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Appearance-Related Commentary and Body Image in Women

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by

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Each person whose signature appears below certifies that this thesis in his/her opinion is adequate, in scope and quality, as a thesis for the degree Doctor of Philosophy.

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ABSTRACT OF THE THESIS

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Research has shown that sociocultural factors such as interpersonal appearance-related commentary influence body dissatisfaction and disordered eating. Few studies have investigated the effects of appearance-related commentary among undergraduate women of different ethnic groups. The aims of the current study were to examine: (1) ethnic differences in body dissatisfaction, eating disorder psychopathology, sociocultural attitudes towards appearance, appearance-related commentary, and acculturation to Western culture in African-, European-, and Hispanic Americans; and (2) negative appearance-related commentary and acculturation to Western culture as moderators of the relationship between body dissatisfaction and eating disorder psychopathology. Participants included 345 undergraduate women (M_{age} = 19.17, *SD* = 1.48; 47.5% European American, 23.8% African American, and 13.6% Hispanic American). Results indicated that European American women reported higher levels of sociocultural attitudes towards appearance and greater negative effects as a result of receiving negative weight and shape-related commentary than African American women. Hispanic American women reported greater negative effects as a result of receiving positive weight and shape-related commentary in comparison to European American women. There were positive associations between the negative effects of receiving positive commentary and

reported levels of body dissatisfaction and eating disorder psychopathology in African- and European American women. In European- and Hispanic American women, higher levels of acculturation were associated with fewer negative effects as a result of receiving positive commentary. Negative weight and shape-related commentary and acculturation were not significant moderators of the relationship between body dissatisfaction and eating disorder psychopathology in all three ethnic groups. Results suggest that the three groups of women have similar levels of body image and eating disorder psychopathology. However, European Americans reported higher levels of sociocultural attitudes and greater negative effects of receiving negative weight and shape-related commentary, which may place this group at higher risk for eating disorder psychopathology. Findings from this study increase our understanding of the potential effects of appearance-related commentary and the role of acculturation on perceptions of commentary among different groups. In addition, such findings may be used to inform interventions for body image and eating disturbance in ethnic groups.

CHAPTER ONE

INTRODUCTION

Body dissatisfaction is one of the most commonly known determinants of the development of eating disorders (Fitzsimmons-Craft & Bardone-Cone, 2012; Rosen, 1992; Talwar, Carter, Gleaves, 2012; Warren, Gleaves, Cepeda-Benito, Fernandez, & Rodriguez-Ruiz, 2005). This risk factor is commonly defined as a negative subjective evaluation of an individual's physical appearance. Historically, research on body dissatisfaction primarily focused on European American women, and only in the last few decades have researchers begun to examine this construct in other ethnic groups (Rogers Wood & Petrie, 2010). Rogers Wood and Petrie (2010) provide a thorough review of several studies, which show that women from different ethnic groups are likely to experience the same societal influences associated with body dissatisfaction as their European American counterparts.

Sociocultural theorists argue that Western cultural standards of appearance emphasize thinness and influence the development of body dissatisfaction in women (Shaw, Ramirez, Trost, Randall, & Stice, 2004). Interpersonal commentary from family, friends and peers is one mechanism by which cultural values of appearance are transmitted to women (Ata, Ludden, & Lally, 2007; Kluck, 2010; Schwartz, Phares, Tantleff-Dunn, & Thompson, 1999). This type of commentary may consist of negative feedback in the form of teasing or positive feedback in the form of a compliment. Research has shown that teasing and negative appearance-related commentary significantly affect an individual's body image, self-esteem, and eating pathology.

Currently, the majority of research regarding appearance-related feedback and body image focuses on measuring the impact of negative commentary or teasing. By primarily measuring the negative appearance-related feedback and focusing on European American women, a thorough assessment of this area has not been conducted (Lopez, Snyder, & Rasmussen, 2003). In an effort to provide a more comprehensive measurement of appearance-related commentary, Herbozo and Thompson (2006b) developed the Verbal Commentary on Physical Appearance Scale (VCOPAS), which takes into consideration both the frequency and effect of positive and negative commentary. This scale has allowed for novel research, indicating that positive commentary can potentially have a negative impact on a subset of women. To date, few studies have examined the impact of positive commentary, and even fewer studies have examined differences in appearance-related commentary among different ethnic groups (Eisenberg, Berge, Fulkerson, & Neumark-Sztainer, 2011; Striegel-Moore, Wilfley, Caldwell, Needham, and Brownell, 1996).

Due to the limited research in this area, the aim of the current study is to explore potential ethnic differences in positive and negative appearance-related commentary, and the relationship between such commentary and body image and eating disturbances. Given the rapidly expanding minority population in the United States (U.S. Census Bureau, 2012), results from this study may have important implications for the treatment and prevention of body image and eating disturbances in ethnic groups.

CHAPTER TWO

BACKGROUND

Body Dissatisfaction

Research indicates that body dissatisfaction is a significant problem, particularly in Western civilizations (e.g., Holmqvist & Frisen, 2010; Stice, 1994; Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). In fact, body dissatisfaction has become so common among women that researchers have termed such dissatisfaction as "normative discontent" (Rodin, Silberstein, & Streigel-Moore, 1984). The amount of body dissatisfaction experienced by women is evidenced by the results of a nationally representative survey, indicating that about half of the women in the United States have experienced negative body image and a preoccupation with their weight (Cash & Henry, 1995). The majority of women were discontented with body weight and shape related features, while a smaller percentage of the women were displeased with facial features.

Additional large scale studies have found similarly high rates of body dissatisfaction among women. Results of large scale surveys conducted in 1972, 1985, and 1997 revealed that dissatisfaction with many aspects of appearance, including weight and overall appearance, increased among women by approximately 40% from 1972 to 1997 (Garner, 1997). Likewise, results of the Youth Risk Behavior Survey in 1990 and the Behavioral Risk Factor Surveillance System in 1989 indicated that about 40% of adolescent and adult women engaged in weight-reduction practices (Serdula et al., 1993). Although attempting to lose weight does not necessarily correlate with body dissatisfaction, it can be an indicator of weight discontent.

The prevalence of body dissatisfaction is concerning given its association with adverse psychological and health consequences, including negative affect, low self-esteem, anxiety, and depression (Goldfield et al., 2010; Thompson et al., 1999). Additionally, body dissatisfaction has been shown to contribute to disordered eating behaviors, including extreme dieting and food restriction, binge eating, purging, and excessive exercise (Allegre, Souville, Therme, & Griffiths, 2006; Bratland‐Sanda et al., 2010; Darby, Hay, Mond, Rodgers, & Owen, 2006). Several researchers have found links between body dissatisfaction and eating disorders, and various explanations have been proposed to explain these relationships (e.g., Stice & Shaw, 2002; Wiederman & Pryor, 2000). For instance, Stice (2001) proposes a dual pathway model for eating pathology that suggests body dissatisfaction may impact eating disorders directly and indirectly via two pathways (shown in Figure 1).

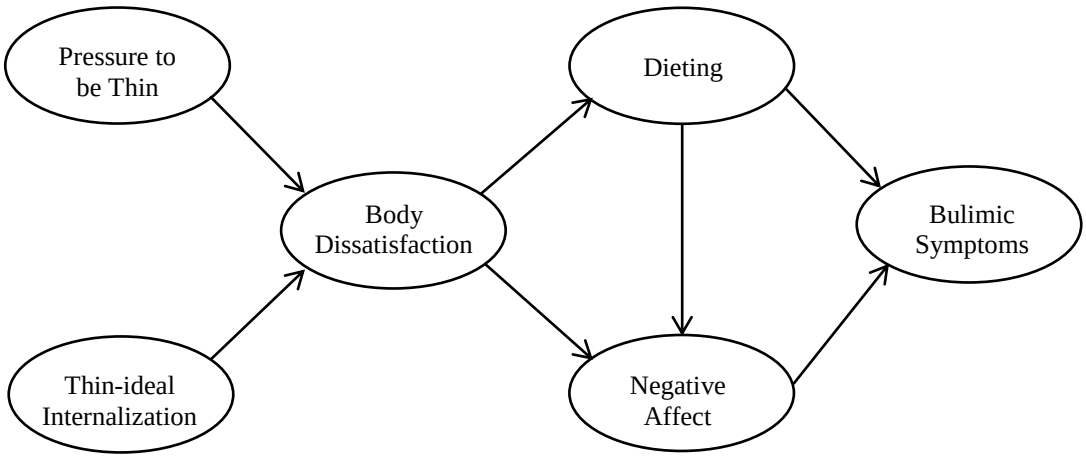

Figure 1. The dual-pathway model (Stice, 2001).

First, body dissatisfaction may directly lead to negative emotions, thoughts, and feelings. An individual may engage in binge eating and purging behaviors to cope with this negative affect. Second, body dissatisfaction promotes dieting behaviors, which typically includes the restriction of foods. Engaging in restrictive eating behaviors may lead to anorexia nervosa or binge eating. Binge eating may cause an individual to feel guilt and shame, which in turn, may lead to compensatory purging behaviors. Dieting behaviors may also foster negative affect due to the failures that are often associated with weight control efforts, as well as the effect that caloric deprivation may have on mood. In a recent longitudinal study, Stice, Marti, and Durant (2011) found that body dissatisfaction was the strongest predictor of the onset of eating disorders in women. Over an eight year period, girls with high body dissatisfaction had a 4.0 increase in the odds of having an eating disorder compared to girls with low levels of body dissatisfaction.

Eating Disorders

The three types of eating disorders identified in the Diagnostic and Statistical Manual of Mental Disorders (5th ed.; DSM-5; American Psychiatric Association, 2013) are anorexia nervosa (AN), bulimia nervosa (BN), and binge eating disorder (BED). AN is characterized by restriction of energy intake resulting in a significantly low body weight, an intense fear of gaining weight, and a distorted body image. BN is primarily defined by recurrent episodes of binge eating followed by the use of compensatory behaviors such as self-induced vomiting or excessive laxative use. Binge eating is defined as eating an unusually large amount of food within a short period of time while

experiencing a loss of control. BED is mainly described as recurrent episodes of binge eating without the use of compensatory behaviors.

All three eating disorders have potential long-term health consequences, which may include hypotension, cardiac complications, infertility, osteoporosis, gastrointestinal disturbances, esophagitis, dental erosion, and obesity (Haller, 1992; Rome & Ammerman, 2003). Psychological effects, such as depression, suicide and suicide attempts, substance abuse, and anxiety are also common in women with eating disorders (Bulik, 1995; Casper, 1998; Holderness, Brooks‐Gunn, & Warren, 1994; Pompili, Girardi, Tatarelli, Ruberto, & Tatarelli, 2006). Moreover, AN has the highest mortality rate of all psychiatric conditions, with deaths resulting from suicide, respiratory illnesses, digestive disorders, kidney and liver disease, cardiologic dysfunctions, skeletal and/or muscular issues, and infections (Agras, 2001; Millar et al., 2005).

Researchers report that lifetime prevalence rates of eating disorders range from 0.9% to 3.5% for women in the United States, with the highest rates for BED (Hudson, Hiripi, Pope, & Kessler, 2007). However, the rates of eating disorder symptoms are much higher in college populations (Cohen & Petrie, 2005; Mintz & Betz, 1988). For instance, in a large sample of college women, Napolitano and Himes (2011) found that 8.4% of the sample met criteria for BED, and 44% of the sample reported severe binge eating symptomatology. Cohen and Petrie (2005) found that 38.9% of college women reported having eating disorder symptoms, with 9.6% meeting DSM-IV criteria for an eating disorder. Additionally, the researchers found that women who reported eating disorder symptoms and the women who met DSM-IV criteria for an eating disorder reported similar levels of sadness, anxiety, guilt, shame, stress, confidence, and self-esteem. These

findings suggest that women who experience symptoms of eating disorders may suffer from the same harmful effects as women who meet full criteria for an eating disorder. Furthermore, the number of women who experience these symptoms may be increasing. A longitudinal study revealed that the prevalence of eating disorders and eating disorder symptoms in undergraduate college women increased from 23.4% in 1995 to 32.6% in 2008 (White, Reynolds-Malear, & Cordero, 2011). Thus, it is apparent that disordered eating behaviors are persistent and have detrimental effects on a large percentage of college women.

Sociocultural Theories

Given the rapid increase of media messages promoting thinness and associated negative consequences (Stice, 1994), researchers have recognized the importance of identifying psychosocial factors that contribute to body image and eating disturbances (Lee & Lee, 1996; Striegel-Moore & Cachelin, 2001). One of the most empirically-supported theories (Becker & Hamburg, 1996) used to explain body image and eating disturbances is the sociocultural model. This model argues that Western society has certain standards of physical attractiveness, which value thinness for women, and such standards are promoted through various sources such as the media. Although the model is slightly modified by different authors to reflect variables of interest, the foundation of the theory rests on three general principles: awareness of Western values of appearance, internalization of the thin-ideal, and a self-ideal discrepancy that leads to the development of body image and eating disturbances (Kiang & Harter, 2006; Mazzeo,

1999; Phan & Tylka, 2006; Rogers Wood & Petrie, 2010; Stice, 1994, 2001; Stice & Shaw, 2002; Striegel-Moore & Bulik, 2007; Thompson & Heinberg, 1999).

First, the sociocultural model proposes that messages regarding cultural values of appearance are transmitted to women through media outlets and through comments from peers and family members. Current cultural values of appearance emphasize beauty and its role in determining a woman's worth (Striegel-Moore & Bulik, 2007). A crucial component of beauty is body size. Specifically, a slender physique is highly regarded and favored in today's society, and researchers have termed this preference the "thin ideal" (Groesz, Levine, & Murnen, 2002; Stice, 1994). According to the model, women become aware of society's standards of appearance at a young age, and are reminded of these ideals throughout their lives (Striegel-Moore & Bulik, 2007).

The second component of the model, "internalization," refers to "the extent to which an individual cognitively 'buys into' socially defined ideals of attractiveness and engages in behaviors designed to produce an approximation of these ideals" (Thompson & Stice, 2001, p. 181). Women begin to internalize societal values; however, most women's bodies do not reflect the thin ideal. Thus, there is a discrepancy between the ideal and the self that may lead to distress and a preoccupation with weight (Brownell, 1991).

The third component of the model is the negative consequences that often result from the self-ideal discrepancy. If a woman is unable to reduce this discrepancy, she may develop body dissatisfaction, which has been associated with negative affect and disordered eating behaviors (Neighbors & Sobal, 2007). The thin-ideal has become progressively thinner during the past few decades, while the average woman's body size

has become larger (Stice, 1994). Thus, as the ideal becomes more unattainable, a greater number of women are at risk for body dissatisfaction.

The tripartite model expands on the general principles of the sociocultural theory to provide a comprehensive explanation of the development of body image and eating disturbances, taking into consideration several factors that have been associated with such disturbances (Keery, van den Berg, & Thompson, 2004). The model, shown in Figure 2, proposes that sociocultural influences from peers, parents, and the media predict body image and eating disturbances indirectly through internalization of the thin-ideal and appearance comparisons. The model shows that sociocultural influences have direct effects on internalization of the thin-ideal and social appearance comparisons, which in turn predict body dissatisfaction. Internalization is also thought to have a direct effect on social appearance comparisons. Social appearance comparisons can be described as the tendency to "compare the self to others on specific attributes" of appearance (van den Berg, Thompson, Obremski-Brandon, & Coovert, 2002, p. 1008). Results of several studies indicate that appearance comparisons may be positively correlated with body dissatisfaction, dieting behaviors, and eating disturbances (Blowers, Loxton, Grady-Flesser, Occhipinti, & Dawe, 2003; Muir, Wertheim, Paxton, 1999; Thompson, Coovert, & Stormer, 1999).

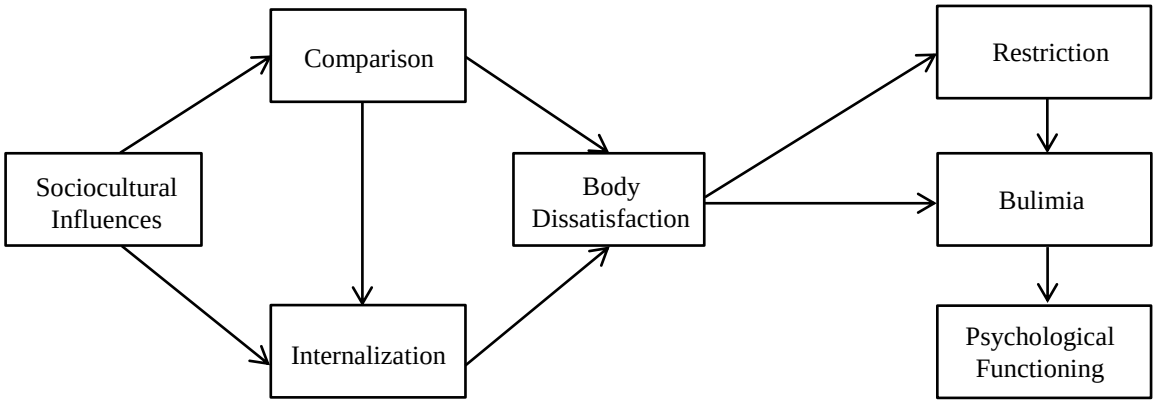

Figure 2. The tripartite model (Thompson et al., 1999).

Next, the tripartite model proposes that body dissatisfaction is directly associated with restrictive eating behaviors and BN. These relationships are also supported by multiple studies identifying body dissatisfaction and restrictive eating as common risk factors in the development of eating disorders (e.g., Johnson & Wardle, 2005, Stice, 2001; Wiederman & Pryor, 2000). Additionally, the model includes a direct path from restrictive eating to BN, reflecting another empirically supported relationship between two variables (Fairburn, Cooper, Doll, & Davies, 2005). The link between restrictive eating and BN can be explained by the fact that women who experience body dissatisfaction may engage in restrictive eating in order to lose weight. In turn, engaging in restrictive eating may cause women to be more susceptible to binge eating (Thompson et al., 1999). If a woman engages in binge eating, she may feel even worse about herself, which may lead to compensatory behaviors characteristic of BN, such as laxative use or purging. Lastly, the tripartite model suggests that BN predicts poor psychological functioning. A strong body of literature supporting negative affect, low self-esteem, anxiety, substance abuse, and depression as potential psychological consequences of

eating disorders also provides evidence for the relationship between BN and mental health (Rosen, 1992; Sandager et al., 2008; Stice, 2001).

Ethnic Differences in Body Dissatisfaction and Eating Disorder Psychopathology

The core tenets of sociocultural theory suggest that ethnic minorities are protected from body image and eating disturbances because many of them do not share the same cultural values of appearance that are promoted in traditional Western society (Lovejoy, 2001). However, Shaw and colleagues (2004) propose that it is possible that mainstream values have become ubiquitous and have reached all ethnic groups. There is limited research on body image and eating disturbances in ethnic groups, and the studies to date have produced conflicting results. Some studies show that body image concerns and disordered eating behaviors are experienced by certain ethnic groups more than others, while others show that women from all ethnic groups are equally affected by such problems.

Several studies have revealed that ethnic minority groups, including African Americans, Asian Americans, and Hispanic Americans, report lower rates of body image concerns in comparison to European Americans (Flynn & Fitzgibbon, 1998; Gray, Ford, & Kelly, 1987; Nevo, 1985). The McKnight Risk Factors survey for eating disorders (2003) revealed that body shape and weight concerns were lower among Hispanic American and African American girls than their European American peers. Low levels of body image concerns correlated with low levels of disordered eating symptoms in the same two groups. Barry and Grilo (2002) found similar results in a diverse clinical

sample of adolescents: European American girls reported greater body image disturbances compared to the African American and Hispanic American girls, who did not differ significantly from each other. However, in a meta-analysis examining 98 studies on body dissatisfaction in ethnic groups, Grabe and Hyde (2006) found no significant differences in body dissatisfaction among Asian American, European American, and Hispanic American women.

With regard to eating disorders, a recent national survey revealed no significant differences in prevalence rates for different ethnic groups (Marques et al., 2011). Results of the survey showed that AN was the least prevalent eating disorder, with rates from 0.12% to 0.64%, and BED was the most prevalent eating disorder in all ethnic groups, with rates from 1.66% to 2.71% . Similarly, in a group of immigrant women, researchers found that eating disturbances were not associated with ethnicity, and having a Carribean, Chinese, or Eastern European background did not reduce risk factors for eating disorders in first, second, or third generation immigrant women (Sussman, Truong, & Lim, 2007). Although there may not be ethnic differences in the prevalence rates of eating disorders, there may be differences in eating disorder symptoms among different ethnic groups. In a diverse treatment-seeking sample, Cachelin et al. (2000) found that Asian American, African American, Hispanic American, and European American women were all equally vulnerable to eating disorders; however, Hispanic American women were more likely to use diuretics, and African American women were more likely to use laxatives in comparison to the other ethnic groups.

Conversely, other studies have found that European American women are more susceptible to eating disorders in comparison with ethnic minority women. Particularly,

in a large sample of African American and European American women, researchers found that European American women were more likely than African American women to meet lifetime criteria for AN, BN, and BED (Striegel-Moore et al., 2003). Specifically, of the 2046 women studied, 57 European American and 19 African American women met the DSM-IV criteria for at least one eating disorder. On the contrary, results of several recent studies have shown that the prevalence rates of eating disorders may be highest in Hispanic Americans. For instance, in a study examining eating disorders in a diverse, low-income college sample revealed that Hispanic American women had the highest and European American women had the lowest rates of eating disorder diagnoses (Gentile, Raghavan, Rajah, & Gates, 2007). Further, in a study examining BED in women, Flynn and Fitzgibbon (1998) found that Hispanic American women reported a significantly greater severity in binge eating symptoms compared to African American and European American women. Moreover, recent results of the National Youth Risk Behavior Survey (2011) demonstrate that Hispanic American adolescents may also suffer higher rates of disordered eating behaviors in comparison to African American and European American adolescents (Eaton et al., 2012).

By contrast, some studies have found that African American women were more likely to binge eat, fast, and use diuretics compared to European American women (Marcus & Kalarchian, 2003; Striegel-Moore, Wilfley, Pike, Dohm, & Fairburn, 2000). The rising rates of obesity might provide an explanation for these findings, taking into consideration that African Americans have the highest rates of obesity, the second highest rates of BED, and the correlation between obesity and binge eating (Flegal et al., 2012; Marques et al., 2011). However, the findings of these studies are inconsistent with

findings from multiple other studies, which have shown that African Americans experience lower rates of body image and eating disturbances compared to other ethnic groups (Grabe & Hyde, 2006; Miller et al., 2000; Sabik, Cole, & Ward, 2010). For example, Aruguete, Nickleberry, and Yates (2004) found that African American college women felt greater body size satisfaction, desired a larger body size, and were less likely to engage in dieting in comparison with their European American peers. Molloy and Herzberger (1998) also found that African American women had more positive views towards their bodies than European American women.

Researchers have proposed several reasons that might explain the high levels of body satisfaction experienced by African American women. Allan, Mayo, and Michel (1993) posit that body image ideals in the media are more targeted to European American women; therefore, African American women feel less affected by these messages. Allan and colleagues (1993) also suggest that African American women's perceptions of beauty are more flexible and all-encompassing rather than being limited to thinness, which make it possible for more women to meet the cultural definition of attractiveness. The African American community may also be more accepting of different body shapes and sizes (Lovejoy, 2001); hence, a woman may not feel as much pressure to conform to a certain standard of appearance. Freedman (1990) also suggests that among the African American community, thinness has become associated with illness and poverty, whereas Sabik and colleagues (2010) suggest that larger body sizes have become associated with health and wealth.

A review of the literature suggests that in earlier studies, it was more common for European Americans to report higher levels of body image and eating disturbances in

comparison to ethnic minorities (e.g., Akan & Grilo, 1995; Barry & Grilo, 2002; Garner, 1993). However, currently there is evidence suggesting that Hispanic Americans may experience body dissatisfaction and eating disturbances at similar or higher rates compared to European Americans (Eaton et al., 2012). These mixed findings may be due to the fact that Hispanic Americans are one of the fastest growing minority groups, and are the group with the second highest rates of obesity in the United States (Flegal, Carroll, Kit, & Ogden, 2012; Grabe & Hyde, 2006). Additionally, Hispanic Americans also have some of the highest prevalence rates of BED (Flynn & Fitzgibbon, 1998; Marques et al., 2011). Given that multiple studies show a strong correlation between obesity and BED (e.g., Davis et al., 2008; Rome & Ammerman, 2003), it is possible that higher rates of obesity may be related to higher rates of BED and body dissatisfaction, which is a common correlate of BED.

The mixed results provide support for Shaw and colleagues' (2004) hypothesis regarding the widespread impact of Western appearance ideals. It is possible that due to the dissemination of mainstream values, body image and eating disturbances are no longer discriminant, and may affect each ethnic group equally. Despite the conflicting research, there is evidence that European American and non-European American women display body image and/or eating disturbances. Given the harmful consequences of body dissatisfaction and eating disorder symptoms, further research is needed to develop efficient strategies aimed to minimize the risk factors associated with these disturbances.

Appearance-Related Commentary

Researchers have identified appearance-related commentary, especially teasing

regarding weight, as one of the primary sociocultural contributors to the development of body image and eating disturbances in women (Cash, Winstead, & Janda, 1986; Rieves & Cash, 1996; Thompson & Heinberg, 1993). Teasing is highly prevalent among adolescents and is a strong predictor of body dissatisfaction in adulthood (Cattarin & Thompson, 1994; Neumark-Sztainer et al., 2002; Rieves & Cash, 1996). Results of a nationwide *Psychology Today* survey in 1997 revealed that teasing during childhood significantly impacted the body image development of 44% of women (Garner, 1997). In addition to body dissatisfaction and eating disorder psychopathology, weight-related teasing may also be associated with low self-esteem, obesity, anxiety, depression, suicidal ideation, suicide attempts, and impaired psychological functioning (Bailey & Ricciardelli, 2010; Fuller-Tyszkiewicz, Reynard, Skouteris, & McCabe, 2012; McLaren, Kuh, Hardy, & Gauvin, 2004; Schwartz et al., 1999).

It has been established that weight-related teasing is common in childhood and adolescence; however, less is known about the prevalence of weight-related teasing experienced during young adulthood. In a large-scale longitudinal study, researchers found that during adolescence, 30.1% of females were teased by family, and 30% of females were teased by peers (Eisenberg et al., 2011). The females who reported receiving weight-based comments from their family as adolescents were twice as likely to report weight-based teasing from family in young adulthood. Results of this study demonstrate the persistent nature of weight-based teasing, and call attention to the need for prevention strategies starting in adolescence and continuing into young adulthood. In another study, Eisenberg, Berge, Fulkerson, and Neumark-Sztainer (2012) found weight-based teasing was positively associated with unhealthy weight control behaviors (e.g.,

skipping meals), extreme weight control behaviors (e.g., laxative use), and binge eating in women. Of the 1,080 women in the study, 58.6% reported some type of disordered eating behavior. These results are consistent with results from previous studies, indicating a strong connection between weight-based teasing and eating pathology (Aubie & Jarry, 2009; Haines, Neumark-Sztainer, Eisenberg, & Hannan, 2006).

Although the detrimental effects of negative appearance-related commentary have been substantiated, less is known about the effects of positive appearance-related commentary. Recent research has begun to examine positive appearance-related commentary using the VCOPAS (Herbozo & Thompson, 2006b). The VCOPAS takes into account both the frequency and the effect of three types of commentary: negative weight and shape, positive weight and shape, and general positive appearance-related commentary. Prior to the development of the VCOPAS, researchers primarily examined the frequency and effect of negative appearance-related commentary in women. It is important to measure the frequency and effect of positive feedback considering the possibility that such feedback may perpetuate society's standards regarding appearance. After receiving a positive appearance-related comment, the receiver may believe that he or she is meeting societal standards of appearance, and may feel greater pressure to continue conforming to society's standards for appearance. This additional pressure could lead to a heightened sense of internalization, thereby increasing the risk for body dissatisfaction and eating disorders (Thompson & Heinberg, 1999; Thompson & Stice, 2001).

Herbozo and Thompson (2006a) found that positive weight-related and general appearance-related commentary had a negative impact on college women who had lower

self-esteem and greater body dissatisfaction, as well as overall appearance dissatisfaction. Calogero, Herbozo, and Thompson (2009) found that women's perceptions of the appearance-related comment, whether it made them feel positive or negative, significantly affected their body dissatisfaction. The women who reported feeling more negatively about appearance-related criticisms and more positively about appearance-related compliments reported greater body dissatisfaction. This phenomenon has been referred to as "complimentary weightism," which is the notion that some women may feel worse about themselves after receiving a compliment because the compliment serves as a reminder that their bodies are on display for others to judge and evaluate (Calogero, Herbozo, & Thompson, 2009, p. 129).

Contrary to the research by Herbozo and Thompson (2006a), other research has not provided support for a relationship between positive appearance-related commentary and body dissatisfaction. In a study examining social comparisons and appearance-related commentary in college women, Bailey and Ricciardelli (2010) found that positive appearance-related commentary was not a predictor of body dissatisfaction or eating disturbance in college women. Meanwhile, negative commentary was a predictor of eating disturbances, but not a predictor of body dissatisfaction. The researchers concluded that women are more affected by negative commentary than positive commentary.

Additionally, McLaren et al. (2004) found that positive commentary from a partner had a significant impact on body satisfaction for middle-aged women with a low body mass index (BMI) and for women who received positive commentary during childhood. For women with higher BMIs, positive feedback from a partner did not have a

strong effect; however, negative feedback during childhood significantly impacted women's current body dissatisfaction. The results indicate that positive commentary in middle adulthood may not offset the detrimental effects of receiving negative appearance-related feedback in childhood, further emphasizing the damaging and lasting effects of negative appearance-related feedback on women's body image.

Conversely, Fea and Brannon (2006) found that compliments might actually decrease negative mood in women with self-objectification traits. Self-objectification traits consist of having a preoccupation with one's appearance and viewing one's body as an object. The researchers suggest that women with high levels of such traits experience great anxiety about their appearance, and receiving a compliment puts them at ease and alleviates some appearance anxiety. Other researchers found that although negative appearance-related commentary might trigger appearance self-consciousness in a subset of women, positive appearance-related commentary did not have an effect on predicting self-consciousness (Fuller-Tyszkiewicz et al., 2012).

Recent studies have also examined differences in appearance-related commentary across weight groups (Herbozo, Menzel, & Thompson, 2013; Herbozo & Thompson, 2009; van den Berg, Neumark-Sztainer, Eisenberg, & Haines, 2008). Herbozo and colleagues (2009, 2013) found that women who were underweight received more positive weight-related feedback, and women who were overweight and obese received more negative weight-related feedback in comparison to other college women. No differences were found among the weight groups in regard to general appearance-related feedback. Furthermore, more positive and less negative feedback was a significant predictor of greater self-esteem in all women.

In summary, the current literature examining different types of appearance-related feedback is limited and somewhat conflicting. The variety of measurement instruments used in previous studies to measure positive commentary may be a reason for the inconsistent results (Fuller-Tyszkiewicz et al., 2012). Therefore, in order to gain a better understanding of the role of positive appearance-related commentary, it is important to continue to explore this construct using empirically-based measures.

Ethnic Differences in Appearance-Related Commentary

To date, only a few studies have examined differences in appearance-related commentary among ethnic groups, and the research is limited to teasing and negative weight-related commentary (Akan & Grilo, 1995; Eisenberg et al., 2011; Neumark-Sztainer et al., 2002). For instance, Eisenberg and colleagues (2011) found that almost half (49.4%) of Native American women reported being teased about their weight, compared to 43.5% of Hispanic American women, 41.8% of Asian American women, 38.5% of African American women, and 28.6% of European American women. Additionally, the researchers found that being overweight or obese was the only significant factor associated with an increase in the odds of experiencing weight-based teasing. Results from this study indicate that minorities have a higher risk of experiencing weight-based teasing compared to European Americans. The authors note that this may be due to different social and cultural norms regarding weight talk and behavior. Because cultural norms may influence weight-based teasing, they may also guide an individual's reaction to this type of teasing. Thus, it is important to measure the effects as well as the

frequency of weight-based teasing to determine how this type of commentary affects minority groups.

Alternatively, van den Berg and colleagues (2008) found that compared to obese European American girls, obese Asian American girls were less likely to be teased about their weight by peers, but Asian American and Hispanic American girls were significantly more likely to be teased by family members. There were no differences in teasing between African American and European American girls. The researchers also examined the effect of teasing on each ethnic group, and found that European American girls were more bothered by weight-based teasing than African American and Asian American girls. On the other hand, Akan and Grilo (1995) found that Asian American women reported less weight-related teasing in comparison with African American and European American women, and teasing significantly predicted body dissatisfaction in European American, but not in African American women. Additionally, Striegel-Moore et al. (1996) found that European American women reported more criticism for being overweight as children than African American women. Lastly, researchers found that European American girls were more likely to be teased for their weight, while African American girls were more likely to be teased for certain physical characteristics, such as nose, skin color, or hair (Yoo & Johnson, 2007).

The conflicting findings indicate that more research is needed to clarify the prevalence and impact of negative appearance-related commentary on women from different ethnic groups. Additionally, to the author's knowledge, none of the existing studies have examined the frequency and impact of positive appearance-related commentary among ethnic groups. Given Herbozo and Thompson's (2006a) findings

implying that positive commentary may have negative consequences for a certain subset of women, this concept should be further explored across different ethnic groups.

Acculturation

Acculturation is considered an important factor in the examination of body image and eating disturbance among women, and can be defined as "the basic process or extent to which an individual learns and adopts the behaviors, attitudes, beliefs, or values of a new, dominant culture" (Warren, Castillo, & Gleaves, 2010, p. 45). Accordingly, results from several studies show that people immigrating to the United States tend to adopt Western values of appearance, and become more susceptible to developing body image and eating disturbances (Bowen, Tomoyasu, & Cauce, 1991; Bulik, 1987; Menon & Harter, 2012). However, the impact of acculturation to Western culture may vary by ethnic group. In regard to Hispanic American women, Warren et al. (2010) found that acculturation to Western culture was a mediator between awareness of Western values of appearance and body satisfaction. Women who were highly behaviorally acculturated to Western culture had high levels of awareness and internalization of the thin-ideal. Consequently, internalization strongly correlated with body dissatisfaction.

Poloskow and Tracey (2013) found similar results in a sample of Mexican American college women, showing a relationship between acculturation to Western culture and body dissatisfaction that is mediated by internalization of U.S. standards of beauty. Furthermore, Gowen, Hayward, Killen, Robinson, and Taylor (1999) found that in adolescent Hispanic American girls, a higher rate of acculturation to Western culture was positively associated with a greater prevalence of eating disorder symptoms. The

researchers did not find an acculturation effect for Asian American or European American girls. In a clinical sample, acculturation had a significant impact on the development and treatment of eating disorders in Asian American, Hispanic American, and European American women (Cachelin et al., 2000). Women who were more acculturated to Western culture were more likely to have an eating disorder and to seek treatment for an eating disorder.

Other studies have found that acculturation does not affect body image and eating disturbances. Aruguete and colleagues (2004) found that African American acculturation was not a significant predictor of body image and eating disturbances in college women. The researchers speculate that the acculturation model for explaining body image and eating disturbances may only be applicable to recent immigrants, and not to established resident minorities. Support for the immigrant acculturation hypothesis is evident in a study by Sussman and colleagues (2007) that found acculturation had the greatest impact on Eastern Europeans. In this group, greater acculturation to Western culture was accompanied by a greater risk for body image disturbance and eating disorders. By contrast, increased acculturation to Western culture in African descendants reflected a decreased risk for body image and eating disturbances, and a decreased risk for body dissatisfaction in Asian descendants. Further, Petrie, Tripp, and Harvey (2002) found that acculturation to Western culture and body satisfaction were unrelated. Blow and Cooper (2014) also reported that acculturation to Western culture was not a significant predictor of body dissatisfaction in a study of 160 Hispanic American college students. Results of these studies on acculturation are mixed. While some studies provide support for acculturation to Western culture being a contributing factor to body image and eating

disturbances, others do not. Thus, it is necessary to further investigate this construct simultaneously with a measurement of cultural attitudes towards appearance.

In addition to having conflicting results, previous research examining acculturation and body image and eating disturbances also varies in methodology. Specifically, most researchers have only used a few variables, such as parents' country of origin, primary language, and country of birth in order to determine an individual's level of acculturation (Cachelin et al., 2000; Gowen et al., 1999). The acculturation measure used in the current study is designed to address a broad spectrum of areas that could contribute to an individual's level of acculturation to Western culture, such as an individual's involvement in social activities, romantic relationships, values, and behaviors consistent with mainstream North American culture or the individual's specific culture of origin.

The Current Study

In summary, past research indicates that European American women have higher rates of body dissatisfaction and eating disorders, while more recent findings reveal higher rates in Hispanic American women. Further, most of the literature shows that African American women have lower body dissatisfaction than any other ethnic group. The impact of negative weight-related commentary has been established, but the impact of positive weight-related commentary is indeterminate. Older studies reveal that the prevalence of weight-related commentary was higher among European American women, but more recent studies indicate a higher prevalence in minority women, although these women seem to be less affected by such commentary. The impact of acculturation

appears to vary by ethnic group. Acculturation to Western culture may have a negative impact for Hispanic American women and Eastern European immigrant women, but a positive impact on body image and eating disturbances in African American women.

The purpose of the current study was to evaluate potential differences in body dissatisfaction, eating disorder psychopathology, Western sociocultural attitudes towards appearance, appearance-related commentary, and acculturation to Western culture in African American, Hispanic American, and European American college women. The first aim of the study was to identify levels of each variable in the three groups. It was hypothesized that African Americans would report lower levels of body dissatisfaction and lower levels of Western sociocultural attitudes in comparison with European Americans, and European Americans would report higher levels of eating disorder psychopathology and acculturation to Western culture in comparison with African Americans. Due to conflicting findings regarding Hispanic Americans, no specific hypotheses were made for this group.

The second aim of the study was to examine possible relationships among the variables for each ethnic group. It was hypothesized that for the European American group, body dissatisfaction, eating disorder psychopathology, Western sociocultural attitudes, acculturation to Western culture, and the frequency of negative weight and shape-related commentary would be positively correlated. Additionally, the frequency of negative commentary would have a stronger negative effect on European Americans in comparison to African Americans and Hispanic Americans. For the Hispanic American group, it was hypothesized that body dissatisfaction, eating disorder psychopathology, Western sociocultural attitudes, and acculturation to Western culture would be positively

correlated. Due to the contradictory findings regarding African Americans, no hypothesis was made for this group. The hypothesis for the frequency and effect of positive appearance-related commentary in each group remained exploratory, due to the mixed findings in this area.

Lastly, the third aim of the study was to examine negative weight and shape-related commentary and acculturation to Western culture as potential moderators of the relationship between body dissatisfaction and eating disorder psychopathology. It was hypothesized that, when controlling for BMI, negative weight and shape-related commentary and acculturation to Western culture would be significant moderators of the relationship between body dissatisfaction and eating disorder psychopathology for the European American group. No hypothesis was made for the African American or Hispanic American groups.

CHAPTER THREE

MATERIALS AND METHOD

Participants

Participants included 345 undergraduate female students drawn from the subject pools at California Baptist University (*n* = 61), La Sierra University (*n* = 47), and the University of Memphis (*n* = 237). The sample consisted of females between the ages of 18 to 25 (*M* = 19.17, *SD* = 1.48) with Body Mass Indexes ranging from 14.98 to 65.68 (*M* = 24.84, *SD* = 6.06). One hundred and sixty-four (47.5%) of the participants were European American, 82 (23.8%) were African American, 47 (13.6%) were Hispanic American, 21 (6.1%) were Asian American, 26 (7.5%) participants identified with more than one race/ethnic group, and 5 (1.5%) identified themselves as other. Participant demographics are shown in Table 1. The current study was designed to evaluate only women due to research findings indicating that college age women are at increased risk for disordered eating in comparison to college age men (Hoek & Van Hoeken, 2003). The G*Power 3 program (Faul, Erdfelder, Lang, & Buchner, 2007) was used to determine the sample size required to achieve sufficient power (.80) at an alpha level of .05 for the statistical analyses.

Procedures

Participants were recruited from the undergraduate subject pools at California Baptist University, La Sierra University, and the University of Memphis. Information about the research study was posted on each department's subject pool website listing research opportunities. The inclusion criteria for the current sample were being female,

being between 18 and 25 of years, having access to internet and a computer to complete the online survey, and able to read and understand the English language. Participants who were interested in the study and met the inclusion criteria were directed to an online survey in which they were first required to sign an electronic informed consent document, and then respond to a series of questionnaires. The study was approved by the Institutional Review Board at Loma Linda University. The participants received extra credit in a psychology course as compensation for their participation in the study.

Measures

Demographic Questions

The demographic information collected from each participant included age, height, weight, year in school, race/ethnicity, marital status, sexual orientation, religion, annual income, parents' annual income, place of birth, parents' place of birth, current place of residency, primary language spoken at home, and fluency in other languages (see Appendix A).

Body Mass Index (BMI)

The BMI of each participant was calculated using self-reported height and weight. BMI is a number that is calculated from a person's height and weight. This number is a fairly reliable measure of body fat and is used as a screening tool for obesity. In this study, BMI was calculated by dividing body weight (in pounds) by height (in inches) squared and multiplying by 703. The following weight categories proposed by the Centers for Disease Control and Prevention (Centers for Disease Control and Prevention

[CDC], 2012) were used: BMI < 18.5 is underweight, BMI between 18.5 and 24.9 is normal, BMI between 25.0 and 29.9 is overweight, and BMI greater than 30.0 is obese.

Body Dissatisfaction

The Body Dissatisfaction subscale of the Eating Disorder Inventory (EDI-3-BD; Garner, 2004; see Appendix B) was used to assess body dissatisfaction. The subscale is composed of ten items that asked participants how they feel about certain parts of their body, such as buttocks, hips, thighs and waist, using a six-point Likert scale ranging from *never* to *always*. Higher scores represented higher body dissatisfaction. The EDI-3-BD has shown good internal consistency for samples with and without eating disorders (Cronbach's alphas above .80), and has demonstrated established convergent and discriminant validity (Garner et al., 1983). The scale also demonstrated good reliability in the current study (Cronbach's alpha = .87).

Eating Disorder Psychopathology

The Eating Disorder Examination Questionnaire (EDE-Q; Fairburn & Beglin, 1994; see Appendix C) is the self-report version of the Eating Disorder Examination (EDE; Fairburn & Cooper, 1993). The EDE-Q is a 36-item questionnaire that focuses on the main features of eating disorders and their occurrence over the past 28 days. The measure consists of the four following subscales: Dietary Restraint, Eating Concern, Weight Concern, and Shape Concern. Higher scores indicated higher levels of eating disorder psychopathology. All subscales of the EDE-Q have demonstrated high internal consistency (Cronbach's alpha = .84), convergent validity, and test-retest reliability in

women (Black & Wilson, 1996; Fairburn & Beglin, 1994; Luce & Crowther, 1999). The EDE-Q showed adequate to strong internal consistency in the present study with Cronbach's alphas ranging from .71 to .92 for the subscales and .88 for the total scale.

Sociocultural Influences

The Sociocultural Attitudes Towards Appearance Questionnaire (SATAQ-4; Schaefer et al., 2014; see Appendix D) is a 22-item measure designed to assess internalization of sociocultural influences on body dissatisfaction. The SATAQ-4 has five subscales: Internalization-Thin/Low body fat, Internalization-Muscular/Athletic, Pressures- Family, Pressures-Peers, and Pressures-Media. Participants indicated their agreement with each statement using a five-point Likert scale, ranging from *definitely disagree* to *definitely agree*. Higher scores reflected greater internalization and pressures of sociocultural attitudes towards appearance. All five subscales have shown strong reliability in a diverse range of samples, with Cronbach's alphas ranging from .82 to .95 (Schaefer et al., 2014). In the present study, the subscales also demonstrated good to high internal consistency with Cronbach's alphas ranging from .83 to .97.

Appearance-Related Commentary

The Verbal Commentary on Physical Appearance Scale (VCOPAS; Herbozo & Thompson, 2006b; see Appendix E) consists of 21 items that were used to measure the frequency and effect of appearance-related commentary from interpersonal sources. The scale includes three subscales: Negative Weight and Shape, Positive Weight and Shape, and Positive General Appearance. Participants were asked to indicate how often they had

received a certain verbal comment over the past two years using a five-point Likert scale, ranging from *never* to *always*. Higher scores indicated a higher frequency of receiving appearance-related commentary. Additionally, participants also reported how the comment made them feel using a five-point Likert scale, ranging from *very positive* to *very negative.* Higher scores reflected a greater negative impact of a particular comment. The subscales have shown adequate internal consistency (Cronbach's alphas ranging from .72 to .89) and test re-test reliability (Cronbach's alphas ranging from .78 to .91; Herbozo & Thompson, 2006b; Herbozo, Menzel, & Thompson, 2013). The subscales also demonstrated adequate to high reliability in the current study, with Cronbach's alphas ranging from .74 to .92.

Acculturation

The Vancouver Index of Acculturation (VIA; Ryder, Alden, & Paulhus, 2000; see Appendix F) consists of 20 items that are divided equally into two subscales, the Mainstream scale and the Traditional scale. The Mainstream scale evaluates to what degree participants identify with Western cultural values. The Traditional scale measures to what degree participants identify with the values of their heritage culture. Participants indicated how often they agreed with a certain statement using a nine-point Likert scale, ranging from *strongly disagree* to *strongly agree*. Higher scores reflected a greater association with Western or traditional heritage culture. Both subscales have demonstrated high internal consistency in cross-cultural samples with Cronbach's alphas ranging from .91 to .92 for the Traditional scale and .87 to .89 for the Mainstream scale

(Huynh, Howell, & Benet-Martínez, 2009), and good concurrent validity for the entire scale (Ryder et al., 2000).

The reliability of the VIA has not been specifically tested in African American, European American, and Hispanic American samples. However, in a meta-analysis examining the reliability of the VIA among other scales, Huynh and colleagues (2009) reported that in studies including African American, European American, and Hispanic American participants, the VIA was shown to have Cronbach's alphas ranging from .80 to .84. In studies that included only European American participants, the VIA showed Cronbach's alphas ranging from .68 to .88. In the current study, among all ethnic groups, the Traditional and Mainstream subscales showed excellent reliability with Cronbach's alphas ranging from .92 to .93 in the Hispanic American group, and .95 for both scales in the African American and European American groups.

Data Analysis

Results of a power analysis using the G*Power 3 program (Faul, Erdfelder, Lang, & Buchner, 2007) indicated that 159 participants were needed in order to achieve sufficient power (.80) at an alpha level of .05 for the analyses. All other analyses were performed using SPSS 20.0. First, descriptive statistics were computed for all variables included in the study. Then, in order to examine potential group differences among the variables, means and standard deviations of each variable were compared using one-way ANOVAs and post hoc tests. Prior to conducting the main analyses, the data were tested for outliers, missing data, multicollinearity, and violations of statistical assumptions. Regression diagnostics were performed to evaluate the leverage, discrepancy, and

influence of the data points in order to detect outliers. As a result, 14 outliers were detected and excluded from the analyses. Data from 68 participants who did not complete the entire survey were also removed from the data set. In addition, given the small percentage of missing data (less than 8%) pertaining to each variable of interest and the large sample size, listwise deletion was used to handle the remaining missing data (Allison, 2001). This method of deletion excluded between two and 22 cases in each analysis.

In order to check for multicollinearity, the Variance Inflation Factor (VIF) and Tolerance values were calculated and examined. Multicollinearity was not shown to be a problem with the data, given that there were no VIF values above the cutoff value of 10 or Tolerance values below 0.10. Additionally, results of four simple linear regressions examining the relationship of each independent variable to the dependent variable were compared to the results of the full multiple regression model. No drastic or unexpected discrepancies in the regression coefficients were observed, providing additional support for the absence of multicollinearity in the data.

The assumptions of ANOVA are that data must normally distributed, variances must be the same throughout the data (homogeneity of variance), and observations must be independent (Field, 2009). In order to test for normality, a histogram and values of skewness and kurtosis was computed and analyzed. Results revealed that BMI was slightly skewed, but the other variables appeared to have a normal distribution. The data were also tested for homogeneity of variance. A commonly used method to test for homogeneity of variance is Levene's test. If Levene's test is non-significant ($p > .05$), it can be concluded that this assumption has been met. Most of our data did not violate the

assumption of homogeneity of variance. However, there was one variable that violated the assumption. Therefore, Welch's F is an alternative *F*-test that was interpreted to detect the presence of group differences in means of the sociocultural attitude internalization-thin/low body fat.

In order to test for potential relationships between the variables for each ethnic group, multiple correlational analyses were conducted, and Pearson's product-moment correlation coefficients were examined. Assumptions of Pearson's correlation are that the data must be interval in order to accurately measure the linear relationship between two variables (Field, 2009). Prior to conducting the correlational analyses, variables were examined to ensure they are continuous and interval. Additionally, to determine if a correlation coefficient is significant, the data must be normally distributed. This assumption was tested by examining histograms and values of skewness and kurtosis. A series of histograms and values of skewness and kurtosis less than the absolute value of 1 revealed that the variables used in the current analyses had normal distributions.

A hierarchical regression analysis was conducted in order to test negative weight and shape-related commentary and acculturation to Western culture as moderators of the relationship between body dissatisfaction and eating disorder psychopathology. There are six common assumptions of regression: the relationship between the independent and dependent variables has been correctly specified; the independent variables must be correctly specified and should have no measurement error; and residuals must demonstrate constant variance (homoscedasticity), independence, and normality (Cohen, Cohen, West, & Aiken, 2003).

To test the first assumption, scatterplots with superimposed linear and lowess curves were created for the dependent variable against each independent variable. In regard to the second assumption, theory, prior research, and logic were used to ensure the correct specification of the independent variables. Additionally, Cronbach's alpha coefficients were computed to establish the reliability of each variable. To test the third assumption, residuals were computed and plotted against each independent variable and against the predicted value in a series of scatterplots. The plots were then examined for patterns of heteroscedasticity. To test independence of residuals, index plots were created and examined for clustering and systematic changes over time. To test normality of residuals, a *normal q-q plot* was created and examined to determine if the plot approximates a straight line at a 45-degree angle. Results of these analyses revealed that the data did not violate assumptions of regression.

The dependent variable in the hierarchical regression analysis was eating disorder psychopathology and the independent variable was body dissatisfaction. The two proposed moderators were negative weight and shape-related commentary and acculturation to Western culture. Given that body weight has been shown to significantly influence the frequency of appearance related commentary (Herbozo et al., 2013), BMI was controlled for in this analysis. Thus, BMI was entered in the first step of the regression analysis. Then, body dissatisfaction was entered in the second step of the analysis, negative appearance-related commentary was entered in the third step of the analysis, and acculturation was entered in the fourth step of the analysis. Lastly, interaction terms were created and added to the model in step five. All the variables used in the analysis were continuous.

CHAPTER FOUR

RESULTS

Participant demographic information is provided in Table 1. In order to test the first aim of the study, means of each variable were compared using one-way ANOVAs with post hoc tests. Table 2 provides means and standard deviations for study variables, and results of the ANOVAs. Our first hypothesis was partially supported. Results indicated that there were significant differences in sociocultural attitudes between the two groups. A Games-Howell post-hoc analysis revealed that European American women reported higher levels of internalization-thin/low body fat (M = 17.81, SD = 4.09) than African American women (M = 14.56, SD = 4.93; Welch's $F(2, 61.256) = 8.35$, $p < .01$). Additional post hoc analyses using a Bonferroni correction revealed that European American women also endorsed higher levels of internalization-muscular/athletic (M = 15.47, SD = 5.24), pressures from peers (M = 9.23, SD = 4.49), and pressures from the media (M = 13.76, SD = 5.45) than African American women (internalization-muscular/athletic: M = 12.22, SD = 4.83; $F(2, 167) = 5.77$, $p < .01$; pressures from peers: M = 7.27, SD = 3.76; $F(2, 167) = 3.27$, $p < .05$; and pressures from the media: M = 11.05, SD = 5.45; $F(2, 167) = 3.59$, $p < .05$). However there was no significant difference between the two groups in regards to sociocultural pressures from family ($p > .05$). Results of the ANOVA indicated that there were significant differences between the groups in terms of body dissatisfaction ($F(2, 167) = 3.11$, $p < .05$); however, upon examination of results of a post hoc analysis, the differences were non-significant, $p > .05$. In regards to eating disorder psychopathology and acculturation, contrary to our hypothesis, there were no significant differences between European American and

African American women in terms of eating disorder psychopathology and acculturation to Western culture ($p > .05$).

Table 1. Participant characteristics.

Variable	N (%)
Age	
18	155 (44.9)
19	85 (24.6)
20	44 (12.8)
21	32 (9.3)
22	14 (4.1)
23	5 (1.4)
24	6 (1.7)
25	2 (0.6)
School	
California Baptist University	61 (17.7)
La Sierra University	47 (13.6)
University of Memphis	237 (68.7)
Race	
African American/Black	82 (23.8)
American Indian/Alaskan Native	1 (0.3)
Asian American	21 (6.1)
European American/White	164 (47.5)
Hispanic/Latino(a) American	47 (13.6)
Native Hawaiian or other Pacific Islander	3 (0.9)
Would rather not answer	1 (0.3)
More than one race category	26 (7.5)
Ethnicity	
Hispanic/Latino(a)	63 (18.3)
Non-Hispanic/Non-Latino(a)	263 (76.2)
Would rather not answer	10 (2.9)

Marital Status	
Single	208 (60.3)
In a relationship	123 (35.7)
Married	8 (2.3)
Separated	1 (0.3)
Would rather not answer	2 (0.6)
US Born	
Yes	327 (94.8)
No	18 (5.2)
Primary Language	
English	304 (88.1)
Spanish	25 (7.2)
Other	12 (3.5)

Further, in regard to appearance-related commentary, results showed that there were significant group differences in terms of the effect of the commentary, but not in regard to the frequency of the commentary. Specifically, European American women (M = 3.77, SD = 0.86) reported significantly greater effects of negative weight and shape-related commentary than African American women (M = 3.23, SD = 0.85; $F(2, 167)$ = 6.02, $p < .01$). Hispanic American women reported significantly greater effects of positive weight and shape-related commentary (M = 2.50, SD = 0.76; $F(2, 167)$ = 4.80, $p < .01$) than European American women (M = 2.02, SD = 0.81).

Table 2. Means and standard deviations for scales and subscales and results of analysis of variance.

Dependent Variable	African American (n = 41)	European American (n = 97)	Hispanic American (n = 30)	df	*F*	*p-value*	η^2
Body Dissatisfaction subscale of the EDI	31.15 (9.71)	34.94 (10.33)	30.93 (9.07)	2, 167	3.110	.047	.191
EDE-Q (Total)	1.15 (1.04)	1.68 (1.22)	1.61 (1.31)	2, 167	2.911	.057	.185
SATAQ-4							
Internalization – Thin/Low body fat	14.56 (4.93)	17.81 (4.39)	16.20 (5.84)	2, 61.26	8.354	.001[a]	.239
Internalization – Muscular/ Athletic	12.22 (4.83)	15.47 (5.24)	15.07 (5.58)	2, 167	5.773	.004[a]	.256
Pressures – Family	9.68 (5.03)	10.25 (5.03)	9.47 (5.31)	2, 167	.358	.700	.066
Pressures – Peers	7.27 (3.76)	9.23 (4.49)	8.07 (4.13)	2, 167	3.272	.040[a]	.038
Pressures – Media	11.05 (5.45)	13.76 (5.45)	12.70 (5.50)	2, 167	3.587	.030[a]	.204
VCOPAS							
Negative Weight and Shape	19.73 (7.45)	19.66 (8.76)	20.17 (7.91)	2, 167	.043	.958	.023
Positive Weight and Shape	13.22 (4.23)	13.72 (4.23)	13.17 (2.80)	2, 167	.351	.704	.065
Positive General Appearance	25.80 (4.39)	24.44 (4.24)	23.67 (3.71)	2, 167	2.600	.077	.175
Negative Weight and Shape Mean Effect	3.23 (0.85)	3.77 (0.86)	3.61 (0.77)	2, 167	6.023	.003[a]	.261

Positive Weight and Shape Mean Effect	2.28 (0.73)	2.02 (0.81)	2.50 (0.76)	2, 167	4.795	.009[c]	.234
Positive General Appearance Mean Effect	1.64 (0.65)	1.68 (0.71)	1.93 (0.69)	2, 167	1.832	.163	.147
VIA Mainstream Subscale	64.10 (15.35)	57.92 (20.00)	65.33 (11.88)	2,167	2.967	.054	.186

Note. * = Welch's *F*-statistic reported; EDI = Eating Disorder Inventory, SATAQ-4 = Sociocultural Attitudes Towards Appearance Questionnaire, EDE-Q = Eating Disorder Examination–Questionnaire, VCOPAS = Verbal Commentary on Physical Appearance Scale, VIA = Vancouver Index of Acculturation; a = significant difference between African Americans and European Americans; b = significant difference between African Americans and Hispanic Americans, c = significant difference between European Americans and Hispanic Americans.

The second aim of the study was to examine possible relationships among the variables for each ethnic group. Results of correlational analyses are presented in Tables 3, 4, and 5. The alpha level was set at .01 to correct for Type I error associated with running multiple correlational analyses. We hypothesized that for the European American group, body dissatisfaction, eating disorder psychopathology, sociocultural attitudes, acculturation to Western culture, and the frequency of negative weight and shape-related commentary would be positively correlated with each other. Our hypothesis was partially supported as body dissatisfaction, eating disorder psychopathology, four of the five sociocultural attitudes (internalization-thin/low body fat and pressures from family, peers, and media), and the frequency of negative weight and shape-related commentary were positively correlated with Pearson's correlation coefficients significant at the .01 level (see Table 3). However, acculturation to Western culture was not significantly correlated

with any of the hypothesized variables. Additionally, internalization-muscular/athletic also did not positively correlate with body dissatisfaction or the frequency of negative weight and shape-related commentary.

Table 3. Results of correlational analyses for European American women.

	1	2	3	4	5	6	7	8	9	10	11	12	13
1.Body Dissatisfaction	1												
2.Eating Disorder Psychopathology	.735**	1											
3.SATAQ-4: Internalization – Thin/Low body fat	.515**	.593**	1										
4.SATAQ-4: Internalization – Muscular/ Athletic	.155*	.222**	.524**	1									
5.SATAQ-4: Pressures – Family	.464**	.528**	.308**	.142*	1								
6. SATAQ-4: Pressures – Peers	.423**	.492**	.323**	.207**	.647**	1							
7.SATAQ-4: Pressures – Media	.515**	.575**	.468**	.240**	.462**	.492**	1						
8.VCOPAS: Negative Weight and Shape	.414**	.457**	.242**	.056	.500**	.472**	.305**	1					
9.VCOPAS: Positive Weight and Shape	-.469**	-.395**	-.102	.154*	-.321**	-.285**	-.286**	-.212**	1				
10.VCOPAS: Positive General Appearance	-.267**	-.200**	-.111	-.117	-.014	-.088	-.191*	.077	.376**	1			
11.VCOPAS: Negative Weight and Shape Mean Effect	.477	.507**	.476**	-.178*	-.317**	-.259**	.417**	.284**	-.192**	.042	1		
12.VCOPAS: Positive Weight and Shape Mean Effect	.108	.055	-.157*	-.096	.147*	.042	-.068	.343**	-.183**	-.182**	-.061	1	
13.VCOPAS: Positive General Appearance Mean Effect	.248**	.204**	.046	.056	.179**	.158**	.068	.474**	-.068	-.249**	-.030	.606**	1
14.VIA: Mainstream Subscale	-.017	.066	.015	-.002	.121	.078	.117	.022	-.172**	-.063	.081	.095	-.210**

Note. SATAQ-4 = Sociocultural Attitudes Towards Appearance Questionnaire, VCOPAS = Verbal Commentary on Physical Appearance Scale, VIA = Vancouver Index of Acculturation. *$p < .05$. **$p < .01$.

Table 4. Results of correlational analyses for Hispanic American women.

	1	2	3	4	5	6	7	8	9	10	11	12	13
1.Body Dissatisfaction	1												
2.Eating Disorder Psychopathology	.716**	1											
3.SATAQ-4: Internalization – Thin/Low body fat	.666**	.725**	1										
4.SATAQ-4: Internalization – Muscular/ Athletic	.278	.367*	.460**	1									
5.SATAQ-4: Pressures – Family	.456**	.538**	.443**	.339*	1								
6. SATAQ-4: Pressures – Peers	.478**	.709**	.437**	.091	.580**	1							
7.SATAQ-4: Pressures – Media	.710**	.687**	.639**	.364*	.573**	.616**	1						
8.VCOPAS: Negative Weight and Shape	.417**	.662**	.383*	.221	.617**	.544**	.499**	1					
9.VCOPAS: Positive Weight and Shape	-.640**	-.460**	-.327*	.047	-.392**	-.460**	.539**	-.308	1				
10.VCOPAS: Positive General Appearance	-.215	-.032	.116	.129	.076	-.023	-.137	.086	.575**	1			
11.VCOPAS: Negative Weight and Shape Mean Effect	.519*	.572**	.582**	.204	.530**	-.401*	.509**	.416**	-.342*	.135	1		
12.VCOPAS: Positive Weight and Shape Mean Effect	-.117	-.098	-.312	.017	.083	-.051	.029	.020	-.217	-.128	-.039	1	
13.VCOPAS: Positive General Appearance Mean Effect	.100	.148	.012	.200	-.059	-.027	.194	.298	.034	-.014	-.019	.348*	1
14.VIA: Mainstream Subscale	.047	.135	.240	-.010	.258	.143	.150	.101	-.197	.026	.344*	.230	-.406**

Note. SATAQ-4 = Sociocultural Attitudes Towards Appearance Questionnaire, VCOPAS = Verbal Commentary on Physical Appearance Scale, VIA = Vancouver Index of Acculturation. *$p < .05$. **$p < .01$

Table 5. Results of correlational analyses for African American women.

	1	2	3	4	5	6	7	8	9	10	11	12	13
1.Body Dissatisfaction	1												
2.Eating Disorder Psychopathology	.780**	1											
3.SATAQ-4: Internalization – Thin/Low body fat	.539**	.599**	1										
4.SATAQ-4: Internalization – Muscular/ Athletic	.103	.009	.482**	1									
5.SATAQ-4: Pressures – Family	.489**	.570**	.309**	.041	1								
6. SATAQ-4: Pressures – Peers	.353**	.362**	.285*	.269*	.651**	1							
7.SATAQ-4: Pressures – Media	.257*	.365**	.295*	.071	.549**	.470**	1						
8.VCOPAS: Negative Weight and Shape	.479**	.526**	.337**	.080	.529**	.379**	.278*	1					
9.VCOPAS: Positive Weight and Shape	-.492**	-.431**	-.194	.113	-.281**	-.207	-.183	-.269*	1				
10.VCOPAS: Positive General Appearance	-.329**	-.331**	-.280*	-.036	-.115	-.149	-.191	-.219	.345**	1			
11.VCOPAS: Negative Weight and Shape Mean Effect	.533	.568**	.462**	.074	.342**	.235*	.267*	.267*	-.356**	-.260*	1		
12.VCOPAS: Positive Weight and Shape Mean Effect	.395**	.319**	.100	.099	.260*	.049	-.067	.185	-.344**	-.363**	.040	1	
13.VCOPAS: Positive General Appearance Mean Effect	.288**	.162	.084	-.005	.257*	.139	-.043	.443**	-.092	-.285*	.005	.611*	1
14.VIA: Mainstream Subscale	.038	.027	-.027	-.027	.041	.104	.058	-.030	-.142	.107	.284*	-.154	-.266**

Note. SATAQ-4 = Sociocultural Attitudes Towards Appearance Questionnaire, VCOPAS = Verbal Commentary on Physical Appearance Scale, VIA = Vancouver Index of Acculturation. *$p < .05$. **$p < .01$.

We also hypothesized that the frequency of negative commentary would be associated with a stronger negative effect among European Americans than African Americans and Hispanic Americans. This hypothesis was not supported by the data, which indicated that the European American group had a smaller correlation ($r = .284$, $p < .01$) between the frequency of negative weight and shape-related commentary and the negative effect of such commentary than the Hispanic American group ($r = .416$, $p < .01$), but slightly larger than the African American group ($r = .267$, $p < .05$). However, hypothesis testing using z-scores revealed that the differences among the groups were not significant, $p > .05$.

For the Hispanic American group, it was hypothesized that body dissatisfaction, eating disorder psychopathology, sociocultural attitudes, and acculturation to Western culture would all be positively correlated with each other. This hypothesis was partially supported, as three variables were not positively correlated with other variables in the hypothesized direction. Internalization-muscular/athletic was not positively correlated with body dissatisfaction and eating disorder psychopathology, and acculturation to Western culture did not correlate with any of the other variables (see Table 4). Due to the contradictory findings regarding African Americans, no hypothesis was made for this group, but the findings for this group were consistent with the results of the other two ethnic groups. In African American women, body dissatisfaction, eating disorder psychopathology, and three of the sociocultural attitudes positively correlated with each other, with the exception of the internalization-muscular/athletic and pressures from the media. Additionally, acculturation to Western culture was not positively correlated with

body dissatisfaction, eating disorder psychopathology, or sociocultural attitudes (see Table 5).

Hypotheses for the frequency and effects of positive weight and shape-related and general appearance-related commentary in each group were exploratory. In the following analyses, it is important to note that in regard to effect ratings, higher scores indicate a stronger negative effect of the commentary. Table 3 shows results of the correlational analyses for European American women. Results revealed that for European American women, the frequency of positive weight and shape-related commentary was negatively associated with body dissatisfaction, eating disorder psychopathology, acculturation to Western culture, pressures from family, peers, and media, and the effect of receiving positive weight and shape-related commentary. The effect of receiving positive weight and shape-related commentary was positively correlated with the frequency of negative weight and shape-related commentary and the effect of receiving general positive appearance-related commentary. The effect of receiving positive weight and shape-related commentary was negatively associated with the frequency of positive weight and shape-related and positive general appearance-related commentary.

In regards to the frequency of receiving positive general appearance-related commentary, this variable was negatively associated with body dissatisfaction, eating disorder psychopathology and the effects of positive weight and shape-related and positive general appearance-related commentary. The effect of receiving positive general appearance-related commentary was positively correlated with body dissatisfaction, eating disorder psychopathology, pressure from family and peers, the frequency of negative weight and shape-related commentary, and the effect of receiving positive

weight and shape-related commentary. The effect of such positive commentary was also negatively associated with the frequency of positive general appearance-related commentary and acculturation to Western culture.

Table 4 shows results of the correlational analyses for Hispanic American women. For Hispanic American women, the frequency of positive weight and shape-related commentary was negatively associated with body dissatisfaction, eating disorder psychopathology, and pressures from family, peers, and media. The effect of receiving positive weight and shape-related commentary was not significantly related to any other variable. In regards to the frequency of positive general appearance-related commentary, this variable was not significantly associated with any other variable. The effect of receiving positive general appearance-related commentary was negatively correlated with acculturation to Western culture.

Table 5 shows results of the correlational analyses for African American women. In African American women, the frequency of positive weight and shape-related commentary was negatively associated with body dissatisfaction, eating disorder psychopathology, the effect of receiving negative weight and shape-related comments, and the effect of receiving positive weight and shape-related comments. The effect of receiving positive weight and shape-related commentary was positively associated with body dissatisfaction, eating disorder psychopathology, and the effect of general positive appearance-related commentary. The effect of receiving this type of positive commentary was negatively correlated with the frequency of positive weight and shape-related and general positive appearance-related commentary. Further, it was found that body dissatisfaction, eating disorder psychopathology, and the effect of receiving positive

weight and shape-related commentary were all negatively correlated with the frequency of positive general appearance-related commentary in African American women. With respect to the effect of general positive appearance-related commentary, results revealed positive correlations with body dissatisfaction, frequency of negative weight and shape-related commentary, and the effect of positive weight and shape-related commentary.

In summary, for European American women, higher frequencies of receiving both weight and shape and general appearance-related positive commentary appeared to be related to lower levels of body dissatisfaction and eating disorder psychopathology. However, negative effects of receiving positive general appearance-related commentary were associated with higher levels of body dissatisfaction and eating disorder psychopathology and lower levels of acculturation. These results indicate that higher frequencies of positive commentary were associated with less body dissatisfaction and lower levels of eating disorder symptoms in European American women, but a subgroup of women who experienced negative effects as a result of receiving positive general appearance-related commentary experienced more body dissatisfaction and higher levels of eating disorder symptoms. Also, results indicated that higher levels of acculturation were related to lower negative effects as a result of experiencing positive general-appearance related commentary.

For Hispanic American women, higher frequencies of receiving positive weight and shape-related commentary appeared to be related to lower levels of body dissatisfaction and eating disorder psychopathology, but positive general appearance-related commentary did not have the same effect. Additionally, similar to European American women, results for Hispanic American women indicated that higher levels of

acculturation were related to lower negative effects as a result of experiencing positive general-appearance related commentary.

African American women experienced similar results to European American women, such that higher frequencies of positive weight and shape and general appearance-related commentary appeared to be related to lower levels of body dissatisfaction and eating disorder psychopathology. However in this group, the negative effects of receiving both types of positive commentary were associated with higher levels of body dissatisfaction and eating disorder psychopathology. These results indicate that higher frequencies of positive commentary were associated with less body dissatisfaction and lower levels of eating disorder symptoms, but a subgroup of women who experienced negative effects as a result of receiving positive commentary experienced more body dissatisfaction and higher levels of eating disorder symptoms.

Lastly, it was hypothesized that, when controlling for BMI, negative weight and shape-related commentary and acculturation to Western culture would be significant moderators of the relationship between body dissatisfaction and eating disorder psychopathology for the European American group. Three hierarchical regression analyses were conducted in order to determine the impact of body dissatisfaction, negative weight and shape-related commentary, and acculturation to Western culture on eating disorder psychopathology in European American, Hispanic American, and African American women. Given that BMI was controlled for, BMI was entered in the first step of the regression analysis. Body dissatisfaction was entered in the second step, the frequency of negative weight and shape-related commentary was entered in the third step, and acculturation to Western culture was entered in the fourth step. Interaction terms

were created and added to the model in step five. However, these terms were shown to be non-significant in all three models, and therefore excluded from the final models.

Table 6. Results of hierarchical multiple regression analysis predicting eating disorder symptomatology from body dissatisfaction, negative weight-related commentary, and acculturation for European American women.

	b	SE	95% CI	β	*t*	*p*	sr^2
Step 1							
BMI	.070	.017	[.036, .105]	.336	4.047	.000	.113
Step 2							
BMI	.021	.013	[-.005, .047]	.100	1.574	.118	.059
Body Dissatisfaction	.083	.008	[.068, .098]	.699	11.040	.000	.433
Step 3							
BMI	.017	.013	[-.009, .044]	.082	1.291	.199	.000
Body Dissatisfaction	.079	.008	[.063, .094]	.659	9.826	.000	.006
Negative weight and shape-related commentary	.015	.009	[-.002, .033]	.113	1.729	.086	.010
Step 4							
BMI	.014	.013	[-.013, .040]	.066	1.025	.307	.000
Body Dissatisfaction	.079	.008	[.063, .095]	.664	9.963	.000	.000
Negative weight and shape-related commentary	.017	.009	[-.001, .035]	.125	1.901	.060	.000
Acculturation	.006	.004	[-.001, .013]	.100	1.672	.097	.010

Note. R^2 = .113 for Step 1. R^2 = .545 for Step 2. R^2 = .556 for Step 3. R^2 = .566 for Step 4.

Overall, the regression model for European American women accounted for a significant proportion of the variance in eating disorder psychopathology, $R^2 = .566$, $F(4, 126) = 41.01$, $p < .001$. Results of the regression analysis are shown in Table 6. BMI accounted for a significant proportion of the variance in eating disorder psychopathology, $R^2 = .113$, $F(1, 129) = 16.38$, $p < .001$. BMI was a significant individual predictor of eating disorder psychopathology in the first step of the regression model, such that a one-unit increase in BMI was associated with a .07-unit increase in eating disorder psychopathology, $t(1) = 4.05$, $p < .001$. However, BMI was no longer a significant individual predictor of eating disorder psychopathology when body dissatisfaction was entered into the model in the second step of the analysis ($p > .05$). Body dissatisfaction accounted for 43.3% of the variance in eating disorder psychopathology, above and beyond the influence of BMI, $\Delta R^2 = .433$, $F(2, 128) = 76.81$, $p < .001$.

In the final regression model for European American women, body dissatisfaction was a significant individual predictor of eating disorder psychopathology, such that a one-unit increase in body dissatisfaction was associated with a .079-unit increase in eating disorder psychopathology, $t(1) = 41.01$, $p < .001$. Negative weight and shape-related commentary and acculturation to Western culture did not account for a significant proportion of the variance in eating disorder psychopathology above and beyond the influence of BMI and body dissatisfaction, and the two variables were not significant independent predictors of eating disorder symptomatology ($p > .05$). Therefore, our hypothesis that negative weight and shape-related commentary and acculturation to Western culture moderate the relationship between body dissatisfaction and eating disorder psychopathology in European American women was not supported.

As with the European American group, the regression model for Hispanic American women accounted for a significant proportion of the variance in eating disorder psychopathology, $R^2 = .634$, $F(4, 30) = 12.97$, $p < .001$. Results of the regression analysis are shown in Table 7. BMI accounted for a significant proportion of the variance in eating disorder psychopathology, $R^2 = .351$, $F(1, 33) = 17.84$, $p < .001$. BMI was a significant individual predictor of eating disorder psychopathology in the first step of the regression model, such that a one-unit increase in BMI was associated with a .226-unit increase in eating disorder psychopathology, $t(1) = 4.22$, $p < .001$. However, BMI was no longer a significant individual predictor of eating disorder psychopathology when negative weight and shape-related commentary was entered into the model in the third step of the analysis ($p > .05$). Body dissatisfaction accounted for 18.5% of the variance in eating disorder psychopathology, above and beyond the influence of BMI, $\Delta R^2 = .185$, $F(2, 32) = 18.50$, $p < .001$. Negative weight and shape-related commentary accounted for 9.4% of the variance in eating disorder psychopathology above and beyond the influence of BMI and body dissatisfaction, $\Delta R^2 = .094$, $F(3, 31) = 17.61$, $p < .001$.

Table 7. Results of hierarchical multiple regression analysis predicting eating disorder symptomatology from body dissatisfaction, negative weight-related commentary, and acculturation for Hispanic American women.

	b	SE	95% CI	β	*t*	*p*	sr^2
Step 1							
BMI	.226	.053	[.117, .335]	.592	4.223	.000	.350
Step 2							
BMI	.121	.054	[.011, .232]	.318	2.232	.033	.104
Body Dissatisfaction	.067	.019	[.029, .105]	.510	3.576	.001	.185
Step 3							
BMI	.049	.056	[-.065, .162]	.128	.874	.389	.030
Body Dissatisfaction	.059	.017	[.024, .094]	.452	3.450	.002	.003
Negative weight and shape-related commentary	.055	.020	[.015, .095]	.382	2.807	.009	.094
Step 4							
BMI	.049	.056	[-.066, .164]	.128	.866	.393	.000
Body Dissatisfaction	.059	.017	[.024, .095]	.452	3.411	.002	.000
Negative weight and shape-related commentary	.054	.020	[.014, .095]	.377	2.732	.010	.000
Acculturation	.007	.012	[-.019, .032]	.059	.531	.599	.003

Note. R^2 = .351 for Step 1. R^2 = .536 for Step 2. R^2 = .630 for Step 3. R^2 = .634 for Step 4.

In the final regression model for Hispanic American women, body dissatisfaction was a significant individual predictor of eating disorder psychopathology, such that a one-unit increase in body dissatisfaction was associated with a .059-unit increase in eating disorder psychopathology, $t(1) = 3.41$, $p < .01$. Negative weight and shape-related

commentary was also a significant individual predictor of eating disorder psychopathology, such that a one-unit increase in negative weight and shape-related commentary was associated with a .054-unit increase in eating disorder psychopathology, $t(1) = 2.73$, $p < .01$.Acculturation to Western culture did not account for a significant proportion of the variance in eating disorder psychopathology above and beyond the influence of BMI, body dissatisfaction, and negative weight and shape-related commentary, and it was also not a significant independent predictor of eating disorder psychopathology ($p > .05$).

Table 8. Results of hierarchical multiple regression analysis predicting eating disorder symptomatology from body dissatisfaction, negative weight-related commentary, and acculturation for African American women.

	b	SE	95% CI	β	*t*	*p*	sr^2
Step 1							
BMI	.052	.014	[.024, .081]	.422	3.633	.001	.178
Step 2							
BMI	.000	.012	[-.023, .024]	.003	.034	.973	.176
Body Dissatisfaction	.085	.010	[.064, .105]	.781	8.203	.000	.434
Step 3							
BMI	-.006	.012	[-.030, .018]	-.046	-.482	.632	.001
Body Dissatisfaction	.078	.011	[.057, .099]	.719	7.318	.000	.007
Negative weight and shape-related commentary	.025	.013	[-.001, .051]	.182	1.949	.056	.023
Step 4							
BMI	-.008	.012	[-.033, .017]	-.065	-.659	.512	.000
Body Dissatisfaction	.079	.011	[.058, .101]	.731	7.349	.000	.000
Negative weight and shape-related commentary	.026	.013	[.000, .052]	.185	1.979	.053	.000
Acculturation	.005	.006	[-.007, .017]	.069	.854	.397	.067

Note. R^2 = .178 for Step 1. R^2 = .613 for Step 2. R^2 = .636 for Step 3. R^2 = .640 for Step 4.

Lastly, the regression model for African American women accounted for a significant proportion of the variance in eating disorder psychopathology, R^2 = .640, $F(4, 58) = 25.83$, $p < .001$. Results of the regression analysis are shown in Table 8. BMI accounted for a significant proportion of the variance in eating disorder psychopathology,

R^2 = .178, $F(1, 61) = 13.20$, $p < .01$. BMI was a significant individual predictor of eating disorder psychopathology in the first step of the regression model, such that a one-unit increase in BMI was associated with a .052-unit increase in eating disorder psychopathology, $t(1, 61) = 3.63$, $p < .01$. However, BMI was no longer a significant individual predictor of eating disorder psychopathology when body dissatisfaction was entered into the model in the second step of the analysis ($p > .05$). Body dissatisfaction accounted for 43.5% of the variance in eating disorder psychopathology, above and beyond the influence of BMI, $\Delta R^2 = .435$, $F(2, 60) = 47.42$, $p < .001$. Body dissatisfaction was a significant individual predictor of eating disorder psychopathology, such that a one-unit increase in body dissatisfaction was associated with a .079-unit increase in eating disorder psychopathology, $t(1) = 7.35$, $p < .001$. Negative weight and shape-related commentary and acculturation to Western culture did not account for a significant proportion of the variance in eating disorder psychopathology above and beyond the influence of BMI and body dissatisfaction, and the two variables were not significant independent predictors of eating disorder psychopathology ($p > .05$).

CHAPTER FIVE

DISCUSSION

The aims of the current study were to examine differences in body dissatisfaction, eating disorder psychopathology, sociocultural attitudes towards appearance, appearance-related commentary, and acculturation to Western culture in African American, Hispanic American, and European American college women. Results revealed several significant differences among the ethnic groups. European American women reported higher levels of sociocultural attitudes towards appearance and stronger negative effects as a result of receiving negative weight and shape-related commentary in comparison to African American women. Hispanic American women reported experiencing stronger negative effects from receiving positive weight and shape-related commentary in comparison to European American women.

Further, negative effects from receiving positive general appearance-related commentary were associated with higher levels of body dissatisfaction, eating disorders, pressures from family and peers, and lower levels of acculturation in European Americans. In African American women, negative effects from receiving positive weight and shape-related commentary were associated with body dissatisfaction and eating disorders, and negative effects of receiving positive general appearance-related commentary were associated with body dissatisfaction. Lastly, negative weight and shape-related commentary and acculturation to Western culture were not found to be significant moderators of the relationship between body dissatisfaction and eating disorder psychopathology in all three groups.

Results provided partial support for the first hypothesis indicating that compared to African American women, European American women reported higher levels of sociocultural attitudes towards appearance, including internalization-thin/low body fat, internalization-muscular/athletic, pressures from peers and pressures from the media. These findings are consistent with prior findings showing that African American women report lower levels of sociocultural pressures to be thin and less internalization of those standards compared to European American women (Cashel, Cunningham, Landeros, Cokley, & Muhammad, 2003). Further, there were no significant differences between African American and European American women in regards to acculturation to Western culture or sociocultural pressures from family.

A possible explanation for the lack of between-group differences in regard to acculturation may be that the majority of our sample (92.2%) was born in the United States, which may reduce the likelihood that individuals feel they need to engage in acculturation. Prior researchers have found that stress related to acculturation is lower in US-born minorities than minority populations that immigrated to the United States (Ryder, 1999). Additionally, research has shown that individuals who experience acculturation in adolescence are more likely to develop eating disturbances compared to those who become acculturated at a younger age or at an older age (Gowen et al., 1999). However, differences in degrees of acculturation among US-born and non-US born individuals have not yet been investigated.

Although differences were not found between the groups in regard to acculturation to Western culture, both African American and European American women experienced moderate levels of pressures from family, but different levels of pressures

from peers and the media. African American women reported low to moderate levels of pressures from peers and the media in comparison to European American women, who reported moderate to high levels of pressures from peers and media, respectively. This finding suggests that although both groups of women reported similar levels of pressure from families to look a certain way, society at large may be sending different messages to women of different ethnic groups. Further, the finding that European American women may be receiving messages from society regarding their bodies in greater frequencies compared to African American women is consistent with results from a study by Jefferson and Stake (2009). These researchers found that in comparison to African American women, European American women reported higher levels of comparison to media beauty figures and higher levels of internalization to Western beauty standards.

Further, the finding showing that European American women experienced more distress as a result of receiving negative weight and shape-related commentary in comparison to African American women is consistent with findings by van den Berg and colleagues (2008) showing that European American girls were more bothered by weight-based teasing than African American girls. Given that there were no significant differences in the frequencies of commentary suggests that there may be other factors that may play a role on the impact of commentary among the different ethnic groups. The fact that sociocultural attitudes about appearance were higher in European American women compared to African American women may partially explain the discrepancy in the effects of commentary. If European American women felt greater pressures from society to be thin compared to African American women, it is likely that they would feel worse about receiving a negative comment about their weight and/or shape.

Other factors such as different beauty ideals of each group may also explain why European American women feel greater distress from negative weight and shape-related comments. For instance, it is known that there is great variation in African American women's perceptions of beauty, and may include hairstyle, clothing, and other aspects of an individual's personal style (Allan et al., 1993). These standards may be more accommodating for African American women, whereas beauty ideals for European American women place a greater emphasis on body size, which may make it more difficult for this group of women to adhere to these more limited standards (Stice, 1994).

There were no significant differences found among African American, Hispanic American, and European American in women terms of body dissatisfaction and eating disorder psychopathology. This finding is congruent with previous findings reported in the literature (Grabe & Hyde, 2006; Shaw et al., 2004), indicating that mainstream values have become pervasive and have reached women of all ethnic groups. However, there was a difference between Hispanic American women and European American women in the effects of commentary, whereas the former reported significantly higher levels of negative effects of positive weight and shape-related commentary compared to the latter.

This finding suggests that there is a subgroup of Hispanic American and European American women who are negatively affected as a result of receiving positive weight and shape-related commentary. Within this subgroup of women, Hispanic American women report higher levels of negative effects as a result of receiving positive weight and shape-related commentary in comparison to European American women. A possible explanation for this finding may involve a pattern of interaction that is common within Hispanic cultures termed "simpatía" (Triandis, Marin, Lisansky, & Betancourt, 1984).

This term is used to describe individuals who are innately agreeable, empathetic, polite, and conflict-avoidant (Triandis et al., 1984). It is possible that a Hispanic American woman who suffers from body dissatisfaction may interpret a positive comment about her body as something that was said out of politeness or simpatía rather than accepting it as a genuine compliment. However, given that simpatía was not assessed in the current study, this hypothesis warrants further examination in future studies.

Further, there were no significant differences between Hispanic American and European American women on body dissatisfaction, eating disorder psychopathology, and sociocultural attitudes towards appearance. This finding is consistent with prior research that has shown no significant differences in body dissatisfaction (Grabe & Hyde, 2006) and eating disorder psychopathology (Marques et al., 2011) between European American and Hispanic American women. Trends in immigration and in turn, exposure to the messages promoting the thin ideal may also partially explain this finding. According to the U.S. Census Bureau, the rates of minority groups (defined as any group other than non-Hispanic White) in the U.S. are have been steadily increasing over time, and the nation's Hispanic population has been one of the country's most rapidly-growing populations (U.S. Census Bureau, 2012). Therefore, it is possible that Western sociocultural attitudes affecting European Americans have begun to influence Hispanic Americans as well.

The second hypothesis that European American women would report positive correlations among body dissatisfaction, eating disorder psychopathology, sociocultural attitudes, acculturation to Western culture, and the frequency of negative weight and shape-related commentary was partially supported. With the exception of acculturation

with Western culture, all other variables were positively correlated. These findings indicate that European American women with higher levels of eating disorder psychopathology also reported higher levels of body dissatisfaction, negative weight and shape-related commentary, and sociocultural attitudes, which supports prior research on the sociocultural model (Stice, 1994).

Further, given that our sample was primarily composed of women born in the United States rather than having immigrated to the U.S., the results regarding the lack of relationship found between acculturation to Western culture and body dissatisfaction, eating disorder psychopathology, and sociocultural attitudes may be explained by the framework proposed by Sussman and colleagues (2007). The researchers argued that acculturation to Western culture may only have an impact on recent immigrants rather than established resident minorities.

The hypothesis that the frequency of negative weight and shape-related commentary would have a stronger negative effect on European Americans in comparison to African Americans and Hispanic Americans was not supported. Results indicated that there were no significant differences in relationships between the frequency and effect of negative weight and shape-related commentary among the three groups of women. This finding indicating that the three groups felt similar levels of negative effects in response to negative weight and shape-related commentary confirms prior findings showing that European Americans and Hispanic Americans experienced similar levels of distress as a result of receiving negative commentary (van den Berg, 2008). However, the finding also conflicts with prior research findings presented by van den Berg and

colleagues (2008) indicating that European Americans reported higher levels of distress in response to negative commentary in comparison to African Americans.

The homogeneity of our sample may explain the lack of differences reported among women in these groups. Our sample consisted of young adult college women, a population that is commonly known to have high rates of body dissatisfaction (Cook-Cottone & Phelps, 2003). Therefore, although these women may have different cultural backgrounds, they are all part of a college environment that may promote sociocultural ideals of beauty. Researchers propose that in this environment, women may be frequently exposed to sociocultural influences on appearance, such as appearance-related commentary and pressures to meet the thin-ideal (Cook-Cottone & Phelps, 2003). Prior researchers have noted that social support may help to buffer some of the effects of sociocultural pressures (Stice & Whitenton, 2002). However, given that about half of college students attend a college more than 100 miles away from home (O'Shaughnessy, 2011), many college students may not have access to protective factors such as family or friend support. This may lead college women to be more susceptible to feeling negative affect as a result of commentary and other potentially harmful effects associated with sociocultural influences that exist in the college environment. .

With regard to Hispanic American women, results provided partial support for our second hypothesis, indicating positive correlations among body dissatisfaction, eating disorder psychopathology, the frequency of negative weight and shape-related commentary, and the majority of sociocultural attitudes, with the exception of internalization of the muscular ideal. This sociocultural attitude refers to a desire for a figure that is lean, but muscular and athletic, and is most commonly reported in males

(Schaefer et al., 2014). However, research is showing that some females may also be starting to identify with the muscular/athletic ideal due to increases in women's participation in sports and the promotion of fitness in the media (Gruber, 2007).

Although both Hispanic American and European American women reported similar levels of internalization of the muscular ideal in the current study and in a previous study (Goodman, 2002), results of the current study indicate that this type of internalization appeared to have a negative effect on European American women in terms of body dissatisfaction and eating disorder psychopathology, but not on Hispanic American women. Internalizing the muscular ideal may not have negatively impacted Hispanic American women partially due to culture-specific gender roles and expectations for Hispanic women. According to researchers, Hispanic families tend to promote traditional feminine roles that are associated with being submissive and self-sacrificial (Galanti, 2003). Additionally, women are expected to be wives and mothers, which are roles that typically do not require a muscular physique (Galanti, 2003).

Conversely, Hispanic men are expected to be the providers in families, a role that may demand physical strength for labor (Galanti, 2003). Hence, the muscular-ideal may be more emphasized in Hispanic cultures for men than women. Also, researchers have noted that young Hispanic American women tend to live with their families longer than European American women (Jane, Hunter, & Lozzi, 1999). Therefore, although Hispanic American women in the current study endorsed internalizing the muscular ideal, familial influence and the promotion of traditional gender roles may serve as protective factors against the potential negative consequences of internalization, such as body dissatisfaction and eating disorder psychopathology (Hahn-Smith & Smith, 2001).

Although a hypothesis was not proposed for African Americans, the findings regarding relationships among body dissatisfaction, eating disorder psychopathology, sociocultural attitudes, acculturation to Western culture, and the frequency of negative weight and shape-related commentary for these women were consistent with the findings for European Americans and Hispanic American women. Internalization-muscular/athletic was not associated with body dissatisfaction or the frequency of negative weight and shape-related commentary, and acculturation with Western culture was not related to any of the other variables. However, other variables including body dissatisfaction, eating disorder psychopathology, and the majority of sociocultural attitudes were positively associated among African Americans.

Results indicate that although many African Americans may endorse a broader range of standards for beauty, these beliefs did not appear to serve as protective factors for the African American women in the current study. Similar to Hispanic American and European American women, African American women reported harmful associations between sociocultural attitudes, body dissatisfaction, and eating disorder psychopathology. These findings are consistent with prior research showing that sociocultural variables were related to the development of body dissatisfaction and eating disorder psychopathology in African American women (Akan & Grilo, 1995). It is possible the Western values of appearance have become indiscriminant, affecting all ethnic groups living in Western culture (Shaw et al., 2004). Results also provide initial support for the sociocultural model in African Americans, which shows strong positive relationships between body dissatisfaction, eating disorder psychopathology, and sociocultural attitudes about appearance (Rogers Wood & Petrie, 2010).

Given the lack of literature on the frequency and effect of positive weight and shape-related and positive general appearance-related commentary with ethnic minority groups, the hypotheses for each group in regard to these variables were exploratory. For European Americans, higher levels of positive weight and shape-related commentary frequency were associated with lower levels of body dissatisfaction, eating disorder psychopathology, acculturation with Western culture, and pressures from family, peers, and media. These results suggest that positive weight and shape-related commentary may have a positive effect on European American women in regard to body dissatisfaction and eating disorder psychopathology, which is consistent with McLaren et al.'s (2004) findings regarding the positive effects of compliments on body image. Additionally, it is possible that women who are receiving such commentary respond to the commentary by continuing to work on maintaining or improving their appearance. In turn, given that these individuals are already internally conforming to societal standards of beauty, they may experience fewer external pressures to conform from family, peers, and media.

Although frequencies of positive weight and shape-related commentary appeared to have a positive effect on women, findings also revealed that higher frequencies of receiving these types of comments actually correlated with a stronger negative effect in European American women. This finding supports the concept of complimentary weightism (Calogero et al., 2009), which is the notion that certain individuals may feel worse about themselves after receiving a compliment because the compliment serves as a reminder that their bodies are on display for others to judge. Therefore, results indicate that although higher levels of positive weight and shape-related commentary frequency were related to lower levels of body dissatisfaction, eating disorder psychopathology, and

sociocultural pressures, it also seems that European American women may generally feel worse as a result of receiving such feedback.

Additionally, the finding that higher frequencies of positive weight and shape-related commentary correlated with lower levels of acculturation to Western culture indicates that European American women who were less acculturated received more comments about their weight or shape. However, acculturation did not correlate with higher levels of body image and eating disturbances, sociocultural pressures, or negative effects of receiving commentary. Therefore, although comments may be more frequent in less acculturated individuals, it does not necessarily mean that these individuals suffer worse consequences than their more acculturated counterparts who receive less positive weight and shape-related commentary. This is a novel finding that contradicts a hypothesis proposed by Wolfson (1981), who examined compliment-giving in different cultures. Wolfson (1981) reported that there are cultural variations in compliment giving and suggested that Americans may use compliments excessively and in situations that may be inappropriate in other cultures. Additional research on appearance-related compliments among different ethnic groups is needed to explore the relationship between acculturation to Western culture and compliment-giving.

Further, in European Americans, higher levels of the negative effects of receiving positive weight and shape-related commentary were related to higher levels of pressures from the media, greater frequency of negative weight and shape-related commentary, and increased negative effects from receiving general positive appearance-related commentary. These findings indicate that the individuals who reported feeling worse about a positive weight and shape-related commentary were more likely to feel bad about

receiving compliments about their general appearance, and may also feel greater pressure from the media to meet a certain standard of appearance. These findings provide strong support for Calogero et al.'s (2009) theory of complimentary weightism, which proposes that receiving compliments may make a woman feel worse about herself as it reminds her that her body is on display for others to judge.

The findings are also in line with objectification theory proposed by Fredrickson and Roberts (1997). This theory is founded on the belief that positive or negative appearance-related comments may cause women to internalize how they are viewed by others and they may begin to see themselves through an outsider's lens. The researchers propose that by adopting this new perspective of the self, women may become more conscious of their bodies and start to engage in habitual body monitoring. Further, having a heightened sense of awareness of her body may increase a woman's anxiety and shame about her appearance. Thus, results indicate that it is the effect of the commentary that has potential to cause greater harm for a woman, rather than simply the number of compliments that a woman receives.

Lastly, the link between increased pressures from the media and feeling a negative effect from receiving positive appearance-related comments is also supported by prior findings that indicate that external pressures may negatively affect body image, self-esteem, and eating-related attitudes in adolescents (Ata et al., 2007). Ata and colleagues (2007) propose that interventions aimed at reducing adolescents' perceptions of appearance-related pressures from family and friends may have positive effects on adolescents' body image, self-esteem, and eating behaviors. Although Ata et al.'s (2007) study was conducted using a younger sample, research has shown that appearance-related

commentary is a strong predictor of body dissatisfaction in adolescence as well as in adulthood (Cattarin & Thompson, 1994; Neumark-Sztainer et al., 2002). Therefore, given the relationship between appearance-related commentary and societal pressures, interventions geared towards reducing an individual's perceptions of pressures may be beneficial for women as well as for adolescents.

In addition, findings of the current study also revealed that the European American women who reported feeling worse about receiving positive comments also reported lower frequencies of positive weight and shape-related and general appearance-related comments and higher frequencies of negative comments regarding their weight and/or shape. These results suggest that overall, this group of individuals reported receiving a greater amount of negative commentary than positive commentary. It is possible that the potential positive effects of positive commentary may be overshadowed by the higher frequencies of negative commentary received by these women.

Some research has shown that appearance-related compliments actually decreased negative mood in women with self-objectification traits (Fea & Brannon, 2006); therefore, perhaps if these women were to receive more positive commentary than negative commentary, they may experience more positive results of this commentary. However, given the limited research on the benefits of positive commentary, future researchers should examine factors that determine whether or not receiving positive commentary results in positive effects. It is important to note that although this subset of European American women received more negative comments about their size and also felt bad when receiving positive comments, they did not report higher levels of body dissatisfaction and eating disorder psychopathology as a result of this negative effect.

Therefore, it is possible that feeling badly about receiving a compliment may manifest itself in ways other than body dissatisfaction and eating disorder psychopathology. It may be beneficial to measure other harmful effects that could be associated with receiving positive commentary, such as anxiety or depression levels (Blow & Cooper, 2014; Phan & Tylka, 2006).

In regard to the frequency of positive general appearance-related comments, findings indicated that higher frequencies of these comments were related to lower levels of body dissatisfaction, eating disorder psychopathology, and internalization-muscular/athletic in European American women. However, receiving greater amounts of positive general appearance-related commentary also indicated stronger negative effects from receiving positive weight and shape-related and positive general appearance-related commentary. Thus, these results suggest that higher levels of positive general appearance-related comments are associated with greater positive outcomes in terms of body image and eating disturbances, but more negative outcomes in terms of the emotional impact of these comments on European American women. When examining the effect of receiving positive general appearance-related commentary, results showed that a stronger negative effect resulting from positive comments was associated with higher levels of body dissatisfaction, eating disorder psychopathology, pressure from family and peers, and negative weight and shape-related commentary. These findings provide additional support for the theory of complimentary weightism, and specifically that certain women who report feeling worse about a compliment may have an increased risk for negative outcomes such as eating disorder psychopathology (Calogero et al., 2009).

Results for Hispanic American women also reflected that a higher frequency of receiving positive weight and shape-related commentary was associated with lower levels of body dissatisfaction, eating disorder psychopathology, and pressures from family, peers, and media. These results suggest that the occurrence of positive weight and shape-related commentary may have a positive impact on Hispanic American women. In regard to positive general appearance-related commentary, Hispanic American women who reported feeling worse about positive general appearance-related comments also reported lower levels of acculturation, which indicates that the less acculturated a Hispanic American woman is to Western culture, the more likely she is to feel negatively about receiving a compliment. However, similar to European American women, results of correlational analyses did not indicate that feeling negatively about a comment increased Hispanic American women's susceptibility to body image and eating disturbances.

Cultural differences in attitudes towards obesity and perceptions of physical attractiveness could explain why Hispanic American women may not experience body image and eating disturbances as a result of feeling bad about receiving an appearance-related comment. For instance, in a study of Guatemalan-American women and European American women, Franko and Herrera (1997) found that Guatemalan-American women reported higher levels of positive attitudes towards obesity regarding attractiveness and lower levels of fears about becoming overweight in comparison to European American women. This research suggests that compared to European American women, Hispanic American women may be less likely to associate attractiveness with thinness. In fact, based on results from a study researching beauty ideals in Ecuadorian women, de Casanova (2004) proposes an emerging standard of beauty referred to as the "generic

Latina" type. This type of beauty is described as "curvaceous and shapely" (de Casanova, 2004, p. 298) and is defined by a large bust and hips, small waist, and long shapely legs. Therefore, in Ecuador, results of one study indicate that thinness does not necessarily represent beauty (de Casanova, 2004). More research is needed to test the notion of the generic Latina beauty ideal in other countries.

Results for African American women showed a similar trend to European American women. Among African American women, higher frequencies of positive weight and shape-related commentary were associated with lower levels of body dissatisfaction and eating disorder psychopathology. However, results also showed that an increase in positive weight and shape-related commentary was related to an increase in the negative effects of experiencing such commentary. The conflicting results highlight the importance of measuring both the frequency and effect of a comment. Although our findings revealed that positive weight and shape-related commentary may have some positive outcomes, such as lower levels of body dissatisfaction, they also indicate that that this type of commentary can be distressing for some women. It would be beneficial to further examine how this distress may be manifested in this group of women.

Future researchers may wish examine levels of depressive or anxiety symptoms in women who reported greater distress as a result of positive commentary. Such symptoms may contribute to how they experience compliments. For instance, research has shown that individuals who are depressed tend to have external and unstable attributions for positive events (Gladstone & Kaslow, 1995). Therefore, if an individual who is experiencing depression receives a compliment, he or she may disregard the compliment and attribute it to factors outside of his or her control. Overall, these results provide

further support for the concept of complimentary weightism, which describes the negative effects an individual might experience from receiving a positive appearance-related comment (Calogero et al., 2009).

When taking into consideration the effect of positive weight and shape-related commentary, African American women who felt a greater negative effect from receiving this type of commentary also reported higher levels of body dissatisfaction, and eating disorder psychopathology, as well as a greater negative effect from general positive appearance-related comments. Results indicate that, similar to European American women, there is subset of African American women who felt distressed as a result of receiving positive weight and shape-related commentary, providing evidence for complimentary weightism in two of the three ethnic groups examined in our study.

African American women also reported experiencing consequences of this distress in terms of increased levels of body image and eating disturbances. This finding is unexpected given that African American women tend to be more accepting of larger body figures as physically attractive when compared to European American women (Flynn & Fitzgibbon, 1998; Striegel-Moore et al., 2003). There may be a specific mediating factor in African American women that links the distress experienced from positive commentary to body image and eating disturbances. Perhaps rates of obesity among African Americans may be affecting how this group responds to the negative effect of receiving a compliment. Given that African Americans currently have the highest rates of obesity among all ethnic groups (Flegal et al., 2012), if an overweight or obese individual feels badly about a compliment, he or she may become more body-conscious and likely to engage in disordered eating behaviors. This explanantion is

supported by prior research indiciating strong correlations between obesity and BED in African Americans (Marques et al., 2011).

In African American women, it was found that higher frequencies of positive general appearance-related comments were related to lower levels of body dissatisfaction and eating disorder psychopathology, indicating that general appearance-related compliments may have a positive impact. However, higher frequencies of positive general appearance-related comments were also associated with greater negative effects of experiencing positive weight and shape-related commentary. This finding suggests that although receiving positive compliments regarding general aspects of their appearance may make African American women less susceptible to body dissatisfaction and eating disorder psychopathology, it may also make these women distressed about receiving positive comments specifically about their bodies. With respect to the effect of positive general appearance-related commentary, results revealed that African American women who experienced more negative effects from receiving this type of commentary had a greater likelihood of reporting higher levels of body dissatisfaction. This finding suggests that a subgroup of African American women who are negatively affected by positive commentary also have higher levels of body dissatisfaction, which provides additional evidence for the notion of complimentary weightism.

The third aim of the study was to examine negative weight and shape-related commentary and acculturation to Western culture as potential moderators of the relationship between body dissatisfaction and eating disorder psychopathology. Results revealed that negative weight and shape-related commentary and acculturation to Western culture did not significantly moderate the relationship between body

dissatisfaction and eating disorder psychopathology in African American, Hispanic American, or European American women. However, the regression model for Hispanic American women indicated that the frequency of negative weight and shape-related commentary was a significant predictor of eating disorder psychopathology, suggesting that an increase in negative weight and shape-related commentary was associated with an increase in eating disorder psychopathology. Although none of the hypothesized moderators were significant, results confirmed prior findings establishing body dissatisfaction as a strong predictor of eating disorder psychopathology in all three ethnic groups (Stice et al., 2011; Wiederman & Pryor, 2000).

This finding supports prior findings reported in a large body of literature, indicating that appearance-related commentary, and in particular weight-related teasing, is one of the primary sociocultural contributors to the development of body dissatisfaction and eating disorders in women (Aubie & Jarry, 2009; Haines, et al., 2006; Rieves & Cash, 1996). Despite the limited research examining the impact of appearance-related commentary on eating psychopathology in Hispanic American women, results of this study were also consistent with results from the McKnight Risk Factors survey for eating disorders (2003). The survey revealed social pressures, including weight-based teasing, was a strong predictor of onset of eating disorders in young Hispanic women.

The finding suggesting that acculturation to Western culture was not a significant predictor in eating disorder psychopathology is consistent with Aruguete et al.'s (2004) findings that acculturation to Western culture does not affect body image and eating disturbances. However, results indicating that negative weight and shape-related commentary was not a significant predictor of eating disorder psychopathology in

African Americans and European Americans was surprising, given the strong evidence for the harmful effects of similar types of commentary, specifically weight-based teasing, on eating psychopathology (e.g., Aubie & Jarry, 2009; Haines et al., 2006). The contrasting results may be related to the content of the negative commentary examined in the current study, which may not be directly targeted at an individual's weight in comparison to weight-based teasing, which focuses solely on an individual's weight.

The current study has several limitations that deserve mention. First, the use of undergraduate women limits the generalizability of the findings to other populations. This specific sample was used because a higher prevalence of eating disorder symptomatology has been reported among young women in comparison to other age groups and to men (American Psychiatric Association, 2013; Gentile et al., 2007). Additionally, research shows that women experience greater distress as a result of appearance-related comments than men (Palayiwa, Sheeran, & Thompson, 2010). Future studies examining the impact of positive appearance-related commentary in men are warranted given that this area of research has not been explored. Another limitation of our study was grouping various ethnicities into three broad categories of African American, Hispanic American, and European American. These groups may contain individuals from various countries with differing cultural backgrounds, values, and beliefs that may influence their responses on the questionnaires. Furthermore, our study used self-report measures, which may be subject to recall bias and lead to inaccurate responses.

Despite these limitations, the study has several strengths. Participants were recruited from three universities located in two different regions of the United States, which increases the generalizability of the findings. The measures used in the analyses

demonstrated high internal consistency and the sample size provided sufficient power to conduct the statistical analyses. The study also extends previous research on ethnic differences in body image and eating disturbances, and provides valuable information about how acculturation to Western culture may influence the perception of appearance-related commentary among women. Additionally, this study extends previous research in the area of appearance-related commentary by examining ethnic differences in frequencies and effects of positive and negative appearance-related commentary in a college population.

The current study also has several implications for researchers and clinicians. Results show that body dissatisfaction and eating disorder psychopathology continue to be prevalent and problematic in terms of negative consequences, particularly among Hispanic American and European American college women. The findings further support the need for a paradigm shift in Western societal standards of physical attractiveness. Given the strong evidence for sociocultural influences on body image and eating disturbances, it is important for researchers to disseminate their findings to the public and to work together with policy-makers and the media in order to make changes at a societal level. One of the crucial changes that should be made is to alter the perception that beauty equals thinness. This change has been initiated, as evident by the fashion industry's efforts to include plus-size models in magazines, on runways, and on television (Diane, 2014). Research has shown that viewing thin models versus regular-size or plus-size models has a stronger negative impact on women (Groesz et al., 2002); therefore, perhaps if there is an increase in regular-size and plus-size women in the media, women may begin to feel less pressured to meet the thin-ideal.

Additionally, findings provide initial evidence indicating that positive appearance-related commentary may have negative effects on the well-being of a subset of African American, European American, and Hispanic American women. The negative consequences of positive commentary warrant further exploration. If compliments are indeed harmful to a subgroup of people, this knowledge may call for a shift in patterns of interactions among individuals. Disseminating this knowledge to the public may encourage individuals from refraining from such commentary, and may help inform interventions for body image and eating disturbances.

Conclusion

In summary, results indicated that European American women reported higher levels of sociocultural attitudes towards appearance and stronger negative effects as a result of receiving negative weight and shape-related commentary than African American women. Hispanic American women reported experiencing stronger negative effects from receiving positive weight and shape-related commentary in comparison to European American women. There were no significant differences among the three groups in regard to acculturation to Western culture.

In regard to positive appearance-related commentary, results revealed that higher frequencies of positive feedback about weight/shape or general appearance were related to lower levels of body dissatisfaction and eating disorder psychopathology in all ethnic groups. However, in African Americans and European Americans, negative effects resulting from such commentary were associated with higher levels of body dissatisfaction and eating disorder psychopathology. Lastly, negative weight and shape-

related commentary and acculturation were not found to be significant moderators of the relationship between body dissatisfaction and eating disorder psychopathology in all three ethnic groups.

Overall, findings showed several significant differences among the three ethnic groups, including differences in sociocultural attitudes and responses to both positive and negative appearance-related commentary. Results are consistent with current findings indicating similar levels of body dissatisfaction and eating disorder psychopathology among all ethnic groups (Grabe & Hyde, 2006; Marques et al., 2011). This study provides insight into how factors such as appearance-related commentary and acculturation to Western culture may play a role in the development of body image and eating disturbances. Although more research is needed in this area, current study findings suggest it is important to acknowledge and account for potential ethnic differences when developing prevention and treatment interventions.

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APPENDIX A

DEMOGRAPHIC QUESTIONS

Age: _____

Height: _____ feet _____ inches

Weight: _____ pounds

Year in school:

a) Freshman (1st year)
b) Sophomore (2nd year)
c) Junior (3rd year)
d) Senior (4th year)
e) Other _____

Which of the following race or ethnicity categories best describes you? You may select more than one.

a) African American/Black
    Please specify:
        i. African
        ii. Afro-Brazilian
        iii. Caribbean
        iv. Haitian
        v. Kenyan
        vi. Jamaican
        vii. Nigerian
        viii. Other origin group _____

b) American Indian/Alaskan Native
    Please specify:
        i. American Indian
        ii. Blackfeet
        iii. Inupiat
        iv. Navajo
        v. Yup'ik
        vi. South American Indian
        vii. Other origin group _____

c) Asian
    Please specify:
        i. Asian Indian
        ii. Cambodian

iii. Chinese
iv. Hmong
v. Japanese
vi. Korean
vii. Laotian
viii. Malaysian
ix. Pakistani
x. Filipino
xi. Thai
xii. Vietnamese
xiii. Other origin group _____

d) Caucasian/White

Please specify:

i. German
ii. Irish
iii. Italian
iv. Lebanese
v. Moroccan
vi. North African
vii. South African
viii. Other origin group _____

e) Hispanic/Latino(a)

Please specify:

i. Argentinean
ii. Chilean
iii. Colombian
iv. Cuban
v. Dominican
vi. Mexican
vii. Nicaraguan
viii. Peruvian
ix. Puerto Rican
x. Salvadoran
xi. Spaniard
xii. Other origin group _____

f) Native Hawaiian or other Pacific Islander

Please specify:

i. Guamanian or Chamorro
ii. Fijian
iii. Hawaiian
iv. Samoan
v. Tongan
vi. Other origin group _____

g) Other not listed/unknown

h) Would rather not answer

Please indicate your ethnicity:

a) Hispanic/Latino(a)
b) Non-Hispanic/Non-Latino(a)
c) Would rather not answer

What is your current marital status?

a) Single
b) In a relationship
c) Married
d) Separated
e) Divorced
f) Widowed
g) Would rather not answer

What is your sexual orientation?

a) Heterosexual
b) Gay/Lesbian
c) Bisexual
d) Other/Would rather not answer

What is your religion?

a) Protestant
b) Catholic
c) Mormon
d) Jehovah's Witness
e) Orthodox
f) Jewish
g) Buddhist
h) Muslim
i) Hindu
j) Spiritual, but not religious
k) Atheist/Agnostic
l) Don't know/Would rather not answer
m) Other _____

What is your annual income?

a) Less than $10,000
b) $10,000 to $14,999
c) $15,000 to $24,999
d) $25,000 to $34,999
e) $35,000 to $49,999
f) $50,000 to $74,999
g) $75,000 to $99,999
h) $100,000 to $149,999
i) $150,000 to $199, 999
j) $200,000 or more
k) Would rather not answer

What is your parents' annual income?

a) Less than $10,000
b) $10,000 to $14,999
c) $15,000 to $24,999
d) $25,000 to $34,999
e) $35,000 to $49,999
f) $50,000 to $74,999
g) $75,000 to $99,999
h) $100,000 to $149,999
i) $150,000 to $199, 999
j) $200,000 or more
k) Don't know/Would rather not answer

Were you born in the United States?

a) Yes
b) No

If no, how many years have you lived in the United States?

_____ years

Where were you born?

Country _____
City _____
State (if applicable) _____

Where were your parents born?

Country _____
City _____
State (if applicable) _____

Where do you currently reside?

Country _____
City _____
State (if applicable) _____

What is the primary language spoken at home?

a) English
b) Spanish
c) Other _____

Are you fluent in other languages?

a) Yes, one other language
b) Yes, two other languages
c) Yes, three other languages
d) Yes, four or more other languages
e) No, I don't speak any other languages

Are you an international exchange student?

a) Yes
b) No

If yes, what are your plans once you have finished school?

a) Return to my home country, which is _____
b) Remain where I am living now
c) Relocate to _____

APPENDIX B

BODY DISSATISFACTION SUBSCALE OF THE EATING DISORDER INVENTORY (EDI-3-BD)

For the items below, please indicate to what extent each statement is true of you.

1 = Always 2 = Usually 3 = Often 4 = Sometimes 5 = Rarely 6 = Never

		Always					**Never**
1.	I think that my stomach is too big.	1	2	3	4	5	6
2.	I think that my thighs are too large.	1	2	3	4	5	6
3.	I think that my stomach is just the right size.	1	2	3	4	5	6
4.	I feel satisfied with the shape of my body.	1	2	3	4	5	6
5.	I like the shape of my buttocks.	1	2	3	4	5	6
6.	I think my hips are too big.	1	2	3	4	5	6
7.	I feel bloated after eating a normal meal.	1	2	3	4	5	6
8.	I think that my thighs are just the right size.	1	2	3	4	5	6
9.	I think my buttocks are too large.	1	2	3	4	5	6
10.	I think that my hips are just the right size.	1	2	3	4	5	6

APPENDIX C

EATING DISORDER EXAMINATION–QUESTIONNAIRE (EDE-Q)

Instructions: The following questions are concerned with the past four weeks (28 days) only. Please read each questions carefully. Please answer all of the questions.

Questions 1 to 12: Please circle the appropriate number on the right. Remember that the questions only refer to the past four weeks (28 days) only.

	On how many of the past 28 days…	**No days**	**1-5 days**	**6-12 days**	**13-15 days**	**16-22 days**	**23-27 days**	**Every day**
1.	Have you been deliberately *trying* to limit the amount of food you eat to influence your shape or weight (whether or not you have succeeded)?	0	1	2	3	4	5	6
2.	Have you gone for long periods of time (8 waking hours or more) without eating anything at all in order to influence your shape or weight?	0	1	2	3	4	5	6
3.	Have you *tried* to exclude from your diet any foods that you like in order to influence your shape or weight (whether or not you have succeeded)?	0	1	2	3	4	5	6
4.	Have you *tried* to follow definite rules regarding your eating (e.g., a calorie limit) in order to influence your shape or weight (whether or not you have succeeded)?	0	1	2	3	4	5	6
5.	Have you had a definite desire to have an *empty* stomach with the aim of influencing your shape or weight?	0	1	2	3	4	5	6
6.	Have you had a definite desire to have a *totally flat* stomach?	0	1	2	3	4	5	6

7.	Has thinking about *food, eating, or calories* made it very difficult to concentrate on things you are interested in (e.g., working, following a conversation, or reading)?	0	1	2	3	4	5	6
8.	Has thinking about *shape or weight* made it very difficult to concentrate on things you are interested in (e.g., working, following a conversation, or reading)?	0	1	2	3	4	5	6
9.	Have you had a definite fear of losing control over eating?	0	1	2	3	4	5	6
10.	Have you had a definite fear that you might gain weight?	0	1	2	3	4	5	6
11.	Have you felt fat?	0	1	2	3	4	5	6
12.	Have you had a strong desire to lose weight?	0	1	2	3	4	5	6

Questions 13 – 18: Please fill in the appropriate number in the boxes on the right. Remember that the questions only refer to the past four weeks (28 days).

Over the past four weeks (28 days)…

13. How many *times* have you eaten what other people would regard as an unusually large amount of food (given the circumstances)? _____

14. On how many of these times did you have a sense of having lost control over your eating (at the time you were eating)? _____

15. How many DAYS have such episodes of overeating occurred (i.e., you have eaten an unusually large amount of food *and* have had a sense of loss of control at the time)? _____

16. How many *times* have you made yourself sick (vomit) as a means of controlling your shape or weight? _____

17. How many *times* have you taken laxatives as a means of controlling your shape or weight? _____

18. How many *times* have you exercised in a "driven" or "compulsive" way as a means of controlling your weight, shape or amount of fat, or to burn off calories? _____

Questions 19 – 21: Please circle the appropriate number. *Please note that for these questions, the term "binge eating" means* eating what others would regard as an unusually large amount of food for the circumstances, accompanied by a sense of having lost control over eating.

19. Over the past 28 days, on how many days have you eaten in secret (i.e., furtively)?

…Do not count episodes of binge eating.

No days	**1-5 days**	**6-12 days**	**13-15 days**	**16-22 days**	**23-27 days**	**Every day**
0	1	2	3	4	5	6

20. On what proportion of the times that you have eaten have you felt guilty (felt that you've done wrong) because of its effect on your shape or weight?

…Do not count episodes of binge eating.

None of the times	**A few of the times**	**Less than half**	**Half of the times**	**More than half**	**Most of the times**	**Every time**
0	1	2	3	4	5	6

21. Over the past 28 days, how concerned have you been about other people seeing you eat?

…Do not count episodes of binge eating.

Not at all	**Slightly**	**Moderately**	**Markedly**		
0	1	2	3	4	5

Questions 22 – 28: Please circle the appropriate number on the right. Remember that the questions only refer to the past four weeks (28 days).

	Over the past 28 days…	**Not at all**		**Slightly**		**Moderately**		**Markedly**
22.	Has your weight influence how you think about (judge) yourself as a person?	0	1	2	3	4	5	6
23.	Has your shape influenced how you think about (judge) yourself as a person?	0	1	2	3	4	5	6
24.	How much would it have upset you if you had been asked to weigh yourself once a week (no more, or less, often) for the next four weeks?	0	1	2	3	4	5	6
25.	How dissatisfied have you been with your weight?	0	1	2	3	4	5	6
26.	How dissatisfied have you been with your shape?	0	1	2	3	4	5	6
27.	How uncomfortable have you felt seeing your body (e.g., seeing your shape in the mirror, in a shop window reflection, while undressing or taking a bath or shower)?	0	1	2	3	4	5	6
28.	How uncomfortable have you felt about others seeing your shape or figure (e.g., in communal changing rooms, when swimming, or wearing tight clothes)?	0	1	2	3	4	5	6

What is your weight at present? (Please give your best estimate) _____

What is your height? (Please give your best estimate) _____

If female: Over the past three to four months, have you missed any menstrual periods? _____

- If so, how many? _____
- Have you been taking the “pill”? _____

APPENDIX D

SOCIOCULTURAL ATTITUDES TOWARDS APPEARANCE SCALE - 4

(SATAQ-4)

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

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

	Definitely Disagree	**Mostly Disagree**	**Neither Agree Nor Disagree**	**Mostly Agree**	**Definitely Agree**
1. It is important for me to look athletic.	1	2	3	4	5
2. I think a lot about looking muscular.	1	2	3	4	5
3. I want my body to look very thin.	1	2	3	4	5
4. I want my body to look like it has little fat.	1	2	3	4	5
5. I think a lot about looking thin.	1	2	3	4	5
6. I spend a lot of time doing things to look more athletic.	1	2	3	4	5
7. I think a lot about looking athletic.	1	2	3	4	5

8. I want my body to look very lean.	1	2	3	4	5
9. I think a lot about having very little body fat.	1	2	3	4	5
10. I spend a lot of time doing things to look more muscular.	1	2	3	4	5

Answer the following questions with relevance to your Family (include: parents, brothers, sisters, relatives):

11. I feel pressure from family members to look thinner.	1	2	3	4	5
12. I feel pressure from family members to improve my appearance.	1	2	3	4	5
13. Family members encourage me to decrease my level of body fat.	1	2	3	4	5
14. Family members encourage me to get in better shape.	1	2	3	4	5

Answer the following questions with relevance to your Peers (include: close friends, classmates, other social contacts):

15. My peers encourage me to get thinner.	1	2	3	4	5
16. I feel pressure from my peers to improve my appearance.	1	2	3	4	5
17. I feel pressure from my peers to look in better shape.	1	2	3	4	5
18. I get pressure from my peers to decrease my level of body fat.	1	2	3	4	5

Answer the following questions with relevance to the Media (include: television, magazines, the Internet, movies, billboards, and advertisements):

19. I feel pressure from the media to look in better shape.	1	2	3	4	5
20. I feel pressure from the media to look thinner.	1	2	3	4	5
21. I feel pressure from the media to improve my appearance.	1	2	3	4	5
22. I feel pressure from the media to decrease my level of body fat.	1	2	3	4	5

APPENDIX E

VERBAL COMMENTARY ON PHYSICAL APPEARANCE SCALE (VCOPAS)

Sometimes, people say things that affect how we feel and think about our appearance. The following is a list of comments that may have been made about you. Please read each item and rate how often you think you have been the recipient of such a comment or similar comment (using the scale provided, *never* to *always*).

If you rate an item as 1, then go directly to the next item. However, if you rate an item as 2, 3, 4, or 5, please also rate how that comment made you feel (using the scale provided, *very positive* to *very negative*).

Rate the items based on your exposure to the following comments within the past **2 YEARS**.

1. Your outfit looks great on you.	1 Never	2	3 Sometimes	4	5 Always
1a. How did this comment make you feel?	1 Very Positive	2	3 Neutral	4	5 Very Negative
2. You need to start watching what you eat.	1 Never	2	3 Sometimes	4	5 Always
2a. How did this comment make your feel?	1 Very Positive	2	3 Neutral	4	5 Very Negative
3. You are pretty.	1 Never	2	3 Sometimes	4	5 Always
3a. How did this comment make you feel?	1 Very Positive	2	3 Neutral	4	5 Very Negative
4. I wish I had a body like yours.	1 Never	2	3 Sometimes	4	5 Always
4a. How did this comment make you feel?	1 Very Positive	2	3 Neutral	4	5 Very Negative
5. You've gained weight.	1 Never	2	3 Sometimes	4	5 Always
5a. How did this comment make you feel?	1 Very Positive	2	3 Neutral	4	5 Very Negative
6. You are in great shape.	1 Never	2	3 Sometimes	4	5 Always
6a. How did this comment make you feel?	1 Very Positive	2	3 Neutral	4	5 Very Negative
7. Don't you think you've eaten enough already?	1 Never	2	3 Sometimes	4	5 Always
7a. How did this comment make you feel?	1 Very Positive	2	3 Neutral	4	5 Very Negative
8. You're looking kind of skinny.	1 Never	2	3 Sometimes	4	5 Always

8a. How did this comment make you feel?	1 Very Positive	2	3 Neutral	4	5 Very Negative
9. Your facial skin looks good.	1 Never	2	3 Sometimes	4	5 Always
9a. How did this comment make you feel?	1 Very Positive	2	3 Neutral	4	5 Very Negative
10. You shouldn't eat so late at night.	1 Never	2	3 Sometimes	4	5 Always
10a. How did this comment make you feel?	1 Very Positive	2	3 Neutral	4	5 Very Negative
11. You have pretty eyes	1 Never	2	3 Sometimes	4	5 Always
11a. How did this comment make you feel?	1 Very Positive	2	3 Neutral	4	5 Very Negative
12. You need to start exercising to lose weight.	1 Never	2	3 Sometimes	4	5 Always
12a. How did this comment make you feel?	1 Very Positive	2	3 Neutral	4	5 Very Negative
13. You have nice abs (abdominals).	1 Never	2	3 Sometimes	4	5 Always
13a. How did this comment make you feel?	1 Very Positive	2	3 Neutral	4	5 Very Negative
14. Have you considered going on a diet?	1 Never	2	3 Sometimes	4	5 Always
14a. How did this comment make you feel?	1 Very Positive	2	3 Neutral	4	5 Very Negative
15. You have a beautiful smile.	1 Never	2	3 Sometimes	4	5 Always
15a. How did this comment make you feel?	1 Very Positive	2	3 Neutral	4	5 Very Negative
16. Your outfit makes you look fat.	1 Never	2	3 Sometimes	4	5 Always
16a. How did this comment make you feel?	1 Very Positive	2	3 Neutral	4	5 Very Negative
17. I really like how those jeans fit you.	1 Never	2	3 Sometimes	4	5 Always
17a. How did this comment make you feel?	1 Very Positive	2	3 Neutral	4	5 Very Negative

18. Are you sure you want to eat such fattening foods?	1 Never	2	3 Sometimes	4	5 Always
18a. How did this comment make you feel?	1 Very Positive	2	3 Neutral	4	5 Very Negative
19. Have you gained weight?	1 Never	2	3 Sometimes	4	5 Always
19a. How did this comment make you feel?	1 Very Positive	2	3 Neutral	4	5 Very Negative
20. Your hair looks really good.	1 Never	2	3 Sometimes	4	5 Always
20a. How did this comment make you feel?	1 Very Positive	2	3 Neutral	4	5 Very Negative
21. You have a nice body.	1 Never	2	3 Sometimes	4	5 Always
21a. How did this comment make you feel?	1 Very Positive	2	3 Neutral	4	5 Very Negative

APPENDIX F

VANCOUVER INDEX OF ACCULTURATION

Please answer each question as carefully as possible by circling *one* of the numbers to the right of each question to indicate your degree of agreement or disagreement.

Many of these questions will refer to your *heritage culture*, meaning the culture that has influenced you most (other than North American culture). It may be the culture of your birth, the culture in which you have been raised, or another culture that forms part of your background. If there are several such cultures, pick the one that has influenced you *most* (e.g., Irish, Chinese, Mexican, Black). If you do not feel that you have been influenced by any other culture, please try to identify a culture that may have had an impact on previous generations of your family.

Please write your *heritage culture* in the space provided. _____
Use the following key to help guide your answers:

Strongly Disagree		Disagree		Neutral/ Depends		Agree		Strongly Agree
1	2	3	4	5	6	7	8	9

1.	I often participate in my *heritage cultural* traditions.	1	2	3	4	5	6	7	8	9
2.	I often participate in mainstream North American cultural traditions.	1	2	3	4	5	6	7	8	9
3.	I would be willing to marry a person from my *heritage culture*.	1	2	3	4	5	6	7	8	9
4.	I would be willing to marry a North American person.	1	2	3	4	5	6	7	8	9
5.	I enjoy social activities with people from the same *heritage culture* as myself.	1	2	3	4	5	6	7	8	9
6.	I enjoy social activities with typical North American people.	1	2	3	4	5	6	7	8	9
7.	I am comfortable working with people of the same *heritage culture* as myself.	1	2	3	4	5	6	7	8	9
8.	I am comfortable working with typical North American people.	1	2	3	4	5	6	7	8	9
9.	I enjoy entertainment (e.g., movies, music) from my *heritage culture*.	1	2	3	4	5	6	7	8	9
10.	I enjoy North American entertainment (e.g., movies, music).	1	2	3	4	5	6	7	8	9
11.	I often behave in ways that are typical of my *heritage culture*.	1	2	3	4	5	6	7	8	9
12.	I often behave in ways that are 'typically North American.'	1	2	3	4	5	6	7	8	9
13.	It is important for me to maintain or develop the practices of my *heritage culture*.	1	2	3	4	5	6	7	8	9

14.	It is important for me to maintain or develop North American cultural practices.	1	2	3	4	5	6	7	8	9
15.	I believe in the values of my *heritage culture*.	1	2	3	4	5	6	7	8	9
16.	I believe in mainstream North American values.	1	2	3	4	5	6	7	8	9
17.	I enjoy the jokes and humor of my *heritage culture*.	1	2	3	4	5	6	7	8	9
18.	I enjoy typical North American jokes and humor.	1	2	3	4	5	6	7	8	9
19.	I am interested in having friends from my *heritage culture*.	1	2	3	4	5	6	7	8	9
20.	I am interested in having North American friends.	1	2	3	4	5	6	7	8	9