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The Relationship of Socioeconomic Status, and Acculturation/ Enculturation to BMI and Perceptions of Body Image Among College-Aged African American Women

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THE RELATIONSHIP OF SOCIOECONOMIC STATUS, AND
ACCULTURATION/ENCULTURATION TO BMI AND PERCEPTIONS OF BODY IMAGE
AMONG COLLEGE-AGED AFRICAN AMERICAN WOMEN

A Thesis

Submitted to the Graduate Faculty of the
University of New Orleans
in partial fulfillment of the
requirements for the degree of

Master of Arts
In
The Department of Human Performance and Health Promotion

By

Tamika Edwards

B.S., Louisiana Tech University, 2001

August, 2006

DEDICATION

To my Mom and Sister

“I can do all things through Christ which strengtheneth me.”

Philippians 4:13

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TABLE OF CONTENTS

List of Figures	vi
List of Tables	vii
Abstract	viii
Chapter 1	1
Introduction	1
Statement of the Problem	1
Nature of the Problem	2
Purpose of the Study	3
Hypothesis and Exploratory Questions	3
Operational Definitions	4
Limitations	5
Assumptions	5
Delimitations	6
Chapter 2	7
Review of Literature	7
Introduction	7
Body Size	7
Socioeconomic Status (SES)	8
Education	8
Sociocultural Factors and Acculturation/Enculturation	10
Body Image	11
Self Perception/Cognitive Component of Body Image	13
Affective Component of Body Image	14
Summary	15
Chapter 3	16
Method	16
Design	16
Participants	16
Measures	16
Demographics and BMI	16
Body Image	16
Acculturation/Enculturation	18
Procedures	18
Data Analyses	19
Chapter 4	20
Results	20
Introduction	20
Descriptive Statistics	20
Evaluation of Hypotheses	24
Hypothesis 1	24
Hypothesis 2	30
Hypothesis 3	31
Hypothesis 4	34
Hypothesis 5	34

Exploratory Question 1	36
Chapter 5	37
Discussion	37
Introduction.....	37
Summary of Results.....	37
The Effects of Acculturation.....	38
The Effects of Socioeconomic Status	39
Body Mass Index	41
Body Image.....	42
Implications.....	45
Limitations	46
Future Research	47
Conclusion	48
References.....	49
Appendices.....	55
A. Letter of Consent.....	56
B. Demographics Forms	57
C. Social Physique Anxiety Scale.....	58
D. Body Image Avoidance Questionnaire	60
E. Contour Drawing Figure Rating Scale	62
F. African American Acculturation Scale.....	63
G. Literature Review.....	66
G. Human Subjects Approval Form.....	68
Vita.....	69

LIST OF FIGURES

1. Interaction of SES and acculturation/enculturation on affective body image31
2. A comparison of affective component of body image among the three SES (i.e., household income) groups33

LIST OF TABLES

1.	Summary of Frequencies and Percentages for Participants' Academic Standing (<i>N</i> =101)	21
2.	Summary of Frequencies and Percentages for Participants' Household Income, Marital Status, and BMI (<i>N</i> =101)	22
3.	Descriptive Statistics for Body Image and Acculturation/Enculturation (<i>N</i> =101)	23
4.	Results of a 2 (Acculturation/Enculturation) x 3 (SES) MANOVA (<i>N</i> =101)	24
5.	Results of the Between-Subjects Effects of the MANOVA (<i>N</i> =101)	25
6.	Means and Standard Deviations of the Cognitive Component of Body Image x SES and Acculturation (<i>N</i> =101)	26
7.	Means and Standard Deviations of the Affective Component of Body Image x SES and Acculturation (<i>N</i> =101)	27
8.	Means and Standard Deviations of the Behavioral Component of Body Image x SES and Acculturation (<i>N</i> =101)	28
9.	Means and Standard Deviations of the Behavioral Component of Body Image x SES and Acculturation (<i>N</i> =101)	29
10.	Means and Standard Deviations for the Interaction of SES on Components of Body Image and BMI (<i>N</i> =101)	33
11.	Means and Standard Deviations for Acculturation/Enculturation among the Three SES Groups (<i>N</i> =101)	35
12.	Regression Analysis Predicting BMI (<i>N</i> =101)	36

ABSTRACT

THE RELATIONSHIP OF SOCIOECONOMIC STATUS, AND ACCULTURATION/ENCULTURATION TO BMI AND PERCEPTIONS OF BODY IMAGE AMONG COLLEGE-AGED AFRICAN AMERICAN WOMEN

The purpose of this study was to examine the relationship of SES and acculturation/enculturation to body image perceptions and overweight (i.e. BMI) among African American college women. A secondary purpose was to examine which factors predicted BMI. Participants included 101 African American women from the University of New Orleans, aged 18-39 years of age. Participants completed a demographic information sheet, and four questionnaires assessing the components of body image and levels of acculturation/enculturation. There was no significant main effect of SES on levels of acculturation/enculturation. There was no significant effect of SES on the cognitive and behavioral components of body image. However, SES related to the affective component of body image. A significant interaction was found for SES and acculturation/enculturation on the affective component of body image, but no such effects were found for the cognitive and behavioral components of body image, or BMI. The cognitive component of body image was a significant predictor of BMI.

CHAPTER I

INTRODUCTION

Statement of the Problem

Overweight is a significant problem in the U.S. that is associated with health problems such as Type II Diabetes, cardiovascular disease, orthopaedic injuries and psychosocial issues (Arfken & Houston, 1996; James, 2003; Sánchez-Johnsen, Fitzgibbon, Martinovich, Stolley, Dyer, & Van Horn, 2004; Thompson ed., 1996; Yates, Edman, & Aruguete, 2004). The prevalence of overweight in the U.S. has increased significantly in the past decade, and is particularly high in African American women. In 1998 (Flegal, Carroll, Kuczmarski, & Johnson, 1998; Sánchez-Johnsen, Fitzgibbon, Martinovich, Stolley, Dyer, & Van Horn, 2004) over 36.9% of African American women were overweight (Body Mass Index [BMI] > 95th percentile) and 29.6% were at risk for overweight (BMI < 85th percentile and < 95th percentile). African American women incur higher death rates from coronary heart disease, stroke and hypertension; all of which are potential consequences of overweight, than Caucasian women (Kemper, Sargent, Drane, Valois, & Hussey, 1994; Dawson, 1989).

Research has suggested that overweight is a ‘culturally bound’ syndrome among African Americans. A possible reason that overweight is considered a ‘culturally bound’ syndrome is that African Americans might be more accepting of larger body sizes (Allan, Mayo, & Michel, 1993; Arfken & Houston, 1996; Gore, 1999). However, little is known about how assimilation of the dominant U.S. Caucasian culture (i.e., preference for thinner feminine physiques) affects perceptions of overweight among African American women.

Nature of the Problem

Americans, and in particular African American women, tend to inaccurately perceive their weight and health status (Paeratakul, White, Williamson, Ryan, & Bray, 2002). Literature on the differences between realistic and ideal body weights and shapes is relatively new. Few studies have focused on what people consider to be realistic or healthy size and shape (Cachelin, Striegel-Moore, & Elder, 1998). Although the current literature reports that overweight is a multifaceted problem influenced by social, economic and ethnic factors (Altabe, 1998; Arfken & Houston, 1996; Gore, 1999; Kuchler & Variyam, 2003; Padgett & Biro, 2003; Sobal & Stunkard, 1989), research has yet to link these factors directly to actual body weight (Allan, Mayo, & Michel, 1993). Hence, understanding the weight and shape perceptions of an at-risk population such as African American women would be helpful for the prevention and treatment of overweight, especially because individual motivation and expectations are crucial and malleable elements for successful weight loss (Cachelin, Striegel-Moore, & Elder, 1998).

The occurrence of overweight varies significantly across socioeconomic status (SES) levels. The relationship between SES and body weight perception has been examined in a limited number of research studies (Paeratakul et al., 2002; Sarlio-Lähteenkorva, Silventoinen, & Lahelma, 2004). It has been shown that SES may contribute to the discrepancy in body weight perception (Paeratakul et al., 2002; Sarlio-Lähteenkorva, Silventoinen, & Lahelma, 2004; Wildes, Emery, & Simons, 2001). Little is known about the combined effects of SES and education levels on perceptions of body weight and obesity. Studies show that overweight was least common among more highly educated women and men, regardless of race/ethnicity and other factors (Paeratakul et al., 2002; Sarlio-Lähteenkorva, Silventoinen, & Lahelma, 2004).

African Americans comprise a diverse group of ethnicities and cultures (Thompson, 1996). Culture is a key influence on the ideal appearance for women. In the dominant (i.e., Caucasian) Western culture appearance among women is idealized as thin (Gluck & Geliebter, 2002; Streigel-Moore, 1995). Research suggests that there are two major social influences on body weight: (a) culture, and (b) SES (Bertera, Bertera, & Shankar, 2003). Cultural patterns and beliefs have been shown to play a key role in determining body weight, and specifically overweight (Bertera, Bertera, & Shankar, 2003). The literature also indicates that African Americans can be thought of as belonging more or less to two cultures (Abrams, Allen, & Gray, 1993; Helms, 1990): (a) the African American culture, and (b) the larger dominant Caucasian culture. African Americans who identify with African American culture are considered to be more enculturated, whereas, those who identify with the dominant culture (i.e., Caucasian) are to be more acculturated. The African American and Caucasian American cultures each have a different ideal of preference regarding body weight and attractiveness. Abrams, Allen, and Gray (1993), reported that African American women who relatively rejected their own African American identity, and idealized the Caucasian identity, or were more acculturated, were also more likely to demonstrate dietary restraint, as well as fear of fat, and drive for thinness.

Purpose of the Study

The present study examined the relationship of SES and acculturation/enculturation to body image perceptions and overweight (i.e., BMI) among African American college women. A second purpose examined which factors predicted BMI in this sample.

Hypothesis and Exploratory Questions

The following hypotheses were proposed for this study:

1. African American women who were more acculturated to the dominant Caucasian American culture perceived overweight status at lower BMI values and reported lower BMIs than those who were more encultured.
2. African American women with lower SES perceived overweight at higher BMI values and reported higher BMIs than those with higher SES.
3. African American women who were more acculturated reported lower body image perceptions than those who are more encultured.
4. African American women with higher SES reported lower body image perceptions than those with lower SES.
5. African American women with lower SES were more encultured than those with higher SES.

The following exploratory question was considered:

1. Which factors in this study best predict BMI?

Operational Definitions

The following operational definitions were used for this study:

1. Acculturation refers to low immersion into African American culture, with the high assimilation of the dominant culture (Klonoff & Landrine, 2000).
2. BMI is weight/height^2 (kg/m^2)
3. Enculturation refers to high immersion into African American culture
4. Healthy/normal weight refers to individuals with a BMI of 18.5-24.99 (CDC, 2006)
5. Obese refers to individuals with a BMI of > 30 (CDC, 2006)
6. Overweight refers to individuals with a BMI of 25-29.99 (CDC, 2006).

7. SES will be based on parents' occupation and highest education level (Akan & Grilo, 1995). Total household income will be divided into three groups: less than \$30,000 a year, \$30,000 to \$59, 999, and \$60,000 and more (Cachelin, Streigel-Moore, & Elder, 1998).
8. Underweight refers to an individual having a BMI less than 18.5 (CDC, 2006)

Limitations

This study was limited by the following uncontrolled factors:

1. Participant selection was voluntary and non-random, potentially causing a selection bias.
2. Acculturation was determined using a single questionnaire.
3. Participants self-reported height and SES, which may result in some inaccurate reporting of data.
4. The use of BMI as a measure of body weight does not account for body fatness or fat distribution.

Assumptions

The following assumptions were made for this study:

1. The measure of self-reported height and SES in this study was a valid measure of body weight and socioeconomic status among African-American college-aged women.
2. The participants accurately reported their height, weight, and income data.
3. The three instruments used to assess body image were valid and reliable measures of the cognitive, affective, and behavioral components of body image.
4. The written measure of acculturation in this study was a valid measure of immersion of African American culture.

Delimitations

The scope of this study was delimited by the following factors:

1. The participants were African American female university students, aged 18-39 years of age in New Orleans, LA.
2. One New Orleans area university was involved in this study.

CHAPTER II

REVIEW OF LITERATURE

Introduction

Obesity continues to be a public health concern in the U.S., and in particular for minority women. The occurrence of overweight and obesity is higher in minority populations, especially among African American women (Arfken & Houston, 1996; Paeratakul, White, Williamson, Ryan, & Bray, 2002). The occurrence of obesity in African American women is twice that of Caucasian women (Cachelin, Striegel-Moore, & Elder, 1998; Rand & Kulda, 1990; Thompson, 1996), increasing their risk for obesity morbidities such as hypertension, diabetes, and other medical conditions (James, 2003). African American women are cited as having higher death rates from coronary heart disease, stroke and hypertension, than Caucasian women (James, 2003; Kemper, Sargent, Drane, Valois, & Hussey, 1994; Dawson, 1989).

With the increasing occurrence of obesity, it is vital that individuals, despite their weight status, have a correct perception of their body weight (Paeratakul et al., 2002). Researchers further observe that an incorrect perception of body size leads harmful consequences such as poor eating habits and obesity morbidities (Paeratakul et al., 2002). The current literature review will validate a research study on the influences of body size, socioeconomic status, and cultural assimilation on perceptions of obesity and overweight in African American women.

Body Size

The literature cites an association between race and body mass index (BMI) (Robert & Reither, 2004; Paeratakul et al., 2002). A study found the mean BMI of African Americans to be in the overweight (25-30) range, while the mean BMI for Caucasians was in the normal (19-25) weight range (DiGiacchino, Sargent, & Topping, 2000).

Currently, there is widespread agreement that BMI is a comparatively consistent method of assessing an individual's total body fat, since BMI is significantly correlated with total body fat content (Kuchler & Variyam, 2003). The literature further notes that BMI is a determinant or contributor to body size perceptions (Cachelin, Rebeck, Chung, & Pelayo, 2002). However, the authors stated that a limitation to their study was that they only used one measure (figure rating scale) to measure body image and size perceptions (Cachelin et al., 2002).

Socioeconomic Status (SES)

The occurrence of obesity may vary significantly across socioeconomic levels. The relationship between socioeconomic status (SES) and body weight perception has been examined in a limited number of research studies (Paeratakul et al., 2002; Sarlio-Lähteenkorva, Silventoinen, & Lahelma, 2004). It has been shown that SES may contribute to the discrepancy in body weight perception (Paeratakul et al., 2002; Sarlio-Lähteenkorva, Silventoinen, & Lahelma, 2004; Wildes, Emery, & Simons, 2001). Cachelin et al. (2002) found that obesity is most common among women of lower economic status. Few studies have examined the combined effects of ethnicity and socioeconomic status as central issues.

Education. Little is known about the combined effects of SES and education levels on perceptions of body weight and obesity. Studies show that overweight and obesity were least common among more highly educated women and men (Paeratakul et al., 2002; Sarlio-Lähteenkorva, Silventoinen, & Lahelma, 2004). Studies show that women with higher education have lower BMI values (Molarius, Seidell, Sans, Tuomilehto, & Duulasmaa, 2000; Rand & Kulda, 1990; Robert & Reither, 2004; Sarlio-Lähteenkorva, Silventoinen, & Lahelma, 2004) and were leaner than those with lower education (Molarius et al., 2000). A limitation to this

finding is that education was not properly defined in many of the studies, and education was used as a proxy for socioeconomic status.

A study found that women living in communities of great income inequality have higher BMI values, independent of race, age, and individual SES (Robert & Reither, 2004). Income data from the above study showed that obese women earned less than other women (Sarlio-Lähteenkorva, Silventoinen, & Lahelma, 2004). The data showed that obese women with higher education earned significantly lower incomes than normal weight women (Sarlio-Lähteenkorva, Silventoinen, & Lahelma, 2004). Reasons for this finding remains open to further study. However, the authors failed to find income differences between different BMI groups among women with 'basic education' only (less than nine years) (Sarlio-Lähteenkorva, Silventoinen, & Lahelma, 2004). A possible reason for this finding is that the study participants were classified based on occupation type rather than by income.

Another area of interest is the influence of education levels on the accuracy of obesity perception. Kuchler and Variyam (2003) found that underassessment of obesity declines as education levels reach or go beyond high school. Among both the obese and the overweight, the amount of people who underaccessed obesity was greater among those with higher education levels (Kuchler & Variyam, 2003). However, the authors did not stratify education levels; they simply defined higher education as greater than high school (Kuchler & Variyam, 2003).

The relationship between socioeconomic class and body weight perception has been examined in a limited number of research studies (Paeratakul et al., 2002; Kuchler & Variyam, 2003; Sarlio-Lähteenkorva, Silventoinen, & Lahelma, 2004). It has been shown that socioeconomic status (SES) may contribute to the discrepancy in perception of body weight

(Paeratakul et al., 2002; Kuchler & Variyam, 2003; Sarlio-Lähteenkorva, Silventoinen, & Lahelma, 2004; Wildes, Emery, & Simons, 2001).

Sociocultural Factors and Acculturation/Enculturation

The United States was once considered a melting pot in which ethnic groups would be assimilated slowly into mainstream culture (Thompson, 1996). Today, the country can be viewed as a tossed salad, where individual and cultural differences are recognized and preserved (Thompson, 1996). The African American ethnic group is a diverse group of ethnicities and cultures (Thompson, 1996). Culture is a key influence on the ideal appearance for women, which in Western culture is idealized as being thin (Gluck & Geliebter, 2002; Streigel-Moore, 1995). The literature states that two major social influences on body weight are culture and SES (Bertera, Bertera, & Shankar, 2003). Cultural patterns and beliefs have been shown to play a key function in determining body weight, and specifically obesity (Bertera, Bertera, & Shankar, 2003).

It is believed that sociocultural factors drive the standards of attractive body weight within cultures, which consequently influences dieting behaviors (such as eating), attitudes, and body image (Akan & Grilo, 1995; Paeratakul et al., 2002). Akan and Grilo (1995) performed a study on how the degree of acculturation (in Asian American women) and assimilation (among African-American women) with the mainstream culture affects body image and dieting behaviors. The authors found that the degree of acculturation and assimilation did not influence dieting behaviors and attitude and body image (Akan & Grilo, 1995). A possible reason for this finding is the use of a small sample size ($N=98$).

Studies have stated that within the African American culture, there appears to be a greater acceptance of heavier body weights than what most Caucasian women view as acceptable

(Abrams, Allen, and Gray, 1993; Cachelin et al., 2002; Padgett & Biro, 2003). Abrams, Allen, and Gray (1993) further comment that this greater acceptance is likely based on a “different standard of beauty”. Women of ethnic and racial minority groups in the United States, especially African Americans, may not be fully integrated into a culture that idealizes extremely thin body sizes (Gluck & Geliebter, 2002).

The literature further notes that African Americans can be thought of as belonging more or less to two cultures (Abrams, Allen, & Gray, 1993; Helms, 1990), the African American culture, and the larger dominant Caucasian culture. The African American and Caucasian American cultures each have a different ideal of tolerability regarding body weight and attractiveness. Kumanyika, Morssink, and Agurs (1992) stated that the African American community have more tolerant attitudes toward obesity, which provide a possible explanation for lack of effective weight control among African American women. In the study performed by Abrams, Allen, and Gray (1993), it was confirmed that African American women who relatively rejected their own African American identity, and idealized the Caucasian identity, are more likely to demonstrate dietary Restraint, as well as Fear of Fat, and Drive for Thinness.

The model of acculturation has recently emerged as a potential nonracist paradigm for understanding and explaining ethnic differences (Landrine & Klonoff, 1995). Since the African American female population is of interest in the current study, the term enculturation is defined as traditional immersion in African American culture, whereas acculturation is defined as “low immersion in African American culture” (Klonoff & Landrine, 2000).

Body Image

Body image can be defined as a “person’s mental ability (perceptions, thoughts, feelings, attitudes) and evaluation of their body and the influence of this mental image and evaluation on

their behavior” (DiGiacchino, Sargent, and Topping, 2001, pp.40). Body image is a useful construct for understanding eating behaviors, as well as distress over appearance that affects many people (Altabe & Thompson, 1996).

There is evidence showing that an individual’s age, body weight, and SES or educational level all influence body image (Cachelin et al., 2002). Middle to high SES women found no significant differences in body satisfaction (Caldwell, Brownwell, & Wilfley, 1997; Demarest & Allen, 2000), and self-esteem (Caldwell, Brownwell, & Wilfley, 1997) between African American and Caucasian women. In contrast, Altabe (1998) found that the African American women had the most positive body image than the Caucasian and Asian-Americans sampled. Similarly, studies also found that African American women were more satisfied with their body weight than Caucasian-American women (Aruguete, Nickleberry, & Yates, A., 2004; Rowen et al., 1991).

Paeratakul and colleagues (2002) performed a study to compare the self-perception of overweight according to sex, race/ethnicity, socioeconomic status, and to further compare the self-perception of overweight among individuals classified as normal weight, overweight, and obese. They found that self-perception of overweight was more common in women compared with men and in Caucasians compared to African Americans (Paeratakul et al., 2002). The authors also found that perceived overweight was significantly higher in women, especially Caucasian women (Paeratakul et al., 2002). The authors suggested that overweight African American women may correctly perceive their weight status, but this perception may only occur at higher levels of body weight (Paeratakul et al., 2002).

Fitzgibbon et al. (2000) noted that similar levels of body dissatisfaction were reported by African Americans and Caucasian females. African American women did not report significant

levels of body dissatisfaction until they reached overweight status (Fitzgibbon et al., 2000).

Similarly, studies have found that African American women exhibit more positive body images and have less desire to be thin than Caucasian or Hispanic women (Demarest & Allen, 2000).

Body mass index (BMI) is a commonly used measure of body size. BMI is considered to be strongly correlated with body-dissatisfaction (Padgett & Biro, 2003; Yates, Edman, & Aruguete, 2004). Slender females tend to like their bodies while heavier females tend to dislike their bodies (Yates, Edman, & Aruguete, 2004). Caldwell, Brownell, and Wilfley (1997) noted that body mass index is associated with body satisfaction among Caucasian women, but less so among African American women.

Self-Perception/Cognitive Component of Body Image. Perception is a method in which a person “organizes, interprets, and transforms information from sense data and memory that gives meaning to one’s experience, represents one’s image of reality, and influences one’s behavior” (Gore, 1999, pp. 72). A person’s perceptions give meaning and perspective in which behavior is performed (Gore, 1999). Although the thoughts of others are included in the perceptions of self, they are not enough to determine behavior unless they are first “internalized as part of the individual’s perceptions” (Gore, 1999, pp. 72). The cognitive component of body image relates to how one perceives their own body size.

An area for concern is that a large number of U.S. adults incorrectly perceive their weight status (Paeratakul et al., 2002). The differentiation between realistic and ideal weights and shapes in the obesity literature is relatively new, and there is few data on what individuals consider to be realistic size and shape goals (Cachelin, Striegel-Moore, & Elder, 1998). Increased understanding of the weight and shape standards of persons who are overweight would

be helpful for the treatment of obesity, especially because individual motivation and expectations are crucial components of successful weight loss (Cachelin, Striegel-Moore, & Elder, 1998).

Results from a study showed that African Americans have similar self-perceptions of their body weight, physical shape, and fitness, compared to Caucasians, despite being heavier, more obese, or less aerobically fit (Cachelin et al., 2002; Duncan, Anton, Newton, Jr., & Perri, 2003). Similarly, a study found that African American women perceived themselves to be smaller than their actual body size (DiGioacchino, Sargent, & Topping, 2001).

Affective Component of Body Image. Social physique anxiety may reduce the motivation to exercise and is associated with low and extreme exercise (Russell & Cox, 2003). While social physique anxiety has been shown to be closely related to body image, little is known about self-perceived weight discrepancies and their influence on social physique anxiety. Authors note that the discrepancy between perceived and actual body size may be a main indicator of social physique anxiety (Russell & Cox, 2003). A study showed that African-American women who exercised were lower in social physique anxiety compared to Caucasian women who exercised (Russell & Cox, 2003).

The large number of U.S. adults who inaccurately perceive their weight stresses the significance of health and behavioral implications of such a misconception (Paeratakul et al., 2002). This demonstrates a cause for concern in women's health. Literature suggests that the acceptance of being overweight may serve as a risk factor for obesity in some population groups (Paeratakul et al., 2002). Additional research should focus on evaluating the role of economic classes and education level on the perception of obesity.

Summary

Most published studies on body image have used convenience samples of college students, have based findings on small samples of minority groups, and have not explained the influence of confounding variables such as body weight and SES (Cachelin et al., 2002). The present study aimed to extend the knowledge base regarding the influences of body size, SES, and acculturation/enculturation of the dominant culture on perceptions of overweight and obesity by administering three well-established instruments to African American women a university in the New Orleans area.

CHAPTER III

METHOD

Design

This study employed a cross-sectional self-report methodology. All data was collected at a single time from each participant.

Participants

Participants ($N=101$) represented a convenient sample consisting of African American women from the University of New Orleans. The participants ranged from 18-39 years. All participants were at least 18 years of age.

Measures

Demographics and BMI. A demographic information sheet was administered to participants and including their age, total household income (or parent's), and self-reported height and weight (see Appendix A). A weight measurement was then taken by the researchers to compare reported weight to measured weight. BMI was calculated as weight (kg) divided by height (m^2), and was calculated using measured weight on a calibrated digital scale and self reported height. A stadiometer was not available for the researchers to perform a measurement of height. Underweight was defined as having a BMI of < 18.5 , normal weight was a BMI of 18.5-24.99, overweight was defined as having a BMI of 25-29.99, and obesity was defined as having a BMI ≥ 30 (CDC, 2006).

Body Image. An amended version of the Social Physique Anxiety Scale (SPAS: Hart, Leary, & Rejeski, 1989) was used to assess the affective component of body image (see Appendix B). Social physique anxiety is the anxiety that people experience in response of others' evaluations of their physiques (Hart, Leary, & Rejeski, 1989). Social physique anxiety

can also be defined as the picture that we form of our bodies in our own minds (Hart, Leary, & Rejeski, 1989). The SPAS is a 9 item questionnaire scored on a five point scale. The test-retest reliability was 0.82 (Hart, Leary, & Rejeski).

The Body Image Avoidance (BIAQ: Rosen, Srebnik, Saltzberg, & Wendt, 2000) questionnaire was administered to assess the behavioral component of body image (see Appendix C). The BIAQ is a 19-item inventory that deals with avoidance of circumstances that cause apprehension about physical appearance (see Appendix D). The BIAQ has excellent internal consistency, with a Cronbach's alpha of 0.89, and a two-week, test-retest reliability coefficient of 0.87 (Rosen, Srebnik, Saltzberg, & Wendt, 2000). The BIAQ has fair to good validity, with a low but significant correlation of 0.22 for body size estimation, a correlation of 0.78 with the Body Shape Questionnaire, 0.68 for the Shape Concern scale, and 0.63 for the Weight Concern scale (Rosen, Srebnik, Saltzberg, & Wendt, 2000).

The Contour Drawing Rating Scale (Thompson & Gray, 1995) was used to assess the cognitive component of body satisfaction and perceptions of obesity (see Appendix E). The figure rating scale consists of nine female figures which increase in size. Participants circled the figure on the scale that is comparable to their own body size, and marked an "X" over the figure which is their "ideal" body size. This scale was scored by assigning the numbers 1-9 to each figure in increasing order of body size, and then a difference was calculated by subtracting the figure that represents current body size from the figure that represents ideal body size. Consequently, negative scores indicated that participants thought they were heavier/bigger than their ideal weight/size, and positive scores indicated that participants thought they were lighter/smaller than their ideal weight/size. Scores of 0 indicated that their perceived ideal and actual weight/size were the same.

Acculturation/Enculturation. The revised African American Acculturation Scale (AAAS-33: Klonoff & Landrine, 2000) is a 33-item inventory that was used in the present study to measure immersion of African American culture (see Appendix F). The AAAS-33 measures immersion using the following eight factors (Klonoff & Landrine, 2000): 1) religious beliefs and practice, 2) preference for things African American, 3) traditional foods, 4) family practices, 5) health and belief practices, 6) cultural superstitions, 7) segregation, and 8) family values. High scores on the scale (high agreement with the items) suggested a “traditional” enculturation into African American culture, whereas low scores (disagreement with the items) revealed an acculturated state with low immersion in African American culture (Landrine & Klondoff, 2000). The correlation between scores on the short form and the original 74-item scale was $r = 0.94$ (Landrine & Klonoff, 1995). The AAAS-33 has a concurrent and split-half reliability of $r = 0.77$, and internal consistency reliability of $r = 0.81$ to $r = 0.88$ (Landrine & Klonoff, 1995).

Procedures

This study was approved by the University’s Institutional Review Board. Participants were recruited voluntarily. The participants were informed that they will be completing questionnaires about their behavioral, affective, and cognitive components of body image, SES and BMI. All participants then read the written informed consent letter (see Appendix G) that was included in the questionnaire packet, and consent was given by the participant by completing the questionnaires. The researchers then administered all questionnaires to participants. All data was anonymous and reported as group results. Approximately 15-20 minutes was required for the completion of the questionnaires. Participants sealed their completed questionnaires into the envelope provided and turned them in when they are completed.

Data Analysis

Descriptive analyses were used to describe the sample. Measured body weight and perceived body weight were compared using a Pearson correlation and a paired samples dependent T-test. Hypotheses 1-4 were analyzed using a 2 (Acculturation/Enculturation) x 3 (SES) MANOVA for body image and overweight perceptions, and BMI. Hypothesis 5 was analyzed using an ANOVA comparing the three SES groups on acculturation/enculturation. The exploratory question was analyzed using a multiple regression (MR). All analyses were done using SPSS. The statistics were calculated using SPSS Version 12.0. The significance level was established at $p \leq 0.05$, however the p values are included for the results of each statistical procedure.

CHAPTER IV

RESULTS

Introduction

This chapter includes descriptive statistics for the sample population, followed by a review of results for the hypotheses and exploratory question. Throughout the chapter, charts and tables are included to summarize and more clearly depict the results.

Descriptive Statistics

There were a total of 101 participants (all African American females) included in this study. The average age of the participants was 20.9 ($SD = 2.96$) years. The mean BMI was 24.34 ($SD = 5.20$). Additionally, 4% ($n=4$) of the participants had a BMI in the underweight range (< 18.5), 66.3% ($n=67$) had a BMI in the healthy weight range (18.5-24.99), 12.9% ($n=13$) had a BMI measurement in the overweight range (25-29.99), and 16.8% ($n=17$) had a BMI in the obese range (> 30). In reference to academic standing, 33.7% ($n= 34$) of the sample population were freshman, 24.8% ($n=25$) of the sample population were sophomores, 23.8% ($n=24$) were juniors, 10.9% ($n=11$) were seniors, and 6.9% ($n=7$) were graduate students. Nearly 48% ($n=48$) of the population that were categorized as low SES, which in this study represented a household income below \$30,000 a year. Additionally, 40.6% ($n=41$) of the population reported as moderate SES (income of \$30,001-\$59,999 a year), and 11.9% ($n=12$) reported a high SES (income at or above \$60,000 a year).

The participants reported their marital status, what type of financial aid they received, and whether or not they were a member of a sorority on the demographic questionnaire. BMI was calculated by the measured weight and self-reported height measurement. The descriptive statistics for the demographic information are displayed in Tables 1 and 2.

Participants reported information regarding their demographic information. Tables 1 and 2 show the frequencies and percents of the demographic information for the population.

Table 1

Summary of Frequencies and Percentages for Participants' Academic Standing (N=101).

Academic Standing	#	%
Freshman	34	33.7
Sophomore	25	24.8
Junior	24	23.8
Senior	11	10.9
Graduate Students	7	6.9

Table 2

Summary of Frequencies and Percentages for Participants' Household Income, Marital Status, and BMI (N=101).

		#	%
Household Income	30,000 or below	48	(47.5)
	\$30,001-\$59,999	41	(40.6)
	\$60,000 and above	12	(11.9)
Marital Status	Single	94	(93.1)
	Married/Divorced	5	(5.0)
BMI	Underweight	4	(4.0)
	Healthy weight	67	(66.3)
	Overweight	13	(12.9)
	Obese	17	(16.8)

Most ($n=96$) of the participants were not a member of a sorority, and a majority ($n=91$) of the participants reported receiving some form of financial aid. More than half of the participants ($n=67$) were a healthy weight.

In addition to participants reporting demographic information, they also reported information regarding their cognitive, behavioral, and affective components of body image and their levels of acculturation. Table 3 shows minimum and maximum scores for each, as well as the mean and standard deviation for the participants' responses. The mean score on the Contour Rating Drawing Scale (the measure of cognitive body image) was -0.54 ($SD = 1.06$), which indicates that the participants viewed their ideal body size as lower than their actual body size.

The Pearson correlation [$R= 0.97, p=0.00$] and paired samples t-test [$T= 3.97, p= 0.00$] showed that actual measured weight was highly correlated with the participants' self-report of their present body weight

Table 3

Descriptive Statistics for Body Image and Acculturation/Enculturation (N=101).

	Minimum	Maximum	<i>M</i>	<i>SD</i>
Contour Rating Drawing Scale	-4	2	-0.55	1.06
Social Physique Anxiety Scale	9	37	21.50	5.94
Body Image Avoidance Questionnaire	10	44	22.63	6.97
African American Acculturation Scale	1	3	2.18	0.46

Evaluation of Hypotheses

Hypothesis 1 – African American women who were more acculturated to the dominant Caucasian American culture perceived overweight status at lower BMI values and reported lower BMIs than those who were more enculturated. A 2 (Acculturation/Enculturation) x 3 (SES) MANOVA was conducted for body image and overweight perceptions, and BMI among the participants. The results for the MANOVA are displayed in Table 4.

Table 4

Results of a 2 (Acculturation/Enculturation) x 3 (SES) MANOVA (N=101).

	<i>Wilk's λ</i>	<i>F</i>	<i>df</i>	<i>p</i>	<i>η^2</i>
SES	0.87	1.59	8,182	0.13	0.07
Acculturation	0.92	0.95	8,182	0.48	0.04
SES X Acculturation*	0.83	2.21	8,182	0.03	0.09

* $p < 0.05$

The results indicated no significant differences for the effects of acculturation/enculturation on cognitive body image. Additionally, there were no significant interactions among acculturation/enculturation, cognitive and behavioral body image, and BMI. The results of the between-subject effects for the MANOVA are shown in Table 5.

Table 5

Results of the Between-Subjects Effects of the MANOVA (N=101).

		<i>df</i>	<i>F</i>	<i>p</i>	η^2
SES	Cognitive Body Image	2, 94	1.06	0.35	0.02
	Affective Body Image*	2, 94	3.79	0.03	0.08
	Behavioral Body Image	2, 94	0.10	0.91	0.00
	BMI	2, 94	0.31	0.74	0.01
Acculturation	Cognitive Body Image	2, 94	0.96	0.39	0.02
	Affective Body Image	2, 94	2.07	0.13	0.04
	Behavioral Body Image	2, 94	1.33	0.27	0.03
	BMI	2, 94	0.21	0.81	0.00
SES X Acculturation	Cognitive Body Image	2, 94	1.10	0.34	0.02
	Affective Body Image*	2, 94	6.72	0.00	0.13
	Behavioral Body Image	2, 94	2.65	0.08	0.05
	BMI	2, 94	2.12	0.13	0.04

* $p < 0.05$

Although the differences were not significant, the African American women in the current study who were highly acculturated did report lower BMI values ($M = 24.11$, $SD = 5.03$) than women who were enculturated ($M = 25.26$, $SD = 4.93$). The means and standard deviations are reported in Tables 6-9.

Table 6

Means and Standard Deviations of the Cognitive Component of Body Image x SES and Acculturation(N=101).

	SES	Acculturation	<i>M</i>	<i>SD</i>
Cognitive Body Image	Low	Moderate	-0.42	1.27
		Low	-0.58	0.99
	Moderate	High	-0.33	1.53
		Moderate	-0.40	0.67
		Low	-1.38	0.92
	High	Moderate	-0.73	1.19
		Low	-1.00	0.00
	Total	High	-0.33	1.53
		Moderate	-0.45	1.06
		Low	-0.90	1.00
		Total	-0.54	1.06

Table 7

Means and Standard Deviations of the Affective Component of Body Image x SES and Acculturation(N=101).

	SES	Acculturation	<i>M</i>	<i>SD</i>
Affective Body Image	Low	Moderate	21.47	5.34
		Low	25.50	5.99
		High	16.67	3.21
	Moderate	Moderate	19.03	3.92
		Low	27.38	7.80
		High	22.09	6.01
	High	Moderate	9.00	0.00
		Low	16.67	3.21
		High	20.61	5.04
	Total	Moderate	25.43	7.49
		Low	21.50	5.94
		Total		

Table 8

Means and Standard Deviations of the Behavioral Component of Body Image x SES and Acculturation(N=101).

	SES	Acculturation	<i>M</i>	<i>SD</i>
Behavioral Body Image	Low	Moderate	22.47	5.95
		Low	26.42	2.81
	Moderate	High	19.67	10.02
		Moderate	19.10	5.98
		Low	28.88	5.51
	High	Moderate	25.09	10.62
		Low	21.00	0.00
	Total	High	19.67	10.02
		Moderate	21.53	7.03
		Low	27.10	4.29
		Total	22.63	6.97

Table 9

Means and Standard Deviations of BMI x SES and Acculturation(N=101).

	SES	Acculturation	<i>M</i>	<i>SD</i>
BMI	Low	Moderate	24.82	6.56
		Low	23.78	4.20
	Moderate	High	24.11	5.03
		Moderate	23.11	3.03
		Low	27.59	5.62
	High	Moderate	24.46	5.64
		Low	24.31	0.00
	Total	High	24.11	5.03
		Moderate	24.10	5.31
		Low	25.26	4.93
		Total	24.34	5.20

Hypothesis 2 – African American women with lower SES perceived overweight at higher BMI values and reported higher BMIs than those with higher SES. A 2

(Acculturation/Enculturation) x 3 (SES) MANOVA was conducted for body image and overweight perceptions, and BMI among the participants. Tests of Between Subjects Effects showed no significant main effect for SES on cognitive body image or BMI. The results of the between-subject effects for the MANOVA are shown in Table 5.

Hypothesis 3 – African American women who were more acculturated reported lower body image perceptions than those who were more enculturated. A 2

(Acculturation/Enculturation) x 3 (SES) MANOVA for body image and overweight perceptions, and BMI. A two-way MANOVA was calculated examining the effect of SES on levels of acculturation/enculturation and SES on the cognitive, behavioral and affective components of body image. A significant effect was found (*Wilk's* $\lambda = 0.83$, $F [6,184] = 2.21$, $p=0.03$, $\eta^2=0.09$) for the combined effects of SES and acculturation/enculturation.

Tests of between-subjects effects were conducted to examine the effect of acculturation/enculturation on the cognitive, behavioral and affective components of body image and BMI. No significant effect was found. The results of the between-subject effects for the MANOVA are shown in Table 5.

However, a significant interaction was found for SES and acculturation/enculturation. The results of the MANOVA are shown in Table 5. Tests of Between Subjects Effects indicated that the combined effects of SES and acculturation/enculturation were not significantly influenced by the cognitive ($F [2,94] = 1.10$, $p=0.337$) and the behavioral ($F [2,94] = 2.65$, $p=0.08$) components of body image, nor BMI ($F [2,94] = 2.12$, $p=0.13$). However, the affective component of body image was significantly influenced by SES and acculturation/enculturation ($F [2,94] = 6.72$, $p=.00$).

High scores on the AAAS-33 suggested a “traditional” immersion in African American culture, whereas low scores showed an acculturated state with low immersion in African American culture. Figure 1 showed an inverse relationship for the affective component of body image with increasing SES and acculturation/enculturation status. Low to moderate SES groups showed increasing mean scores with higher scores on the AAAS-33, indicating enculturation,

whereas the high SES group had decreasing mean scores from moderate to high scores on the AAAS-33 (indicating moderate to high enculturation). There were no low mean scores on the AAAS-33 in the high SES group in this study.

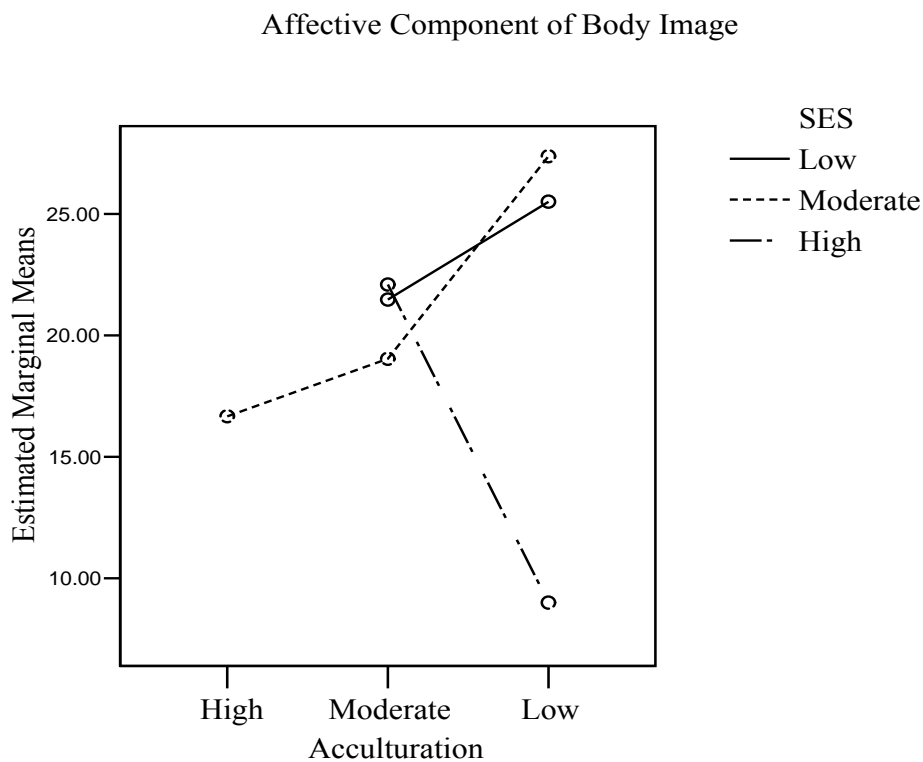


Figure 1. Interaction of SES and acculturation/enculturation on affective body image.

Hypothesis 4 – African American women with higher SES reported lower body image perceptions than those with lower SES. A 2 (Acculturation/Enculturation) x 3 (SES) MANOVA was conducted for body image and overweight perceptions, and BMI. There were no significant main effects for SES alone, but there was a significant interaction for the combined effects of SES and acculturation on the affective and behavioral components of body image. The results for the MANOVA are displayed in Table 5.

Tests of Between-Subjects Effects indicated that Cognitive ($F [2,94] = 1.06, p=0.35$) and behavioral ($F [2,94] = 0.10, p=0.91$) components of body image were not significantly influenced by SES. However, the affective component of body image was significantly influenced by SES ($F [2,94] = 3.79, p=0.03$).

The high SES group had higher scores on the cognitive body image measure ($M= -0.75, SD= 1.14$) than the low SES group ($M= -0.46, SD=1.20$). However, the high SES group had lower mean scores on the affective ($M= 21.00, SD= 6.86$) and behavioral ($M=24.75, SD=10.19$), but the differences are not significant. Table 10 lists the means and standard deviations for the interaction of SES on components of body image and BMI.

Table 10

Means and Standard Deviations for the Interaction of SES on Components of Body Image and BMI (N=101).

Components of Body Image	SES	<i>M</i>	<i>SD</i>
Cognitive	Low	-0.46	1.20
	Moderate	-0.59	0.87
	High	-0.75	1.14
Affective	Low	22.47	5.72
	Moderate	20.49	5.87
	High	21.00	6.86
Behavioral	Low	23.46	5.59
	Moderate	21.04	7.18
	High	24.75	10.19
BMI	Low	24.56	6.03
	Moderate	24.05	4.08
	High	24.45	5.37

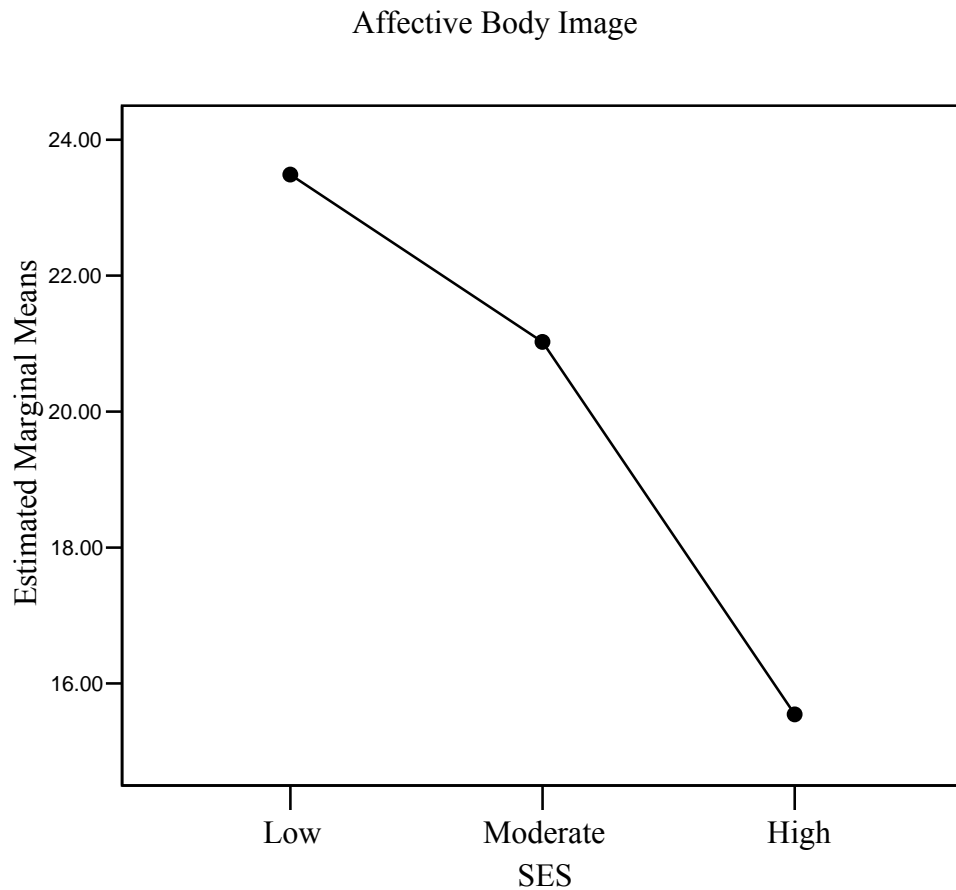


Figure 2. A comparison of affective component of body image among the three SES (i.e., household income) groups.

This figure depicts that as SES increased, mean scores on the SPAS decreased.

Hypothesis 5- African American women with lower SES were more enculturated than those with higher SES. A univariate ANOVA was conducted comparing the three SES groups on levels of acculturation/enculturation. The main effect for SES was not significant ($F [2,98] = 3.01, p=0.06, \eta^2=0.06$). However, participants of the low SES group ($M=150.19, SD=3.93$) had significantly higher mean acculturation scores than the high SES group ($M= 129.00, SD= 7.85$). This indicates that the low SES group was less acculturated than the high SES group. There

were no significant differences in acculturation scores in the moderate SES group ($M= 143.51$, $SD= 4.25$) when compared to the low and high SES groups.

Table 11

Means and Standard Deviations for Acculturation/Enculturation among the Three SES Groups (N=101).

	<i>n</i>	<i>M</i>	<i>SD</i>
Low SES	48	150.19	22.65
Moderate SES	41	143.51	29.16
High SES	12	129.00	36.12

Exploratory Question 1: Which factors in this study best predict BMI?

A multiple linear regression was calculated to predict participants' BMI based on their SES, the cognitive, behavioral, and affective components of body image, and levels of acculturation/enculturation. The cognitive component of body image, which accounted for 37% of the variance, was a significant predictor ($F [5,95] = 11.24, p=0.00$) of BMI.

Table 12

Regression Analysis Predicting BMI (N=101).

Variables	β	t	p
Acculturation	0.11	1.20	0.24
Cognitive Body Image*	-0.52	-5.63	0.00
Affective Body Image	0.09	0.89	0.38
Behavioral Body Image	0.02	0.15	0.88
SES	-0.12	-1.39	0.17

$R^2 = 0.37$.

* $p < 0.05$

Appendix G contains a literature review comparing the means and standard deviations of the current study with previous research studies.

CHAPTER V

DISCUSSION

Introduction

This study examined the relationship of SES and acculturation/enculturation to BMI and perceptions of body image in a sample of college-aged African American female students. The participants included in this study represented a group for which relatively little information is available: college-aged African-American women.

Summary of Results

The mean BMI for the population was 24.34 ($SD = 5.20$), which reflects a normal/healthy weight range. Less than half of the study population was categorized in the low SES group (income of less than \$30,000 a year). The participants in the current study had accurate perceptions of their current BMI. However, the participants viewed their ideal body size as being thinner than their actual body size. Acculturation was not related to cognitive, behavioral, and affective body image; or BMI.

There were no significant differences among the three SES groups on levels of acculturation/enculturation. SES did not affect cognitive and behavioral components of body image, or BMI. However, SES related to the affective component of body image. Specifically, as SES increased, SPAS scores decreased. The cognitive component of body image was a significant predictor of BMI. Specifically, participants' BMI decreased as scores on the Contour Drawing Rating Scale (the cognitive measure of body image) increased.

However, a significant interaction was found for SES and acculturation/enculturation on affective body image. No such effects were found for the cognitive and the behavioral

components of body image, or BMI. However, a main effect was found for SES on the affective component of body image.

The tests of between-subjects effects calculated that there was a significant ($F [2,94] = 6.72, p=0.00$) inverse relationship for the affective component of body image with increasing SES and acculturation/enculturation status. Low to moderate SES groups reported higher scores on the AAAS-33, indicating enculturation, whereas the high SES group reported decreasing mean scores from moderate to high scores on the AAAS-33 (indicating moderate to high enculturation). The high SES group did not report any low scores on the AAAS-33, which indicates that the high SES group was not in an acculturated state.

The Effects of Acculturation

Previous research suggests that cultural patterns and beliefs are major social influences in determining body weight (Bertera, Bertera, & Shankar, 2003). Bertera, Bertera, and Shankar (2003) noted that culture and SES are two essential influences on body weight, but the study focused solely on immigrants from El Salvador. They also reported that overweight was associated with acculturation measures (such as language preference and years residing in the U.S.), but not with SES measures (such as income and level of education). In agreement with previous research which also examined the African American population (Aruette, Nickelberry, & Yates, 2004), the present study indicated that the BMI was not significantly influenced by acculturation or SES. A possible explanation for this finding could be that the acculturation model may better explain cultural differences, eating patterns and body image among U.S. immigrants than among minorities who were born in the United States. Further research is needed to compare body image perceptions and BMI among U.S. immigrant populations and native U.S. minority populations.

It is believed that sociocultural factors such as race/ethnicity, culture, and SES drive the standards of attractive body weight within cultures, which then influences behaviors such as eating and body image (Abrams, Allen, & Gray, 1993; Akan & Grilo, 1995; DiGiacchino, Sargent, & Topping, 2001; Paeratakul et al., 2002). Previous research has examined the effects of the degree of acculturation (in Asian American women) and assimilation (among African-American women) with the mainstream culture on body image and dieting behaviors (Akan & Grilo, 1995). The authors found that the degree of acculturation and assimilation did not influence dieting behaviors and attitude and body image (Akan & Grilo, 1995). In contrast, Abrams, Allen and Gray (1993) noted that African American women who reject their 'Black identity' and were more acculturated were more likely to endorse negative body image attitudes and participate in dietary behaviors associated with eating disorders. In the present study, the levels of acculturation/enculturation alone did not have a significant effect on the cognitive, behavioral, and affective components of body image. However, when acculturation was combined with SES, a significant effect was found on the affective component of body image, which is the anxiety that people experience in response of others' evaluations of their physiques. This finding might suggest that race and cultural patterns alone do not influence body image as once proposed by researchers. Findings of the present study imply that race and ethnicity combined with a sociocultural factor such as SES have a greater effect on body image than just race and ethnicity alone. Further research in this area is needed to determine which sociocultural factors influence body size and body image.

The Effects of Socioeconomic Status

The relationship between socioeconomic status (SES) and body weight perceptions has been examined in a limited number of research studies (Paeratakul et al., 2002; Sarlio-

Lähteenkorva, Silventoinen, & Lahelma, 2004) among the African American population. Previous researchers have suggested that socioeconomic status may contribute to the discrepancy in body size perception (Paeratakul et al., 2002; Sarlio-Lähteenkorva, Silventoinen, & Lahelma, 2004; Wildes, Emery, & Simons, 2001). However, Sarlio-Lähteenkorva, Silventoinen, and Lahelma (2004) did not examine body size perceptions or body image exclusively among the African American population, and a study Paeratakul et al., (2002) had a study population with fairly homogenous income data (more than 57% of the sample population was categorized in the lower SES group). In the present study, SES did not have a significant effect on the behavioral and cognitive components of body image, but it did have an effect on the affective component. This finding may be because the current sample population correctly perceived their current body weight. SES may not be a significant influence if people correctly perceive their own current body size, but it could be a determinant of body size when a person has anxiety when others critique their physiques.

Few studies (Caldwell, Brownwell, & Wilfley, 1997; Cachelin, Striegel-Moore, & Elder, 1998; Demarest & Allen, 2000) have examined the combined effects of ethnicity and SES in regard to body image. Previous research found that middle to high SES women found no significant differences in body satisfaction (Caldwell, Brownwell, & Wilfley, 1997; Demarest & Allen, 2000), and self-esteem (Caldwell, Brownwell, & Wilfley, 1997) between African American and Caucasian women. Cachelin, Striegel-Moore, and Elder (1998) found that income was not a significant predictor of perceptions of realistic and ideal shape and weight among African American, Asian, Hispanic, and Caucasian men and women. In the present study, college aged African American women were examined. The present study found that BMI did not change significantly among differing SES groups; however, the body size of the current

sample was homogeneous in nature. This finding may imply that SES does not have a significant impact on body image and body size, until combined with other sociocultural factors such as race/ethnicity and culture. However, only 11.9% of the current sample population was in the high SES group. More studies need to be performed on a sample population that is heterogeneous in nature.

Body Mass Index

BMI may vary significantly across SES levels. The literature cites an association between race and BMI (DiGioacchino, et al., 2001; Robert & Reither, 2004; Paeratakul et al., 2002). A study found the mean BMI of African Americans to be in the overweight (25-30) range, while the mean BMI for Caucasians was in the normal (19-25) weight range (DiGioacchino, Sargent, & Topping, 2000). In further support of this finding, another study, which included male and female African Americans, found that mean BMIs for both men and women were greater than 25, which is in the overweight range (James, 2003). In the current study, the African American female population was solely investigated. The mean BMI for this group was 24.10 ($SD= 5.71$), which is in the healthy weight range, contrary to the findings of previous research. It is important to note that BMI is not the best indicator of body weight or body fat, and thus the findings of this study must be interpreted cautiously. A possible explanation for this finding is that data were collected at the University of New Orleans during the Spring 2006 semester in the aftermath of Hurricane Katrina. The university population was significantly reduced, and the population composition was greatly affected. In addition, perceptions and emotions may have been unique and have affected participants' responses.

A previous study noted that BMI was a determinant of body size perceptions (Cachelin, Rebeck, Chung, & Pelayo, 2002). Cachelin and colleagues observed that BMI was positively

correlated with figure ratings, suggesting that individuals who were larger in size tended to choose larger acceptable and attractive figures. However, this study was limited by the fact that the authors only used one measure (i.e., contour figure rating scale) to measure body image and size perceptions (Cachelin et al., 2002). The present study used three measures to assess the cognitive, behavioral, and affective components of body image. The current study found that BMI was not significantly influenced by the cognitive, behavioral, or affective components of body image. However, the regression analysis showed that the cognitive component of body image does significantly predict BMI. This finding may imply that how a person cognitively views their own body size may influence patterns and behaviors that may lead to overweight and obesity. This is an area that needs further research.

DiGioacchino and colleagues (2001) observed that African American women perceived themselves to be much smaller than their actual weight, while Caucasians perceived themselves to be much closer to their actual BMI. However, in agreement with previous research (Allan, Mayo, & Michel, 1993; Duncan, Anton, Newton, Jr., & Perri, 2003), participants in the current study had accurate perceptions of their current BMI. However, this finding may be due to the lack of heterogeneity in body size in the current sample.

Body Image

Body image can be defined a “person’s evaluation of their body and the influence of this mental image and evaluation on their behavior” (DiGioacchino, Sargent, & Topping, 2001, pp.40). Previous research suggested that an individual’s age, body weight, and SES or educational level all influence body image (Cachelin et al., 2002). In the current study, between-subjects effects indicated that SES did significantly relate to the affective component of body image, but not the behavioral and cognitive components. In the current study, the low SES had

the highest mean SPAS scores, indicating that the low SES group experienced the greatest amount of social physique anxiety. With increasing SES levels, it could be implied that people experience less anxiety towards how others view their body size. Future research should focus on how affective body image is influenced by sociocultural factors.

Additionally, previous studies found that middle to high SES women found no significant differences in body satisfaction (Caldwell, Brownwell, & Wilfley, 1997; Demarest & Allen, 2000), and self-esteem (Caldwell, Brownwell, & Wilfley, 1997) between African American and Caucasian women. In contrast, Altabe (1998) found that the African American women had the most positive body image than the Caucasian and Asian-Americans sampled. However, in contrast to previous studies (Allan, Mayo, & Michel, 1993), the participants in the current study viewed their ideal body size lower than their actual body size, which suggests that the women in the current sample had a negative body image. However, these negative body image perceptions did not seem to correspond to the participants' BMIs, which were relatively healthy/normal compared to norms.

Paeratakul and colleagues (2002) performed a study to compare the self-perception of overweight according to sex, race/ethnicity, socioeconomic status, and to further compare the self-perception of overweight among individuals classified as normal weight, overweight, and obese. They found that self-perception of overweight was more common in women compared with men and in Caucasians compared to African Americans (Paeratakul et al., 2002). The authors also found that perceived overweight was significantly higher in women, especially Caucasian women (Paeratakul et al., 2002). Fitzgibbon et al. (2000) noted that similar levels of body dissatisfaction were reported by African Americans and Caucasian females. African American women did not report significant levels of body dissatisfaction until they reached

overweight status (Fitzgibbon et al., 2000). Similarly, previous research has reported that African American women display more positive body images and have less desire to be thin than Caucasian or Hispanic women (Demarest & Allen, 2000). In contrast to previous research, the current sample mean cognitive body image score was -0.56 ($SD = 1.06$), which indicates that the current sample negatively viewed their own body image. This finding is in agreement with Cachelin et al. (2002), who reported that there was not general acceptance of larger body sizes among African American women, as commonly believed. However, in the current study, SES and BMI was not a controlled variable. Since the current sample accurately perceived their current body weight, it could be implied that there's a relationship between their perception of their current weight and their perception of their ideal weight. This is an area that needs further research.

Previous research has shown that African Americans have similar self-perceptions of their body weight, physical shape, and fitness, compared to Caucasians, despite being heavier, more obese, or less aerobically fit (Cachelin et al., 2002; Duncan, Anton, Newton, Jr., & Perri, 2003). Similarly, DiGiacchino, Sargent, & Topping (2001) reported that African American women perceived themselves to be smaller than their actual body size. Studies have also found that African American women were more satisfied with their body weight than Caucasian-American women (Altabe, 1998; Aruguete, Nickleberry, & Yates, A., 2004; Rowen et al., 1991). In the current study, a figure rating scale was used to measure how the participants cognitively viewed their current body size. The mean scores were negative which means that the participants of the current study viewed their ideal body size to be lower than their actual body size, in contrast to previous studies. This finding could imply that the current sample idealized smaller body sizes, which could be media influenced. The current study did not investigate the

role that media play in influencing perception of ideal body size. Further research in this area is needed.

Implications

The results of the current study imply that SES effects the affective component of body image. As a result, researchers should focus on the role SES plays on the affective component of body image among college-aged African American women. Results of previous research focused only on the cognitive component of body image in African American females, thus ignoring other components of body image and body size perceptions.

Additionally, the combination of SES and levels of acculturation/enculturation also effects the affective component of body image. Researchers need to investigate which sociocultural components of have a significant effect on body image. Because acculturation and SES had an effect on affective body image in the current study, interventions should be aimed at making African-American women feel more comfortable ‘culturally’ while exercising. Since the affective component of body image was effected by SES and acculturation, gyms should offer secluded work-out spaces, so that women will feel less anxiety about others critiquing their physique and body size. More research studies are needed that examine affective body image among the African American female population.

Although SES or levels of acculturation did not have a significant effect on body mass index in the current study, the current research found that the cognitive component of body image significantly predicted BMI. The current study did not include a sample with a wide range of BMIs, so findings regarding BMI are not generalizable to the population. Future research should focus on a broader sample size and use more measures to be able to accurately predict what variables predict body mass index.

Limitations

The limitations of this study include a small sample size, participant selection, and the use of self-reported height from the participants. With a total sample size of 101, the sample size was fairly small, which affects the generalizability of the results. Selection of the participants was voluntary and non-random, which potentially caused selection bias. Only three African American females targeted for the study declined to participate because they did not want their weight measured. Slightly more than 10% of the population was in the high SES group, so there was some homogeneity when looking at the variable of SES. Future research should examine a more heterogeneous sample.

Data were collected from the African American female population at the University of New Orleans in Spring 2006 following Hurricane Katrina. The school's population was reduced, and the racial and SES composition was altered. In addition, the aftermath of Hurricanes Katrina and Rita caused a significant increase in the occurrence of depression and anxiety among those affected by the storms (Voelker, 2006). Each of these factors may have affected participants' responses to the survey items.

The use of BMI as a measure of body weight does not account for body fatness or fat distribution. Body fatness and fat distribution should be appropriately measured because they are associated with obesity comorbidities. Also, when Pearson correlations were calculated comparing measured BMI to actual BMI, self-reported height was used, which means that BMI may not have been accurately calculated.

A new measure of the cognitive component of body image should be designed for the African American female population. The participants could not identify with the figures on the Contour Drawing Rating Scale used to measure the cognitive component of body image in the

present study. A more culturally appropriate figure rating scale should be designed for African American women to more accurately assess the cognitive component of body image.

The results of the present study may have been positively influenced due to the characteristics of the research team. The results of the participants may have been particularly honest because both the researchers collecting data from the participants and the participants themselves were African American. As a result, the participants might have been more at ease answering racially-sensitive questionnaires presented to them by an African American woman compared to the stereotypical white male researcher.

Finally, participants self-reported height and SES, which may result in some inaccurate reporting of data. Self-reporting always includes some error, and the validity of these measures is not established. Consequently, SES and BMI may not have been accurately evaluated.

Future Research

There is a paucity of research that examines the role that acculturation/enculturation plays on body image and obesity perceptions. The current sample consisted of a relatively narrow range of body sizes, so the researcher was not able to fully examine the potential relationships of the factors in the study to BMI. Future researchers should include a sample of African American women that encompasses broader ranges of BMI. Additionally, there is a need for a more standard measure of cognitive body image for African American women. The figure rating scales that were developed in previous studies and employed in the current study do not accurately depict the body appearance of African American women.

The current study did not fully assess levels of physical activity in the sample population. In the current study, the behavioral, cognitive, and affective components of body image were examined as factors that determine BMI, but physical activity has been shown to influence BMI

(James, 2003). Future research should assess physical activity levels in addition to other variables to properly evaluate causes of obesity. Obesity is a public health issue, especially among African American women. Unless variables that lead to obesity are properly identified, the prevalence of overweight and obesity will continue to rise in this particular group. Physical activity levels, along with acculturation/enculturation should be evaluated in future research so that intervention programs could be developed that are culturally appropriate for African American women.

Conclusion

Most published studies (Cachelin et al., 2002; Demarest & Allen, 2000) on body image have been characterized by the following: 1) convenient samples of college students, 2) small samples of minority groups, and 3) no consideration of confounding variables such as BMI and SES. The current study aimed to extend the knowledge base regarding the influences of body size, SES, and acculturation/enculturation of the dominant culture on perceptions of overweight and obesity among African American women. The results of the current study suggested that statuses alone, and in combination with acculturation/enculturation, significantly affects certain components (i.e., affective) of body image.

References

- Abrams, K.K., Allen, L.R., & Gray, J.J. (1993). Disordered eating attitudes and behaviors, psychological adjustment, and ethnic identity: A comparison of black and white female college students. *International Journal of Eating Disorders*, 14(1), 49-57.
- Akan, G.E. & Grilo, C.M. (1995). Sociocultural influences on eating attitudes and behaviors, body image, and psychological functioning: A comparison of African-American, Asian-American, and Caucasian college women. *International Journal of Eating Disorders*, 18(2), 181-187.
- Allan, J.D., Mayo, K., & Michel, Y. (1993). Body size values of White and Black women. *Research in Nursing and Health*, 16, 323-333.
- Altabe, M. (1998). Ethnicity and body image: quantitative and qualitative analysis. *International Journal of Eating Disorders*, 23, 153-159.
- Altabe, M. & Thompson, J.K. (1996). Body image: A cognitive self-schema construct? *Cognitive Therapy and Research*, 20, 171-193.
- Arfken, C.L. & Houston, C.A. (1996). Obesity in inner-city African Americans. *Ethnicity and Health*, 1(4), 317-326.
- Aruguete, M.S., Nickleberry, L.D., & Yates, A. (2004). Acculturation, body image, and eating attitudes among Black and White college students. *North American Journal of Psychology*, 6, 393-404.
- Bertera, E.M., Bertera, R.L., & Shankar, S. (2003). Acculturation, socioeconomic factors and obesity among immigrants from El Salvador living in the Washington, D.C. area. *Journal of Ethnic and Cultural Diversity in Social Work*, 12(2), 43-59.

- BMI—Body Mass Index: About BMI for Adults. (2006). Centers for Disease Control and Prevention. Retrieved on May 24, 2006 from http://www.cdc.gov/nccdphp/dnpa/bmi/adult_BMI/about_adult_BMI.htm
- Cachelin, F.M., Rebeck, R.M., Chung, G.H. & Pelayo, E. (2002). Does ethnicity influence body-size preference? A comparison of body image and body size. *Obesity Research*, 10(3), 158-166.
- Caldwell, M.B., Brownell, K.D., & Wilfley, D.E. (1997). Relationship of weight, body dissatisfaction, and self-esteem in African American and white female dieters. *International Journal of Eating Disorders*, 22, 127-130.
- Cash, T.F., & Pruzinsky, T. (Eds.). (1990). *Body images: development, deviance, and change*. New York: The Guilford Press.
- Dawson, D. (1989). Ethnic differences in female overweight: Data from 1985 National Health Interview Survey. *American Journal of Public Health*, 59, 353-358.
- Demarest, J. & Allen, R. (2000). Body image: Gender, ethnic, and age differences. *The Journal of Social Psychology*, 140(4), 465-472.
- DiGiacchino, R.F., Sargent, R.G., & Topping, M. (2001). Body dissatisfaction among White and African American male and female college students. *Eating Behaviors*, 2, 39-50.
- Duncan, G.E., Anton, S.D., Newton, Jr., R.L., & Perri, M.G. (2003). Comparison of perceived health to physiological measures of health in Black and White women. *Preventive Medicine*, 36, 624-628.
- Fitzgibbon, M.L., Blackman, L.R., & Avellone, M.E. (200). The relationship between body image discrepancy and body mass index across ethnic groups. *Obesity Research*, 8(8), 582-589.

- Flegal, K.M., Carroll, M.D., Kuczmarski, R.J., & Johnson, C.L. (1998). Overweight and obesity in the United States: prevalence and trends, 1960-1994. *International Journal of Obesity Related Metabolic Disorders*, 22, 39-47.
- Gluck, M.E. & Geliebter, A. (2002). Racial/ethnic differences in body image and eating behaviors. *Eating Behaviors*, 3, 143-151.
- Gore, S.V. (1999). African-American womens' perceptions of weight: paradigm shift for advanced practice. *Holistic Nursing Practice*, 13(4), 71-79.
- Gray, S. (1977). Social aspects of body image: perception of normalcy of weight and affect of college undergraduates. *Perceptual and Motor Skills*, 45, 1035-1040.
- Harris, M.B., & Koehler, K.M. (1992). Eating and exercise behaviors and attitudes of Southwestern Anglos and Hispanics. *Psychology and Health*, 7, 165-174.
- Hart, Leary, & Rejeski. (1989). The measurement of social physique anxiety. *Journal of Sport and Exercise Psychology*, 11, 94-104.
- Helms, J.E. (1990). Black and White racial identity: theory, research, and practice. New York: Greenwood Press.
- James, D.C.S. (2003). Gender differences in body mass index and weight loss strategies among African Americans. *Journal of the American Dietetic Association*, 103, 1360-1362.
- Jeffery, S., Forster, J., Folsom, A., Leupker, R., Jacobs, D., & Blackburn, H. (1987). Relationship between social status and body mass index in the Minnesota heart health program. *International Journal of Obesity*, 13, 59-67.
- Kemper, K.A., Sargent, R.G., Drane, J.W., Valois, R.F., & Hussey, J.R. (1994). Black and White females' perceptions of ideal body size and social norms. *Obesity Research*, 2(2), 117-126.

- Klonoff, E.A. & Landrine, H. (2000). Revising and improving the African American Acculturation Scale. *Journal of Black Psychology*, 26(2), 235-261.
- Kuchler, F. & Variyam, J.N. (2003). Mistakes were made: Misperception as a barrier to reducing overweight. *International Journal of Obesity*, 27, 856-861.
- Kumanyika, S.K., Morssink, C., & Agurs, T. (1992). Models for dietary and weight change in African-American women: Identifying cultural components. *Ethnicity & Disease*, 2, 166-175.
- Landrine, H. & Klonoff, E.A. (1995). The African American Acculturation Scale II: Cross-validation and Short Form. *Journal of Black Psychology*, 21, 124-152.
- Molarius, A., Seidell, J.C., Sans, S., Tuomilehto, J., & Kuulasmaa, K. (2000). Educational level, relative body weight, and changes in their association over 10 years: An international perspective from the WHO MONICA project. *American Journal of Public Health*, 90(8), 1260-1268.
- Padgett, J. & Biro, F.M. (2003). Different shapes in different cultures: Body dissatisfaction, overweight, and obesity in African-American and Caucasian females. *Journal of Pediatric and Adolescent Gynecology*, 16, 349-354.
- Paeratakul, S., White, M.A., Williamson, D.A., Ryan, D.H., & Bray, G.A. (2002). Sex, race/ethnicity, socioeconomic status, and BMI in relation to self-perception of overweight. *Obesity Research*, 10(5), 345-350.
- Perez, M., Voelz, Z.R., Pettit, J.W., & Joiner, Jr., T.E. (2002). The role of acculturative stress and body dissatisfaction in predicting bulimic symptomology across ethnic groups. *International Journal of Eating Disorders*, 31, 442-454.

- Rand, C.S.W. & Kuldau, J.M. (1990). The epidemiology of obesity and self-defined weight problem in the general population: Gender, race, age, and social class. *International Journal of Eating Disorders*, 9(3), 329-343.
- Robert, S.A., & Reither, E.N. (2004). A multilevel analysis of race, community disadvantage, and body mass index among adults in the US. *Social Science and Medicine*, 59, 2421-2434.
- Rosen, E.F., Anthony, D.L., Booker, K.M., Brown, T.L., Christian, E., Crews, R.C. et al. (1991). A comparison of eating disorder scores among African-American and white college females. *Bulletin of the Psychonomic Society*, 29, 65-66.
- Rosen, J.C., Srebnick, D., Saltzberg, E., & Wendt, S.H. (2000). Body image avoidance questionnaire [BIAQ]. In K.J. Corcoran, & J. Fischer (Eds.), *Measures for clinical practice: a sourcebook*. 3rd Ed. (vol. 2). New York: Free Press.
- Rowland, M.L. (1990). Self reported weight and height. *American Journal of Clinical Nutrition*, 52, 1125-1133.
- Russell, W.D., & Cox, R.H. Social physique anxiety, dissatisfaction, and self-esteem in college females of differing exercise frequency, perceived weight discrepancy, and race. *Journal of Sport Behavior*, 26, 298-318.
- Sánchez-Johnsen, L.A.P., Fitzgibbon, M.L., Martinovich, Z., Stolley, M.R., Dyer, A.R., & Van Horn, L. (2004). Ethnic differences in correlates of obesity between Latin-American and Black women. *Obesity Research*, 12(4), 652-660.
- Sarlio-Lähteenkorva, S., Silventoinen, K. & Lahelma, E. (2004). Relative weight and income at different levels of socioeconomic status. *American Journal of Public Health*, 94(3), 468-472.

- Snooks, M.K. & Hall, S.K. (2002). Relationship of body size, body image, and self-esteem in African American, European American, and Mexican American middle-class women. *Health Care for Women International*, 23, 460-466.
- Sobal, J. & Stunkard, A.J. (1989). Socioeconomic status and obesity: a review of the literature. *Psychological Bulletin*, 105(2), 260-275.
- Streigel-Moore, R.H. (1995). A feminist perspective on the etiology of eating disorders. In K.D. Brownell, & C.G. Fairburn (Eds.), *Eating disorders and obesity: A comprehensive handbook* (pp.224-229). New York: The Guilford Press.
- Thompson, J.K. ed. (1996). *Body image, eating disorders, and obesity: and integrative guide for assessment and treatment*. Washington, D.C.: American Psychological Association.
- Thompson, M.A. & Gray, J.G. (1995). Development and validation of a new body image assessment scale. *Journal of Personality Assessment*, 64, 258-269.
- Tiggemann, M. & Rothblum, E. (1988). Gender differences in social consequences of perceived overweight in the United States and Australia. *Sex Roles*, 18, 75-86.
- Voelker, R. (2006). Post-Katrina mental health needs prompt group to compile disaster medicine guide. *JAMA: Journal of the American Medical Association*, 295, 259-260.
- Yates, A., Edman, J., & Aruguete, M. (2004). Ethnic differences in BMI and body/self-dissatisfaction among whites, Asian subgroups, Pacific Islanders, and African-Americans. *Journal of Adolescent Health*, 34(4), 300-307.

APPENDICES

APPENDIX A

LETTER OF CONSENT

Dear Participant:

I am a graduate student under the direction of Professor Dr. Anthony Kontos, Ph.D. in the Department of Human Performance and Health Promotion at the University of New Orleans. I am conducting a research study to examine the effects of body size (measured in body mass index (BMI), socioeconomic status (SES) and acculturation/enculturation on ideals of body image and perceptions of overweight among African American college women.

I am requesting your participation, which will involve approximately 30 minutes (or less) of your time. Your participation in this study is voluntary. If you choose not to participate or to withdraw from the study at any time, there will be no penalty. The results of the research study may be published, but your name will not be used. The questionnaire is anonymous.

If you have any questions regarding the research study, please call Dr. Anthony Kontos at UNO at (504) 280-6420.

Return of the questionnaire will be considered your consent to participate.

Sincerely,

Tamika Y. Edwards

APPENDIX B

TO ENSURE ANONYMITY, PLEASE DO NOT PUT YOUR NAME ON ANY OF THE FORMS INSIDE OF THIS PACKET!!

Please fill in your current:

Age: _____ years

Height: _____ inches

Weight: _____ pounds

Please indicate your **current academic standing** at this university (**please check only one**):

- ☐ Freshman ☐ Sophomore ☐ Junior ☐ Senior
☐ Graduate Student ☐ Other _____ (please fill in)

Please indicate your **current marital status**:

- ☐ Single ☐ Married ☐ Divorced/Separated

Please indicate **your or your parents' total household income during the past year** (**please check only one**):

- ☐ \$30,000 or below ☐ \$30,001-\$59,999 ☐ \$60,000-\$99,999
☐ \$100,000 or above

Please indicate if you receive any or all of the following **types of financial aid**:

- ☐ Pell Grant ☐ Student Loans ☐ Scholarship

Are you currently a member of a sorority?

- ☐ Yes ☐ No

Measured Weight _____

APPENDIX C

Social Physique Anxiety Scale

The Social Physique Anxiety Scale will be used to assess the affective component of body image. Please read each of the following statements carefully and indicate the degree to which the statement is characteristic of you, according to the following scale:

- 1 = Not at all characteristic of me
- 2 = Slightly characteristic of me
- 3 = Moderately characteristic of me
- 4 = Very characteristic of me
- 5 = Extremely characteristic of me

Please circle the number that is characteristic of you for the following questions:

1. I wish I wasn't so uptight about my physique/figure. 1 2 3 4 5
2. There are times when I am bothered by thoughts that other people are evaluating my weight or muscular development negatively. 1 2 3 4 5
3. Unattractive features of my physique/figure make me nervous in certain social settings. 1 2 3 4 5
4. In the presence of others, I feel apprehensive about my physique/figure. 1 2 3 4 5
5. I am comfortable with how my body appears to others. 1 2 3 4 5
6. It would make me uncomfortable to know others were evaluating my physique/figure. 1 2 3 4 5
7. When it comes to displaying my physique/figure to others, I am a shy person. 1 2 3 4 5

1 = Not at all characteristic of me
2 = Slightly characteristic of me
3 = Moderately characteristic of me
4 = Very characteristic of me
5 = Extremely characteristic of me

- | | |
|---|--------------------------|
| 8. I usually feel relaxed when it is obvious that others are | 1 2 3 4 5 |
| looking at my physique/figure. | |
| 9. When in a bathing suit, I often feel nervous about the shape | 1 2 3 4 5 |
| of my body. | |

APPENDIX D

Body Image Avoidance Questionnaire

Please circle the number with best describes how often you engage in these behaviors at the present time.

	Always	Usually	Often	Sometimes	Rarely	Never
1. I wear baggy clothes	5	4	3	2	1	0
2. I wear clothes I do not like	5	4	3	2	1	0
3. I wear darker color clothing	5	4	3	2	1	0
4. I wear a special set of clothing, e.g. my “fat clothes”	5	4	3	2	1	0
5. I restrict the amount of food I eat	5	4	3	2	1	0
6. I only eat fruits and vegetables and other low calorie foods	5	4	3	2	1	0
7. I fast for a day or longer	5	4	3	2	1	0
8. I do not go out socially if I will be “checked out”	5	4	3	2	1	0
9. I do not go out socially if the people I’m with talk about weight	5	4	3	2	1	0
10. I do not go out socially if the people I am with are thinner than me	5	4	3	2	1	0
11. I do not go out socially if it involves eating.	5	4	3	2	1	0

	Always	Usually	Often	Sometimes	Rarely	Never
12. I weigh myself	5	4	3	2	1	0
13. I am inactive	5	4	3	2	1	0
14. I look at myself in the mirror	5	4	3	2	1	0
15. I avoid physical intimacy	5	4	3	2	1	0
16. I wear clothes that will divert attention from my weight	5	4	3	2	1	0
17. I avoid going clothes shopping	5	4	3	2	1	0
18. I don't wear "revealing" clothes, e.g. short tank tops or bathing suits	5	4	3	2	1	0
19. I get dressed up or made up	5	4	3	2	1	0

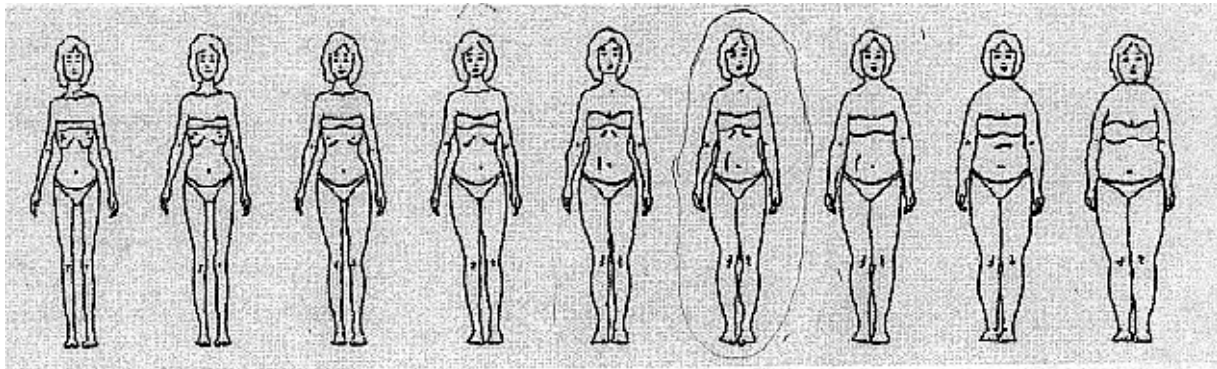
APPENDIX E

Figure Rating Scale

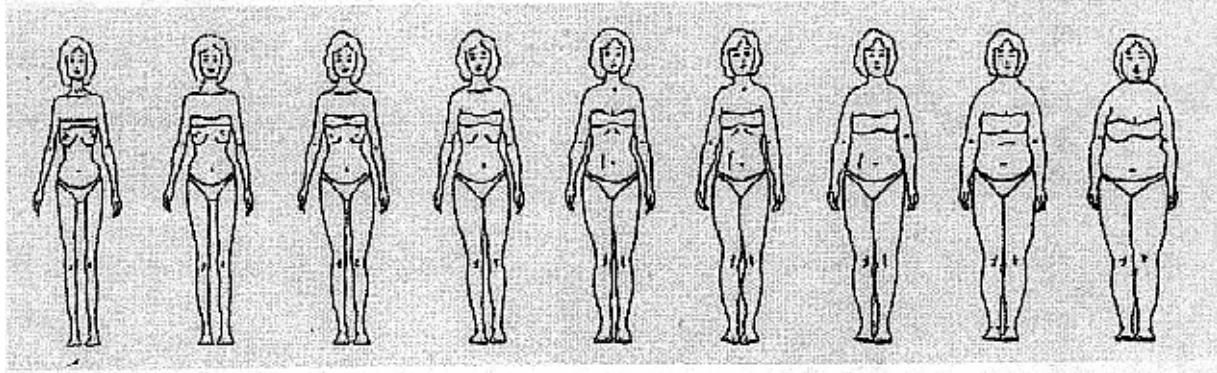
Please circle the figure below that best represents your current size. Place an 'X' above the figure that represents your ideal size.

EXAMPLE:

X



FEMALE:



APPENDIX F

African American Acculturation Scale (AAAS-33)

Beliefs and Attitudes Survey

Below are some beliefs and attitudes about religion, families, racism, African Americans, Caucasians, and health. Please indicate how much you personally agree or disagree with these beliefs and attitudes by circling a number for each statement.

	I totally disagree Not true at all ↓			Sort of agree Sort of true ↓			I strongly agree Absolutely true ↓	
1. Most of the music I listen to is by Black artists.	1	2	3	4	5	6	7	
2. I like Black music more than White music.	1	2	3	4	5	6	7	
3. The person I admire the most is Black.	1	2	3	4	5	6	7	
4. I listen to Black radio stations.	1	2	3	4	5	6	7	
5. I try to watch all the Black shows on TV.	1	2	3	4	5	6	7	
6. Most of my friends are Black.	1	2	3	4	5	6	7	
7. I believe in the Holy Ghost.	1	2	3	4	5	6	7	
8. I believe in heaven and hell.	1	2	3	4	5	6	7	
9. I like gospel music.	1	2	3	4	5	6	7	
10. I am currently a member of a Black church.	1	2	3	4	5	6	7	
11. Prayer can cure disease.	1	2	3	4	5	6	7	
12. The church is the heart of the Black community.	1	2	3	4	5	6	7	

	I totally disagree Not true at all ↓			Sort of agree Sort of true ↓			I strongly agree Absolutely true ↓
13. I know how to cook chit'lins.	1	2	3	4	5	6	7
14. I eat chit'lins once in a while.	1	2	3	4	5	6	7
15. Sometimes, I cook ham hocks.	1	2	3	4	5	6	7
16. I know how long you're supposed to cook collard greens.	1	2	3	4	5	6	7
17. I went to a mostly Black elementary school.	1	2	3	4	5	6	7
18. I grew up in a mostly Black neighborhood.	1	2	3	4	5	6	7
19. I went to (or go to) a mostly Black high school.	1	2	3	4	5	6	7
20. I avoid splitting a pole.	1	2	3	4	5	6	7
21. When the palm of your hand itches, you'll receive some money.	1	2	3	4	5	6	7
22. There's some truth to many old superstitions.	1	2	3	4	5	6	7
23. IQ tests were set up purposefully to discriminate against Black people.	1	2	3	4	5	6	7
24. Most tests (like the SATs and tests to get a job) are set up to make sure that Blacks don't get high scores on them.	1	2	3	4	5	6	7
25. Deep in their hearts, most White people are racists.	1	2	3	4	5	6	7

	I totally disagree Not true at all ↓			Sort of agree Sort of true ↓			I strongly agree Absolutely true ↓
26. I have seen people “fall out.”	1	2	3	4	5	6	7
27. I know what “falling out” means.	1	2	3	4	5	6	7
28. When I was a child, I used to play tonk.	1	2	3	4	5	6	7
29. I know how to play bid whist.	1	2	3	4	5	6	7
30. It’s better to try to move your whole family ahead in this world than it is to be out for only yourself.	1	2	3	4	5	6	7
31. Old people are wise.	1	2	3	4	5	6	7
32. When I was young, my parent(s) sent me to stay with a relative (aunt, uncle, grandmother) for a few days or weeks, and then I went back home again.	1	2	3	4	5	6	7
33. When I was young, I took a bath with my sister, brother, or some other relative.	1	2	3	4	5	6	7

APPENDIX G

Literature Review

Authors	Race/Ethnicity	Factors	<i>N</i>	<i>M</i>	<i>SD</i>
Akon and Grilo (1995)	African-American	Age	36	20.28	1.16
		BMI	36	23.57	3.98
	Asian-American	Age	34	20.03	1.45
		BMI	34	21.03	1.91
	Caucasian	Age	28	20.11	1.17
		BMI	28	21.57	2.38
	Hispanic	Age	36	20.28	1.16
		BMI	36	23.57	3.98
Cachelin et al.(2002)	African-American	Age	132	27.5	10.3
		BMI	132	27.3	6.2
	Asian-American	Age	189	22	6.6
		BMI	189	20.9	3.5
	Caucasian	Age	101	28.6	11.2
		BMI	101	23.2	4.2
	Hispanic	Age	379	21.1	5.3
		BMI	379	24.5	5.2

Authors	Race/Ethnicity	Factors	<i>N</i>	<i>M</i>	<i>SD</i>
DiGiacchino et al. (2001)	African-American	BMI	119	25.56	6.19
	Caucasian	BMI	320	22.3	4.16
Duncan et al. (2003)	African-American	Body Weight (kg)	35	82.7	16.5
		BMI	35	30.3	5.3
	Caucasian	Body Weight (kg)	155	73.1	12.9
		BMI	155	27.2	4.5
Present Study	African-American	Age	101	20.9	2.9
		Body Weight (kg)	101		
		BMI	101	24.34	5.2

***University Committee for the Protection
of Human Subjects in Research
University of New Orleans***

Campus Correspondence

Anthony Kontos, Ph.D.
Tamika Edwards

4/13/2005

RE: The relationship of body size, socioeconomic status, and acculturation to
perceptions of overweight among college-aged African American women

IRB#: 12apr05

The IRB has deemed that the proposed research project is now in compliance with
current University of New Orleans and Federal regulations.

Be advised that approval is only valid for one year from the approval date. Any changes
to the procedures or protocols must be reviewed and approved by the IRB prior to
implementation. Use the IRB# listed on the first page of this letter in all future
correspondence regarding this proposal.

If an adverse, unforeseen event occurs (e.g., physical, social, or emotional harm), you
are required to inform the IRB as soon as possible after the event.

Best of luck with your project!
Sincerely,

Laura Scaramella, Ph.D.
Chair, University Committee for the Protection of Human Subjects in Research

VITA

Tamika Yvette Edwards was born in Shreveport, LA. Tamika attended C.E. Byrd Math/Science Magnet High School in Shreveport, Louisiana, and she graduated in May, 1996. In the Fall of 1996, Tamika was accepted into the Louisiana Tech University, where she pursued her bachelor of science degree with a concentration in Cell and Molecular Biology. In the Winter Quarter of 2001, Tamika graduated from Louisiana Tech University. In the Fall of 2002, Tamika was accepted into the graduate program of Human Performance and Health Promotion at the University of New Orleans. During her graduate studies, Tamika pursued a concentration in Exercise Physiology. Her research interests included body size and body image perceptions among African American women. During her graduate career, Tamika was a research associate for in the Department of Ophthalmology at Louisiana State University Health Sciences Center. After graduating, Tamika will pursue a doctorate of physical therapy degree at a University in the New Orleans Metropolitan area.