Approximately 10 percent of individuals who have been diagnosed with anorexia die from medical complications that result from the disorder, or from suicide (APA, 1994; Phelps & Bajorek, 1991). Overall, for women who are between the ages of 20 and 28, .5 percent die from complications associated with having an eating disorder (Striegel-Moore & Smolak, 2001). The fact that the mortality rate for eating disorders is so high suggests that it is important to study factors that put individuals at risk for developing an eating disorder, as well as factors that can provide protection against their development.

According to Dancyger and Garfinkel (1995) the prevalence rates of diagnosable eating disorders are higher on college campuses than in the general population. Research suggests that as many as 20 percent of college women suffer from a diagnosable eating disorder, with a quarter of these women having bulimia and the remainder of them having EDNOS (Cavanaugh & Lemberg, 1999). Other studies (e.g. Mintz & Betz, 1988; Cohen & Petrie, 2005) have found that upwards of 60 percent of college women may be symptomatic. Clearly, college women experience a disproportionately high rate of disordered eating.

In addition to high prevalence rates on college campuses, what makes subclinical eating disorders noteworthy is the fact that women with subclinical eating disorders share some psychological characteristics in common with women who have clinical eating disorders (Franko & Omori, 1999). For example, women with both clinical and subclinical eating disorders were similar to one another on measures of body satisfaction and concern (Drewnowski et al., 1994), emotional distress (Franko & Omori, 1999), internalization of the thin ideal (Cohen & Petrie, 2005), and social pressure to be thin (Tylka & Subich, 2003). In addition, not only were the subclinical and clinical groups similar to one another, they were more distressed than the nondisordered or asymptomatic women.

There are several reasons why eating disorders are so prevalent among college women. For example, during college individuals have to adjust to a new environment, increased academic demands, and the pressures of dating and being viewed as attractive by the opposite sex (Cavanaugh & Lemberg, 1999; Drewnowski et al., 1988; Mintz & Betz, 1988; Pyle, Neuman, Halvorson, & Mitchell, 1991; Stein, 1991; Striegel-Moore, Silberstein, Frensch, & Rodin, 1989). Also, Cooley and Toray (2001) found evidence to support that women tend to gain weight during college, specifically during the first year of college. Although there is no conclusive evidence linking weight gain to the development of an eating disorder (Cooley & Toray, 2001; White, 2000), higher Body Mass Indices (BMI) are related to an increase in disordered eating behaviors (Stein & Hedger, 1997; Taylor, Sharpe, Shisslak, Bryson, Estes, Gray, McKnight, Crago, Kraemer, & Killen, 1998) – likely due to concern about not having a physique that fulfills

the beauty ideal. Further, the academic competition that often exists in college environment can spill over into competition to achieve a thin body (Striegel-Moore et al., 1988), and thus increase the risk of engaging in disordered eating behaviors.

Age of Onset

There are two primary risk periods for eating disorder development – the onset of adolescence and the transition from high school to college (Barth, 1989; Crisp, 1980). Between the ages of 11 and 14 with the onset of puberty (Simmons & Blyth, 1987), there is a physical shift in the body that results in girls gaining and storing fat in their bodies (Hermes & Keel, 2003; Striegel-Moore, McMahon, Biro, Schreiber, Crawford, & Voorhees, 2001). This increase in body fat and development of a rounder and softer looking physique is in conflict with Western society's thin ideal, and can heighten concern about body size and shape in girls, particularly those who have internalize a thin, tubular look as the body ideal (Abraham & Llewllyn-Jones, 2001). Levine and Smolak (1992) have suggested that when girls experience these pubertal bodily changes simultaneously with the onset of dating and increased academic pressures, their risk of developing disordered eating behaviors and attitudes is increased. The experience of these cumulative stressors can lead girls to feel out of control in their lives and with their bodies and can prompt them to engage in extreme dieting and weight loss practices to cope. Such food restriction, when coupled with feelings of low self-worth, may result in the development of anorexia and/or bulimia nervosa.

The second risk period occurs during the transition from high school to college. During this time, young women have to negotiate changes in their social support

networks, living situations, romantic/physical relationships, and academic demands (Boskind-White & White, 2000; Striegel-Moore et al., 1989), and are separating and individuating from their families of origin (Armstrong & Roth, 1989). On a measure of attachment style, women who developed eating disorders showed more separation anxiety and then higher levels of depression after they separated from attachment figures than did asymptomatic women. Further, women who struggle with eating disorders appear to have lower self-efficacy and lower expectations for social acceptance (Armstrong & Roth, 1989; Troisi, Massaroni, Cuzzolaro, 2005). Eating disorders can serve as a means of redirecting attention away from problems with attachment to something more controllable, such as physical appearance (Cole-Detke & Kobak, 1996; Dozier, Stovall, & Albus, 1999).

For some, bulimia becomes a means of coping with the multiple changes and stressors in their environment. One reason that bulimia is a popular method of coping for college-aged women is the fact that the behaviors are so socially acceptable that it is not uncommon for young women to binge and purge together (Ogden, 2003). According to Nickerson and Nagle (2005), peers are very important in college because they provide a reference for appropriate behavior. Both Crandall (1988) and Zalta and Keel (2006) found that individuals may choose to interact with peers with similar traits and tendencies toward disordered eating. As part of that peer bond, women may inform one another about and engage in similar patterns of disordered eating (Crandall, 1988; Zalta & Keel, 2006). Thus, disordered eating attitudes and behaviors that may have been precipitated by

the stressors of coming to college, potentially are maintained or even exacerbated through the social milieus of female undergraduates.

Race/Ethnicity

As with age and gender, the prevalence rates of eating disorders appear to vary based on race/ethnicity as well as socioeconomic status. Early eating disorder studies suggested that eating disorders only occurred among Caucasian women (Garner, 1993; Phelps & Bajorek, 1991) who were from high socioeconomic levels (Andersen & Hay; 1985; Brumberg, 1988). It was assumed that only Caucasian women had eating disorders because early research was based on samples of anorexics from treatment clinics (Weiss, 1995). Anorexia was thought to be a result in these women due to pressure to conform to society's beauty ideal as well as the pressure to adhere to the high-achieving standards of their families (Stern, Dixon, Jones, Lake, Nemzer, & Sansone, 1989), stressors through to not exist for minority women. Researchers and clinicians may have further perpetuated this bias that eating disorders were only a problem of Caucasian women by overlooking incidences of eating pathology in minority women (Dolan, 1991; Silber, 1986).

Initially, only anorexia was classified as an eating disorder in the DSM (Coric & Murstein, 1993); however, during the 1970's, Bulimia emerged as another major form of eating pathology (Vandereycken, 1994), and it was given a diagnosis in the DSM-III in 1980 (Coric & Murstein, 1993). With the emergence of a "new" form of eating pathology, it became clear that a broader range of women exhibited eating disorder symptoms. Recent research suggests that eating disorders occur within minority groups, such as Hispanic, Native Americans, Asian Americans, and African American women at

levels similar to and, in some cases, higher than Caucasians (Cavanaugh & Lemberg, 1999; Crago, Shisslak, & Estes, 1996; leGrange, Stone, & Brownell, 1998; Lester & Petrie, 1998a; Lester & Petrie 1998b; Mulholland & Mintz, 2001; Osvold & Sodowsky, 1993; Weiss, 1995).

According to Crago et al. (1996) as well as Lester and Petrie (1998a), Hispanic women experience eating disorders at rates comparable to Caucasian women. Lester and Petrie (1998a) found that between 1.4 and 4.3% of their sample of college-age Mexican American women could be diagnosed with bulimia, a number that is comparable to the 3 to 3.8 percent reported among Caucasian female undergraduates (Mintz & Betz, 1988; Striegel-Moore et al., 1989). Additionally, Lester and Petrie (1998a) found that these women reported engaging in a wide range of pathological behaviors such as binge eating at least twice per week (11%), exercising daily in order to burn calories (12.2%), and dieting or fasting at least twice in the past year (25.9%). Similarly, Joiner and Kashubeck (1996) found that 20 percent of their predominantly Hispanic high school sample endorsed beliefs or behaviors indicative of anorexia, whereas 15 percent reported significant levels of bulimic symptoms.

Using data gathered from high schools between 1994 and 1995 for the National Longitudinal Study of Adolescent Health, Granillo, Jones-Rodriguez, and Carvajal (2005) examined the prevalence rate of eating disorder symptomatology in Hispanic girls. They found that 53.3 percent of the sample was currently on a diet, which was higher than expected in a comparable Caucasian sample (46.3%). In addition, the bulimic symptoms of Hispanics were compared to those of Caucasians and there were no

significant differences between the two groups (1.9% and 1.7% respectively) (Granillo et al., 2005). These findings support the idea that eating disorders are not only a problem for Caucasian women.

Among Native Americans, women may be more likely to develop eating disorders than Caucasian women. In a study conducted by Smith and Krejci (1991), Native American adolescents scored higher than their Caucasian and Hispanic counterparts on two eating disorder screening tools, the Eating Disorder Inventory (EDI; Garner, Olmstead, & Polivy, 1983) and the Bulimia Test (BULIT; Thelen, Mintz, & Vander Wal, 1996). Similarly, Lynch, Eppers, and Sherrodd (2004) found that Native American adolescent girls reported significantly higher levels of dieting, restricting, and purging than did their Caucasian counterparts.

Research also has been conducted on eating disorders and Asian American women. Kennedy, Templeton, Gandhi, and Gorzalka (2004) examined different groups of women of Asian descent in Canada, and found that, although there were differences between the groups, overall, Asian women reported lower levels of body satisfaction than did their Caucasian counterparts. In addition, Asian American women have levels of thin ideal internalization that are commensurate with those of Caucasian women (Shaw, Ramirez, Trost, Randall, & Stice, 2004). Despite these problems, Asian women were less likely to seek treatment than were Caucasian women, which may account for the assumption that Asian women are not body dissatisfied nor do they experience high levels of disordered eating (Kennedy, Templeton, Gandhi, & Gorzalka, 2004). In fact, the prevalence of eating disorders or disordered eating attitudes among Asian American

women ranges from 2 percent to 14 percent (Gross & Rosen, 1988; Lucero, Hicks, Bramlette, Brassington, & Welter, 1992; Nevo, 1985), which is comparable to levels found among Caucasians.

Initial studies have shown that, when compared with Caucasian women, African American women have fewer eating disorder symptoms (Hamilton, Brooks-Gunn, & Warren, 1985), and a more positive body image regardless of their size (Gray et al., 1987; Hsu, 1987). More recent studies of African American women, however, suggest that the prevalence of eating disorder symptoms is strongly influenced by the environment in which the women reside. For example, in a study of African American and biracial women in a large public university setting, two percent had EDNOS, and 23 percent had subclinical eating disorders (Mulholland & Mintz, 2001). Conversely, in a study conducted at a predominantly African American college, bulimia occurred significantly less frequently among African American women than among Caucasian women at a predominantly Caucasian campus (Gray et al., 1987). These researchers suggested that being enrolled at a predominantly African American college may have served as a protective factor for their participants because, within the African American culture, there is considerably less pressure to adhere to the thin-ideal; in fact, a heavier physique is seen as socially acceptable. This protective factor, however, may not generalize to those African American women who are more exposed to the mainstream culture on a daily basis and integrated into predominantly White environments.

As was stated previously, research suggests that eating disorders occur among women in minority groups more frequently than was typically assumed (Barry & Grilo,

2002; Brumberg, 1988; Cavanaugh & Lemberg, 1999; Crago et al., 1996; Gowen, Hayward, Killen, & Barr Taylor, 1999; Gray et al., 1987; leGrange et al., 1998; Lester & Petrie, 1995; Lester & Petrie, 1998a; Lester & Petrie, 1998b; Mulholland & Mintz, 2001; Nasser, 1986; Osvold & Sodowsky, 1993; Weiss, 1995). In fact, prevalence rates among minority women appear to be comparable to, and, in some cases greater than, those found among Caucasian women (Crago et al., 1996). These findings suggest that a need exists for examining eating disorders among minority groups.

Most of the research conducted on eating disorders in minority groups has consisted of between groups comparisons in which the eating attitudes and behaviors of minority women are compared to those of Caucasian women (Abrams, Allen, & Gray, 1993; Fisher, Pastore, Schneider, Pegler, & Naolitano, 1994; Gross & Rosen, 1988; Lucero, Hicks, Bramlette, & Brassington, 1992; Pumariega, Gustavson, Gustavson, & Motes, 1994; Smith & Krejci, 1991). Although between groups comparisons provide information regarding how the attitudes and behaviors of minority women compare to those of Caucasian women, these comparisons do not give information about the development and maintenance of eating disorders, or the psychological characteristics associated with eating disorders within different groups of minority women. Because more recent research has shown that Caucasian women are not the only women who experience eating disorders, there has been a call to add to the scant research literature examining psychological correlates of eating disorders among minority groups (Kashubeck-West & Mintz, 2001). In the interest of learning more about minority women specifically, researchers need to conduct large within group studies to better understand

how psychological variables relate to disordered eating among minority women. As Root (2001) noted, the relationship among psychological variables and eating disorders may be different for different groups of women, and the only way to determine the relationships is with within groups designs. Although African American women are not the only minority group susceptible to eating disorders, they will be the focus of this study because, thus far, there have been few within groups studies of this racial ethnic group (e.g. Lester & Petrie, 1998b).

Eating Disorder Model

Eating disorder research has historically been descriptive in nature – reporting prevalence rates, making comparisons between ethnic groups, or examining simple bivariate relationships between different psychological factors and eating disorders (Abrams et al., 1993; Crago et al., 1996; Fisher et al., 1994; Granillo et al., 2005; Gross & Rosen, 1988; Lucero et al., 1992; Gray et al., 1987; Pumariega et al., 1994; Smith & Krejci, 1991). Although these previous studies have provided important basic information about eating disorders, to gain more knowledge about their development and maintenance, researchers acknowledge the need to develop models that predict eating pathology by linking psychological variables together (Kashubeck-West & Mintz , 2001; Stice et al., 1994; Striegel-Moore & Cachelin, 1999). Specifically, researchers increasingly have turned toward comprehensive, multidimensional models that suggest that the development of eating disorders occurs through pathways that include sociocultural, personal, and relational variables (Petrie & Greenleaf, 2007; Phan & Tylka, 2006; Tylka & Subich, 2004). In particular, these and other models have focused on and

included variables that have been shown to be risk factors, or even causal risk factors, in the development of eating pathology.

Central to most models are societal pressures to be thin, internalization, and body dissatisfaction. Thus far, societal pressures to be thin, internalization, and body dissatisfaction have only been empirically validated within an eating disorder model examining Caucasian and Asian American women. However, research shows that African American women also are impacted by societal pressures to be thin, internalization, and body dissatisfaction (Lester & Petrie, 1998b; Root, 1990, 2001; Shaw, Stice, & Springer, 2004). According to Root (1990, 2001), sociocultural pressures to be thin may cause women from minority groups to internalize the thin-ideal in much the same way that Caucasian women do. Lester and Petrie (1998b) found that higher levels of internalization of the beauty ideal was positively correlated with body dissatisfaction. Also, Shaw et al. (2004) reported that African American women experience levels of body dissatisfaction commensurate to Caucasian women, and that body dissatisfaction is related to higher levels of disordered eating (Lester & Petrie, 1998b).

Societal Pressures

One of the initial pathways contained in many eating disorder models stems from external pressure to conform to the thin ideal (Petrie & Greenleaf, 2007; Phan & Tylka, 2006; Stice, 1994; Tylka & Subich, 2004). The thin-ideal, which promotes a negative view of larger body shapes, is predominantly seen within those societies that have an abundance of food (Polivy & Herman, 2004). According to Stice (2002), sociocultural

pressure to be thin can be exterted by an individual's social support network or through the media.

Through women's magazines, the media portrays those physical characteristics society deems to be attractive, which have become increasingly thinner over time (Stice et al., 1994). In fact, during the last 30 years, women portrayed in the media have decreased in size (Silverstein, Perdue, Peterson, Vogel, & Fantini, 1986; Wiseman, Gray, Mosimann, & Ahrens, 1992), while the size of the average American woman actually has increased (Fouts & Burggraf, 2000). The increased disparity between what is prized as the epitome of physical beauty and the actual size of the average American woman does not, by itself, put women at risk for the development of an eating disorder (Polivy & Herman, 2004). Rather, it is the personal characteristics, such as self-worth and social success, that are linked to the thin ideal that may increase the pressure women feel to become thinner (Dittmar, 2005; Polivy & Herman, 2004; Stice et al., 1994; Striegel-Moore et al., 1986). For example, Fredrickson and Roberts (1997) found that how women feel about themselves, as well as how they are seen by others, is positively correlated with their physical appearance. Given this relationship, women will likely strive to meet Western society's beauty ideal to achieve not only the state of physical attractiveness it represents but also the positive psychological characteristics associated with it.

In addition to being svelte, the physical ideal espoused in Western culture has Caucasian features (Parker, Nichter, Nichter, Vuckovic, Sims, & Ritenbauth, 1995; Perkins, 1996; Rucker & Cash, 1992). According to Greenberg, Mastro, & Brand (2002), between 2 and 6 percent of women portrayed in the mainstream media are African

American, and those women tend to have lighter skin and Caucasian-like features (hooks, 1992). Given that the media focuses on what society deems to be beautiful, this marginalization of African American features suggests that those features are not desirable in Western culture (Root 1990, 2001; Mok 1998).

Because minority women do not have the "desirable" features portrayed in the mainstream media, achieving Western society's ideal of beauty is even more difficult for them (Perkins, 1996). Root (1990, 2001) suggested that women from minority groups respond to sociocultural pressure to be thin by internalizing the thin ideal. For example, Akan and Grilo (1995) found that increased frequency of childhood teasing about body weight and size, a form of societal pressure, was linked to negative eating attitudes in African American women. Further, the disparity between the physical features of minority women and those considered to be beautiful in Western culture, as well as the manner in which African American women choose to interpret that disparity could impact how much and in what way they internalize the thin ideal, and the degree to which they experience body dissatisfaction.

Social relationships are another area in which women feel pressure to conform to the thin ideal. According to Hohlstein, Smith, and Atlas (1998), social referencing may play a role in the internalization of the thin-ideal. They suggested that individuals respond to social reinforcement, such that those things that are valued by friends, family or significant others become more valuable to the individual. In this case, when those in the individual's social support network directly as well as subtly express support for the thin-ideal, the individual may equate more acceptance with increased adherence to that ideal

Dittmar (2005) reported that higher levels of body dissatisfaction, as well as the development of an eating disorder may be linked to the pressure an individual feels from their friends, family, and peer group, to meet the demands of the thin-ideal.

Women also often experience pressure to be physically attractive from romantic partners. The desire to be appealing to potential romantic partners suggests that what is seen as physically attractive by the men a woman might date could influence the degree to which a woman internalizes the thin ideal (Greenberg & LaPorte, 1996). Greenberg and LaPorte (1996) found that although both African American and Caucasian men tended to prefer thin female body shapes over large female body shapes, the African American men's preferences were larger than their Caucasian counterparts. The physical preferences of African American men may suggest that African American culture provides some sort of protective factor against high levels of thin ideal internalization and body dissatisfaction among African American women because there is no need to be extremely slender in order to attract a romantic partner. Therefore, although Caucasian and African American women both appear to experience pressure to be attractive to men, which is represented by a thin physique, the extent of the pressure African American women experience may be different from that of Caucasian women.

Different forms of social pressure (e.g. the media, friends and family, and potential romantic partners) to conform to the beauty ideal in United States culture appear to be present for both Causasian as well as African American women (Dittmar, 2005; Greenberg & LaPorte, 1996; Stice et al., 1994). At the same time, Miller, Gleaves, Hirsch, Green, Snow, and Corbett (2000) suggested that African American women must

contend with conflicting social messages from the mainstream culture and from African American culture. Although African American culture has historically accepted larger body sizes in women, a survery of an *Essence*, an African American beauty magazine, readers showed that African American women reported eating and body image concerns at levels similar to Caucasian women (Miller et al., 2000). This finding suggests that the beauty ideal of United States culture may be beginning to permeate African American culture.

Although being exposed to social pressure to be thin is not directly related to the development of eating disorders, research suggests that social pressure to be thin is directly related to internalization of the thin ideal (Field, Camargo, Taylor, Berkey, Frazier, Gillman, & Colditz, 1999; Gardner, Stark, Friedman, & Jackson, 2000; Stice, Presnell, & Bearman, 2001). It is important to note that although social pressure for thinness is a risk factor for eating pathology, its influence is mediated through internalization of the thin ideal and body dissatisfaction (Phan & Tylka, 2006; Tylka & Subich, 2004). For example, Phan & Tylka (2006) found that, among Asian American female undergraduates, perceived pressure for thinness was related to body preoccupation through internalization of the thin ideal. Further, they found that body preoccupation was a strong and direct predictor of eating disorder symptoms.

Internalization

Internalization refers to the degree to which individuals adopt a certain belief system as their own (Thompson & Stice, 2001). When an individual internalizes the United States' societal values about attractiveness, they come to believe that an extremely

slender physique must be attained in order to be attractive (Thompson & Stice, 2001). This belief typically leads women to engage in behaviors, such as dieting and restrained eating, designed to reduce the size of their bodies and make them more comparable to the beauty ideal (Griffiths et al., 2000; Thompson & Stice, 2001).

According to Thompson and Stice (2001), the more a woman internalizes the thin-ideal, the greater the risk she runs for decreased body satisfaction and the eventual development of disordered eating. In support of this idea, Strauman, Vookles, Berenstein, and Chaiken (1991) found that a greater discrepancy between how an individual's self-perception and their perception of the beauty ideal was associated with increases in body dissatisfaction.

Part of what makes the thin ideal seem so desirable is the misconception women have that they will be happy, appeal more readily to the opposite sex, and attain higher social status if they can simply conform (Tiggemann, 2002). This idea is reinforced by the popular media's suggestion that a woman's quality of life will improve if she is able to adhere to the thin ideal (Dittmar, 2005; Polivy & Herman, 2004; Stice et al., 1994; Striegel-Moore et al., 1986). Research within Caucasian samples suggests that exposure to media images is related to thin-ideal internalization, body dissatisfaction, and disordered eating (Stice et al., 1994; Thompson & Heinberg, 1999).

Internalization also has been seen among African American women. Lester and Petrie (1998b) found that, in a sample of African American women, a higher level of internalization of the thin ideal was correlated with higher levels of body dissatisfaction and bulimic symptomatology. Given that internalization of the thin ideal has been seen to

impact body image and eating attitudes in both Caucasian and African American women, it will be important to further explore the impact of internalization within an African American sample.

Body Dissatisfaction

Body dissatisfaction is defined as the degree to which an individual is unhappy with their body (Dittmar, 2005). According to the thin ideal, the "best" form for a woman's body is extremely slender and toned. Body dissatisfaction typically results from a discrepancy between what the individual views as her ideal body size or shape, and how she perceives the size and shape of her actual body (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). The fact that body dissatisfaction is hypothesized to result from the internalization of a body ideal that is discrepant from one's actual body suggests that internalization mediates the relationship between societal pressure to be thin and body dissatisfaction (Ahern & Hetherington, 2006; Polivy & Herman, 2004; Stice, 1994; Stice et al., 1994; Stice, Spangler, & Agras, 2001; Striegel-Moore et al., 1986; Thompson & Stice, 2001).

The fact that the thin ideal is physically unattainable for most women can increase body dissatisfaction, as well as her perceived need to continue working toward the thin-ideal (Levine & Harrison, 2004; Polivy & Herman, 2004; Thompson et al., 1999). For example, according to a meta-analysis conducted by Groesz, Levine, and Murnen (2002), body dissatisfaction was found to increase with exposure to the thin ideal through magazines or television. Additionally, levels of body dissatisfaction were even higher

among women who felt external pressure to be thin and who already had elevated levels of thin-ideal internalization (Groesz, Levine, & Murnen, 2002; Stice et al., 2001).

Based on part of the eating disorder model suggested by Phan & Tylka (2006), body dissatisfaction is an integral part of the eating disorder model. In their study, body dissatisfaction showed the strongest direct relationship to eating disorder symptomatology. Further, body dissatisfaction mediated the effect other variables, such as social pressure for thinness and internalization, had on eating disorder symptomatology. These findings replicated those of Tylka and Subich (2004) who found body dissatisfaction to have the strongest direct relationship to eating disorder symptomatology.

Although most research has been conducted on Caucasian women, there is some research that suggests that body dissatisfaction is an important variable in the development of eating disorders in African American women. For example, Shaw, Stice, and Springer (2004) reported that African American and Caucasian women experience the same levels of eating disorder symptoms, such as fear of becoming fat and concerns about weight and shape; a finding supported by Caldwell, Brownell, and Wilfley (1997). However, there is some research that suggests that African American women experience lower levels of body dissatisfaction (Atlas, Smith, Hohlstein, McCarthy, & Kroll, 2002; Rubin, Fitts, & Becker, 2003). Because body dissatisfaction has been empirically supported as a variable that mediates the relationship between sociocultural pressures and internalization and disordered eating among Caucasian women, and it has been observed

among African American women, it will be important to explore the impact of body dissatisfaction and disordered eating within a sample of African American women.

Acculturation and Exposure to Mainstream Culture

Acculturation is defined as the behavioral and psychological changes an individual of one ethnic/minority group undergoes as a result of prolonged interaction with persons from the majority group (Berry & Kim, 1988). Among minority groups, the idea that eating disorders occur primarily among women of higher socioeconomic status is linked to acculturation. That is, the risk of developing an eating disorder increases as acculturation (Osvold & Sodowsky, 1993) and social status do (Brumberg, 1988). Although the beauty ideal in the United States espouses a very slender or very toned body, African American women may reject this beauty ideal because they are not well-represented in mainstream media. However, Rucker and Cash (1992) have suggested that, as African American women become more acculturated, their beauty ideals may shift to those of the mainstream culture.

For example, Hsu (1987) suggested that an increase in socioeconomic status among African Americans can lead to increased access to and acceptance of mainstream values, and thus increased affliction with the disorders of the mainstream culture. Mulholland and Mintz (2001) suggested that lower levels of eating pathology among African American women may be linked to identification with other African American females. It follows that as African American women become more acculturated, they begin to identify more with the values held by Caucasian women. This new identification also may lead to increased adherance to the thin ideal. This idea about the consequences

of increased identification with Western culture coincides with the finding that eating disorders are typically only seen within countries that have experienced significant levels of Westernization (Brumberg, 1988; Nasser, 1986).

It is noteworthy that not all research has found level of acculturation to be linked to elevated levels of eating disorders. For example, in a meta-analysis (Wildes et al., 2001), eating pathology did not appear to be connected to level of acculturation. Further, Lester and Petrie (1998b) found that, in a sample of African American women, higher levels of acculturation were not linked to bulimic symptoms, although it was linked to lower levels of body satisfaction and self-esteem, and higher levels of depression. Similarly, other studies found no link between level of acculturation and eating disorder symptoms among samples of Hispanic, Asian, and African American women (Akan, & Grilo, 1995; Jennings, Forbes, McDermott, Juniper, & Hulse, 2005; Lester & Petrie, 1995).

Researchers (Hall, 1995; Helms, 1990; Lee, 2003; Phinney, 1989; Striegel-Moore et al., 1986) have suggested that minority women who report higher levels of identification with their culture of origin experience greater body satisfaction. These researchers argued that non-Western cultures do not value thinness as a physical ideal, which appears to foster greater body acceptance in women from minority groups. Therefore, although minority women living in the U.S. are exposed to mainstream ideals, a strong identification with their culture of origin may assist them in rejecting mainstream ideals, opting instead for ideals that emanate from their culture.

Summary

Research has demonstrated that eating disorders are a problem primarily affecting women (Brumberg, 1988; Cavanaugh & Lemberg, 1999; Connors & Johnson, 1987;Garner, 1993; Stein, 1991). Although the prevalence rate of clinical eating disorders among the general population is low (Dancyger & Garfinkel, 1995; Lappalainen & Tuomisto, 1999; White, 2000), women have higher levels of eating pathology than men (Dancyger & Garfinkel, 1995; Drewnowski et al., 1994; Mintz & Betz, 1988). The prevalence rate of eating disorders is even higher among college-aged women than it is among school-aged children or adults (Cavanaugh & Lemberg, 1999; Drewnowski et al., 1988; Pyle et al., 1991; Striegel-Moore et al., 1989). Contrary to early studies on eating pathology, women of different races and varying SES do experience eating disorders (Cavanaugh & Lemberg, 1999; Crago et al., 1996; leGrange et al., 1998; Lester & Petrie, 1998a; Lester & Petrie, 1998b; Mulholland & Mintz, 2001; Osvold & Sodowsky, 1993; Weiss, 1995). However, research findings are conflicting in that some studies indicate that the incidence of eating pathology is lower among African American women than it is among Caucasian women (Atlas et al., 2002; Hsu, 1987; Wildes, Emery, & Simmons, 2001), whereas other studies suggest that the incidence is comparable for both groups (Crago et al., 1996; Mulholland & Mintz, 2001). This conflicting information supports the need to examine eating disorder relationships within large samples of African American women to determine what psychological variables may precipitate and/or maintain disordered eating behaviors and attitudes.

Currently, models of eating disorder development include three primary components: social pressure to be thin, internalization, and body dissatisfaction (Lester & Petrie, 1998b; Root, 1990, 2001; Shaw et al., 2004). The importantance of adhering to the thin ideal is communicated through media images as well as the opinions espoused by friends, family, and significant others (Stice, 2002), with some women internalizing the thin ideal for themselves (Field et al., 1999; Gardner et al., 2000; Stice et al., 2001). If a woman's current body does not conform to her internalized ideal, then she is likely to be dissatisfied with her body (Ahern & Hetherington, 2006; Polivy & Herman, 2004; Stice, 1994; Stice et al., 1994; Stice et al., 2001; Striegel-Moore et al., 1986; Thompson et al., 1999; Thompson & Stice, 2001). Ultimately, an eating disorder results from a woman's attempt to lessen her body dissatisfaction through dieting, over-exercising, and other forms of purging (Phan & Tylka, 2006; Tylka & Subich, 2004).

For African American women, the pathways to the development of eating disorders also must address the issue of acculturation. For example, some research suggests that greater identification with mainstream culture increases internalization, which in turn increases body dissatisfaction among African American women (Brumberg, 1988; Osvold & Sodowsky, 1993). That being the case, it might be helpful to further examine not only the pathways between sociocultural pressure to be thin, internalization, and body dissatisfaction, but an acculturation pathway because it could potentially influence internalization and body dissatisfaction among African American women.

Purpose of Study

The current study will examine a modified version of Phan and Tylka's (2006) model of eating disorder symptomatology as it relates to African American women. According the model tested by Phan and Tylka (2006), social pressure to be thin was positively directly related to internalization of the thin ideal, which then leads to body image concerns. Body concerns is the only variable to be directly related to eating disorder symptomatology. In addition to examining the influences of the variables on African American women, this study will address how acculturation may play a role in the development of disordered eating.

Based on past research (e.g. Phan & Tylka 2006), the following hypotheses are offered:

1. There will be a direct, positive relationship between societal pressure to be thin and internalization.
2. There will be a direct, positive relationship between level of acculturation and internalization.
3. There will be a direct, positive relationship between internalization of the thin ideal and body dissatisfaction.
4. There will be a direct, positive relationship between body dissatisfaction and eating disorder symptoms.

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