ACCULTURATION IN AFRICAN AMERICAN COLLEGE WOMEN
AND CORRELATES OF EATING DISORDERS

DISSERTATION

Presented to the Graduate Council of the
University of North Texas in Partial
Fulfillment of the Requirements

For the Degree of

DOCTOR OF PHILOSOPHY

By

Regan Lester, B.S., M.A.
Denton, Texas
August, 1996
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Although eating disorders have been the focus of much research, the inclusion of minority populations has been minimal. A recent review of the literature by Dolan (1991) has found that eating disorders were most likely to be present in non-White women who were exposed to Western societies and cultures. Thus, the purpose of this study was to examine personality, physical, and cultural correlates of bulimic symptomatology in a sample of African American college women. The Bulimia Test Revised (BULIT-R) was used to assess bulimia symptoms. The African American Acculturation Scale (AAAS), the Beliefs about Attractiveness Scale Revised (BAAR factors 1 and 2), the Rosenberg Self-Esteem Scale (SES), the Centers for Epidemiological Depression Scale (CES-D), Body Parts Satisfaction Scale (BPSS), and body mass were the independent variables hypothesized to predict bulimic symptoms. Hierarchical regression analysis revealed that body mass, depression, and low self-esteem were the best predictors of bulimic symptomatology, together accounting for 38% of the variance. Beliefs about attractiveness and body satisfaction were
related to bulimic symptoms but not when considered simultaneously with the other variables. Acculturation was not predictive of bulimic symptoms. 0-ordered correlations revealed that beliefs about attractiveness and body satisfaction were correlated with bulimic symptoms. Acculturation was not related to any variables except depression. Implications for counseling interventions as well as directions for future research are discussed.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th></th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. INTRODUCTION</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Correlates and Prevalence of Eating Disorders in European Americans</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eating Disorders in Minorities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eating Disorders examined Internationally</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acculturation and Eating Disorders</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. METHOD</td>
<td></td>
<td>46</td>
</tr>
<tr>
<td>Participants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instruments</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level of Acculturation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sociocultural Mores About Attractiveness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body Dissatisfaction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Esteem</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bulimic Symptomatology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demographic Information</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Procedure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. RESULTS</td>
<td></td>
<td>56</td>
</tr>
<tr>
<td>Descriptive and Demographic Data</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prevalence of Bulimia Nervosa</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Prediction of Bulimia Nervosa</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. DISCUSSION</td>
<td></td>
<td>60</td>
</tr>
<tr>
<td>Limitations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implications for Counselors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Directions for Future Research</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conclusion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>APPENDICES</td>
<td></td>
<td>80</td>
</tr>
<tr>
<td>REFERENCES</td>
<td></td>
<td>113</td>
</tr>
</tbody>
</table>
CHAPTER I

INTRODUCTION

Although this literature review will focus on research investigating eating disorders in ethnic minority females, specifically, African American females, in the first section, a general discussion concerning theories and prevalence of eating disorders will be presented. In this section, current research examining the correlates of eating disorders also will be discussed. The second section will focus on minority females and non-minority and minority males and females, reviewing prevalence rates and correlates of eating disorders. In the third section, eating disorders examined internationally will be discussed. As eating disorders research indicates that exposure to Western Society influences their development, the concept of Acculturation and its relations to eating disorders will be discussed in the fourth section. The few existing studies examining eating disorders in relation to acculturation will be outlined.

Correlates and Prevalence of Eating Disorders in European Americans

Extensive research on Bulimia and Anorexia Nervosa has identified several factors in the etiology of these disorders. Specifically, research has identified personality, family dynamics, demographic characteristics,
and sociocultural influences (Shisslak, Crago, Neal, & Swain, 1987), preoccupation with body weight (Polivy & Herman, 1987), gender role and body image (Jackson, Sullivan, & Rostker, 1988), body mass (Davis & Cowles, 1989), and self-concept and perceptions of physical attractiveness (Grant & Fodor, 1986) as major predisposing factors. In their extensive review of Bulimia Nervosa research, Striegel-Moore, Silberstein, and Rodin (1986) indicated that university environments may place students particularly at risk to the development of these disorders. In general, universities are stressful, semiclosed environments that may intensify societal pressures to be thin, foster competition in many areas of one's life, and provide female students with the opportunity to teach each other how to binge, purge, starve, and diet (Striegel-Moore, et al., 1986).

Rodin, Silberstein, and Striegel-Moore (1985) suggested that dieting and weight concerns are rampant in non-clinical populations. Among young women and girls, dieting is more prevalent than not dieting and is thus being viewed as normal behavior (Polivy, Garner, & Garfinkel, 1986). This increased acceptance of dieting as normal is particularly alarming given that beginning a diet or having a history of dieting has been associated with the development of eating disorders (Crisp & Toms, 1972; Striegel-Moore, Silberstein, et al., 1986). In considering the prevalence rates of
eating disorders in our society, women appear to be most vulnerable to the deleterious effects of dieting and other factors (Kagan & Squires, 1984; Shisslak et al., 1987; Striegel-Moore et al., 1986). Striegel-Moore et al. (1986) argued that sociocultural factors, specifically society's value of attractiveness and thinness, place women at greater risk for developing bulimia nervosa than men. They suggested that women who have accepted and internalized most deeply the socio-cultural mores about thinness and attractiveness will be at greatest risk because they will be most driven towards obtaining the ideal body and most afraid of becoming fat. In an earlier study, these authors found a positive relationship between level of disordered eating and agreement with statements reflecting socio-cultural messages regarding attractiveness (Striegel-Moore, Silberstein, & Rodin, 1985; cited in Striegel-Moore et al., 1986).

Eating disorder prevalence studies also support sociocultural theories of etiology. Pope, Hudson, and Yurgelun-Todd (1984) found that, in a sample of 300 female shoppers over age 12, .7% reported a lifetime history of anorexia nervosa while 10.3% reported a lifetime history of bulimia according to Diagnostic and Statistical Manual of Mental Disorders criteria (DSM-III; American Psychiatric Association [APA], 1980). In a second study, Pope, Hudson, Yurgelun-Todd, and Hudson (1984) determined the prevalence rates in three student populations, two colleges and one
secondary school. Among the three female student populations 1 to 4.2% had a history of anorexia nervosa and 6.5% to 18.6% had a history of bulimia. In total, 15.4% of the female students met DSM-III criteria for an eating disorder. No male students evidenced diagnosable eating disorders.

Hart and Ollendick (1985) compared nonclinical samples of university women and working women to determine the prevalence of bulimia nervosa and to assess the range of disordered eating attitudes and behaviors in these two populations. The two groups of women were similar in height; however, they differed in weight and age. The mean weight for working women was 124.00 pounds ($SD = 6.45$) while the mean weight for university women was 115.00 pounds ($SD = 4.07$). The mean age was 24.00 years ($SD = 2.75$) and 18.90 years ($SD = 1.05$) for working women and university women, respectively. Hart and Ollendick found the prevalence rates for binge eating to be 41% for working women and 69% for university women. When the added criteria of depressed and self-deprecating thoughts were added to binge eating, 27% of working women and 54% of university women were afflicted. Prevalence rates were again determined for those women who engaged in binge eating, self-deprecating thoughts and had fears of not being able to stop eating voluntarily which were 9% and 17%, respectively, for working women and university female students. Lastly, these three criteria
were added to the more stringent DSM-III criterion of self-induced vomiting on a weekly basis (meeting the diagnosis of bulimia). Prevalence rates dropped even further, with only 1% of working women and 5% of university women reporting all these symptoms.

Drewnowski and Yee (1987) compared 18 year old, college freshman males and females to examine their desire for thinness or weight gain. Their total sample of 231 freshman was comprised of 131 females and 100 males. Only eight women were happy with their body weights. Eighty-five percent of the college freshman women desired to lose weight, while only four women in the sample wished to gain weight. Men were almost equally divided between wanting to lose weight (45%) and wanting to gain weight (40%), while only ten men were satisfied with their weight. Of the women who were considered normal weight, 89% wanted to be thinner. For the normal weight men, over half (52%) of the normal weight men wanted to lose weight. Both the men and the women who wanted to lose weight expressed similar negative body perceptions. Both groups saw themselves as overweight and did not differ significantly in self-perception of being overweight or dissatisfaction with body shape. With respect to weight loss methods, there was a significant difference between men and women. That is, women dieted more frequently than men, while men exercised more frequently than women. These findings suggest there is a
sub-population of men who have negative perceptions of their bodies similar to what is normally found with women, although these men appear to attempt weight loss through more physical means (i.e., exercise).

Although past research often has focused on determining the incidence of anorexia and bulimia nervosa (as defined by DSM criteria), recent studies have focused on identifying a broader range of disordered eating behaviors. As discussed above, the prevalence rates reported by Hart and Ollendick (1985) suggest this contention. That is, as the diagnostic criteria became more stringent in their study, the prevalence rates for abnormal eating behaviors changed, suggesting that eating problems exist on a continuum, ranging from less severe to more severe. Mintz and Betz (1988) also considered eating disorders from this perspective. In their investigation of normal weight (i.e., neither severely under or overweight) female college students, they classified participants as normal eaters, bingers, purgers, dieters, subclinical bulimics, and bulimics to investigate differences in the psychological and attitudinal characteristics, such as self-esteem, body image, and degree of endorsement of sociocultural mores. Although they found that only a small number (3.1%) met DSM-III-R criteria of bulimia nervosa, 64% evidenced some form of disordered eating as defined above; only 33% of the participants were classified as normal eaters.
With respect to the psychological and attitudinal measures, Mintz and Betz (1988) found that the bulimia nervosa group was significantly different from all other groups in the following ways: more dissatisfaction with their bodies; lower self-esteem; and greater endorsement of sociocultural mores regarding thinness and attractiveness. Those subjects who reported normal eating behaviors clearly had the healthiest attitudes of overall self-esteem and body image; however, those subjects classified in the intermediate groups (bingers, purgers, etc.) were found to have intermediate values (attitudes or beliefs) as compared to normals and bulimics. Specifically, the body-satisfaction scores of chronic dieters were higher than those of bulimics, but lower than the normal, binger, or subthreshold bulimic groups. In turn, bingers, purgers, and subthreshold bulimics reported having lower body satisfaction than did normals. On self-esteem, bingers and subthreshold bulimics reported lower scores than normals, whereas purgers and chronic dieters did not differ from normals. The intermediate groups and the normals did not differ significantly on beliefs about attractiveness either. Mintz and Betz (1988) found that Bulimics reported greater endorsement of socio-cultural mores regarding thinness and attractiveness than any other disordered eating comparison group. These findings suggest that Western society’s beliefs about body shape and attractiveness may place undue
pressure on individuals to obtain a thin-ideal, and thus, increase their risk for developing disordered eating behaviors or a diagnosable eating disorder. Overall, these results indicate that a large proportion of college women engage in unhealthy eating and weight control behaviors, although few could actually be diagnosed with an eating disorder. In addition, these women's attitudinal and psychological attributes appear to worsen in direct relation to their eating disturbance.

Klemchuk, Hutchinson, and Frank (1990) administered the Eating Disorders Inventory (EDI) to undergraduate females. The eight EDI subscales were submitted to factor analysis in order to identify subgroups of college females with distinct patterns of maladaptive behaviors and cognition. The factor analysis yielded a 6-factor structure made up of an "Eating Disorders" Factor (Drive for Thinness, Bulimia, and Interoceptive Awareness), and 5 factors representing the remaining 5 EDI scales (Body Dissatisfaction, Ineffectiveness, Perfectionism, Interpersonal Distrust, and Maturity Fears). The investigators found that 10.1% of their sample could be described as pathologically weight preoccupied (defined by the EDI Drive for Thinness score at or above the anorexia nervosa patients' mean scale score). This first subgroup was classified as the Eating Disorder group. A second subgroup, Body Dissatisfaction group, also was identified. These individuals held extremely negative
attitudes toward their bodies. In fact, their EDI Body Dissatisfaction scores were more extreme than the eating disorder group's scores. Although these women were highly dissatisfied with their bodies, they were not engaging in pathogenic weight control behaviors or reporting other psychological disturbances at levels characteristic of the eating disorder group. Lastly, the remaining students comprised the third subgroup, the control group, who had normal eating behaviors and attitudes. A discriminant function analysis revealed that the Eating Disorder group, Body Dissatisfaction group, and normal control group differed on 12 variables such as weight and eating attitudes, cognition, exercise, "stress eating" habits, and binge-purge behaviors. Overall, the Eating Disorder group showed more pathology on all variables except weight dissatisfaction, in which the Body Dissatisfaction group scored the highest. The Body Dissatisfaction group scored in between the Eating Disorders group and the control group on all other measures. The identification of these subgroups (e.g., normal eating behaviors and attitudes, intermediate attitudinal disturbances with extreme body dissatisfaction, and eating disordered behaviors) provides additional support for operationalizing disordered eating on a continuum. In addition, it may be that such extreme body dissatisfaction is an important antecedent for developing a diagnosable eating disorder. To determine if body
dissatisfaction did precipitate the development of diagnosable eating disorders, longitudinal investigations would need to be conducted.

Katzman and Wolchik (1984) examined behavioral and personality characteristics in three groups of undergraduate women; those who met the DSM-III criteria for bulimia nervosa, those who reported binge-eating 8 or more times per month but did not meet DSM-III criteria, and a control group with no bulimic symptomatology. Katzman and Wolchik found the bulimic group scored higher on measures of restraint (dieting concern and eating habits), binge eating, high self-expectations, demand for approval, and depression than the control group. The bulimic group also scored higher on these same measures except for high self-expectations than the binge eaters. Bulimics reported lower levels of self-esteem and poorer body attitudes than both binge eaters and controls. Binge eaters differed from controls on only two measures, evidencing more restraint and binge eating. These findings also suggest that the eating behaviors and attitudes span from normal to unhealthy, giving credence to this hypothesized eating disordered continuum.

Thompson, Berg, and Shatford (1987) examined bulimia nervosa on a continuum--symptom-free, bulimic-like, and bulimic--in relation to the use of food as a coping mechanism and cognitive distortions regarding food and weight. The results again supported the concept of the
eating disorders continuum ranging from low to high. The symptom-free, bulimic-like, and bulimic groups differed from one another on the affective and cognitive indices of eating pathology (dichotomous thinking, worry, exaggeration, superstitious thinking, and personalization), drive for thinness, and lack of interoceptive awareness. The bulimic and bulimic-like groups, however, scored similarly to one another yet significantly higher than the symptom-free group on perfectionism, defeatism, regret, and body dissatisfaction. For compensatory measures, the same increasing levels were found from symptom-free to bulimic in the extent of dieting and exercising, but only the bulimic group used self-induced vomiting and laxatives. Although all groups wanted to weigh less than 94% of the standard weight for their height, the bulimic group evidenced the highest drive for thinness score suggesting that they were most likely to pursue the underweight goal. These results suggest that although bulimia nervosa does exist, there are intermediate eating disorder disturbances which are not yet represented by DSM-III-R criteria. In addition, the use of food as a coping mechanism and food- and weight-related cognitive distortions that were found to coexist with bulimic behaviors may be important to consider in future research or treatment of the disorder. In fact, Thompson et al. suggest that these factors may be used to screen individuals for bulimia nervosa.
These studies by Mintz and Betz (1988); Klemchuk, et al. (1990); Katzman and Wolchik (1984); and Thompson et al. (1987) are good preliminary studies on examining bulimia nervosa and its related symptomatology on a continuum. Klemchuk et al. (1990) were the only examiners to look at anorexic-like behaviors on this continuum. A weakness to these studies is that they only examined undergraduate female students, thus the generalizability is limited to this distinct population. Future studies should examine this continuum in male college students and other at risk populations such as adolescents and young adults.

Furthermore, the relationship between anorexia nervosa, bulimia nervosa, and obesity should be investigated. The term Bulimarexia has been used which is suggestive of this continuum. In addition, obesity is a health problem that is often times comprised of compulsive overeating or binge eating.

In their examination of male and female students during their first year of college, Striegel-Moore, Silberstein, Frensch, and Rodin (1989) found that only 3.8% of females and less than .2% of males initially met the DSM-III-R criteria for a diagnosis of bulimia nervosa. Of the students who completed both the initial and follow-up surveys, only three females developed bulimia nervosa over the course of the academic year. These students had been symptomatic at a subclinical level at the beginning of the
study. Five females no longer met the criteria for bulimia nervosa at follow up, though they still reported bulimic behavior at subclinical levels. Even though few subjects developed bulimia nervosa during the year, a significant number of students experienced an increase in one or more symptoms of disordered eating. Approximately 15% of the females students began binge eating, while 25% began to diet for the first time. In conclusion, Striegel-Moore and colleagues (1989) reported that increases in negative feelings about attractiveness, body weight, weight dissatisfaction, stress, and ineffectiveness were associated with a worsening of disordered eating symptoms in females (i.e., first time dieting and binging).

The Striegel-Moore et al. (1989) study represents one of the few longitudinal investigations of eating behaviors. The fact that three subclinical females developed bulimia nervosa supports the notion that bulimic symptomatology may be a precursor for developing full-blown bulimia nervosa. Five initially bulimic females, however, did not meet diagnostic criteria at the end of the study, though they still demonstrated symptoms. This change suggests that individuals may experience some spontaneous remission of symptoms even without treatment. Again, longitudinal studies are needed to examine this issue further.

The changes in perceptions concerning attractiveness, body weight, and weight dissatisfaction reported by
Striegel-Moore et al. (1989) are different aspects or ways of measuring body image. Garner and Garfinkel (1981/82) distinguished two manifestations of body image that may operate independently or conjointly. The first type is a perceptual disturbance where the anorexic is unable to assess her body size accurately. The second type is related to cognitive and affective disturbances where the anorexic reacts to her/his body with extreme forms of disparagement or aggrandizement. Cash and Brown (1987) call the first type of body image disturbance by Garner and Garfinkel body distortion and the second type, body dissatisfaction. This body image distinction also has been made with individuals diagnosed with Bulimia Nervosa (Freeman, Thomas, Solymon, & Miles, 1983; Ruff & Barrios, 1986).

Garner and Garfinkel (1981/82) reported that both anorexics and same aged matched controls over-estimate body size using the movable caliper technique (a body distortion technique). The difference, however, is that the tendency toward overestimation seems to be related to prognosis and psychopathological features in anorexics. In addition, Garner and Garfinkel found a positive relationship between over-estimation on the distorting photograph technique (20% thinner to 20% fatter than total body size) and body dissatisfaction estimated from a self-report questionnaire given to their anorexic patients.
In their comprehensive review of body image in anorexia and bulimia nervosa, Cash and Brown (1987) compared studies using one of these two different measures of body image. They reported that the results of body distortion research have been equivocal. Eating-disordered individuals do not consistently evidence more perceptual distortion of their bodies than non-disordered comparison groups. Studies measuring body dissatisfaction, however, have demonstrated that eating disordered individuals consistently report greater body dissatisfaction/dysphoria than do non-disordered comparisons. Other researchers also have found that body dissatisfaction differentiates between disordered eating sub-groups with the most disturbed eating groups evidencing the highest level of dissatisfaction (Mintz & Betz, 1988; Striegel-Moore et al., 1986). From these results, it appears that current measures of body dissatisfaction provide a more useful measure of body image than perceptual distortions, and thus may represent a better means for distinguishing between disordered and non-disordered individuals.

In summary, sociocultural theory has proposed that society's value of attractiveness and thinness needlessly place women at risk for developing eating disordered behaviors. Striegel-Moore et al. (1985) and Mintz and Betz (1988) found positive relationships between level of disordered eating and agreement with statements reflecting
socio-cultural messages regarding attractiveness in college women. Further support for this theory is found in prevalence studies which demonstrate that women are far more likely than men to suffer from eating disorders (Kagan & Squires, 1984; Shisslak et al., 1987). Recent research has focused on identifying a broader range of behaviors and psychological attitudes related to eating disorders. For example, researchers have demonstrated that eating disorders are related to body satisfaction (Klemchuk et al., 1990; Mintz & Betz, 1988), depression (Katzman & Wolchik, 1984), self-esteem (Mintz & Betz, 1988, Katzman & Wolchik, 1984), self-expectations (Katzman & Wolchik, 1984), and drive for thinness (Thompson et al., 1987). Researchers also have examined eating disordered behaviors along a continuum, from normal to severe eating disturbances (Mintz & Betz, 1988, Thompson, et al., 1987). Studies have shown that attitudinal and psychological attributes appear to worsen in direct relation to this continuum of eating disturbances (Klemchuk et al., 1990; Mintz & Betz, 1988; Thompson, et al., 1987; Katzman & Wolchik, 1984). Most of these studies have focused on white college females to the neglect of other populations, such as minority females. Future research should examine this spectrum of behaviors and correlates of eating disorders in diverse racial/ethnic populations.
Eating Disorders in Minorities

Although eating disorders research has been pursued in different populations, it has focused primarily on White females somewhat to the neglect of other ethnic/racial groups (Gray, Ford, & Kelley, 1987). Given this dearth of research, questions remain as to the prevalence of disordered eating in non-White populations and what factors place these individuals at risk. Among Blacks and Hispanics, for example, anorexia nervosa has been considered to be rare (Pumariega, 1986; Pumariega, Edwards, & Mitchell, 1984; Robinson & Anderson, 1985; Silber, 1986). Silber (1986), however, provided evidence, using four case studies, that anorexia nervosa does indeed occur among ethnic minority groups. These four cases were representative of seven total cases seen over a 12 year period. All patients in the study were adolescent females (5 Hispanic, 2 Black), and generally, children of professional, upper-middle-class or upwardly mobile families. All had family backgrounds that included very work-oriented, perfectionistic fathers. Each of the girls had been enrolled by their fathers into predominantly white, private schools, and often were isolated from similar racial/ethnic peers. The patients had similar family values of being proper and outstanding in society and were found to have a strong desire to please. In addition, these patients' symptoms appeared more extreme than those often found in white patients. Silber posited
that these symptoms might be an attempt to cope with the pressure of a high stress environment. All patients were perfectionistic overachievers who wanted to be "normal" and fit in and sought acceptance through the societal conviction that being thin is essential to success. Silber stated that these girls who already felt different, suffered from low self-esteem and had a powerful need to be accepted, sought assimilation in society through rigid dieting and the acceptance of U.S. societal standards of slimness.

In the case studies, one of the seventeen-year-old African American females was enraged about her nutritional rehabilitation and expressed suicidal threats. She responded only after eight months of intensive individual and family therapy and antidepressive drug treatment. She also reported being disappointed by her social life, most likely due to being the only Black in a competitive private school. The second seventeen-year-old African American female, suffered from a markedly distorted body image. Her parents had separated many years before and still had a conflictual relationship. Their daughter, however, still entertained thoughts of their reconciliation. In conclusion, Silber stated that the number of cases of anorexia nervosa among ethnic minorities has probably been underreported and predicted that this number would rise with increased awareness by professionals that minorities can be affected by eating disorders.
Hiebert, Felice, Wingard, Munoz, and Ferguson (1988) compared Caucasian and Hispanic anorexic patients in terms of therapeutic outcome. Although there was a slight trend towards a better outcome in Hispanic patients, Hiebert et al. found no significant differences between the two groups in terms of clinical characteristics (i.e., age at onset, severity of weight loss at presentation, bulimia and/or self-induced vomiting, and outcome). These findings demonstrate that Caucasian and Hispanic anorexic patients are very similar in demographic and outcome data, suggesting that the symptoms of anorexia nervosa may apply across racial/ethnic groups.

Pumariega et al. (1984) reported on two case studies of African American adolescent females, ages 15 and 17, who were treated for anorexia nervosa over a six month period. Pumariega et al. claimed that their two patients are the tenth and eleventh black girls with anorexia nervosa reported in the literature. They asserted that these two girls' diagnoses were controversial at first because of the rarity of this disorder seen in the black population; however, both girls met the DSM-III diagnostic criteria. They suggested a rising incidence of anorexia nervosa in the black population due to the findings of their two cases within six months, and the fact that nine out of 11 cases reported in the literature occurred within the past three years from the date of this study.
Pumariega et al. (1984) noted common patterns between these two girls' cases. Both exhibited conflicts around sexuality, specifically around conception and childbirth; parental marital conflict that led to separation in one case and divorce in the other; significant role diffusion (one girl baby-sat her older sister's child, thus taking on a parental role) and enmeshment in the families; isolation and conflicts with individuation; and difficulty engaging the families in treatment. In the first case study, the girl presented with symptoms of depression, suggesting an underlying affective disorder.

Robinson and Anderson (1985) presented five case histories of Anorexia Nervosa in African Americans. Three of the patients were female and two were male. All met the diagnostic criteria for Anorexia Nervosa (i.e., morbid fear of fatness, substantial weight loss, amenorrhea or sexual dysfunction, and various anorexic behaviors). One patient met the criteria for bulimia nervosa as well. Consistent with clinical features found among Caucasian anorexic patients, the presence of mood (depression) and obsessional features, adolescent onset, and a family history of affective disorders were noted. Atypical symptoms also were apparent. All five cases shared the occurrence of parental death or separation. Four patients had a family history of obesity, diabetes, or cardio-vascular disease. Contrary to the case presentations made by Silber (1986), only one
patient exhibited academic striving, and the majority of cases came from middle to low income families.

Although the studies by Silber (1986), Pumariega et al. (1984), and Robinson and Anderson (1985) are important preliminary investigations on the characteristics of minority individuals with eating disorders, they are limited due to their case study format and small n. The case studies, however, demonstrated that African American and Mexican American patients suffering from anorexia nervosa, and in one case bulimia nervosa, met the diagnostic criteria and presented with symptoms consistent with those of Caucasian eating disordered patients. To determine the generalizability of these findings, future research should examine the prevalence rates and relationships of symptoms and correlates of eating disorders in larger samples representing the minority populations.

Pumariega (1986) compared Hispanic and Caucasian groups to determine if differences existed in the occurrence of eating disorders. He found similarities between the two groups on (a) the mean age (16.5 for the Anglos and 17.4 for the Hispanics) and (b) average Eating Attitudes Test score (EAT; Garner & Garfinkel, 1979) (19.7 for Anglos and 18.2 for Hispanics), and the percentage of subjects who scored at or above the eating disorder cut-off score (19% for Anglos and 20% for Hispanics). These findings suggest that eating
disorder symptoms are relatively consistent in Hispanic and Anglo individuals.

Studies involving other minority groups, such as Native American and Asian women, also have been conducted. Rosen, Shafer, Dummer, Cross, Deuman, and Malmberg (1988) sought to determine the prevalence of pathogenic weight control behaviors among female members of a Chippewa Indian community. They reported 63 of the 88 subjects who participated in the study had made weight loss attempts. Over half of the subjects reported having used one or more pathogenic weight control techniques, including vomiting and laxative use. In addition, women with higher body weight-to-height ratios were more likely to use pathogenic techniques than those with lower ratios. Although adolescents and younger women are generally believed to be the most vulnerable to developing eating disorders, in this study, 10 of 13 women in their 30's were using pathogenic methods, and the average age of the purgers was 28.8 years. These results suggest that weight concerns and the subsequent use of pathogenic weight loss methods are not restricted to Caucasian and European women and/or adolescents and very young women. Although Rosen et al. suggested that these maladaptive behaviors may characterize a significant percentage of Native American women, it is important to remember that only Chippewa Indians were included in the study. To determine the generalizability of
these findings, other Native American tribes would need to be studied.

Lucero, Hicks, Bramlette, Brassington, and Welter (1992) investigated the frequency of eating problems among Asian (Chinese, Japanese, and Vietnamese) and Caucasian female undergraduates. Participants completed the EAT-26 (Garner, Olmstead, Bohr, & Garfinkel, 1982) which is a relative index of an individual's tendency to report abnormal eating patterns. A cut-off score of 20 or above indicated abnormal eating patterns. Lucero et al. found that female Caucasian undergraduates were 5.5 times more likely to have eating problems than female Asian undergraduates. The researchers also found 38.7% of the Asian and 43.2% of the Caucasian students to be symptom free, which is a nonsignificant difference between the groups. Although both Caucasian and Asian undergraduate women were exhibiting symptoms, these results suggest that Caucasian undergraduate women are more at risk than Asian students for developing eating disorders.

Osvold and Sodowsky (1993a) examined eating disordered behaviors and attitudes in African American and Native American women, using several Eating Disorder Inventory subscales, including Drive for Thinness, Ineffectiveness, Interpersonal Distrust, and Interoceptive Awareness. Osvold and Sodowsky, in their comparison between the Ethnic/Racial groups, found the African American women to have higher
Drive for Thinness, Ineffectiveness, and Interoceptive Awareness scores than the Native American women. The Native American women, however, were higher on Interpersonal Distrust.

Osvold and Sodowsky (1993a) also asked the participants open-ended questions about their reactions to traditional U.S. symbols of beauty and their feelings about their physical self. Responses to the first question, "How do you feel when you see slender White women on TV and in magazines exhibited as the traditional symbol of beauty?", were divided into three categories: negative or critical, neutral, and positive. Among the Native American and African American women, 66% and 80%, respectively, wrote negative or critical comments, such as "I feel fat and ugly" and "I am insulted that society believes or seems to believe that only White women are beautiful. Our country has such a diversity of ethnicity that you cannot compare beauty by one race. Moreover, the stereotypes of big Black, Hispanic, and Indian women is outrageous." Of the Native American women 25% made neutral comments and 9% made positive comments. Twenty percent of the African American women made neutral comments; although, none made positive comments.

For the second question, "How much do your feelings about your physical self affect overall how you feel about yourself?", answers were grouped in five categories: those who misunderstood the question; feelings of physical self
did not affect how they felt about themselves; feelings of physical self somewhat affected how they felt about themselves; feelings of physical self affected a great deal how they felt about themselves; and those who did not know. Among the Native American and African American women, 34% and 21%, respectively, wrote responses indicating that their feelings of their physical self affected a great deal how they felt about themselves. For example, one woman wrote, "A great deal, because it is a key component in development of one's self-esteem." Nineteen percent of Native American women and 21% of African American women stated that their physical appearance affected somewhat their overall feeling about themselves, such as "A small portion of my physical appearance decides how I feel about myself." Thirteen percent of the Native American women and 4% of the African American women reported that their physical self did not affect their overall feelings of self. Thirty-one percent and 54% of Native American and African American, respectively, misunderstood the question, while only one Native American woman did not know. Clearly, the responses to the two questions posed indicate that minority women are affected by the majority culture's definition of beauty, which may result in negative perceptions of themselves or low self esteem.

The case studies reviewed demonstrate that minority women do present with diagnosable eating disorders, and
evidence psychological and behavioral symptoms that have been found in Caucasian females (Pumariega et al., 1984; Robinson & Andersen, 1985; Silber, 1986). More extensive studies of minorities corroborate the findings of the case study investigations. These studies demonstrate that eating disordered behaviors and attitudes, such as body mass, drive for thinness, and feelings of worthlessness, have been found in Hispanic patients (Pumariega, 1986), female members of a Chippewa Indian community (Rosen et al., 1988), and Native American and African American women (Osvold & Sodowsky, 1993a). A strength of these studies is that they focus on different age groups and populations of minority females and are not limited to undergraduate females. A weakness of eating disorder research among minority and Caucasian females, excluding case studies, is the use of questionnaires without the corroboration of clinical interviews to diagnose eating disorders. This weakness should be addressed in future research. Because everyone living in the U.S. may be exposed to majority cultural norms, these studies of minority women exhibiting pathological weight control behaviors and attitudes suggest that further research needs to be conducted on the sociocultural factors (U.S. societal beliefs about attractiveness) that may contribute to the development of eating disorders.
Eating disorders and related pathogenic behaviors have been documented in Minority females, and similar results have been found in a few studies that included ethnic minority males (Andersen & Mickalide, 1983; Lachenmeyer & Muni-Brander, 1988; Robinson & Anderson, 1985). Lachenmeyer and Muni-Brander examined male and female students, ages 13 to 19, from two ethnically and economically diverse high schools, and found a high rate of maladaptive eating patterns (binging, vomiting, laxative and diuretic use) in this nonclinical population. Lachenmeyer and Muni-Brander compared these two samples from high schools of differing economic levels. No significant gender differences in the rates of binging, vomiting, binging and vomiting, use of laxatives or diuretics were found. Females were significantly more likely to be found in the Clinical Bulimia group, Bulimia-1 group (met all criteria except one), and Bulimia-2 group (met all criteria except two). In addition females were more likely to restrict food intake and use diet pills. Prevalence rates for males in the low socio-economic status (SES) group were 5.7%, 12.2%, and 5.7% for Clinical Bulimia, Bulimia-1, and Bulimia-2, respectively. In addition 49.7% of the low SES males and 57.9% of the high SES males reported engaging in binge eating. Significantly more subjects from the "other" category (Asians and other minorities) met the DSM-III criteria for bulimia and significantly fewer Blacks almost
met the criteria for bulimia (minus one or two of the menu items). There was significantly more binge eating and greater use of diuretics and diet pills in the higher SES group. More low SES subjects almost met the criteria for bulimia (minus one menu item in the DSM-III). The results indicate that there is a high rate of eating disorders or maladaptive eating patterns and attitudes in a nonclinical population that included males and females of different ethnicities and SES groups. From this study, it is apparent that eating disorders cross socio-economic classes and ethnic groups and have a higher rate of occurrence in adolescent males than previously reported.

Gray, Ford, and Kelly (1987) examined the prevalence of bulimia nervosa and attitudes toward food in male and female African American college students at an all-Black university. In the female students, the prevalence for bulimia using the DSM-III criteria was 3%. When the more stringent criteria for Bulimia Nervosa was used (regular binging, vomiting, or laxative abuse, an intense fear of gaining weight) the prevalence rate for females was 1.5%. The results indicated that 71% of the African American females reported episodes of binging, 51% reported restrictive dieting, 2% reported vomiting, 5% reported the use of laxatives, and 6% reported using diuretics. In the African American male students, the prevalence of bulimia and bulimia nervosa were 2% and 0%, respectively. Among the
males, 80% reported binging, 8% reported vomiting, 23% reported restrictive dieting or fasting, and 2% reported using diuretics. Clearly, male and female African American students exhibit maladaptive eating attitudes and behaviors on a continuum.

Gray et. al (1987) took this African American sample from an all-Black college and compared them to a Caucasian undergraduate sample of males and females using a similar methodology. African American females were found to have lower prevalence of bulimia and/or bulimia nervosa and used purging methods less frequently than the Caucasian females. No differences were found in the frequency of binging or fasting and restrictive dieting. African American females, however, reported less emphasis on food and weight control in their immediate families and were less likely to consider themselves overweight or to feel they possessed a body type which easily puts on weight than the Caucasian females. The African American females were also less likely to feel depressed after binging, and they had less fear of weight gain and were less likely to believe that a five pound weight gain would change their attractiveness as compared to the Caucasian females.

Gray et. al (1987) suggested that the differences between the African American and Caucasian groups may be due to a different ideal of beauty in the Black Community. That is, an ideal that does not emphasize thinness as much as the
main culture does. An African American woman who attends a Black college may be more proximally shaped by the Black experience (i.e., Black ideal of beauty) and only distally shaped by attitudes toward thinness in the majority culture, thereby reducing her likelihood to use drastic means to achieve thinness. They also state that this emphasis on thinness is culturally directed at females and not males due to their findings that very little bulimia nervosa or extreme methods of purging were found in their male samples. The authors propose that African Americans in a primarily Caucasian college may feel greater pressure toward thinness; therefore, they may be more likely to internalize an extreme emphasis on thinness and develop bulimic behaviors. Future research should examine this question.

Eating Disorders examined Internationally

Dolan, Lacey, and Evans (1990) examined attitudes towards eating (using the EAT) and weight and shape (using the Body Shape Questionnaire; BSQ) as well as levels of anxiety and depression (using the Hospital Anxiety and Depression Scale; HAD) in three ethnic groups of women – British, Asian (Indian, Pakistani, Sri Lankan, and East African Asian), and African Caribbean. The sample was drawn from a Family Planning and Well-Woman Clinic. The results indicated that abnormal eating attitudes and concerns with body shape and weight were found in their sample of Caucasian, African Caribbean, and Asian British women.
Dolan et al. also found that the Asian women were more likely to possess disordered eating attitudes (i.e., higher EAT-26 scores) than were the Caucasian women. Eight point five percent, 7%, and 16% of the Caucasian, African Caribbean, and Asian British women, respectively, scored above the cut-off score of 20 on the EAT indicating significant disordered eating behaviors and/or a possible diagnosis of Anorexia Nervosa. No differences were found among the three ethnic groups in their feelings towards body weight and shape. For the Caucasian British women, EAT scores and BSQ scores were positively correlated with HAD anxiety and HAD depression scores, but not for the Asian British women. The BSQ scores were positively correlated with HAD anxiety and HAD depression scores for the Afro Caribbean women. Dolan et al. pointed out that the finding of more Asian British women displaying greater eating disordered attitudes than Caucasian women is opposite to the numbers that present at eating disordered clinics. The authors suggested that fewer Asian and African Caribbean women may be referred by their General Practitioners to eating disorder clinics for various reasons, such as cultural expectation of only Caucasian women having eating disorders, minority patients not complaining of the possibility of an eating disorder, and the lack of anxiety and/or depressed mood in Asian and African Caribbean women that is usually associated with eating disorders in Caucasian women. Even though a sample
of women taken from a family planning clinic cannot be
generalized to the entire population, these results suggest
that more Asian and African Caribbean women may suffer from
eating disorders and body shape concerns than was previously
expected.

Mumford, Whitehouse, and Platts (1991) examined Asian
and Caucasian British schoolgirls using a diagnostic
interview, the Eating Attitudes Test, the Body Shape
Questionnaire, and Body Mass Index to assess eating
disorders in these populations. Three point four percent
and .6% of the Asian and Caucasian girls, respectively, met
the DSM-III-R criteria for Bulimia Nervosa. One Asian girl
met the criteria for Anorexia Nervosa. The BSQ was
correlated to the BMI in both ethnic groups, suggesting that
greater concern with body shape was associated with higher
body mass. Body mass was also found to be positively
correlated with higher EAT scores in Caucasian girls but not
Asian girls.

Lucero et al. (1992) combined the data from these two
British studies by Dolan et al. (1990) and Mumford et al.
(1991) and compared it to their own sample of Asian American
(Chinese, Japanese, and Vietnamese) undergraduate females.
The results indicated that 13.1% of the Indian and Pakistani
Asian women scored > 20 on the EAT-26 while only 1.8% of the
Asian American (Chinese, Japanese, and Vietnamese) women
scored > 20. The Asian women from Oriental heritage were
7.3 times less likely to report eating problems than the Asian women of Indian and Pakistani heritage. These findings suggest that ethnicity, cultural background, or country of origin may have an influence on the reporting of symptoms of eating problems; therefore, researchers should examine groups made up of members from their respective cultures and not combine into broad categories of race. Lucero et al. suggested that there are many possible explanations for the differences found between the women of Oriental heritage and those of Indian and Pakistani heritage, such as willingness to disclose due to cultural expectations, eating patterns, and cultural norms for attractiveness. This study would have been more definitive if same-aged groups of Caucasian American, Chinese American, Japanese American, Vietnamese American, Indian American, and Pakistani American Women had been compared to rule out cultural effects from differing Western societies.

In her comprehensive review of over 46 cross-cultural, epidemiological surveys, and/or case studies, Dolan (1991) found that although eating disorders do occur in non-White women and men from Non-Western countries, they are more likely to be found in non-White women who are exposed to Western societies. The question that arises then is, what level of exposure to Western society and acceptance of its values will place an individual at risk for developing an eating disorder?
From their review of the literature, Osvold and Sodowsky (1993b) concluded that the impact of Western culture on the etiology of anorexia and bulimia nervosa in African American, Native American, and International women should be examined. They asserted that counselors should assess how much a woman identifies with her culture of origin and that of the majority white culture which emphasizes thinness for the Western concept of beauty.

Nasser (1988) reviewed previous literature examining the relationship between eating disorders and socio-cultural factors. Anorexia nervosa has characteristics that are similar to the culture bound syndrome of thinness in Western Society which has come to symbolize desirable attributes. Bulimia was discussed as having possibly become a socially acceptable behavior of weight control. Nasser, citing research from non-Western cultures where plumpness is held in high regard (Buhrich, 1981; Carlos, 1972; Neki, 1973; German, 1972; El Sarag, 1968), indicated that anorexia nervosa is rare or absent in these non-Western cultures. Nasser indicated that the most recent trend in the literature is to focus on the effect of cultural change (i.e., adapting to a new culture or being exposed to Western values) on weight consciousness. In conclusion, she asserted that exposure to Western values seems to be linked to overconcern with body weight. These findings suggest that examining individuals' level of acculturation to
western society and their beliefs about the U.S.'s socio-cultural mores of attractiveness would give insight into the development of eating disordered behaviors of minority individuals who come from cultures that otherwise seem to be protected from eating disorders.

**Acculturation and Eating Disorders**

Although the U.S. is considered to be the "melting pot" of many cultures, there still remains a dominant Western/Anglo culture to which individuals are exposed. Through prolonged exposure to this dominant culture, ethnic individuals may experience pressure to change and conform to the values and ideas of the majority society, a process known as acculturation. The Social Science Research Council (1953) defined acculturation as the following:

Culture change that is initiated by the conjunction of two or more autonomous cultural systems. Acculturative change may be the consequence of direct cultural transmission; it may be derived from noncultural causes, such as ecological or demographic modifications induced by an impinging culture; it may be delayed, as with internal adjustments following upon the acceptance of alien traits or patterns; or it may be a reactive adaptation of traditional modes of life. Its dynamics can be seen as the selective adaptation of value systems, the processes of
integration and differentiation, the generation of developmental sequences, and the operation of role determinants and personality factors. (p.974)

In support of the contention that exposure to Western Society influences acculturation, Olmedo and Padilla (1978) found that acculturation levels were lowest for first generation Mexican-Americans, in the middle for third generation Mexican-Americans, and highest for Anglos. These results suggest that Mexican-Americans became acculturated to the values of Anglo society in relation to the amount of time they had lived in the United States.

Traditionally, acculturation research has been conducted by anthropologists and sociologists who have focused on the group process of acculturation (Olmedo, 1979). Psychologists and psychiatrists are relatively new to the study of acculturation and have focused more on the individual's process of change (Olmedo, 1979). Psychological studies investigating acculturation have tended to focus on its relation to various aspects of counseling. Specifically, researchers have investigated the relationship of Hispanic or Mexican American and/or Asian Americans' level of acculturation to counselor ethnicity preference and self-disclosure (Sanchez & Atkinson, 1983), counselor trustworthiness and counseling style (Pomales & Williams, 1989), previous counseling experience and counselor empathy (Kunkel, 1990), counselor ethnicity,
counselor cultural sensitivity, credibility, and cultural competence, and gender (Gim, Atkinson, & Kim, 1991), and use of mental health services (Atkinson & Gim, 1989).

Research investigating the relationships of eating disorders and acculturation, however, has been limited. Pumariega (1986) examined eating attitudes and level of acculturation in 138 Hispanic females, ages 16 to 18 because he believed that this population may be experiencing more eating disorders due to exposure to U.S. societal pressures to achieve and to be attractive. A requirement to participate in the study was that the student must have been born or have a parent born out of the U.S. The EAT was used to assess disordered eating attitudes and the Culture Questionnaire, which included number of years living in the U.S., preferences of language use, food, clothing, and music, cultural background of close relatives, and self identification, to assess acculturation level. The Hispanic group was compared to White public high school students from another study. The mean age for the White group (16.5) was similar to the mean age for the Hispanic group (17.4), as was the mean EAT score for the two samples (19.7 for the White group and 18.2 for the Hispanic group). Similarly, 20% of the Hispanic and 19% of the Whites scored 30 or more points on the EAT which is the cut-off score for anorexia. The mean score for acculturation was 49.01 (SD = 6.89) out of a possible 75 points suggesting that the Hispanic
American group was relatively acculturated. This group rated their families' SES as middle to lower-middle class, while projecting their own SES to be upper middle to upper class. Pumariega conducted correlation analyses on EAT scores, acculturation scores, and current and anticipated future SES. He found that EAT scores and acculturation scores were positively correlated. No other correlations were significant. From these results, Pumariega suggested that greater adherence to U. S. culture may increase an individual's risk for the development of an eating disorder. He stated that the narrow range of acculturation scores, however, suggested the need to examine correlates of eating disorders to a sample with a broader range of acculturation.

The study by Mumford, Whitehouse and Platts (1991) discussed earlier also examined acculturation issues. To assess acculturation, they asked the participants questions concerning their language, dress, and food. Contrary to previous research (Dolan, 1991; Pumariega, 1986), Western cultural orientation was unrelated to EAT and Body Shape Questionnaire (BSQ) scores in Asian schoolgirls. In fact, girls with a more traditional Asian cultural orientation scored significantly higher on the EAT and BSQ. The authors suggested these findings may be due to the discrepancies between Asian and Western cultural orientations that these girls are exposed to at home and school, respectively, thereby causing internal conflict resulting in eating
pathology. An example of this possible conflict is the school girl learning to be independent at school, but at home having to be dependent by obeying her parents' wishes for her. These contradictory expectations of independence/dependence may cause an internal conflict for the traditionally oriented Asian girl. It is possible that the conflict is manifesting itself in eating disordered behaviors.

Lester and Petrie (1995) examined acculturation and personality and physical correlates of bulimia nervosa in Mexican American female college students. Regression analysis revealed that body mass and endorsement of U.S. societal values concerning attractiveness were related positively to bulimic symptomatology, accounting for a combined 38% of the variance. Acculturation level, body satisfaction, and age, however, were unrelated to bulimic symptoms when considered with the other variables in the regression analysis. When Pearson Product-Moment Correlations were conducted, it was found that beliefs about attractiveness and body mass were positively related to bulimic symptomatology, and body satisfaction was negatively related to bulimic symptomatology. In addition, body mass was negatively correlated with body satisfaction. The acculturation finding appears inconsistent with Pumariega's (1986) research. The differences between these two studies may be due to the fact that two separate eating disorders
were examined (bulimia nervosa vs. anorexia nervosa). As Hispanic females become acculturated and adopt U.S. societal values they may manifest this value structure through anorexic-like (e.g., drive for thinness) as opposed to bulimic-like (e.g., binge-purge) behaviors.

Although possible, it also may be that acculturation scales provide too general or broad a measure of exposure to U.S. societal roles and values to be useful in eating disorder research. As suggested by Lester and Petrie's (1995) findings, a more useful consideration may be minority females' adoption of U.S. societal values about attractiveness and thinness. The Beliefs about Attractiveness Questionnaire appears to measure dimensions (e.g., attractiveness, thinness) salient to bulimic symptomatology, whereas the acculturation scale does not. Thus, future research may want to examine the manner by which minority women adopt U.S. societal values concerning attractiveness as well as its relationship to the more general acculturation process.

Osvold and Sodowsky (1993a) examined African American and Native American women's acculturation level, using the Majority-Minority Relations Scale (MMRS), in relation to their eating attitudes using the Eating Disorders Inventory (EDI). The MMRS has been used to measure the acculturation attitudes of Hispanic and Asian Americans. In this study, only two subscales were used, Perceived Prejudice and Social
The Language subscale was not used because the sample spoke primary English. Only four subscales, Drive for Thinness, Ineffectiveness, Interpersonal Distrust, and Interoceptive Awareness, from the EDI were used. The African American and Native American women who were more acculturated to the dominant White society showed a trend towards endorsing more problematic eating attitudes, such as more distress on Ineffectiveness, Interpersonal Distrust, and Interoceptive Awareness, than those who were less acculturated. (ANOVAS for these variables in relation to acculturation were not significant at the .01 level in which the authors designated to correct for Type 1 error owing to multiple univariate analyses.) Acculturation, however, was not related to Drive for Thinness which is the best subscale for predicting eating disorders. To explain the trends, the authors suggested that a higher score on Ineffectiveness, which measures concepts such as feelings of worthlessness and not being in control, by the more acculturated non-White women may be a reflection of their recognition of their outgroup status. Thus, they may have stronger feelings of their ineffectiveness than those who do not identify as strongly with the majority culture. The higher score on Interpersonal Distrust by the acculturated women suggests that they may be experiencing more institutional, cultural, and individual racism simply by their increased interaction with the majority culture. Lastly, the researchers
indicated that the more acculturated women may have scored higher on Interoceptive Awareness due to the experience of cultural conflicts between their indigenous cultural values and the majority cultural values. These internalized cultural conflicts may cause the women to lose touch with and fail to identify accurately their intimate emotions or physical sensations related to hunger or fullness. In conclusion, this study found minimal support for acculturation in relation to eating disordered symptomatology. For more definitive results, the authors should have examined the relationship of acculturation to the remainder of the variables on the EDI, Bulimia, Body Dissatisfaction, Perfectionism, and Maturity Fears.

In summary, this review of the literature has focused on different populations that experience eating disorders, extreme weight consciousness, body dissatisfaction, higher body mass indices, depression, and low self-esteem. The populations discussed include the typically studied Caucasian female college population but also addressed female ethnic minority populations (African Americans, Asians, Hispanics, and Native Americans), white Anglo males, ethnic minority males (African Americans, Asians, and Hispanics), other Western cultures, and non-Western cultures. All groups seemed to exhibit the similar feature of a morbid fear of becoming fat. Researchers also have found that many males and females from these differing races
and/or ethnicities exhibit maladaptive eating behaviors and attitudes and weight control methods on a continuum from binge eating to anorexia or bulimia nervosa. In addition, a relationship of increased disordered eating has been found to be associated with greater endorsement of U.S. socio-cultural mores regarding attractiveness and thinness in some of these populations.

Case studies examining African American and Hispanic patients with Anorexia Nervosa (Silber, 1986) suggest that Western cultural factors, such as the acceptance of thinness as an ideal, may influence the development of their disorders. Depression (Pumariega et al., 1984; Robinson & Andersen, 1985; Silber, 1986) and low self-esteem (Silber, 1986) were noted in many cases as well.

Through the process known as acculturation, minority individuals are exposed to the dominant culture and may experience pressure to change and conform to the values of U.S. society. Individuals, however, do not conform to the same degree, thus different levels of acculturation can be found. Although acculturation level has been related to different aspects of the counseling process, including counselor ethnicity (Sanchez & Atkinson, 1983), counselor attractiveness (Atkinson & Matsushita, 1991; Ponce & Atkinson, 1989), and willingness to seek counseling services (Ponce & Atkinson, 1989), only four studies were found that examined acculturation level in relation to eating
disorders. Osvold and Sodowsky (1993a) and Pumariega (1986) found minimal support for the hypothesis that increased acculturation to U.S. society is positively correlated to more disordered eating attitudes and behaviors in minority females. The study by Lester and Petrie (1995), however, uncovered no such relationship with bulimic symptoms. They did find that the endorsement of U.S. societal beliefs about attractiveness, a potentially specific type of acculturation, was related to bulimic symptomatology. Last, the study by Mumford et al. (1991) found that eating disordered attitudes and behaviors were unrelated to a Western Cultural orientation but associated with a traditional Asian cultural orientation. Although only a few studies have been completed, there appears to be little or no support for acculturation in the investigation of eating disorders in minorities. A specific variant, U.S. cultural beliefs about attractiveness, however, may be related. Thus, because of its potential theoretical significance, acculturation still appears to be an important variable to consider in conjunction with other correlates in future eating disorder investigations.

Given the dearth of research in this area, this study examined the relationship of personality and physical variables to bulimic symptoms in African Americans. Because of acculturation's theoretical significance in relationship to eating disorders in minority females (Pumariega, 1986;
Osvold & Sodowsky, 1994) it is included in the present model to establish its usefulness, relative to other correlates, in explaining bulimic symptomatology. Consistent with previous research, other variables to be examined are body satisfaction (Mintz & Betz, 1988), beliefs about attractiveness (Lester & Petrie, 1995), body mass (Davis & Cowles, 1989), depression (Hart & Ollendick, 1985; Katzman & Wolchik, 1984), and low self-esteem (Mintz & Betz, 1988; Katzman & Wolchik, 1984). Taken together, these variables represented measures of the physical, psychological, and social factors related to bulimia nervosa. In keeping with past research, (Lester & Petrie, 1995; Davis & Cowles, 1989; Mintz & Betz, 1988) body mass was entered into the hierarchical regression model first, BAARFAC1 and BAARFAC2 were entered second as a set, BPSS was entered third, CES-D and SES were entered fourth as a set, and AAAS was entered fifth. Each variable was expected to predict a percentage of the variance accounting for bulimic symptomatology, with the first explaining more of the variance and the last explaining the least.
CHAPTER II

METHOD

Participants

One hundred twenty-three African American college women participated in this study. Participants were drawn from general undergraduate psychology courses, as well as African American student organizations at a large Southwestern university and one Southwestern junior college. Although 136 women (131 from the large university and 5 from the junior college) initially participated, data from 10 were discarded due to incomplete questionnaires and 3 because of being extreme outliers (i.e., age and weight). The mean age of the 123 participants comprising the final sample was 20.89 years (SD = 2.8), with 114 (92.7%) reporting being single, seven married (5.7%), and two divorced (1.6%). Thirty students (24.4%) were classified as freshman, 31 (25.2%) were classified as sophomores, 33 (26.8%) as juniors, and 27 (22%) as seniors, and two (1.6%) were graduate students. The mean number of years attending college was 2.71 (SD = 1.37), while the reported grade point average was 2.71 (SD = .43). The women reported their parents' marital status as single (10.6%), married (58.5%), divorced (25.2%), and did not specify (5.7%).
Instruments

Level of Acculturation. The African American Acculturation Scale (AAAS; Landrine & Klonoff, 1994) was used to determine the African-America students' levels of acculturation based on the following areas: traditional African American religious beliefs and practices, traditional African American family structure and practices, traditional African American socialization, preparation and consumption of traditional foods, preference for African American things, interracial attitudes, superstitions, and traditional African American health beliefs and practices. The AAAS was normed on a community sample of African American adults who ranged in age, social class, education level, and geographic location. The AAAS consists of 74 items that are intended to differentiate levels of personal affiliation with African American or American (majority) societal values and roles. Items from the AAAS include: “Most of my friends are Black,” “I currently live in a mostly Black neighborhood,” and “Some members of my family hate or distrust White people.” A seven point Likert type scale ranging from 1, I totally disagree, this is not at all true of me, to 7, I totally agree, this is absolutely true of me is associated with each item. A total score is obtained by summing across all items and can range from 74 to 518. Due to concerns expressed by some initial participants, items 1, 3, 6, and 12 from the Traditional
Family Practices and Values subscale; items 25, 27, 30, 31, and 33 from the Traditional Foods and Food Practices subscale; and items 44, 45, and 47 from the Traditional Health Beliefs, Practices and Folk Disorders subscale were discarded because they were determined to be racially offensive. The new total score is obtained by summing across all items and can range from 62 (immersed in White culture) to 434 (immersed in own culture).

Landrine and Klonoff (1994) did not report Cronbach's alpha for the 74 item AAAS. The split-half reliability was .93, suggesting that the items measure acculturation in a highly consistent and reliable manner. Cronbach's alpha for the 62-item AAAS was .89. African Americans were found to score significantly higher than non-African Americans on the total score, providing support for the scales criterion-related validity. To assess concurrent validity, the researchers divided some of the participants into two groups: those that lived in an all Black neighborhood (traditional) and those who lived in an integrated neighborhood (acculturated). Results indicated that the traditional participants scored higher than the acculturated participants on the total score.

*Sociocultural Mores About Attractiveness*. The Beliefs About Attractiveness Scale-Revised (BAAR) measures the degree to which individuals endorse sociocultural mores regarding attractiveness in American society (Petrie,
The BAAR consists of nine items, including "Being physically fit and in shape is directly related to attractiveness" and "The heavier a woman is the less attractive she is." Individuals indicate their agreement with each item on a 7-point Likert scale, ranging from 1, strongly disagree, to 7, strongly agree. A total score is obtained by summing across all items. Total scores can range from 9, low endorsement of sociocultural mores, to 84, high endorsement of sociocultural mores. Cronbach's alpha for the full scale was found to be .92, indicating a high level of internal consistency. Exploratory and confirmatory factor analyses revealed that two factors best described the instrument. BAAR Factor 1 measures the importance of physical fitness and BAAR Factor 2 measures the importance of being attractive and thin. Internal consistencies (Cronbach's alphas) for the Physical Fitness and Attractive and Thin subscales were .88 and .89, respectively. Internal consistency reliabilities were computed: full scale (.90), Physical Fitness (.85), and Attractiveness and Weight (.85). Correlations with eating disorder measures were computed to determine the scale's construct validity. Greater endorsement of societal values concerning attractiveness (either importance of Physical Fitness or Being Attractive and Thin) was associated with more bulimic symptoms (Bulimia Test Revised, BULIT-R), lower self-esteem (Rosenberg Self-Esteem Scale, SES), more concern
with body size and shape (Body Shape Questionnaire, BSQ), higher levels of depression (Center for Epidemiological Studies for Depression, CES-D), more dissatisfaction with their general appearance (Multidimensional Body-Self Relations Questionnaire, MBSRQ), and greater investment in how one looks/appears and in grooming behaviors (MBSRQ). Cronbach's alphas for the present sample were .89, .83, and .85, for the total score, factor 1, and factor 2, respectively.

**Body Dissatisfaction.** The Body Parts Satisfaction Scale (BPSS; Bohrnstedt, 1977; Mintz & Betz, 1988) measures the degree of satisfaction individuals have with their bodies. The BPSS is comprised of 24 body parts such as eyes, nose, overall face, shoulders, hips, upper thighs, and abdomen. For each body part, individuals indicate their level of satisfaction on a 6-point Likert scale ranging from 1, extremely dissatisfied, to 6, extremely satisfied. A total body satisfaction score is obtained by summing across all items and then dividing by 24. Total scores can range from 1, extremely dissatisfied with one's own body, to 6, extremely satisfied with one's body.

Cronbach's alpha has been found to be .89, indicating a relatively high level of (internal consistency) reliability (Noles, Cash, & Winstead, 1985). Cronbach's alpha for the present sample was .93. A correlation of .70 between the mean body satisfaction score and a single item measuring
overall body satisfaction was reported, providing evidence for the scale's construct validity (Bohrnstedt, 1977; cited in Mintz & Betz, 1988). Cronbach's alpha for the present sample was .93.

**Depression.** The 20-item Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977) measures current depressive symptomatology, with emphasis on the affective component, depressed mood. Sample items of the CES-D include, "I felt that I could not shake off the blues even with help from my family or friends." and "My sleep was restless." Individuals indicate the degree to which each item applies to them on a four point Likert scale ranging from 0, "rarely or none of the time (Less than 1 day a week)" , to 3, "most or all of the time (5-7 days a week)". The possible range of scores is zero to 60, with the higher scores indicating more depressive symptoms.

Radloff (1977) found measures of internal consistency (coefficient alpha) to be high in the general population (.85) and even higher in a patient sample (about .90). Cronbach's alpha for the present sample was .89. Test-retest correlations were in the moderate range (.57) as would be expected with such a measure. The CES-D was able to discriminate between patient and general population groups (Radloff, 1977), demonstrating its validity. The average CES-D score for a sample of psychiatric inpatients was significantly higher than the average for the general
population samples. Seventy percent of the patients and only 21% of the general population scored at or above an arbitrary cutoff score of 16. In the patient group, the correlation between the CES-D scale and ratings of severity of depression by a clinician was .56 (Craig & Van Natta, 1976). Cronbach's alpha for the present sample was .89.

**Self-Esteem.** The Rosenberg Self-Esteem Scale (SES; Rosenberg, 1965) measures a self-acceptance dimension of self-esteem and consists of ten items regarding feelings of worthlessness versus self-like and respect. Examples of sample items include: "I feel that I am a person of worth, at least on an equal basis with others," and "I feel I do not have much to be proud of." Subjects are asked to respond to the items on a 5-point Likert-type scale ranging from 1 (strongly agree) to 5 (strongly disagree). The overall self-esteem score is obtained by Guttman scoring: two or three responses indicating high self-esteem is scored as one item. The first 3 items are scored as one item, indicating high self-esteem. Two responses indicating high self-esteem on Items 4 and 5 are scored as one item, and two responses indicating high self-esteem on Items 9 and 10 are scored as one item. The remaining items are scored individually, thus, the self-esteem score can range from 0 (low self-esteem) to 6 (high self-esteem).

The test-retest reliability over a 2-week period has been found to be high (r = .85) suggesting that the scale is
stable over time (Robinson & Shaver, 1973). Cronbach's alpha for the present sample was .81. This measure has been found to moderately correlate with scores on the Coopersmith Self-Esteem Inventory ($r = .59$) and the California Psychological Inventory Self-Acceptance scale ($r = .66$) (Robinson & Shaver, 1973). Cronbach's alpha for the present sample was .81.

**Bulimic Symptomatology.** The Bulimia Test-Revised (BULIT-R; Thelen, Farmer, Wonderlich, & Smith, 1991) is a 36-item, questionnaire based on DSM-III-R criteria that measures individuals' level of bulimic symptomatology. Although only 28 of the 36 items are used in determining the final score, all 36 items are presented in a five-point Likert scale format with one point given for extreme "normal" answers and five points given for extreme "bulimic" answers. Total scores are obtained by summing across the included 28 items, and can range from 28 to 140, with higher scores representing more symptoms of bulimia nervosa.

Reliability and validity data were provided by Thelen et al. (1991). Test-retest and internal consistency (Cronbach's) reliabilities were high and reported to be .95 and .97, respectively. Cronbach's alpha for the present sample was .90. In a cross validation study incorporating independent samples of bulimic and control subjects, BULIT-R scores differentiated between the two groups. These results indicate that the BULIT-R has adequate criterion related
validity. In addition, Thelen et al. reported correlations of .99 and .85 between the BULIT-R, and BULIT (Smith and Thelen, 1984) and The Binge Scale (Hawkins & Clement, 1980) respectively, providing evidence for the scale's convergent validity. Cronbach's alpha for the present sample was .90.

Demographic Information. A demographic questionnaire was used to obtain information concerning the participants' age, current weight, height, ideal weight, year in school, GPA, marital status, estimated acculturation level, family size, parents' marital status, parents' income level, and parents' occupations.

Participants' self-reported heights and weights were used to determine body mass \(\text{wt[kg]} / \text{hgt[m]}^2\), an accepted measure of physical size or leanness (Keys, Fidanza, Karvonen, Kimura, & Taylor, 1972). Prior research has demonstrated that self-reported heights and weights are adequate for research purposes (Palta, Prineas, Berman, & Hannan, 1982), with correlations greater than .95 and .85, respectively, between self-reported and measured weight and self-reported and measured height being demonstrated for females (Brooks-Gunn, Burrow, & Warren, 1988).

Procedure

All the African American students anonymously completed the AAAS, BULIT-R, BPSS, BAQ, SES, CES-D, and demographic questionnaire in groups of approximately 20. At the beginning of each session, participants were informed as to
the general purpose of the study, and consent forms were signed. Following this introduction, the questionnaires were administered. Due to the nature of this study, the demographic questionnaire was presented first. The remaining questionnaires were counter balanced to control for ordering effects. Participants who were enrolled in Psychology classes received extra-credit for their participation. After finishing the questionnaires, participants were given a written summary of the purpose and hypotheses of the study. In addition, they were given the option of requesting an abstract of the results after completion of the study.
CHAPTER III

RESULTS

Descriptive and Demographic Data

Table 1 presents Pearson Product Moment Correlations and means and standard deviations among the primary predictor variables (BMI, BAQFAC1, BAQFAC2, CESD, SES, BPSS, and AAAS) and the BULIT-R.

Prevalence of Bulimia Nervosa

The participants' BULIT-R scores were used to determine the prevalence of bulimia nervosa in this sample. Based on the cut-off score (i.e., 104) established by Thelen, Farmer, Wonderlich, and Smith, Farmer, Wonderlich, and Smith (1991), none (0%) of the individuals were classified as bulimic. In addition, none of the African American women were found to be bulimic using Welch, Thompson, & Hall's (1993) less stringent recommended cut-off score of 98. The highest BULIT-R score found in this sample of African American women was 93. It is important to note that the cut-off scores established by Thelen et al. (1991) and Welch et al. (1993) were based on primarily Caucasian samples. No similar cutoffs for African Americans exist.

The Prediction of Bulimic Symptoms

To determine the relationship between bulimic symptomatology and the predictor variables (BMI, BAARFAC1,
BAARFAC2, BPSS, CES-D, SE, and AAAS), a multiple hierarchical regression was employed. In keeping with past research, (Lester & Petrie, 1995; Davis & Cowles, 1989; Mintz & Betz, 1988) body mass was entered into the model first, BAARFAC1 and BAARFAC2 entered second as a set, BPSS was entered third, CES-D and SES were entered fourth as a set, and AAAS was entered last. Alpha was set at .05 for this analysis and for an effect size of $R^2 = .2$, power exceeded .9 (Cohen & Cohen, 1983).

Table 2 presents the results of the hierarchical regression. Each theoretical and empirically-driven step, except model 5, contributed to the prediction of bulimic symptomatology. In model 1, body mass was positively related to BULIT-R scores ($F(1,121) = 15.49, p < .0001$), accounting for 11% of the variance. Inclusion of the two BAAR factors explained an addition of 9% of the BULIT-R variance ($F(2,119) = 6.59, p < .01$), with each factor being positively related to bulimic symptoms. Body satisfaction was found to be a significant predictor of bulimic symptomatology in Model 3, accounting for an additional 9% of the variance ($F(1,118) = 14.92, p < .0001$). Body satisfaction was negatively related to bulimic symptomatology. The predictor variables, depression and self-esteem, which explained an additional 8% of the variance ($F(2,116) = 7.78, p < .05$), with depression being positively related to bulimic symptoms and self-esteem being
negatively related to bulimic symptoms. Inclusion of the acculturation variable in step 5 did not contribute significantly to the prediction of bulimic symptomatology ($F(1,115) = 1.64, p > .05$). Because step 5 did not contribute significantly to the variance, the more parsimonious model for the prediction of bulimic symptoms included only the first four steps. When considered together in the regression model, body mass, depression, and low self-esteem were significantly related to BULIT-R scores, while beliefs about attractiveness and body satisfaction were not.

In order to determine the best possible model for the predictor variables, a stepwise regression was employed. As shown in Table 3, the results of the stepwise regression revealed that four variables, low self-esteem, body mass, depression, and body satisfaction, best predicted bulimic symptomatology. In step 1, low self-esteem accounted for 20% of the variance ($F(1,121) = 29.65, p < .0001$), with higher scores being related to fewer symptoms. In step 2, body mass explained an additional 10% of the BULIT-R variance ($F(1,120) = 17.09, p < .0001$), with greater body mass being related to more bulimic symptomatology. Depression was added to the equation in step 3, accounting for 4% of the variance ($F(1,119) = 7.30, p < .01$), which indicates a positive relationship of depression to bulimia. Step 4 contained the last variable, body satisfaction, which
was negatively related to bulimic symptomatology ($F(1,118) = 4.70, p < .05$), accounting for 3% of the variance. The other variables, beliefs about attractiveness factor 1, beliefs about attractiveness 2, and acculturation did not significantly contribute to the prediction of bulimic symptomatology in this sample of African American college women.
CHAPTER IV

DISCUSSION

The purpose of this study was to explore the prevalence and correlates of Bulimia Nervosa in a sample of female African American undergraduates. Past research has based much of its information about eating disorders in African Americans on case studies (Pumariega, Edwards, & Mitchell, 1984; Robinson & Anderson, 1985; Silber, 1986), and generally has not considered acculturation to U.S. society as a potential moderating factor. The current study addressed these two limitations (small n and lack of consideration of acculturation) by surveying a larger sample of African American college women and examining the relationship of bulimic symptomatology to body mass, beliefs about attractiveness (importance of fitness and importance of attractiveness and thinness), body satisfaction, depression, self-esteem, and acculturation. Taken together, these variables represented measures of the physical, psychological, and social factors related to bulimia nervosa.

The hierarchical regression analysis revealed that body mass, beliefs about attractiveness, body satisfaction, depression, and low self-esteem added to the prediction of
bulimic symptomatology. Body mass, beliefs about attractiveness and thinness, and depression were positively related to BULIT-R scores, while body satisfaction and self-esteem evidenced negative relationships. Even though the beliefs about attractiveness factors 1 (importance of physical fitness) and 2 (importance of attractiveness and thinness) and body satisfaction did not add significantly to the prediction of BULIT-R scores when considered with the other variables, it is important to note that they did correlate significantly with bulimic symptomatology. These findings are consistent with studies conducted primarily with undergraduate, Caucasian women (Katzman & Wolchik, 1984; Mintz & Betz, 1988) and support the observations made from the case studies of African American females exhibiting diagnosable eating disorders (Pumariega et al., 1984; Robinson & Anderson, 1985; Silber, 1986).

Specifically, Katzman and Wolchik (1984) found that the bulimic group in their survey of undergraduate women endorsed higher levels of depression, lower levels of self-esteem, and poorer body attitudes than their control group. Mintz and Betz (1988) found that the bulimia nervosa group in their study of undergraduate women experienced more dissatisfaction with their bodies, lower self-esteem, and greater endorsement of sociocultural mores regarding attractiveness and thinness.
Concerning African Americans, Pumariega et al. (1984) reported on a case study of an adolescent girl who was being treated for anorexia nervosa and presented with symptoms of depression, suggesting an underlying affective disorder. Robinson and Anderson (1985) presented five case studies of Anorexia Nervosa in African Americans with one also meeting the criteria for Bulimia Nervosa and reported that these five patients exhibited symptoms of depression as well. Silber (1986) commented on seven case studies which included five Hispanic and two African American adolescent females and reported that these girls suffered from low self-esteem, sought assimilation through rigid dieting and the acceptance of U.S. societal standards of slimness, and one presented with depression and another with extreme body distortion. Together, these findings support the results of the current investigation. In addition, previous studies with other minority groups have demonstrated similar findings, such as the relationship of eating disordered behaviors with body mass and feelings of worthlessness in Hispanic patients (Pumariega, 1986), women and adolescent females of a Chippewa Indian community (Rosen, Shafer, Dummer, Cross, Deuman, & Malmberg, 1988), and Native American and African American women (Osvold & Sodowsky, 1993a), and the relationship of bulimic symptoms to body mass and sociocultural beliefs about attractiveness in Mexican American college women (Lester & Petrie, 1995).
Gray et al. (1987) surveyed African American college students at an all-Black university and found that the women had a prevalence rate of 3% for bulimia and 1.5% for bulimia nervosa. They compared these African American women to a sample of Caucasian college students and found that the African American women had a lower prevalence rate of bulimia and bulimia nervosa and used purging methods less often. Gray et al. (1987) proposed this difference may be due to a different beauty ideal in the Black community. An ideal that does not emphasize thinness as much as in the main culture, thereby lowering the risk of using drastic measures to be thin. This investigation's findings, however, are in contrast to Gray's proposal. Acculturation was not found to be associated with bulimic symptomatology. That is, a traditional African American orientation was not related to fewer bulimic symptoms nor a dominant cultural orientation related to greater bulimic symptoms. This statement is supported by the lack of correlation between the scores on the AAAS and the BULIT-R. In addition, none of the other variables (e.g., body mass, beliefs about attractiveness, body satisfaction, and low self-esteem) found to predict bulimic symptomatology was related to acculturation (AAAS) except depression (CESD). A positive relationship, however, was found between African American women's endorsement of beliefs about attractiveness and bulimic symptomatology. That is, if an African American
woman endorsed U.S. society's beliefs about attractiveness and thinness she was more likely to endorse bulimic symptoms.

The fact that the broader measure of acculturation was not related to bulimic symptomatology in this study is consistent with previous eating disorder research. Osvold and Sodowsky (1993a) found no relationship between acculturation, as measured by the Majority-Minority Relations Scale, and measures of drive for thinness, bulimia or body dissatisfaction. Lester and Petrie (1995) examined acculturation in Mexican American females and found no relationship with bulimic symptomatology. They did, however, find that the endorsement of U.S. societal beliefs about attractiveness, a potentially specific type of acculturation, to be related to bulimic symptoms. Lester & Petrie (1995) suggested that acculturation scales may be too broad a measure of exposure to U.S. societal roles and values to be useful in eating disorder research. A more useful consideration may be the measurement of minority women's adoption of U.S. societal values about attractiveness and thinness. The present study corroborates these findings with an African American sample. That is, the broader measure of acculturation was unrelated to bulimic symptoms while the more specific measure of endorsement of values concerning attractiveness predicted such symptoms. Thus, future research may wish to examine
the manner by which minority women adopt U.S. societal values concerning attractiveness as well as their relationship to the more general acculturation process. It is important to note, however, that in the current investigation and the Lester and Petrie (1995) study no relationships were found between measures of acculturation and beliefs about attractiveness and thinness and importance, suggesting that these two concepts are distinct and may be adapted in different ways.

In contrast, two studies found support for the hypothesis that increased acculturation to U.S. society is positively correlated with disordered eating behaviors and attitudes. The first study by Osvold and Sodowsky (1993a) examined eating attitudes using the EDI in relation to acculturation level using the Majority-Minority Relations Scale in African American and Native American women. In both groups, the more acculturated women reported higher scores on Ineffectiveness, Interpersonal Distrust, and Interoceptive Awareness. The second study by Pumariega (1986), using the EAT and the Culture Questionnaire which included number of years living in the U.S., preferences of language use, food, clothing, and music, cultural background of close relatives, and self-identification to assess acculturation, found that eating disordered attitudes and acculturation were positively correlated (although a small correlation, $r = .18$) in Hispanic adolescent girls. From
these results, Pumariega suggested that greater adherence to U.S. culture may increase an individual's risk for developing an eating disorder. Acculturation, therefore, may have a less direct relationship to eating disordered symptoms.

Differences in the results of these four studies may be due to the fact that differing age groups, ethnicities, and eating disorders (anorexia nervosa vs. bulimia nervosa) were examined and differing eating disorder questionnaires and acculturation questionnaires were employed. The two studies that found positive results between eating disordered behaviors and acculturation were similar in that they examined more anorexic-like behaviors. Future research should employ comparable measures and examine the relationships of African American women's endorsement of beliefs about attractiveness and thinness, acculturation, anorexia nervosa, and bulimia nervosa.

Prevalence of Bulimia Nervosa

With respect to the prevalence of bulimia nervosa, none of the African American women in this sample would be considered at risk for this disorder based on the cut-off score (i.e., 104) established by Thelen, Farmer, Wonderlich, & Smith (1991) nor the less stringent score (i.e., 98) suggested by Welch, Thompson, & Hall (1993). It is important to note that the cut-off scores established by Thelen et al. (1991) and Welch et al. (1993) were determined
from primarily Caucasian samples; therefore, different scores may apply to African Americans. With these limitations in mind, this finding is consistent with Gray, Ford, and Kelley's (1987) determined prevalence rate of 3% for Bulimia and 1.5% for the more stringent diagnosis of Bulimia Nervosa in a sample of college women at an all-Black university. If scores on the BULIT-R were normed on an African American population and a lower score, 90 for example, was established for the cut-off to determine bulimia nervosa, one woman in this sample would be considered at risk. Even though a psychometrically sound, paper and pencil questionnaire was employed in the current study, participants may have under reported their symptoms; therefore, the exact number of undergraduates meeting diagnostic criteria for bulimia nervosa may not be determined given that a follow-up clinical interview was not used.

Limitations

Although this study provided important information concerning the relationship of acculturation to indices of eating disorders, several limitations exist that warrant discussion. First, only self-report measures were used and participants may have under or over reported psychological and behavioral disturbances. If participants did underreport, then the prevalence and correlates of bulimia nervosa would most likely be greater. Second, only college
students were surveyed; therefore, the generalizability may be limited. Researchers and counselors should refrain from making generalizations or use extreme caution if generalizing these results to other African American populations, such as adolescents, non college educated women, and older women. Third, because of the sample used (e.g., college educated, middle socio-economic status) the range of scores on some of the measures (e.g., acculturation) may have been restricted. If restriction of range problems existed, then the strength of relationships with this variable would have been lessened. Fourth, only certain behavioral and psychological indicators of eating disorders, specifically Bulimia Nervosa, were used, thus comments concerning anorexic symptoms, for example, cannot be made. In addition, comments concerning other correlates found to be related to eating disorders in case studies and other investigations, such as family conflict (Pumariega et al., 1984) and perfectionism (Silber, 1986) cannot be made.

**Implications for Counselors**

Limitations existed in this study, yet the findings suggest implications for counseling. It will be important for counselors to be aware that African American college women’s bulimic symptoms are related to body mass, U.S. sociocultural beliefs about attractiveness (BAAR factors 1 and 2), body dissatisfaction, depression, and low self-esteem. Before working with African American clients,
counselors must realize that many African Americans are reluctant to seek counseling services due to racism and oppression that they may have experienced in the past (Wilson & Stith, 1993). Many Caucasian therapists and even some African American therapists may have basic value and communication differences with African American clients that could interfere with the establishment of rapport and understanding between one another. In addition, counselors will need to understand the effects of racism on their interactions with clients. It is, therefore, the responsibility of the counselor to develop culturally sensitive attitudes and skills by being aware of the counselor's own cultural background, values, and biases and learning about and accepting the client's cultural background, values, and past experiences with racism. These culturally sensitive attitudes and skills will aid in the development of trust between the client and counselor.

With these suggestions in mind, an apparent goal in therapy would be to address the validity of the client's endorsement of U.S. societal values about attractiveness and thinness. The counselor could help the client to explore psychologically healthier characteristics that aid in social acceptance and success, such as self-esteem. Counselors also might assist clients in understanding that the dominant society's "ideal" body image neither represents the norm nor physical health and could even be considered underweight.
Identifying with the less stringent African American beauty ideal that does not emphasize thinness may be a healthier choice. This educational strategy may help clients to better accept their bodies and increase their body satisfaction. Due to the relationship found between depression and bulimic symptomatology, counselors suspecting that an African American woman may have an eating disorder, should not only assess for bulimia nervosa but depression as well. If depression is diagnosed, antidepressant medication therapy may be indicated.

Group therapy also may be an important avenue for addressing eating disordered behaviors and attitudes in African American women. Boyd-Franklin (1987) discussed the establishment of a therapy/support group for African American women. An important function of this type of group is to help the women broaden their support network. Many of these women have been raised to be suspicious of others as a coping mechanism to deal with racism, so this group often provides the first opportunity to build trust, intimacy, and closeness in a safe environment. Boyd-Franklin cautions the therapist to be very supportive when an African American woman cries in group by acknowledging the tears and promoting the need to release them. For many of these women, public display of tears are a sign of weakness. If a supportive environment is provided group cohesion often occurs after a member has displayed emotions, and the group
members have been able to "be there" for her. Boyd-Franklin (1991) builds upon her previous suggestions by identifying important themes to address with African American women. Racial identification, skin color, and body images are often very painful topics for these women to discuss openly. Because of racism and oppression in the U.S., racial identification is a very complex process and can be exacerbated when these women feel like they do not measure up to the "White ideal" of beauty portrayed in the media. Discrimination involving issues of color may have also been experienced within families. Boyd-Franklin stated that families sometimes use color as a vehicle for scapegoating a member when she is different from the other, whether she is lighter or darker skinned. Group discussion would provide an avenue for these women to work through their feelings of self-denigration and lessen their isolation.

Considering the results of this current investigation, counselors should implement Boyd-Franklin's suggestions by establishing an African American women's group to discuss eating disordered attitudes and symptoms. It would be important for the counselor to assess the group members' endorsement of U.S. sociocultural beliefs about attractiveness. If the clients' endorse these unrealistic beliefs, the counselor could challenge these women's views of beauty and help them to develop healthier attitudes, using other group members' support. By establishing group
cohesion and trust, these women can help each other to develop an appreciation for many diverse body types and racial/ethnic features, acceptance of their own bodies, more appropriate coping skills, and relationships to lessen isolation, thus increasing body satisfaction and self-esteem and decreasing depression.

Directions for Future Research

Due to the larger number of African American college women surveyed and the predictor variables examined, this study represents an improvement over past research. Future research, however, should examine the relationships of a broader range of variables, such as issues around sexuality (Robinson & Anderson, 1985), perfectionism (Silber, 1986), drive for thinness (Osvold & Sodowsky, 1993a), and family discord (Pumariega et al., 1984) to bulimia nervosa and anorexia nervosa.

Mintz and Betz (1988) and Striegel-Moore, Silberstein, Frensch, and Rodin (1989) have demonstrated eating disorders exist on a continuum, that is, eating behaviors may range from normal to bulimic. Lachenmeyer and Muni-Brander (1988) also found support for the presentation of eating disordered symptoms along a continuum in Caucasian and minority high school students. In fact, they found no differences in these continuous behaviors between ethnic groups except that more participants from the Asian/Other category met the criteria for bulimia nervosa and fewer Blacks met all but
one or two criteria for bulimia nervosa. In addition, this continuum of eating disordered behaviors has been found to exist in White college females (Mintz & Betz, 1988), in male and female college students (Striegel-Moore et al., 1989), and in male and female high school students from differing ethnic and SES backgrounds (Lachenmeyer & Muni-Brander, 1988). Given these findings in predominantly Caucasian college and high school minority samples, it may be useful to determine whether the continuum exists for males and females of other racial/ethnic groups of differing ages and the relationship of this continuum to U.S. societal beliefs about attractiveness. Prevalence rates and correlates of eating disorders should be examined for male and female minority populations, as well.

Gray et al. (1987) found a prevalence rate of 3% for bulimia and 1.5% for bulimia nervosa in a sample of African American college students at an all-Black university. When this sample was compared to a sample of Caucasian college students, Gray et al. found that the African American women had a lower prevalence rate of bulimia and bulimia nervosa and used purging methods less often. Because of these differences found in the two populations, Gray et al. (1987) proposed that it may be due to a different beauty ideal in the Black community. An ideal that does not emphasize thinness as much as in the main culture, thereby lowering the risk of using drastic measures to be thin.
Future research might examine the prevalence and correlates of eating disorders in a comparative study between two samples of African American college women, made up of those attending an all-Black university and those attending a mostly Caucasian university. The influences of African American cultural views and mainstream cultural views about beauty or attractiveness should be examined as well. According to sociocultural theories of mainstream culture promoting a smaller range of what is considered to be attractive, one would propose that the African American college women attending a predominantly Caucasian university would more likely endorse greater U.S. societal beliefs about attractiveness and thinness and exhibit more disordered eating symptoms than the African American women attending an all-Black university where different cultural norms may exist.

The current study as well as a previous one using Mexican American college women (Lester & Petrie, 1995) found no relationships between acculturation and disordered eating. Other studies, however, have found support for the hypothesis that acculturation is related to eating disordered behaviors and attitudes (Pumariega, 1986; Osvold & Sodowsky, 1993a). Because these results are equivocal, researchers may wish to continue to examine the relationship of acculturation to disordered eating behaviors and attitudes with other minority groups in order to determine
more definitive conclusions. It may be useful for researchers to use one standardized acculturation questionnaire that assesses individual's acculturation level across minority groups in order to make comparisons between groups and across studies. In relation to the current investigation's findings, it would be important to examine the influence of U.S. societal beliefs about attractiveness and thinness and how this concept relates to acculturation as well.

Due to the inconsistent findings on acculturation, researchers may want to approach the influence of culture on eating disorders in a different manner. Atkinson, Morten, and Sue (1993) proposed a Minority Identity Development (MID) Model that defines five stages of development that minority individuals may experience as they struggle to define themselves within their own culture and the oppressive relationship between the dominant culture and their own culture. The authors describe stage one as the Conformity Stage where the minority individual has an unequivocal preference for dominant cultural values over their own culture. The physical and/or cultural characteristics that single them out as members of a minority group are a source of pain and may be viewed extremely negatively. Stage 2 is called the Dissonance stage and is the beginning of the breakdown of their denial system. These individuals begin to have conflicts between
their majority-held views and their feelings of shared experience with individuals from their respective culture. Resistance and Immersion is the third stage of development and is exemplified by the minority individual who completely endorses minority-held views and rejects those of the dominant culture. Stage four, the Introspection Stage, is defined by those individuals who gain increased autonomy and begin to believe that not everything is bad or good in the majority culture. These individuals are progressively more comfortable with their own sense of identity. In the last stage, the Synergistic Stage, individuals experience a sense of self-fulfillment with regard to cultural identity. These individuals are able to accept or reject values from their own culture, other minority cultures, and the majority culture. Due to the conflictual influences of the dominant culture and minority culture, individuals may be more at risk for developing eating disorders depending on what stage of identity development they are experiencing. Most likely, individuals in the Conformity Stage would be at the greatest risk for developing an eating disorder due to their rejection of their own culture and total endorsement of the majority culture. Individuals in the second stage of identity formation, the Dissonance Stage, would also be at risk for developing an eating disorder, although at less of a risk than an individual in the first stage due to the breakdown in their denial systems. Individuals in the other
three stages, the Resistance and Immersion Stage, the Introspection Stage, and the Synergistic Stage, would be less likely to develop eating disorders. Those in the Resistance and Immersion Stage would seem to be protected because of their total rejection of the dominant culture's values; however, individuals in this stage may be somewhat at risk because they continue to struggle with identity issues such as how they fit into society and self-esteem. In the Introspection Stage individuals are able to view cultural beliefs in both cultures as not good or bad, thereby not being affected by dominant cultural values about attractiveness and thinness as easily as in stages 1 and 2. Last, individuals in the Synergistic Stage have developed a sense of fulfillment in their own identity, which has enabled them to gain the ability to accept or reject values from their own or the majority culture that do not fit with their belief systems. Future researchers, therefore, may want to examine the stages of minority identity development and its possible relationship to eating disordered symptomatology.

Conclusion

This study examined the relationship between the predictor variables, body mass, beliefs about attractiveness factor 1 (importance of physical fitness) and factor 2 (importance of attractiveness and thinness), body satisfaction, depression, low self-esteem, and
acculturation, to bulimia nervosa. The hierarchical regression analysis revealed that body mass, beliefs about attractiveness factor 2, body satisfaction, depression, and low self-esteem were related to bulimic symptomatology. Beliefs about attractiveness factor 1 and acculturation, however, were found to be unrelated. When considered together, only body mass, depression, and low self-esteem contributed to bulimic symptomatology in the hierarchical regression. In addition, a stepwise regression analysis was performed, resulting in a slightly different predictor model. Low self-esteem, body mass, depression, and body satisfaction, in the respective order, were found to be the best predictors of bulimic symptomatology. Neither acculturation nor the beliefs about attractiveness factors contributed. Concerning prevalence, using cut-off scores established on primarily Caucasian samples, none of the African American college women were diagnosed with bulimia nervosa.

The findings suggest implications for counselors. Counselors should be aware that African American women may exhibit symptoms and correlates related to bulimia nervosa. That is, counselors should assess clients' level of endorsement of U.S. sociocultural beliefs about attractiveness, body satisfaction, depression, and self-esteem as identifiers to aid in the decision to screen for
bulimic symptomatology and determine treatment interventions.

Future research should examine prevalence rates and correlates of eating disorders for other male and female minority populations. Support for the relationship between bulimic symptomatology and U.S. societal beliefs about attractiveness and thinness was found. Acculturation, however, was not related to bulimic symptomatology. Thus, it would be important to further explore this relationship between bulimia nervosa and beliefs about attractiveness with other minority populations. Even though this study did not find a relationship between acculturation and bulimia nervosa in African American college women, other studies have found support for this hypothesis (Osvold & Sodowsky, 1993a; Pumariega, 1986). Thus, this relationship between other minority groups' acculturation level and disordered eating behaviors and attitudes should be considered as well.
APPENDIX A

TABLES
Table 1

Person Product-Moment Correlations Among the Predictor and Criterion Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>BMI</th>
<th>BAR1</th>
<th>BAR2</th>
<th>BPSS</th>
<th>CESD</th>
<th>SES</th>
<th>AAAS</th>
<th>BUL</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMI</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>23.82</td>
<td>4.00</td>
</tr>
<tr>
<td>BAR1</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>35.26</td>
<td>11.06</td>
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<tr>
<td>BAR2</td>
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<td></td>
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<td>21.44</td>
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<tr>
<td>BPSS</td>
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<td>-.23¹</td>
<td>-.31²</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.61</td>
<td>.79</td>
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<tr>
<td>CESD</td>
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<td>.24²</td>
<td>.29²</td>
<td>-.39³</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>17.63</td>
<td>10.77</td>
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<tr>
<td>SES</td>
<td>-.05</td>
<td>-.27³</td>
<td>-.30²</td>
<td>.49³</td>
<td>-.50³</td>
<td></td>
<td></td>
<td></td>
<td>4.89</td>
<td>1.63</td>
</tr>
<tr>
<td>AAAS</td>
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<td>-.01</td>
<td>-.01</td>
<td>.04</td>
<td>.21¹</td>
<td>-.02</td>
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<td></td>
<td>292.37</td>
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<tr>
<td>BUL</td>
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<td>.25¹</td>
<td>.28¹</td>
<td>-.44³</td>
<td>.43³</td>
<td>-.44³</td>
<td>.14</td>
<td></td>
<td>45.95</td>
<td>14.45</td>
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</tbody>
</table>

Note. BMI represents the subjects' body mass index. BAR1 represents importance of physical fitness. BAR2 represents importance of attractiveness and weight. BPSS represents the subjects' degree of body satisfaction. CESD represents the subject's degree of depression. SES represents the subjects' degree of self-esteem. AAAS represents the subjects' degree of acculturation. BUL represents the subjects' bulimic symptomatology.

¹ p.<.05, ² p.<.001, ³ p.<.0001.
Table 2

Summary of Hierarchical Regression Analysis for Variables Predicting Bulimic Symptomatology (N = 123)

<table>
<thead>
<tr>
<th>Step</th>
<th>Variable</th>
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<th>SE</th>
<th>Beta</th>
</tr>
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<td>1.22</td>
<td>.31</td>
<td>.34***</td>
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<td>BMI</td>
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<td>.30</td>
<td>.34***</td>
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<td></td>
<td>BAQ 1</td>
<td>.15</td>
<td>.14</td>
<td>.11</td>
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<tr>
<td></td>
<td>BAQ 2</td>
<td>.31</td>
<td>.15</td>
<td>.21*</td>
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<tr>
<td>3</td>
<td>BMI</td>
<td>.97</td>
<td>.29</td>
<td>.27**</td>
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<tr>
<td></td>
<td>BAQ 1</td>
<td>.12</td>
<td>.13</td>
<td>.09</td>
</tr>
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<td></td>
<td>BAQ 2</td>
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<td>.15</td>
<td>.13</td>
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<td></td>
<td>BPSS</td>
<td>-5.89</td>
<td>1.52</td>
<td>-.32**</td>
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<td>4</td>
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<td>.27**</td>
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<td></td>
<td>BAQ 2</td>
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<td>.18*</td>
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<td>.82</td>
<td>-.22*</td>
</tr>
<tr>
<td>5</td>
<td>BMI</td>
<td>.96</td>
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<td>.26**</td>
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<td></td>
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<td>.08</td>
<td>.12</td>
<td>.06</td>
</tr>
<tr>
<td></td>
<td>BAQ 2</td>
<td>.12</td>
<td>.14</td>
<td>.08</td>
</tr>
<tr>
<td></td>
<td>BPSS</td>
<td>-3.28</td>
<td>1.63</td>
<td>-.18*</td>
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<tr>
<td></td>
<td>CESD</td>
<td>.21</td>
<td>.12</td>
<td>.15</td>
</tr>
<tr>
<td></td>
<td>SES</td>
<td>-1.98</td>
<td>.82</td>
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<tr>
<td></td>
<td>AAAS</td>
<td>.03</td>
<td>.02</td>
<td>.10</td>
</tr>
</tbody>
</table>

Note. $R^2 = .11$ for Step 1; Changed $R^2 = .09$ for Step 2 ($p < .01$); Changed $R^2 = .09$ for Step 3 ($p < .01$); Changed $R^2 = .08$ for Step 4 ($p < .01$); Changed $R^2 = .00$ for Step 5, not significant. BMI represents body mass index. BAQ 1 represents degree of endorsement of sociocultural beliefs about attractiveness (importance of physical fitness). BAQ 2 represents degree of endorsement of sociocultural beliefs about attractiveness (importance of attractiveness and weight). BPSS represents Body Satisfaction. CESD represents level of depression. SES represents level of self-esteem. AAAS represents acculturation level. *$p < .05$, **$p < .001$, ***$p < .0001$. 
Table 3

Stepwise Regression Analysis for Variables Predicting Bulimic Symptomatology (N = 123)

<table>
<thead>
<tr>
<th>Step</th>
<th>Variable</th>
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<th>R² Partial</th>
<th>B</th>
<th>SEB</th>
<th>Beta</th>
<th>F</th>
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</thead>
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<td>.20</td>
<td>-2.09</td>
<td>.81</td>
<td>-.24</td>
<td>29.65</td>
</tr>
<tr>
<td>2</td>
<td>BMI</td>
<td>.30</td>
<td>.10</td>
<td>.93</td>
<td>.27</td>
<td>.26</td>
<td>17.09</td>
</tr>
<tr>
<td>3</td>
<td>CEDS</td>
<td>.34</td>
<td>.04</td>
<td>.27</td>
<td>.12</td>
<td>.20</td>
<td>7.30</td>
</tr>
<tr>
<td>4</td>
<td>BPSS</td>
<td>.36</td>
<td>.03</td>
<td>-3.46</td>
<td>1.60</td>
<td>-.19</td>
<td>4.70</td>
</tr>
</tbody>
</table>

Note. Total R² = .3631. SES represents level of self-esteem. BMI represents body mass index. CEDS represents level of depression. BPSS represents body satisfaction.
APPENDIX B

CONSENT FORM
Consent Form

I agree to voluntarily participate in a study concerning eating patterns of female college students. As a participant in this study, I agree to complete a series of questionnaires designed to measure variables, such as acculturation, eating patterns, and beliefs about attractiveness. I understand that, following completion of the questionnaires, no additional time will be required or requested by the investigator. The purpose of this study is to better understand the relationship, if any, between acculturation, patterns of eating, and beliefs about attractiveness.

The questionnaires will take approximately 45 minutes to complete. I understand that all information I provide will be confidential, and will not be recorded in any way that could identify me personally. In addition, I understand that there is minimal personal risk or discomfort directly involved with this research and that I am free to discontinue participation at any time without penalty or prejudice.

If I have any question or problems that arise in connection with my participation in this study, I should contact Regan Lester or her supervisor, Dr. Trent Petrie, Department of Psychology at 565-2671.

Date

Participant’s Signature

Date

Investigator’s Signature

THIS PROJECT HAS BEEN REVIEWED BY UNIVERSITY OF NORTH TEXAS COMMITTEE FOR THE PROTECTION OF HUMAN SUBJECTS (phone 565-3940)
APPENDIX C

DEMOGRAPHIC QUESTIONNAIRE
Demographic Questionnaire

Directions: Please answer all items on this questionnaire honestly as they apply to you. All information you provide will be kept strictly confidential.

1. Age ___

2. Marital Status: ___Single ___Married ___
Divorced/Separated

3. Academic Rank: ___Freshman ___Sophomore ___
___Junior ___Senior ___Graduate

4. Year(s) in School: 1 2 3 4 5 6

5. Religious Preference: ___Catholic ___Protestant ___
___Jewish ___Other Religion (please specify ____________)
None of the above

6. Parents’ Income Level:
___Under $10,000 ___$10,000 - $25,000 ___
___$25,001 - $50,000 ___$50,001 - Above

7. Mother’s Occupation (Be specific) __________________
Father’s Occupation (Be specific) __________________

8. Family size: ___

9. Parents’ Marital Status: ______Single
_______Married _______Divorced _______Single
_______Other

10. Ideal Weight ______
Current Weight ______
Height ______

11. Cumulative GPA _____ Major __________________

12. On a scale from 1 to 7, with 1 being nonacculturated and 7 being acculturated, how acculturated are you?

ACCULTURATION IS THE DEGREE TO WHICH A MINORITY GROUP (AFRICAN AMERICAN OR MEXICAN AMERICAN) HAS ADAPTED THE VALUES, ROLES, AND PERSONALITY FACTORS OF THE MAJORITY CULTURE (WESTERN/ANGLO).

1 2 3 4 5 6 7
Nonacculturated Acculturated
African American Majority
Oriented Oriented
APPENDIX D

AFRICAN AMERICAN ACCULTURATION SCALE
African American Acculturation Scale

Below are listed 62 statements representing aspects of African American culture. For each statement, rate your level of agreement using the 7-point scale ranging from 1, I totally disagree, this is not at all true of me, to 7, I totally agree, this is absolutely true of me, for each of the following items. There are no right or wrong answers so please respond honestly as each statement applies to you. For example:

1 2 3 4 5 6 7
totally disagree, neutral totally agree,
this is not at this is absolutely
all true of me true of me

1. 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

2. When I was young, my cousin, aunt, grandmother, or other relative lived with me and my family for a while.

1 2 3 4 5 6 7

3. When I was young, my mother or grandmother was the “real head” of the family.

1 2 3 4 5 6 7

4. Old people are wise.

1 2 3 4 5 6 7

5. When I was young, my mother or grandmother was the “real head” of the family.

1 2 3 4 5 6 7

6. I often lend money or give other types of support to members of my family.

1 2 3 4 5 6 7

7. It's better to try to move your whole family ahead in this world than it is to be cut for only yourself.

1 2 3 4 5 6 7

8. A child should not be allowed to call a grown woman by her first name, "Alice." The child should be taught to call her "Miss Alice."

1 2 3 4 5 6 7
11. It's best for infants to sleep with their mothers.

12.

13. I know how to play bid whist.

14. Most of my friends are Black.

15. I feel more comfortable around Blacks than around Whites.

16. I listen to Black radio stations.

17. I try to watch all the Black shows on TV.

18. I read (or used to read) Essence or Ebony magazine.

19. Most of the music I listen to is by Black artists.

20. I like Black music more than white music.

21. The person I admire the most is Black.

22. When I pass a Black person (a stranger) on the street, I always say hello or nod at them.

23. I read (or used to read) Jet magazine.

24. I usually add salt to my food to make it taste better.

25.

26. I save grease from cooking to use it again later.

27.
28. I eat grits once in a while.
   1 2 3 4 5 6 7

29. I eat a lot of fried food.
   1 2 3 4 5 6 7

31.

32. People say I eat too much salt.
   1 2 3 4 5 6 7

33.

34. 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

35. Deep in their hearts, most white people are racists.
   1 2 3 4 5 6 7

36. IQ tests were set up purposefully to discriminate against Black people.
   1 2 3 4 5 6 7

37. Whites don't understand Blacks.
   1 2 3 4 5 6 7

38. Some members of my family hate or distrust White people.
   1 2 3 4 5 6 7

39. I don't trust most White people.
   1 2 3 4 5 6 7

40. Most Whites are afraid of Blacks.
   1 2 3 4 5 6 7

41. There are many types of blood, such as "high," "low," "thin," and "bad" blood.
   1 2 3 4 5 6 7

42. I was taught that you shouldn't take a bath and then go outside.
   1 2 3 4 5 6 7

43. Illnesses can be classified as natural types, and unnatural types.
   1 2 3 4 5 6 7
44.

45.

46. I know what "falling out" means.

47.

48. Some older Black women know a lot about pregnancy and childbirth.

49. Prayer can cure disease.

50. I have seen people "fall out."

51. If doctors can't cure you, you should try going to your minister.

52. I have "fallen out."

53. I believe in heaven and hell.

54. I like gospel music.

55. The church is the heart of the Black community.

56. I am currently a member of a Black church.

57. I have seen people "get the spirit" or speak in tongues.

58. I believe in the Holy Ghost.

59. I went to a mostly Black elementary school.

60. When I was young, I was a member of a Black church.
61. I grew up in a mostly Black neighborhood.
62. The biggest insult is an insult to your mother.
63. I went to (or go to) a mostly Black high school.
64. Dancing was an important part of my childhood.
65. I used to sing in the church choir.
66. When I was a child, I used to play tonk.
67. When I was young, I used to jump double-dutch.
68. I currently live in a mostly Black neighborhood.
69. I used to like to watch "Soul Train."
70. What goes around comes around.
71. There's some truth to many old superstitions.
72. I avoid splitting a pole.
73. When the palm of your hand itches, you'll receive some money.
74. I eat Black-eyed peas on New Year's Eve.
APPENDIX E

BELIEFS ABOUT ATTRACTIVENESS SCALE-REVISED
Beliefs About Attractiveness Scale-Revised

DIRECTIONS: Listed below are statements about attractiveness in our society. For each item, please circle the response that best describes what you believe to be true using the following scale:

1  2  3  4  5  6  7
Strongly Disagree  Neither Agree  Strongly Agree
Disagree  Nor Disagree

It is very important that you respond to all the items and that you answer them honestly.

1. People would prefer to date thin rather than overweight women.

2. It is not that important for overweight women to spend money on clothes since they will look unattractive no matter what they wear.

3. A woman with an attractive face will not get very far in life without a thin body.

4. Overweight women lack self-control and discipline.

5. The heavier a woman is, the less attractive she is.

6. Being physically fit and in-shape is directly related to attractiveness.

7. Physically fit and in-shape women have a greater sense of well-being.

8. Thinness represents the current beauty ideal for women.

9. Attractive women are smarter than unattractive women.

10. The more physically fit an in-shape a woman is, the more likely it is she will have a romantic partner.
11. Attractive women are more interesting and outgoing than unattractive women.

12. It is important for women to be physically fit and in-shape.

13. Overweight women should be embarrassed by how they look.

14. Attractive women lead more fulfilling lives than unattractive women.

15. The thinner a woman is, the more attractive she is.

16. Attractiveness increases the likelihood of professional success.

17. A physically fit and in-shape body reflects the beauty ideal for women.

18. Physically fit and in-shape women have more self-confidence.

19. Women who are physically fit and in-shape have more fun than those who are not.
APPENDIX F

BODY PARTS SATISFACTION SCALE
Body Parts Satisfaction Scale

DIRECTIONS: Below is a list of body parts. Please rate how satisfied you are with each body part according to the following scale:

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
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<tbody>
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<td>1.</td>
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Remember, it is very important that you respond to all the items and that you answer them honestly as they apply to you. All of the information you provide will be kept strictly confidential.
<table>
<thead>
<tr>
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<th>Description</th>
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<tr>
<td>19.</td>
<td>Size of Sex Organs</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>20.</td>
<td>Appearance of Sex Organs</td>
<td>1 2 3 4 5 6</td>
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<td>21.</td>
<td>Hips and Upper Thighs</td>
<td>1 2 3 4 5 6</td>
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<td>22.</td>
<td>Legs (Calves) and Ankles</td>
<td>1 2 3 4 5 6</td>
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<td>23.</td>
<td>Feet</td>
<td>1 2 3 4 5 6</td>
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<td>24.</td>
<td>General Muscle Tone</td>
<td>1 2 3 4 5 6</td>
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APPENDIX G

THE BULIMIA TEST-REVISED
The Bulimia Test-Revised

Answer each question by circling the appropriate number on the answer sheet. Please respond to each item as honestly as possible; remember all of the information you provide will be kept strictly confidential.

1. I am satisfied with my eating patterns.
   1. agree
   2. neutral
   3. disagree a little
   4. disagree
   5. disagree strongly

2. Would you presently call yourself a "binge eater"?
   1. yes, absolutely
   2. yes
   3. yes, probably
   4. yes, possibly
   5. no, probably not

3. Do you feel you have control over the amount of food you consume?
   1. most or all of the time
   2. a lot of the time
   3. occasionally
   4. rarely
   5. never

4. I am satisfied with the shape and size of my body.
   1. frequently or always
   2. sometimes
   3. occasionally
   4. rarely
   5. seldom or never

5. When I feel that my eating behavior is out of control I try to take rather extreme measures to get back on course (strict dieting, fasting, laxatives, diuretics, self-induced vomiting, or vigorous exercise).
   1. always
   2. almost always
   3. frequently
   4. sometimes
   5. never or my eating behavior is never out of control
6. I use laxatives or suppositories to help control my weight.
   1. once a day or more
   2. 3 - 6 times a week
   3. once or twice a week
   4. 2 - 3 times a month
   5. once a month or less (or never)

7. I am obsessed about the size and shape of my body.
   1. always
   2. almost always
   3. frequently
   4. sometimes
   5. seldom or never

8. There are times when I rapidly eat a very large amount of food.
   1. more than twice a week
   2. twice a week
   3. once a week
   4. 2 - 3 times a month
   5. once a month or less (or never)

9. How long have you been binge eating (eating uncontrollably to the point of stuffing yourself)?
   1. not applicable; I don't binge eat
   2. less than 3 months
   3. 3 months - 1 year
   4. 1 - 3 years
   5. 3 or more years

10. Most people I know would be amazed if they knew how much food I can consume at one sitting.
    1. without a doubt
    2. very probably
    3. probably
    4. possibly
    5. no

11. I exercise in order to burn calories.
    1. more than 2 hours per day
    2. about 2 hours per day
    3. more than 1 but less than 2 hours per day
    4. one hour or less per day
    5. I exercise but not to burn calories or I don't exercise
12. Compared with women your age, how preoccupied are you about your weight and body shape?
   1. a great deal more than average
   2. much more than average
   3. more than average
   4. a little more than average
   5. average or less than average

13. I am afraid to eat anything for fear that I won't be able to stop.
   1. always
   2. almost always
   3. frequently
   4. sometimes
   5. seldom or never

14. I feel tormented by the idea that I am fat or might gain weight.
   1. always
   2. almost always
   3. frequently
   4. sometimes
   5. seldom or never

15. How often do you intentionally vomit after eating?
   1. 2 or more times a week
   2. once a week
   3. 2 - 3 times a month
   4. once a month
   5. less than once a month or never

16. I eat a lot of food when I'm not even hungry.
   1. very frequently
   2. frequently
   3. occasionally
   4. sometimes
   5. seldom or never

17. My eating patterns are different from the eating patterns of most people.
   1. always
   2. almost always
   3. frequently
   4. sometimes
   5. seldom or never
18. After I binge eat I turn to one of several strict methods to try to keep from gaining weight (vigorous exercise, strict dieting, fasting, self-induced vomiting, laxatives, or diuretics).
1. never or I don't binge eat
2. rarely
3. occasionally
4. a lot of the time
5. most of or all of the time

19. I have tried to lose weight by fasting or going on strict diets.
1. not in the past year
2. once in the past year
3. 2 - 3 times in the past year
4. 4 - 5 times in the past year
5. more than 5 times in the past year

20. I exercise vigorously and for long periods of time in order to burn calories.
1. average or less than average
2. a little more than average
3. more than average
4. much more than average
5. a great deal more than average

21. When engaged in an eating binge, I tend to eat foods that are high in carbohydrates (sweets and starches).
1. always
2. almost always
3. frequently
4. sometimes
5. seldom, or I don't binge

22. Compared to most people, my ability to control my eating behavior seems to be:
1. greater than others' ability
2. about the same
3. less
4. much less
5. I have absolutely no control

23. I would presently label myself a "compulsive eater", (one who engages in episodes of uncontrolled eating).
1. absolutely
2. yes
3. yes, probably
4. yes, possibly
5. no, probably not
24. I hate the way my body looks after I eat too much.
   1. seldom or never
   2. sometimes
   3. frequently
   4. almost always
   5. always

25. When I am trying to keep from gaining weight, I feel that I have to resort to vigorous exercise, strict dieting, fasting, self-induced vomiting, laxatives, or diuretics.
   1. never
   2. rarely
   3. occasionally
   4. a lot of the time
   5. most or all of the time

26. Do you believe that it is easier for you to vomit than it is for most people?
   1. yes, it's no problem at all for me
   2. yes, it's easier
   3. yes, it's a little easier
   4. about the same
   5. no, it's less easy

27. I use diuretics (water pills) to help control my weight.
   1. never
   2. seldom
   3. sometimes
   4. frequently
   5. very frequently

28. I feel that food controls my life.
   1. always
   2. almost always
   3. frequently
   4. sometimes
   5. seldom or never

29. I try to control my weight by eating little or no food for a day or longer.
   1. never
   2. seldom
   3. sometimes
   4. frequently
   5. very frequently
30. When consuming a large quantity of food, at what rate of speed do you usually eat?
1. more rapidly than most people have ever eaten in their lives
2. a lot more rapidly than most people
3. a little more rapidly than most people
4. about the same rate as most people
5. more slowly than most people (or not applicable)

31. I use laxatives or suppositories to help control my weight.
1. never
2. seldom
3. sometimes
4. frequently
5. very frequently

32. Right after I binge eat I feel:
1. so fat and bloated I can't stand it
2. extremely fat
3. fat
4. a little fat
5. ok about how my body looks or I never binge eat

33. Compared to other people of my sex, my ability to always feel in control of how much I eat is:
1. about the same or greater
2. a little less
3. less
4. much less
5. a great deal less

34. In the last 3 months, on the average how often did you binge eat (eat uncontrollably to the point of stuffing yourself)?
1. once a month or less (or never)
2. 2 - 3 times a month
3. once a week
4. twice a week
5. more than twice a week

35. Most people I know would be surprised at how fat I look after I eat a lot of food.
1. yes, definitely
2. yes
3. yes, probably
4. yes, possibly
5. no, probably not or I never eat a lot of food
36. I use diuretics (water pills) to help control my weight.
   1. 3 times a week or more
   2. once or twice a week
   3. 2 - 3 times a month
   4. once a month
   5. never
APPENDIX H

CENTER FOR EPIDEMIOLOGIC STUDIES

DEPRESSION SCALE
DIRECTIONS: Below is a list of the ways you might have felt or behaved. Please state how often you have felt this way during the past week.

0 - Rarely or None of the Time (Less than 1 Day)
1 - Some or a Little of the Time (1 - 2 Days)
2 - Occasionally or a Moderate Amount of Time (3 - 4 Days)
3 - Most or All of the Time (5 - 7 Days)

DURING THE PAST WEEK:

1. I was bothered by things that usually don't bother me.
   0  1  2  3

2. I did not feel like eating; my appetite was poor.
   0  1  2  3

3. I felt that I could not shake off the blues even with help from my family or friends.
   0  1  2  3

4. I felt that I was just as good as other people.
   0  1  2  3

5. I had trouble keeping my mind on what I was doing.
   0  1  2  3

6. I felt depressed.
   0  1  2  3

7. I felt that everything I did was an effort.
   0  1  2  3

8. I felt hopeful about the future.
   0  1  2  3

9. I thought my life had been a failure.
   0  1  2  3

10. I felt fearful.
    0  1  2  3

11. My sleep was restless.
    0  1  2  3

12. I was happy.
    0  1  2  3
13. I talked less than usual.  
   0  1  2  3

   0  1  2  3

15. People were unfriendly.  
   0  1  2  3

16. I enjoyed life.  
   0  1  2  3

17. I had crying spells  
   0  1  2  3

18. I felt sad.  
   0  1  2  3

19. I felt that people dislike me  
   0  1  2  3

20. I could not get "going.  
   0  1  2  3
APPENDIX I

ROSENBERG SELF-ESTEEM SCALE
Rosenberg Self-Esteem Scale

Directions: Below is a series of statements concerning how people feel about themselves. For each item, please circle the response which best describes what you believe to be true according to the following scale:

1  2  3  4
Strongly Agree  Disagree  Strongly Agree  Disagree

Remember, it is very important that you respond to all the items and that you answer them honestly as they apply to you. There are no right or wrong answers. All of the information you provide will be kept strictly confidential.

1. I feel that I am a person of worth, at least on an equal basis with others.
   1  2  3  4

2. I feel that I have a number of good qualities.
   1  2  3  4

3. All in all, I am inclined to feel that I am a failure.
   1  2  3  4

4. I am able to do things as well as most other people.
   1  2  3  4

5. I feel I do not have much to be proud of.
   1  2  3  4

6. I take a positive attitude toward myself.
   1  2  3  4

7. On the whole, I am satisfied with myself.
   1  2  3  4

8. I wish I could have more respect for myself.
   1  2  3  4

9. I certainly feel useless at times.
   1  2  3  4

10. At times I think I am no good at all.
    1  2  3  4
REFERENCES


among Asian and Caucasian college women. Psychological Reports. 71. 255-258.


