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# Cultural and Personal Influences on Body Satisfaction in Mexican American Women

Melissa Y. Snyder  
*Loma Linda University*

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LOMA LINDA UNIVERSITY  
School of Science and Technology  
in conjunction with the  
Faculty of Graduate Studies

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Cultural and Personal Influences on Body Satisfaction in Mexican American Women

by

Melissa Y. Snyder

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A Dissertation submitted in partial satisfaction of  
the requirements for the degree of  
Doctor of Philosophy in Clinical Psychology

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March 2011

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

\_\_\_\_\_, Chairperson  
David Chavez, Professor of Psychology, California State University, San Bernardino

\_\_\_\_\_  
Gloria Cowan, Adjunct Professor of Psychology

\_\_\_\_\_  
Paul McMahon, Adjunct Professor of Psychology

\_\_\_\_\_  
Matt Riggs, Adjunct Professor of Psychology

\_\_\_\_\_  
David Vermeersch, Associate Professor of Psychology

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## ABBREVIATIONS

<i>ANGMAR</i>	Anglo Marginality
<i>AOS</i>	ARSMA-II Anglo Orientation Scale
<i>ARSMA</i>	Acculturation Rating Scale for Mexican Americans
<i>ARSMA-II</i>	Acculturation Rating Scale for Mexican Americans - Revised
<i>BES</i>	Body Esteem Scale
<i>BMI</i>	Body Mass Index
<i>CFI</i>	Comparative Fit Index
<i>DSM-IV-TR</i>	Diagnostic and Statistical Manual of Mental Disorders –IV- Text Revision
<i>EDI-B</i>	Eating Disorder Inventory - Bulimia
<i>EDI-BD</i>	Eating Disorder Inventory – Body Dissatisfaction
<i>EDI-DT</i>	Eating Disorder Inventory – Drive for Thinness
<i>EDI-E</i>	Eating Disorder Inventory - Ineffectiveness
<i>HWSSS</i>	Hispanic Women’s Social Stressor Scale
<i>HWSSS</i>	Hispanic Women’s Social Stressor Scale Average
<i>HWSSSI</i>	Hispanic Women’s Social Stressor Scale - Immigration
<i>HWSSSR</i>	Hispanic Women’s Social Stressor Scale - Racism
<i>LA</i>	Linear Acculturation
<i>M</i>	Sample mean, arithmetic average
<i>MAMARG</i>	Mexican American Marginality
<i>MARG</i>	ARSMA-II Marginalization Scale

<i>MEXMAR</i>	Mexican Marginality
<i>MOS</i>	ARSMA-II Mexican Orientation Scale
<i>N</i>	Total number of cases
<i>n</i>	Number of cases (in a subsample)
<i>OBCS</i>	Objectified Body Consciousness Scale
<i>OBCBS</i>	Objectified Body Consciousness Scale – Body Shame
<i>OBCC</i>	Objectified Body Consciousness Scale - Control
<i>OBCSSU</i>	Objectified Body Consciousness Scale – Surveillance
<i>RMSEA</i>	Root Mean Square Error of Approximation
<i>SEM</i>	Structural Equation Modeling
<i>SES</i>	Social Economic Status
<i>SD</i>	Standard Deviation

## ABSTRACT OF THE DISSERTATION

Cultural and Personal Influences on Body Satisfaction in Mexican American Women

by

Melissa Y. Snyder

Doctor of Philosophy, Graduate Program in Clinical Psychology  
Loma Linda University, March 2011  
Dr. David Chavez, Chairperson

The current study extended prior research examining the impact of acculturation on body satisfaction while integrating possible mediating variables for a sample of Mexican American women. Specifically, the study examined the relationships among acculturation (ARSMA-II), acculturative stress related to racism and immigration (HWSSS), objectified body consciousness (OBCS), SES, age, BMI, and body dissatisfaction. Outcome measures of body dissatisfaction included the EDI subscales of Body Dissatisfaction, Bulimia, Drive for Thinness, and Ineffectiveness, as well as the Body Esteem Scale (BES). Participants were 352 women of Mexican descent between the ages of 18 and 50 years recruited through California State University, San Bernardino and in the community. Using SEM, fit indices indicated model fit was moderate with model modifications. Results supported the hypothesis that a significant indirect relationship exists between acculturation and body dissatisfaction, which is accounted for by the intermediating variables in the model. Greater acculturation was associated with less acculturative stress, but increased objectified body consciousness. Increasing objectified body consciousness was directly associated with higher body dissatisfaction while acculturative stress was not directly associated with body dissatisfaction. BMI, age, and SES were found to be significant variables that need to be accounted for when

examining other influences on body dissatisfaction. Shedding light on the unique factors that trigger body dissatisfaction for Latinas allows for the development of culturally sensitive interventions for related outcomes such as eating disorders. Findings indicate changes through acculturation plays a lesser role in body dissatisfaction for Mexican American women than whether they internalize societal standards. Post-hoc analyses indicated that increased acculturative stress is related to increased objectified body consciousness and endorsement of a greater Mexican orientation is associated with lower body dissatisfaction. Implications of the study include the importance of assisting Latinas in maintaining a positive connection to their culture of origin and in critically evaluating mainstream body ideals as the internalization of these ideals is significantly associated with body dissatisfaction. A further implication is the importance of assessing Latina women's acculturation levels and experiences of acculturative stressors such as racism in terms of shaping their attitudes toward their bodies and the development of disordered eating.

## **Introduction**

Immigration is an integral part of American history and culture. Over the years a multiplicity of ethnic and racial groups has come to this country seeking to make a new life. Many early settlers were of European descent and from them a majority culture has grown that is primarily Caucasian, patriarchal, and Christian based. Subsequent generations of immigrants have brought their own cultural heritages and have sought to establish themselves within the American culture. The meeting of two cultures and the resulting changes in each is the study of acculturation (Berry, 1999). According to Redfield, Linton, and Herskovits, acculturation is a process that occurs when two different cultures interact and influence one another (as cited in Berry, 1999). Usually the minority group changes the most as people adopt the ways of the dominant culture. Research in the area of acculturation has examined not only levels of adaptation to the majority culture, but also the impact these changes have on minority group members in terms of mental, emotional, and physical wellbeing.

In the complex and multifaceted current day world, acculturation is an ongoing process at many levels. The seemingly ever-expanding types and speed of communication spread Western ideas and ideals to an increasing number of people. As individuals from minority cultures attempt to balance their own traditions with those promulgated by the media, they experience a breadth of pushes and pulls. Women, and particularly young women, are bombarded with images of how they should be, what they need to be successful, and how they should look. Many studies propose that these images place unique pressure on minority women to adhere to a mainstream ideal of physical



attractiveness. This has raised concern and research questions as to how minority women cope with the discrepancies that they perceive between their own bodies and the mainstream ideal that is presented to them. As the dominant culture is largely Caucasian and of European descent, for minority women acculturating in the United States, the images depicting the mainstream ideal are usually of Caucasian women. Many studies have examined minority women in relation to the dominant culture, which has been described in a number of terms such as White women, European American females, Caucasian women, and Anglo American women. When presenting information related to idealized depictions of U.S. mainstream women, there are often references to European-American ideals, and Anglo ideals<sup>1</sup>.

One arena in which changes are thought to occur among minority group members is with one's sense of body satisfaction, with minority group members hypothesized as being vulnerable to greater body dissatisfaction as they take on Anglo expectations for themselves. One reason that body satisfaction has been an area of interest is because of its relationship to eating disorders (Grabe & Hyde, 2006; Petrie, Tripp, & Harvey, 2002). Of concern is how specific minority groups are impacted by majority culture expectations for attractiveness as minorities become acculturated to mainstream ideals. Due to the prevalence of disordered eating in Caucasians, historically most research has focused on this population (Cachelin, Veisel, Barzegarnazari, & Striegel-Moore, 2000). However, as risk for disordered eating appears to be increasing, the recent trend in disordered eating research has been to examine the interaction between ethnicity and dysfunctional eating.

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<sup>1</sup> The term *Anglo ideals* is generally used throughout this manuscript to refer to the ideals of the dominant culture in the United States as it is consistent with the terminology used in the acculturation measure. When referencing prior studies, the same designation is used as did the study unless referring to multiple studies with differing designations in which case the term *Anglo* is used for clarity.

Because of the established relationship between body dissatisfaction and eating disorders, a few studies have focused on body dissatisfaction in ethnic minorities. For example, Joiner and Kashubeck (1996) found that higher body dissatisfaction was predictive of both anorexic and bulimic symptomatology in Mexican American<sup>2</sup> adolescent girls. Even still there continues to be a paucity of research focusing on minority women, particularly Latinas, despite their growing presence in the United States.

More recently, studies have identified a number of factors that may mediate the relationship between ethnicity and body dissatisfaction, such as level of acculturation, the individual's experience of acculturation, and differences based on the minority group to which one belongs, with mixed results. Differences in findings across studies are due in part to how acculturation has been measured and which intervening variables have been included in studies. Additionally, potentially key variables such as acculturative stress and Body Mass Index (BMI) tend to be included alternately in one study or another but not addressed together in the same study. Thus, the current study attempts to synthesize and examine important variables identified in earlier research into one study of cultural and personal influences on body satisfaction in a sample of Mexican American women.

### **Eating Disorders: Clinically Extreme Body Dissatisfaction**

In recent years, there has been considerable research attention given to obesity and eating disorders such as Anorexia Nervosa and Bulimia Nervosa, as the prevalence of these health concerns has been rising in American society (Cachelin, Monreal, & Juarez,

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<sup>2</sup> The designation Mexican American is used throughout except in situations where the sample was inclusive of other ethnic groups in which case, Latino/a is used. When referencing prior studies, the designation used in the study (e.g. Latina, Latino, Mexican American, or Hispanic) is used when referring to participants.

2006; Wing & Polley, 2001). While obesity seems to cut across many cultures, according to the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR) eating disorders have been more prevalent among Caucasian women in industrialized countries than among other ethnicities (American Psychiatric Association, 2000). Approximately 0.5% of females will develop Anorexia Nervosa at some point in their lives, and up to 3% of women will develop Bulimia Nervosa (American Psychiatric Association, 2000). Research with minorities has noted similar trends. Lester and Petrie (1998) reported the prevalence of Bulimia Nervosa for a sample of Mexican American college women in the range of 1.4 to 4.3% depending on the cutoff used. In addition, they found that 11% of participants in the study engaged in disordered eating even though they did not meet the criteria for a specific eating disorder. Others cite prevalence rates for Anorexia Nervosa and Bulimia Nervosa of up to 4% in ethnic minorities (as cited in Gilbert, 2003). In addition, research has indicated significantly higher rates of obesity among Mexican American children as compared to non-Hispanic-white children raising the concern that negative attitudes toward obesity coupled with thin body ideals increases the risk for body dissatisfaction in this population (Olvero, Suminski, & Power, 2005). Anorexia Nervosa and Bulimia Nervosa have distinguishing criteria, but they also share commonalities, and key among these is the presence of body dissatisfaction.

### **Body Dissatisfaction**

Two key aspects of eating disorders are distortions of body image and body dissatisfaction. One's body image is how one sees oneself – the image that one carries in the mind about how one looks (Ben-Tovim & Walker, 1991). The diagnostic criteria for

Anorexia Nervosa and Bulimia Nervosa include distortions of how individuals perceive their bodies (American Psychiatric Association, 2000). Body image has also been conceptualized as the degree of body satisfaction one has in conjunction with the level of importance that is placed on appearance (Jarry & Kossert, 2007). Body dissatisfaction has been defined as when an individual feels unhappy with or ashamed of their physical appearance, and is also discussed in terms of body esteem, a component of self-esteem (Franzoi & Shields, 1984; Lau, Lum, Chronister, & Forrest, 2006). As individuals become more dissatisfied with their bodies, they are not only at greater risk for developing problems such as eating disorders, but they are also at increased risk for distressing psychological outcomes such as depression, anxiety, and low self-esteem (Franko & Striegel-Moore, 2002; Grabe & Hyde, 2006; Marcu, Bromberger, Wei, Brown, & Kravitz, 2007; Pipher, 1994; Posavac & Posavac, 2002). Sub-clinical levels of disordered eating and ideology may be present, such as engaging in restricting or purging and endorsing a thin ideal, which can signify body dissatisfaction and being at risk for developing eating disorders.

Much of the research on body dissatisfaction has focused on adolescent and college age women and focuses on weight. Young women seem to be particularly vulnerable to concerns with body satisfaction. One hypothesis is that during the maturation process young girls' bodies put on weight and gain fat at a time when they are especially sensitive to changes in their bodies that seem to be going against the cultural ideal of thinness (Franko & Striegel-Moore, 2002; Lindberg, Grabe, & Hyde, 2007; Rodin, Silberstein, & Striegel-Moore, 1984). Weight gain due to maturation appears to trigger body dissatisfaction and dieting behavior, which can ultimately lead to eating

disorders (as cited in Franko & Striegel-Moore, 2002; Miller & Pumariega, 2001). One study found that early maturing girls were at greater risk for body dissatisfaction, and that the increase in dissatisfaction could be attributed to increases in weight (as cited in Franko & Striegel-Moore, 2002). Adolescent girls who regard the onset of puberty and resulting physical changes negatively report body dissatisfaction, which in turn has been linked to depression (Nolen-Hoeksema & Girgus, 1994). Other risk factors that have been identified for developing body dissatisfaction include teasing, low self-esteem, media, and social comparison (Miller & Pumariega, 2001; Thompson, van den Berg, Roehrig, Guarda, & Heinberg, 2004). Body dissatisfaction, however, is not limited to the adolescent period. For many women, physical attractiveness is intimately linked to status and power (Rodin et al., 1984), and consequently to self-worth. Thus body image and shape become part of an ongoing self-evaluative process.

Young women are thought to be susceptible to societal expectations regarding body image because resolving the crisis of identity is part of the maturation process and there is considerable value placed on appearance for women. According to Erikson, during adolescence young people need to establish a sense of who they are and how they fit in with others (as cited in Ewen, 1998). Because adolescents are attempting to formulate a solid sense of self, they may use external cues as to what is appropriate and attempt to conform to the external standards for behaviors or attitudes that represent fitting into a certain group (as cited in Ewen, 1998; Mckinley, 1999). For women, many of these standards involve physical attractiveness (Rodin et al., 1984), and this can result in modeling of behaviors and attitudes set forth by family, peers, and the larger cultural context (Thompson et al., 2004). Of concern is how societal pressures and expectations

impact body satisfaction and subsequently eating behavior, especially for adolescent girls and young women as well as women who are also attempting to bridge the gap between cultures.

Ben-Tovim and Walker (1991) noted that across measures and studies, female participants consistently endorse an ideal body image that is thinner than what they see themselves to be and are unhappy with particular aspects of their bodies such as hips and thighs, and that body satisfaction is correlated with self-esteem. When values regarding physical attractiveness become internalized, the individual begins to accept certain attitudes or beliefs as a measure of comparison and may start to adjust her behaviors to coincide with them. The propensity for women to gain weight as they age widens the gap between women's bodies and societal ideal. An internalized thin body ideal may result in body dissatisfaction and a change in eating behavior in an attempt to approximate the ideal more closely. McKinley and Hyde (1996) have found a positive correlation between the internalization of societal body expectations and increased body shame. Thus, another aspect of body image is the ability to understand the individual's application of body ideals to self. This can include perceived pressure on appearance from media sources, as well as more recent influences related to athleticism and the pressure to be physically fit, how much importance is placed on information gleaned from the media, and the level of internalization and conformity to societal expectations individuals express (Thompson et al., 2004).

An etiological factor that has been proposed for body dissatisfaction is the barrage of media images that communicate an extremely thin body ideal (Cachelin, Phinney, Schug, & Striegel-Moore, 2006; Gilbert, 2003; Pipher, 1994, Thompson et al., 2004).

Pipher noted that women's magazines and those geared toward adolescent girls are filled with images of thin women (1994). A discrepancy theory is proposed whereby individuals compare themselves to media images and their level of dissatisfaction with self is dependent upon how discrepant they judge their bodies to be from the ideal (Posavac & Posavac, 2002). Images of women in the media are often unrealistic or professionally altered creating ideals that are not attainable for most women (Joiner & Kashubeck, 1996; Posavac & Posavac, 2002). Pipher (1994) noted that young women in particular, who are beginning to establish a sense of self, compare themselves to the mostly unachievable ideals presented in the media and are likely to evaluate themselves negatively. In addition, individuals who are already dissatisfied with their appearance appear to be at even greater risk for negative self-evaluation when exposed to the media (Posavac & Posavac, 2002).

Studies with adolescent girls and women exposed to popular media images of women indicated increased body dissatisfaction and negative affect as well as lower self-esteem compared to those not exposed (Durkin & Paxton, 2002; Hawkins, Richards, Granley, & Stein, 2004). The participants were shown pictures gleaned from magazines that target adolescent girls and women. The pictures were of female figures, which were chosen for their representation of the mainstream ideal of attractiveness. Durkin and Paxton (2002) found that the adolescent girls who had viewed the advertisements containing female images had lower body satisfaction and higher depression and anxiety immediately following exposure than did adolescent girls who had not been exposed to the female images. In addition, older adolescent girls were more negatively affected than were younger girls. Durkin and Paxton proposed that as girls mature they begin to feel

more pressure to conform to mainstream ideals, a process sometimes referred to as gender intensification (Nolen-Hoeksema & Girgus, 1994).

Societal expectations dictating what is and is not viewed as physically attractive coupled with the degree of importance placed upon appearance make body image a salient factor for women. When women see themselves as discrepant from the ideal, body dissatisfaction can result and may involve compensatory behaviors associated with dysfunctional eating. Adolescent and young women are particularly at risk due to psychological and physical changes associated with maturity; however, societal pressures also continue into adulthood. Research has broadened to include minority women and has begun to explore eating disorders and body dissatisfaction in the context of additional factors that may become relevant with specific populations.

### **Eating Disorders, Body Dissatisfaction, and Ethnicity**

Findings have been mixed with regard to prevalence rates of eating and body image disturbances across ethnic groups with a number of studies citing no differences and some studies indicating equal or greater disturbances in eating for some non-Anglo groups than Anglo groups (Hrabosky & Grilo, 2007; Soh, Touyz, & Surgenor, 2006). In reviewing several studies, Soh et al. cited a number of inconsistencies across the research as possible explanations for the mixed findings. Among these was the failure to take acculturation into consideration and use of different measures across studies. Gilbert (2003) noted that prevalence rates for minority groups in clinical populations may be underreported because ethnic minorities are less likely than Caucasians to have access to appropriate health care or to make use of available services. In addition, some research



has indicated that even when minority women present with symptoms of eating disorders, they may be less likely to receive an appropriate diagnosis. Failure to recognize symptoms in minority women may be due to biases or lack of knowledge as to how symptoms may differ across groups (Gilbert, 2003; Root, 1990). For example, Soh et al. (2006) noted that the degree to which women with diagnosed eating disorders endorsed a fear of gaining weight varied across countries. However, other research has found consistency in the presentation of eating disorder symptoms across ethnicities (Cachelin et al., 2000). Over time, the phenomenon of disordered eating among minorities has gained recognition, and although higher estimates are still often cited for Caucasian women, many estimates now reflect similar levels for some minority women.

Due to increased awareness of eating disorders in non-Anglo women, research has been generated in an attempt to understand risk factors that are unique to ethnic minorities (Arriza & Mann, 2001; Gilbert, 2003; Forbes & Frederick, 2008; Hrabosky & Grilo, 2007). For minority women, body dissatisfaction has been attributed in part to internalization of the Anglo ideal for body image with higher dissatisfaction noted with exposure to Western standards of beauty (Bettendorf & Fischer, 2009; Iyer & Haslam, 2003). The ideal of attractiveness for women in America has been portrayed not only as needing to be slim, but also as having blond hair and large breasts as well as particular facial features that are more common to people of Caucasian/European descent (Mok, 1998). Women who are considered overweight or unattractive are less frequently or negatively portrayed in media. In addition, research on ethnic representations in the media reveals that even though the number of ethnic minorities has been increasing on television, the majority of media images are of Caucasians (Calvert, 2001). The result is

that women are exposed to a barrage of media that exemplifies an Anglo ideal of attractiveness. This has led to questions about the differential impact of exposure to the Anglo ideal on body satisfaction for specific minority groups.

The research on body dissatisfaction among minority groups has been mixed depending on how minorities have been categorized and the measures utilized. Historically, studies have indicated less body dissatisfaction for minorities as compared to Caucasians (cited in Grabe & Hyde, 2006; cited in Shaw, Ramirez, Trost, Randall, & Stice, 2004). For example, in a meta-analytic review of 35 studies, Wildes, Emery, and Simons (2001) examined ethnicity and eating pathology including eating disturbance/body dissatisfaction, eating disorders, weight and dieting concerns, drive for thinness, and body dissatisfaction and found that Caucasians consistently reported more eating pathology than non-Caucasians. However, non-Caucasians were classified only as Black, Asian, and Other based on classification by race preventing a comparison of prevalence rates for Latinas. Another study examined eating disturbances and body image for 715 adolescents in an inpatient psychiatric unit across three ethnic groups (Caucasian, African American, and Latino American) using the Eating Dysfunction and Body Disapproval subscales of the Millon Adolescent Clinical Inventory (MACI; Millon, Millon, & Davis, 1993) (Barry & Grilo, 2001). Adolescent girls were more likely than boys to endorse eating dysfunction and body image disturbances (Barry & Grilo, 2001). While few differences were found between groups on measures of eating dysfunction, Caucasian adolescents were significantly less satisfied with their bodies and reported higher body image disturbance compared to African American and Latina American

adolescent girls (Barry & Grilo, 2001). Group differences were not found between the later two groups on these measures.

Other studies have found rates of disordered eating to be similar across groups. For example, Shaw et al. (2004) examined the differences in eating disorder symptoms and risk factors for developing an eating disorder across three minority groups (Asian, African American, and Hispanic) compared to Caucasians. They did not find differences in the prevalence of eating disorder symptoms or risk factors (Shaw et al., 2004). The researchers proposed that the lack of differences between groups could be attributed to ethnic minorities having internalized the dominant ideal for body image making them equally susceptible to the accompanying sequelae. Similarly, in a meta-analysis, Grabe and Hyde (2006) reported that the majority of studies indicated no differences in body satisfaction for Hispanic women as compared to White women.

Other researchers have found higher body esteem and appearance satisfaction for African American women as compared to Latina American and Anglo American women (Franko & Striegel-Moore, 2002; Miller, Gleaves, Hirsch, Green, Snow, & Corbett, 2000; Molloy & Herzberger, 1998). Story, French, Resnick, and Blum (1995) found higher levels of dieting and other compensatory behaviors (e.g., vomiting and using laxatives) among Hispanic girls as compared to other ethnicities. Some groups of minority women seem to be more vulnerable to negative self-evaluations of their bodies than are others, which raises the question as to why.

One proposal is that acculturation plays a significant role in the development of disordered eating. For instance, while all women can be susceptible to making discrepant comparisons between their own bodies and media images, for some minority women

there may be an increased risk to develop body image dissatisfaction as they begin to acculturate and endorse an Anglo body ideal that they may not ultimately be able to achieve due to their ethnicity (Posavac & Posavac, 2002; Shaw et al., 2004). For example, Cachelin et al. examined acculturation and disordered eating among women of different ethnicities and found greater acculturation to be associated with an increase in eating pathology (2000). Studies have found that Asian American children and adolescents were significantly less satisfied with their bodies than other children as they internalized White ideals of beauty and were especially dissatisfied with their height as well as nose and eye shape – features that identified them as Asian rather than Caucasian (Hall, 1995; Mok, 1998). For many women, body dissatisfaction is tied particularly to weight and body shape, especially hips, thighs, and waist size (Ben-Tovim & Walker, 1991, Pepper & Ruiz, 2007). Attempts to accommodate to mainstream ideals may include dieting, changes in dress, hair color, or other means of distancing oneself from visually identifiable characteristics associated with one's ethnic background such as plastic surgery (Mok, 1998; Root, 1990). With regard to body satisfaction, the concern is that as women acculturate to the dominant culture, they will adopt body ideals that will lead to dissatisfaction with their own bodies. Similarly, a lack of acculturation may be a protective factor against the development of body dissatisfaction. For example, maintaining one's ethnic identity and familial connection have been found to buffer the connection between acculturation and eating concerns (Bettendorf & Fischer, 2009). Thus, level of acculturation is an important component to examine in understanding the increasing prevalence of body dissatisfaction and subsequent eating dysfunction in minority women within the larger Anglo American culture.

## **Acculturation**

There are differing ideas on what acculturation encompasses and how this process unfolds. Psychological aspects of acculturation have been identified such as the degree to which one accepts the attitudes, beliefs, and values of the dominant culture. A shift in cultural values is believed to signify the greatest change in one's identity and may be indicated by beliefs about one's role in society and social propriety (Zea, Asner-self, Birman, & Buki, 2003). Women who begin to endorse an Anglo body ideal are thought to be evidencing a shift in values. There is also behavioral acculturation such as the degree to which an individual adheres to cultural norms including dress and language (Rudmin, 2003). For example, one's choice of friends, food, or clothing is thought to indicate behavioral acculturation. As women begin to make changes in their appearance to adhere to Anglo expectations (e.g., dieting, dying their hair, plastic surgery, etc.), they are engaging in behavioral acculturation. Other researchers also discuss emotional acculturation; this being the degree to which one's emotional response to a situation is filtered through a particular cultural lens (Liem, Lim, & Liem, 2000). For example, an individual from one cultural background may feel intensely shamed in a certain situation due to cultural interpretations whereas another person might not have the same reaction. A woman who views her body through the dominant cultural lens and feels ashamed would be exhibiting emotional acculturation. Acculturation measures may also make distinctions based on individual self-labels, cultural knowledge, and language (Zea et al., 2003). One study indicated that language ability accounted for the largest portion of variance in acculturation, and having less facility in the dominant group language was thought to be indicative of having a stronger identification with one's minority culture

(Suinn, Khoo, & Ahuna, 1995). Changes in attitudes, beliefs, and values as well as behaviors and emotional responses signify a shift in cultural identity (Liem et al., 2000; Ryder, Alden, & Paulhua, 2000). As the process of acculturation has been examined, two approaches to understanding how one's cultural identity shifts have dominated the literature (Ryder et al., 2000).

**The unidimensional model.** One model of acculturation is the unidimensional model, which explains acculturation along a single continuum of change whereby individuals gradually give up pieces of their cultural identity as they are replaced by aspects of the dominant culture (Cabassa, 2003; Ryder et al., 2000). From this perspective, individuals are assimilated into mainstream culture over time as they lose more and more characteristics of their culture of origin (LaFromboise, Coleman, & Gerton, 1993). However the conjecture that acceptance of mainstream culture equates a reciprocal decrease or rejection of the culture of origin has met with considerable criticism (Cabassa, 2003). For example, because individuals have adopted western style dress and eating habits does not mean that they have also embraced deeper cultural values or even that they are comfortable operating within the confines and expectations of the dominant culture. Immigrants may more quickly adopt salient behaviors consistent with the dominant culture because this aids in survival, but underlying changes in values are proposed to occur more slowly if at all and may depend on whether the individual maintains a connection with her culture of origin (Kim, Atkinson, & Yang, 1999). Studies have found that identification with the dominant culture and identification with the minority culture are not inversely related resulting in the development of the bidimensional model of acculturation, which allows for individual differences and greater

flexibility in its conceptualization (Liu, Pope-Davis, Nevitt, & Toporek, 1999; Ryder et al., 2000).

**The bidimensional model.** The bidimensional model conceptualizes adherence to the dominant and minority cultural norms as separate valences thus allowing one to preserve aspects of one's original cultural identity even while embracing new cultural values (Cabassa, 2003; Ryder et al., 2000). Because one is able to embrace more than a single cultural identity at a time, individual differences in acculturation can be described across a spectrum of possibilities based on the relationship the person maintains with each culture.

The most well-known bidimensional model is the Fourfold Theory of acculturation developed by John Berry (Ryder et al., 2000). The concept of four separate aspects of acculturation has a long history in the literature (see Rudmin, 2003, for an extensive historical perspective). Minorities may have differing attitudes toward the dominant culture and their own culture resulting in four possible combinations: assimilation - an acceptance of the dominant culture and rejection of the minority culture; integration - an acceptance of both cultures; marginalization - a rejection of both cultures; and separation - the acceptance of the minority culture and the rejection of the dominant culture (Berry, 1999; Rudmin, 2003).

The four levels of acculturation have been associated with different degrees of adaptation and well-being. Berry (1999) indicated that integrated individuals who are able to incorporate aspects of the mainstream culture as well as keep aspects of their original culture are most often cited in the research as being the best adjusted of the four categories, whereas marginalized individuals seem to be subject to the greatest

acculturative stress and are more likely to engage in maladaptive behaviors. Individuals who are able to balance both cultures seem to have fewer negative consequences such as losing their sense of identity, isolation, depression, and anxiety. However, Rudmin (2003) reviewed earlier studies and did not find support for better adjustment for integrated individual as compared to the other three categories on measures of psychological marginality and psychosomatic stress. Seemingly, differences in adaptation and well-being across levels of acculturation would likely depend on which aspects of mainstream culture an individual has adopted and how maladaptation is conceptualized. For example, the minority woman who has assimilated into the dominant culture in terms of acceptance of an extremely thin, Anglo ideal of beauty may endorse greater stress if she is unable to achieve that ideal than a minority woman who has not assimilated. Maintaining a connection with one's culture of origin may provide a level of protection more so than for the individual who internalizes the dominant cultural ideals of beauty.

In examining the bidimensional model, Ryder et al. (2000) found support for the independent dimensions of cultural identity when comparing mainstream and minority group identity and concluded that the bidimensional model of acculturation is a more comprehensive model than the unidimensional model. This preference has been echoed by others in this area of research (Cabassa, 2003; Cachelin, Phinney, Schug, & Striegel-Moore, 2006; Cuellar, Arnold, & Maldonado, 1995).

Two frequently used bidimensional measures of acculturation specific to Latino/a populations include the Acculturation Rating Scale for Mexican Americans – II (ARSMA-II) and the Bidimensional Acculturation Scale for Hispanics (BAS) (Cabassa, 2003). The BAS (Marin & Gamba, 1996) is limited in that it relies on the domain of



language to assess level of acculturation, which does not capture other aspects of acculturation (Cabassa, 2003). To develop the ARSMA-II, the original scale (The ARSMA; Cuellar, Harris, & Jasso, 1980) was revised in 1995 to facilitate a bidimensional measure of acculturation resulting in four levels: assimilation, integration, marginalization, and separation as well as a linear measure of acculturation. However, limited sample sizes and increasing levels of overall acculturation often seem to preclude the use of the four separate categories. Recent research tends to use the linear measure of acculturation, which has two scales or valences – degree of Anglo orientation and degree of Mexican orientation- that can be combined to create an overall bidimensional measure of acculturation that incorporates one’s level of endorsement of both orientations (Ayala, Mickens, Galindo, & Elder, 2007; Cachelin et al., 2006). The ARMSA-II primarily examines behavioral acculturation in terms of “language use and preference, ethnic identity and classification, cultural heritage and ethnic behaviors, and ethnic interaction” (Cuellar et al., 1995, pp 282) and is one of the most widely used measures of acculturation for Latino/a populations (e.g. Cachelin, Phinney, Schug, & Striegel-Moore, 2006; Castillo, Conoley, & Brossart, 2004).

It should be noted that there are many criticisms of acculturation measures (see Rudmin, 2003 for a comprehensive review). Echoing this concern, Wildes, Emery, and Simons examined 35 studies and concluded that the effect of acculturation on eating pathology was not well supported; in explaining this they underscored inconsistencies in how acculturation is operationally defined and problems when comparing studies across widely varying samples (2001). Bidimensional models seem to represent an improvement over unidimensional models, but acculturation is a complex construct, and existing

measures fall short of capturing the breadth of factors that represent the experiences of individuals attempting to negotiate more than one culture. One aspect is that each culture is constantly in flux, thus societal behaviors and values are constantly changing in both the culture of origin and the host culture, which changes the interaction between the two (Zea et al., 2003). For example, attitudes toward sexuality have changed dramatically in the United States over the past 100 years, and individuals acculturating now will be confronted with a different set of values and attitudes than individuals who came to this country in earlier decades. Similarly, Rudmin (2003) noted that acculturation is a phenomenon that is occurring everywhere and more rapidly with current media and technology, which might eliminate meaningful differences between groups, as values such as body ideals may be more similar across various populations than different. Miller and Pumariega's (2001) finding that eating disorder rates have increased in countries around the world supports this possibility, as does recent research indicating that women of differing ethnicities were equally dissatisfied with having smaller breasts (Forbes & Frederick, 2008). Thus, acculturation in and of itself may not be as crucial as accompanying factors that may alter the acculturative experience and resulting self-evaluation. In other words, the question is not only the degree to which one culture differs from the other and one's endorsement of each, but to consider whether there are added stressors that shape the acculturative process.

**Contextual factors influencing acculturation.** There may be a number of factors that mediate the relationship between exposure to an Anglo ideal and negative outcomes for women of color (Bettendorf & Fischer, 2009; Durkin & Paxton, 2002). In general, models of acculturation assume a shared process despite differences that might be

experienced by unique individuals from various cultures (Bauman, 2005). Researchers have cautioned, however, that the level of acculturation that an individual arrives at and the acculturative experience may be altered by a variety of factors, many of which the individual may have little or no control over (Berry, 1999; Cabassa, 2003; Ryder et al., 2000). One of the overarching factors is the receptivity of the host culture (Cabassa, 2003). Both assimilation and integration require the dominant group to embrace the minority group to some degree. If the minority individual is somehow prevented from participating in the majority culture through discrimination, integration and assimilation are prevented. According to the 2002 census, the largest minority group in the United States today is Latino/a in origin (United States Census, 2002; Zea et al., 2003). And while the influx of Latino/a culture may ease the transition for some, acculturative stressors in the form of racism and conflicting values are evident and can manifest in devaluation of the minority culture and a sense of alienation from mainstream culture. Research has indicated that not belonging to either culture may lead to feeling socially isolated and anxious (LaFromboise et al., 1993).

A specific aspect of receptivity by the host culture is the degree to which individuals are able to assimilate based on physical appearance. Individuals who look different from the dominant culture may be prevented from integration into the dominant culture and subjected to discrimination adding to acculturation stress and feeling marginalized (Berry, 1999). These individuals may have an increased sense of dissatisfaction, particularly with their body image as they begin to view themselves through the eyes of others. Mok (1998) discussed how dissatisfaction among minorities with their physical appearance is tied to the process of acculturation, and she indicated

that individuals who feel marginalized may be especially susceptible to lower self-images. In a society that has placed considerable emphasis on the value of women's physical appearance, it is not surprising that self-worth is intertwined with how one looks and impacted by the perception of how one is viewed by others. Thus, the development of body dissatisfaction as one acculturates may be mediated by factors like acculturative stress in the form of discrimination and the degree to which one internalizes specific dominant cultures standards such as those related to body image.

**Acculturative stress.** The process of acculturation in and of itself is believed to produce stress. Acculturative stress refers to discrimination and other factors including language barriers, financial strain, and feeling alienated from mainstream society that make the acculturative process more difficult (Hovey, 2000; Perez, Voelz, Pettit, & Joiner, 2002). For example, in a study of Mexican immigrants, experiencing acculturative stress was predictive of both depression and suicidal ideation (Hovey, 2000). Racial discrimination is considered to be one aspect of acculturative stress, and researchers have found that negative verbal comments, increased frequency of teasing, and its ability to upset the victims were associated with body dissatisfaction (as cited in Thompson, Cattarin, Fowler, & Fisher, 1995).

The experience of discrimination may exacerbate the stress of acculturation and increase body dissatisfaction and eating disturbances by highlighting differences between groups and casting minorities in a negative light (Thompson et al., 1995). In a study of South Asian-American women primarily of Indian descent, researchers examined racial teasing and taunts which highlighted ethnic characteristics that caused individuals to be singled out and degraded (Iyer & Haslam, 2003). They proposed that racial teasing not

only made ethnic minorities more aware of the distinct physical features that set them apart from the majority group, but also caused them to evaluate their features negatively and to be more inclined to accept the majority view of attractiveness (Iyer & Haslam, 2003). Further, researchers hypothesized that as minorities compare themselves to the majority ideal, they experience increased body dissatisfaction and resulting problems with eating disturbances as they strive to meet the new standard. In this study, racial teasing was found to be predictive of both disturbances in body image and eating (Iyer & Haslam, 2003). It is, however, entirely reasonable to interpret this correlation in the opposite direction (i.e., disturbances in eating and how they look elicit teasing).

Perez et al. found that stress related to acculturation moderated the relationship between body dissatisfaction and bulimic symptoms in Latin and African American women (2002). For ethnic minority participants reporting low levels of acculturative stress, body dissatisfaction was not significantly correlated with bulimic behaviors. However, high levels of acculturation stress resulted in a significant correlation between body dissatisfaction and bulimic symptoms. Of interest, Latinas reported higher levels of acculturative stress, body dissatisfaction, and bulimic symptoms than did African American women in this study raising concerns that Latinas may be at increased risks for eating pathology (Perez et al., 2002). Latinas may have greater acculturative stress and body dissatisfaction because they are more inclined than are African American women to attempt to integrate into White mainstream culture. Researchers have suggested that rejection of the White ideal may be a protective factor for African American women (Franko & Striegel-Moore, 2002; cited in Perez et al., 2002; Shaw et al., 2004). Perez et al. asserted the need to examine body dissatisfaction and dysfunctional eating in

conjunction with a measure of level of acculturation in a non-university sample of minority women. They also noted the need for similar follow up studies with specific cultural groups rather than a heterogeneous sample.

Acculturative stress, particularly in the form of discrimination, seems to be a factor in whether acculturating individuals make negative self-evaluations. The impact of discrimination on one's self-esteem is a likely route through which body dissatisfaction occurs especially when teasing involves physical features that differ from the majority. For example, Fingeret and Gleaves (2004) found that self-esteem predicted body dissatisfaction. Similarly, Joiner and Kashubeck (1996) found that self-esteem and body dissatisfaction were significant predictors of disordered eating symptoms for Mexican American adolescents; however, they did not find a direct relationship between acculturation level and self-esteem. As such, they posited that changes in global self-esteem could be attributed to reduction in acculturative stress over time rather than level of acculturation. In other words, when acculturating individuals come into contact with mainstream ideals, negative self-evaluations may be more likely if acculturation is accompanied by acculturative stress in the form of discrimination, which underscores discrepancies between self and the dominant culture. Then, as one acculturates, one would expect acculturative stress to decrease as the individual begins to assimilate into the dominant culture. Root (1990) indicated that individuals may seek to boost self-esteem as well as mitigate identity crises and acculturative stress by greater adherence to dominant cultural norms. If however, individuals experience acculturative stress and feel unable to meet dominant cultural norms, increasing acculturation and acculturative stress may result in greater negative self-evaluation. Thus, another key aspect to consider in

addition to exposure to acculturative stressors such as discrimination is the degree to which one has internalized societal norms specific to body image.

### **Objectified Body Consciousness and Body Dissatisfaction**

For some women, self-worth is appearance based (Jarry & Kossert, 2006). Research on the impact of how others view one's physical body and changes in one's view of self is discussed in the work on objectified body consciousness. Drawing on feminist theory, McKinley and Hyde (1996) proposed that how women view their bodies must be couched in a social construction framework, which they termed as objectified body consciousness. This is explained as being comprised of three components that include an intrapersonal perspective examining the degree to which women internalize socially constructed standards of appearance. Body surveillance is the first component and occurs as women learn from society to view their bodies in objectified terms and to survey their bodies from an external point of view (i.e., how they look through the eyes of others). Thus, rather than basing self-evaluations on how they feel about their own bodies, women evaluate their bodies from a removed stance based on social and cultural expectations. Because body approval is externally based, women rely on validation from others, which may result in constant social comparison and a need to minimize any perceived discrepancies between self and social ideals. Frederick, Forbes, Grigorian, and Jarcho (2007) examined the relationship between body surveillance and body satisfaction for White, Asian, and Hispanic women. While Hispanic women were significantly less likely to report decreased body satisfaction as a function of increased surveillance than

were White women, they reported similar levels of overall body satisfaction when BMI was accounted for.

When women decide that their bodies do not measure up to societal standards, this can result in body shame, the second component of the theory. Body shame is conceptualized as going beyond having negative feelings about one's body to feeling bad about oneself as a person for not achieving societal standards. McKinley and Hyde (1996) proposed that women internalize societal ideals for appearance to the degree that they regard their striving for attractiveness as a personal choice and in turn feel responsible if they do not live up to expectations. In this sense, it captures the degree to which women have internalized the standards promoted by the cultural context. When women are able to achieve ideals, this can be a source of esteem and accomplishment. Conversely, the inability to achieve ideals can result in body shame. McKinley and Hyde found increased body surveillance and body shame to be correlated with decreases in body esteem and higher levels of disordered eating (1996).

The third component of objectified body consciousness is control beliefs, which is the amount of control that women feel they can assert over their appearance (McKinley & Hyde, 1996). While having a sense of increased control to change one's appearance may increase body esteem, this may also result in more attempts to manage one's appearance through unhealthy means such as disordered eating.

Sinclair and Myers (2004) examined objectified body consciousness and wellness among college women. Defining wellness as including physical, psychological, and social aspects of functioning, Sinclair and Myers noted women experience higher morbidity and depression than do men and sought to explore the connection between



women's sense of wellness and body experiences. They found that as body shame increased, total wellness decreased, and increased body surveillance was associated with decreases on what they termed the "coping self factor," which they defined as one aspect of wellness that includes stress management and sense of worth. In addition, having a greater sense of control of one's appearance was related to higher wellness scores. BMI was also measured and found to be related to body shame with normal and overweight participants having greater body shame than underweight participants. They limited their study to European American women to eliminate the confounding impact having an ethnic minority orientation could have.

Mercurio and Landry (2008) examined self-objectification and body shame and how the interaction between these variables impacts self-worth/self-esteem and in turn life satisfaction. They found that increased self-objectification was associated with increased body shame, which decreased self-esteem, which in turn decreased life-satisfaction. The overall model accounted for 44% of the variance in life-satisfaction. The sample was predominantly Caucasian, although a small percentage identified as Hispanic (6%).

Objectified body consciousness provides one explanation of how the internalization of cultural ideals can result in higher levels of body dissatisfaction for some women. Objectified body consciousness has not been examined specifically among Mexican American women, nor has it been studied in conjunction with acculturation and how it might change with exposure to Anglo body ideals that may or may not be achievable (controllable) for minority women. Although limited in scope, research has

begun to incorporate acculturation into studies on body dissatisfaction and eating pathology in Mexican American women.

### **Acculturation, Disordered Eating, and Body Dissatisfaction among Mexican American Women**

Root (1990) highlighted the possibility that the process of acculturation can result in moving through a stage where one has attempted to separate from her culture of origin but has not yet established a firm sense of identity within the majority culture. She proposed that this stage of uncertainty in one's identity may increase the risk of engaging in disordered eating as an avenue for gaining esteem and self-definition. In addition, women of color who are the first among their peers to pursue academic or career paths that were historically unavailable to them may feel increased pressure to model certain standards to other women in their community of origin as well as feel additional pressure to succeed by fitting in with the majority culture (Root, 1990). Chamorro and Flores-Ortiz (2000) examined levels of acculturation and disordered eating among Mexican American women using a combined college and community sample. Attitudes were assessed toward eating with women originally born in Mexico as well as women born in the United States. They found that an increase in disordered eating was related to level of acculturation using the ARSMA and the EAT-26. More specifically, they noted that second generation (first to be born in the United States) Mexican American women had higher disordered eating scores than both first generation women (those born in Mexico) and women of later generations (Chamorro & Flores-Ortiz, 2000). Like Root (1990), they proposed that as daughters of immigrant families, first generation women might feel

unique pressures as their families attempted to adjust to the dominant culture and to balance differing demands to conform to each culture's expectations. This study did not examine/control for additional variables such as acculturative stress and BMI, the inclusion of which might elucidate further the specific factors impacting the relationship between acculturation and disordered eating while accounting for the possible confounding issue of weight.

Olvera, Suminski, and Power (2005) examined body image, BMI, and acculturation in a community sample of Mexican American children (both girls and boys; 6 to 12 years of age) and their mothers over a four year span. For girls in the study, the majority preferred a body ideal that was thinner than their actual body size although approximately a third of the girls identified an ideal that was larger than their actual size. More acculturated girls and girls with more acculturated mothers preferred thinner body ideals as did children who were at-risk or overweight. Similarly, using only language spoken in the home and amount of time lived in the United States as indicators of acculturation, another study found that greater acculturation was positively correlated with eating disorder symptoms for Hispanic girls, but no relationship was found between acculturation and body satisfaction or weight concerns (Gowen, Hayward, Killen, Robinson, & Taylor, 1999). Pepper and Ruiz (2007) found an increase in negative attitudes toward being overweight or obese among highly acculturated Latinas but not among bicultural or low acculturated Latinas. Further, using language as a measure of acculturation, they found that individuals who preferred speaking English as opposed to Spanish endorsed greater body dissatisfaction and negative attitudes toward weight.

Joiner and Kashubeck (1996) did not find a relationship between level of acculturation and symptoms of disordered eating, body image, or self-esteem for a sample of Mexican American adolescents. Joiner and Kashubeck (1996) did find that increased body dissatisfaction was correlated with lower self-esteem and both variables were predictive of disordered eating. Joiner and Kashubeck proposed a number of possible explanations for the failure to find a significant impact of acculturation including overemphasis on acculturation, the type of acculturation assessed by the measure used, specific sample characteristics, and SES. Using the ARSMA, they calculated acculturation along a single continuum from Mexican to Anglo oriented, and they also noted that despite increasing acculturation for first through fifth generation participants, their sample was more acculturated overall than expected. Another possible explanation is that the relationship between acculturation and body dissatisfaction is moderated by factors such as acculturative stress. Joiner and Kashubeck also remarked that the Mexican culture of origin may value thinness to a similar degree as the majority Caucasian culture, which would negate the impact of acculturation for this variable.

Research indicates, however, that Mexican American women's bodies tend to be heavier than the ideal perpetuated in the dominant American culture and that in Latino culture being heavier is more acceptable than it is in Caucasian culture (Olvera et al., 2005; Shaw et al., 2004). For example, Cachelin et al. (2006) found that participants who endorsed a higher Anglo orientation had thinner body ideals and were more disapproving of larger figures whereas greater tolerance for being overweight was associated with having a Mexican orientation. Of note, Mexican American women who were categorized

as obese had the highest body dissatisfaction compared to average and overweight women suggesting BMI becomes an overriding concern at higher weights.

Lester and Petrie (1995) examined level of acculturation (ARMSA), endorsement of United States societal values of attractiveness, body satisfaction, BMI, and bulimic symptoms in a sample of Mexican American college women. Both increased BMI and endorsement of societal ideals of attractiveness predicted bulimic symptoms while body satisfaction and acculturation did not. They distinguished between acculturation and endorsement of societal ideals highlighting the possibility that individuals who acculturate may not necessarily internalize societal ideals of attractiveness. They also indicated that body satisfaction may not specifically predict bulimic type behaviors; however, they proposed that this does not preclude a relationship between body satisfaction and disordered eating, particularly anorexic type behaviors.

Cachelin, Phinney, Schug, and Striegel-Moore (2006), noting that many studies have focused on adolescents and college women, examined the relationship between acculturation (using the ARMSA-II), ethnic identity, and eating disorders in a community sample of Mexican-American women ages 18 to 48. They found that increasing levels of Anglo orientation were predictive of an increase in the likelihood of having an eating disorder (Cachelin et al., 2006). The degree to which participants endorsed a Mexican orientation or ethnic identity was not correlated with having an eating disorder suggesting adoption of mainstream Anglo ideals is a key factor whereas maintenance of a connection with one's culture of origin may not play a protective role. The researchers noted the value of a bidimensional model of acculturation to tease out these differences. This study focused on women formally diagnosed with an eating disorder as opposed to sub-clinical

body dissatisfaction and did not examine proposed moderating variables such as self-esteem and discrimination, nor control for BMI, which research indicates is important to take into account.

Ayala, Mickens, Galindo, & Elder (2007) examined acculturation, body image, and disordered eating among Latino children and adolescents. For children, in terms of acculturation, having a Mexican orientation was predictive of greater body dissatisfaction, and having an Anglo orientation was associated with disordered eating, but acculturation was not associated with body dissatisfaction for adolescents. However, for adolescents, endorsement of socially sanctioned standards of beauty and thinness predicted body dissatisfaction and disordered eating. The researchers propose possible reasons for the disparity in findings across development including the possibility that youth have greater acculturative stress and fewer coping mechanisms than adolescents. They also proposed that having a Mexican orientation may result in body dissatisfaction for children residing in a predominately Anglo culture, but that this identification may also be a protective factor from engaging in disordered eating behaviors or that the negative impact of acculturation may manifest in other ways besides disordered eating. While this may be the case, it may also be true that younger children's diets are more controlled by parents than are the eating behaviors of adolescents so disordered eating does not emerge until later. With regard to acculturation versus endorsement of socially sanctioned standards of beauty and thinness and body dissatisfaction, it is notable that one's acculturation level was not significant while endorsement of socially sanctioned standards of beauty and thinness were for adolescents. This is consistent with research on Objectified Body Consciousness, which stresses the significance of the internalization of

body ideals within the mainstream culture as having an impact on body satisfaction and related behaviors more so than the overall acculturation process. Being overweight or at-risk for being overweight (i.e., weight just below the cutoff for being identified as overweight) was associated with greater body dissatisfaction across groups, which is a key variable often overlooked.

### **Additional Factors Related to Body Dissatisfaction**

**Age.** Research indicates that women's attitudes about their bodies change as a function of age (Grabe & Hyde, 2006). Specifically, women tend to experience a decrease in body satisfaction as they move into adolescence and then this appears to remain fairly stable through young adulthood, but this relationship may differ by ethnicity and continue to change with advancing age. As such, age is an important variable to account for when examining body satisfaction.

**Body mass index.** One criticism of the research examining differences in eating disturbances across groups has been the failure to control for body mass index (Arriza & Mann, 2001). Researchers suggest that it is important to take into consideration preexisting weight status before examining disturbances in eating or elevated concerns about weight or body shape (Arriza & Mann, 2001; Forbes & Frederick, 2008; Frederick et al., 2007). In other words, individuals who are obese may have body dissatisfaction due to societal attitudes toward obesity, which result in rejection and discrimination, as well as body dissatisfaction as a result of weight related health concerns (Marcus et al., 2007). Similarly, for obese individuals the endorsement of dieting behaviors may indicate a more appropriate attempt to control weight gain rather than being indicative of

disordered eating. Prior research has found elevated BMI to be correlated with body image and eating concerns (Hrabosky & Grilo, 2007; Marcus et al., 2007), as well as a significant predictor of body dissatisfaction (Robinson, Killen, Litt, Hammer, Wilson, Haydel, Hayward, & Taylor, 1996). In a sample of Mexican American children, Olvera, Suminski, & Power (2005) found being overweight was associated with greater body dissatisfaction, even though their mothers viewed their daughters' weight as acceptable and were more tolerant of higher weights if less acculturated.

To examine the relationship between body mass index and eating disturbances, Arriza and Mann (2001) analyzed concerns about body weight and shape and levels of restrained eating while controlling and not controlling for body mass index for a sample of Caucasian, Hispanic, and Asian college women. When body mass index was not controlled, concerns regarding weight and shape were greater for the Hispanic participants; however, these differences were not present once body mass index was controlled. In terms of restrained eating, when body mass index was entered into the equation, Caucasians were more inclined than either Hispanics or Asians to endorse dieting behaviors (Arriza & Mann, 2001). The role of acculturation was not examined. As noted earlier, Lester and Petrie (1995) found that body mass index was significantly correlated with bulimic behaviors in a sample of Mexican American college students.

In a sample of Asian, Hispanic, African American, and White girls (11 to 26 years old) who had non-significant differences in BMI across groups, similar body image and eating disturbances were reported (Shaw et al., 2004). Acculturation was not examined in this study, but it is notable that the endorsement of a thin body ideal was found to be lower for Hispanic and African American girls (Shaw et al., 2004). Given that BMI did



not vary across participants, it is difficult to ascertain whether body image and eating disturbances would increase with higher BMI, but the implication is that weight may play a primary role in differences in body image and eating disturbances. For example, when comparing Caucasian, Asian, and Hispanic adolescent girls (ages 10 to 14) on body dissatisfaction, girls across all three ethnicities reported increased dissatisfaction with increased BMI (Robinson et al., 1996). Notably though, Hispanic girls endorsed greater body dissatisfaction overall than did Caucasian girls. Additionally, Hispanic girls in the lowest BMI range reported the highest body dissatisfaction as compared to the Caucasian and Asian girls in the same range leading researchers to conclude that Hispanic girls may be at an increased risk for eating disorders as they endorsed greater body dissatisfaction in the absence of true weight concerns. An alternate possibility is that Caucasian and Asian girls endorse greater body satisfaction when quite lean indicating they, rather than Hispanic girls, may be at increased risk for eating disorders. Further, while increased body dissatisfaction for Hispanic girls within the lowest range might have been due to weight concerns, dissatisfaction with other aspects of their bodies may have also accounted for this finding. This study, however, highlights the importance of BMI as well as the role of perception, not just actual weight, in determining attitudes about one's body.

**Social economic status.** Researchers have also proposed that social economic status can play a role in the adoption of mainstream ideals, body dissatisfaction, and disordered eating, but the findings are mixed (Miller & Pumariega, 2001; Soh et al., 2006). When examining the relationship between body satisfaction and self-esteem, Abell and Richards (1996) found a stronger correlation for women of higher SES than for

women of lower SES indicating perhaps that body satisfaction becomes a more salient feature of self-esteem with increasing affluence. Story et al., (1995) also examined SES, dieting behaviors, and body image among adolescents. Females from lower SES were not as likely to view themselves as being overweight or to engage in dieting behavior, but they were more inclined to engage in compensatory behaviors (e.g., vomiting) than females from a higher SES. Notably, girls from the highest SES were more likely to be proud of their bodies. In an adolescent community sample, Rogers, Resnick, Mitchell, and Blum found the average weight decreased as SES increased, but body satisfaction and eating disordered symptoms were not correlated with SES when BMI was taken into consideration (1997).

Bove and Olson (2006) highlighted a number of factors related to SES that would also potentially impact one's relationship to body satisfaction and eating behavior including lack of opportunity for exercise, food insecurity, and eating in response to isolation, boredom, stress, and negative feelings. These factors are thought to increase the likelihood of body dissatisfaction, obesity, and disordered eating among women of lower SES.

Molloy & Herzberger (1998) examined whether greater financial stability translated into social mobility that would bring ethnic minorities into contact with ideals outside of their own culture and how this might be related to body image and self-esteem. Contrary to their hypothesis, social economic status did not appear to be indicative of negative evaluations of self in comparison to the dominant culture. The researchers noted that although they differentiated between upper and lower class participants, their sample group was comprised of college students, who were likely to be more acculturated and to

have been exposed to mainstream ideals from a variety of sources (Molloy & Herzberger, 1998).

Snooks and Hall (2002) found no significant differences in body image, self-esteem, or differences in real and ideal body sizes in a sample of European American, African American, and Mexican American women from the same SES (middle-class). They did not directly measure acculturation, but concluded that acculturation had not resulted in increased endorsement of the White, middle-class norm as there were significant differences in weight between African American and European American women, but not self-esteem. An alternate explanation is that differences in body satisfaction between minority groups disappear as women become more acculturated or are from the same SES, which would only be apparent if compared to women of differing levels of SES and acculturation. Overall, the studies highlighting the potential contribution of BMI and SES to body dissatisfaction underscore the need to account for these variables in any analysis.

## The Current Study

Examination of the prior research indicates a need for further exploration of body dissatisfaction among Mexican American women. Findings are mixed with regard to the levels of body dissatisfaction and outcomes such as disordered eating for Mexican American women as compared to Caucasian women and other ethnicities, but a number of studies indicate Mexican women are endorsing similar body concerns and maladaptive behaviors. While acculturation was associated with increasing body concerns among Mexican American women in some studies, for many studies there was no direct relationship between acculturation and body dissatisfaction or disordered eating. Other research suggests there are additional factors that may better explain how exposure to dominant cultural ideals through acculturation may result in outcomes such as body dissatisfaction and disordered eating for Mexican American women. Despite some indications that there is less emphasis on a thin ideal among Mexican Americans, BMI emerges as a concern that must be addressed when examining other possible issues. One implication of prior research is that acculturative stress is a possible factor, but there is little research on this variable in relation to body dissatisfaction and eating disorders. Additionally, research with Caucasian women has indicated the possibility that body dissatisfaction occurs through a process of internalization of dominant cultural ideals (objectified body consciousness), which has essentially been unexamined in Mexican American women.

The aim of the current study was to re-examine prior findings examining acculturation and body satisfaction while integrating possible mediating variables

identified in prior research into a single study with a mixed college and non-college sample of women of Mexican descent. Specifically, the goal was to examine the relations among acculturation, acculturative stress, objectified body consciousness, SES, BMI, and body dissatisfaction in one model using SEM. Body dissatisfaction has been identified as a risk factor for developing eating disorders (Franko & Striegel-Moore, 2002). As women become more acculturated, exposure to mainstream ideals may heighten the risk of developing body dissatisfaction; however, the factors that trigger the development of body dissatisfaction may vary as a function of different social pressures such as the impact of acculturative stress (Chamorro & Flores-Ortiz, 2000). Thus, in the current study, the goal was to examine acculturative stress in terms of immigration stress as well as the experience of racism as a mediator of the relationship between acculturation and body dissatisfaction.

Another aim of the current study was to examine the relationship between acculturation, objectified body consciousness, and body dissatisfaction, which has not been previously studied. The proposal was that the impact of level of acculturation on body dissatisfaction would be mediated by the degree of internalization of body ideals as represented by body surveillance, body shame, and sense of control over appearance. Prior research has indicated that increased body surveillance and body shame are correlated with decreases in self-esteem, body esteem, and life satisfaction as well as higher levels of disordered eating (McKinley & Hyde, 1996; Mercurio & Landry, 2008).

Prior research suggests increased age and BMI negatively impact self-esteem and body satisfaction independent of exposure to Anglo ideals and should therefore be accounted for when examining acculturation and body dissatisfaction. As such, it was

proposed that these variables should be taken into consideration when examining acculturation and body dissatisfaction. Additionally, SES has been shown to play a role in attitudes toward weight and shape, acculturation, and exposure to acculturative stressors making it a potentially confounding variable if not also accounted for. Thus, it was proposed that the current study should include socioeconomic status in terms of income and education. Outcomes in the current study were to be measured in terms of changes in body satisfaction and body-esteem as well as a propensity toward engaging in disordered eating and a sense of ineffectiveness.

## **Hypotheses**

SEM was chosen as an appropriate technique as it allowed for developing a more complex model examining the interrelations among variables. The hypothesized model examined predictors of Body Dissatisfaction, a latent variable measured by the Body Esteem Scale and 4 subscales of the EDI (Drive for Thinness, Bulimia, Body Dissatisfaction, and Ineffectiveness). The hypothesized model can be seen in Figure 1. Latent constructs are represented by circles, and measured variables are presented in rectangular boxes. Arrows indicate the expectation of a hypothesized effect. Predictors of Body Dissatisfaction included the latent variable of Objectified Body Consciousness, as measured by three subscales (Surveillance, Control, and Body Shame), and the latent variable of Acculturative Stress, as measured by two subscales of the Hispanic Women's Social Stress Scale (Racism and Immigration Stress). Socioeconomic Status was also represented as a latent variable measured by income and education levels. The relationship between Level of Acculturation and Body Dissatisfaction was hypothesized

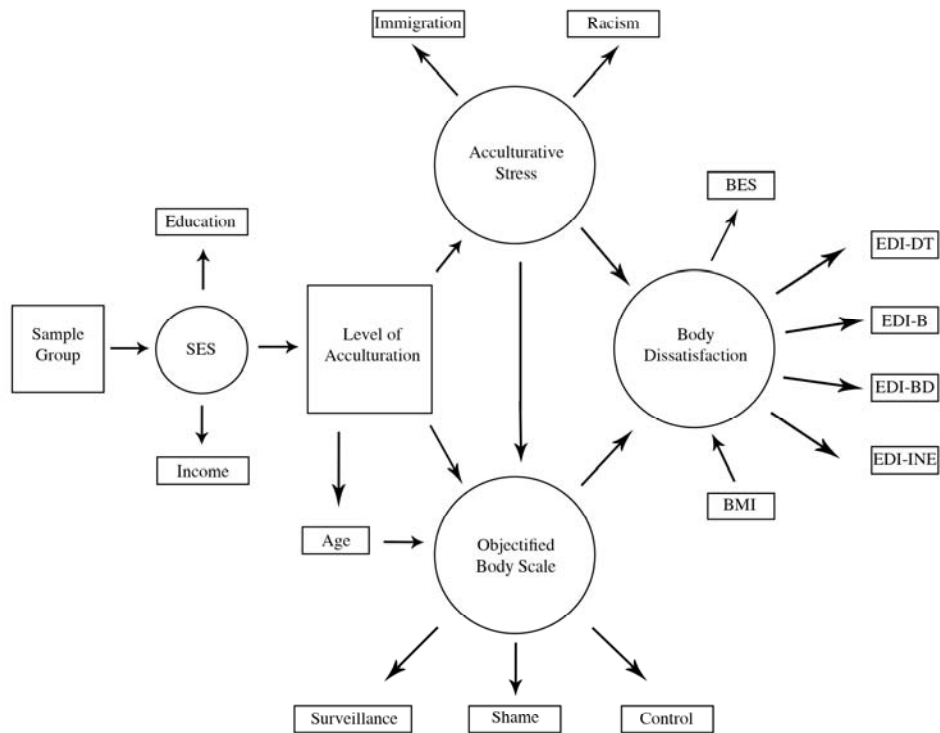
to be fully mediated by Objectified Body Consciousness and Acculturative Stress after accounting for SES, age, and BMI. In addition to examining the overall fit of the model, specific significant relationships were predicted as follows:

1. Acculturative Stress was expected to mediate the relationship between Level of Acculturation and Body Dissatisfaction such that increased Acculturative Stress was proposed to account for a significant portion of variance in the construct Body Dissatisfaction while accounting for Objectified Body Consciousness, age, SES (income and education), and BMI. Thus as women acculturated, they were hypothesized to experience Acculturative Stress in the form of Racism and Immigration Stress, and women who reported increased levels of Acculturative Stress were hypothesized to report greater levels of Body Dissatisfaction. Specifically, increased Acculturative Stress was expected to be positively correlated with Body Dissatisfaction, Drive for Thinness, Bulimia, and Ineffectiveness and negatively correlated with Body Esteem.
2. Objectified Body Consciousness was also expected to mediate the relationship between level of acculturation and body dissatisfaction such that increased objectified body consciousness was proposed to account for a significant portion of variance in the construct body dissatisfaction while accounting for acculturative stress, age, SES (income and education), and BMI. Specifically, Women who had a higher overall level of acculturation (i.e., a stronger Anglo orientation more so than a stronger Mexican orientation) were expected to endorse a higher level of objectified body consciousness. In turn, Objectified Body Consciousness was expected to be positively correlated with higher levels of Body Dissatisfaction, Drive for Thinness, and

Bulimic symptoms, as well as feelings of Ineffectiveness and lower levels of overall Body Esteem. An increase in objectified body consciousness was expected to be represented by an increase in body surveillance and body shame. Specific directional hypotheses regarding control beliefs (the third component of OBC) were not made, as it was not clear as to whether individuals would experience greater distress when they felt change was beyond their control or within their control but unexercised.

3. Acculturative Stress was also examined in relation to Objectified Body Consciousness. A positive correlation was expected between Acculturative Stress and Objectified Body Consciousness such that women experiencing higher levels of Acculturative Stress were predicted to report higher Objectified Body Consciousness in terms of increased body Surveillance and Body Shame and a decreased sense of Control.
4. In keeping not only with the bidimensional model of acculturation, but also with the conceptualization of acculturation as resulting in four possible separate categories of acculturation, the current study also explored the relationship between each of the mediating variables (Objectified Body Consciousness and Acculturative Stress) for women who would be identified as highly integrated (who endorse high levels of both Mexican and Anglo Orientations) and Marginalized individuals, but specific hypotheses were not made given the paucity of prior research.





*Figure 1.* Hypothesized Model of the relationship between Level of Acculturation and Body Dissatisfaction as being fully mediated by Objectified Body Consciousness and Acculturative Stress while accounting for SES, Age, and BMI. Hypothesized structural equation model: prediction of Body Dissatisfaction. SES = socioeconomic status; BES = Body Esteem Scale; EDI-DT = Eating Disorder Inventory – Drive for Thinness; Eating Disorder Inventory – Bulimia; Eating Disorder Inventory – Body Dissatisfaction; Eating Disorder Inventory – Ineffectiveness.

## **Method**

### **Participants**

Mexican American women between the ages of 18 and 50 were recruited to participate in this study. Upper and lower age limits were set to control for the potential effects of including both very young and much older women in the same study. Participants were drawn from a university and a community population in Southern California. Participants at California State University, San Bernardino were recruited using Survey Monkey and the SONA System, an online data collection system utilized by the university. The community participants were recruited from the desert area communities (San Bernardino through Mecca) utilizing the snowball technique whereby participants are recruited by word of mouth and face to face interaction within their community (Mahammadi, Jones, & Evans, 2008). This technique has been shown to have greater efficacy in recruiting minority women and in overcoming barriers to participation in research for ethnic minorities and those from a lower SES (Gilliss, Lee, Gutierrez, Taylor, Beyene, Neuhaus, & Murrell, 2001). With regard to community participants, bilingual research assistants were recruited to give out surveys in the community. Additionally, the primary investigator was able to access a number of the participants with the assistance of a local church. Through the church, the primary investigator was able to setup a table at a community festival in Mecca, Festival de la Uva – the Grape Festival, which attracts hundreds of people from the surrounding farming communities most of whom are Latino. A substantial number of the completed surveys were gathered at the festival with the help of the bilingual assistants. While the intention was not to

make specific comparisons between the university and community participants, it was thought that collecting data from both would provide a wider range of acculturation levels within the study and more accurately reflect the greater population of Mexican American women in the area.

The final data set was comprised of 352 of the total 530 surveys collected, as the analyses only included complete cases. Of the 530 surveys, 178 were eliminated from the analyses for the following reasons: 14 surveys had no data for the measures included and 3 surveys were indicative of a problematic response style; 2 participants indicated they were male, 1 participant was underage, 6 participants were over the age cutoff; and 152 were missing greater than 20% of data or data that prevented calculation of key variables (BMI, age, income, and education). For variables missing less than 20% of data, mean score substitution was utilized.

## **Demographics**

Participants were 352 Mexican American women between the ages of 18 and 50 ( $M$  age = 26.11,  $SD$  = 8.23). Of the total sample, 67.0% of data ( $n$ = 236) was collected from California State University, San Bernardino, using Survey Monkey and the SONA System. The remaining 33.0% of the data ( $n$ = 116) was collected from the desert area communities. Table 1 illustrates the overall sample demographics as well as demographics specific to the university and community participants.

Of the women surveyed, 68.8% ( $n$  = 242) indicated they were born in the United States, while 30.1% ( $n$  = 106) indicated having been born in Mexico and .3% ( $n$  = 1) having come from another non-Latin Country, but being of Mexican descent. Three

participants (.9%) did not report their country of origin. For participants who were not born in the United States, the amount of time living in the US ranged from just a few months to 44 years ( $M$  years in the US = 15.72). Approximately one-third of the participants reported being first generation (32.1%;  $n = 113$ ); while 51.4% ( $n = 181$ ) reported being second generation, and 15.3% ( $n = 54$ ) reported being third generation. Four participants (1.1%) did not indicate their generational status.

The majority of the participants were single (59.9%,  $n = 211$ ). Approximately a quarter of the participants indicated they were married (24.1%;  $n = 85$ ), while a smaller percentage endorsed being divorced/separated (3.4%,  $n = 12$ ), cohabitating (7.4%,  $n = 26$ ), or other (3.7%,  $n = 13$ ) such as widowed.

Family income of participants ranged considerably from 0 to over 15,000 a month ( $M$  income = 3108.05). Note that while the survey requested monthly income, many participants appeared to report yearly income although in some cases it was difficult to ascertain. As such, a cutoff of 9,000 a month was designated, and individuals reporting greater than this were assumed to have provided a yearly income, which was divided by 12 to obtain a monthly figure.

The majority of the sample reported having obtained some amount of college education: some college (19.3%,  $n = 68$ ) or currently enrolled (33.0%,  $n = 116$ ), AA degree (18.5%,  $n = 65$ ), BA degree (4.3%,  $n = 15$ ), and MA degree (1.1%,  $n = 4$ ). Almost a quarter of the sample reported having obtained a twelfth grade education or less: no education through 6<sup>th</sup> grade (5.1%,  $n = 18$ ), 7<sup>th</sup> through 8<sup>th</sup> grade education (2.6%,  $n = 9$ ), and 9<sup>th</sup> through 12<sup>th</sup> grade education (16.2%,  $n = 57$ ).

Table 1

*Demographic Characteristics as a Percentage for the Total Sample and Subgroups  
(Frequencies in Parentheses)*

Characteristic	Total Sample ( <i>n</i> = 352)	University ( <i>n</i> = 236)	Community ( <i>n</i> = 116)
<b>Marital status</b>			
Single	59.9 (211)	72.0 (170)	35.3 (41)
Married	24.1 (85)	13.6 (32)	45.7 (53)
Divorced/separated	3.4 (12)	3.0 (7)	4.3 (5)
Cohabiting	7.4 (26)	8.9 (21)	4.3 (5)
Other	3.7 (13)	2.1 (5)	6.9 (8)
Not reported	1.4 (5)	.4 (1)	3.4 (4)
<b>Birthplace</b>			
United States	68.8 (242)	86.9 (205)	31.9 (37)
Mexico	30.1 (106)	12.7 (30)	65.5 (76)
Other non-Latin country	.3 (1)	.4 (1)	
Not reported	.9 (3)		2.6 (3)
<b>Generational status</b>			
First	32.1 (113)	14.8 (35)	67.2 (78)
Second	51.4 (181)	65.7 (155)	22.4 (26)
Third	15.3 (54)	19.1 (45)	7.8 (9)
Not reported	1.1 (4)	.4 (1)	2.6 (3)
<b>Education level completed</b>			
0-6 <sup>th</sup> grade	5.1 (18)		15.5 (18)
7-8 <sup>th</sup> grade	2.6 (9)		7.8 (9)
9-12 <sup>th</sup> grade	16.2 (57)	7.6 (18)	33.6 (39)
Some college	19.3 (68)	18.2 (43)	21.6 (25)
AA degree	18.5 (65)	24.6 (58)	6.0 (7)
BA/BS degree	4.3 (15)	3.4 (8)	6.0 (7)
MA/MS degree	1.1 (4)		3.4 (4)
Currently enrolled	33.0 (116)	46.2 (109)	6.0 (7)

When comparing participants drawn from the university versus the community, university participants were more likely to be second generation, to be younger, and to be single. With regard to education, while there was a wider range in level of education for community participants than for university participants, a much smaller percentage

reported any college education and their average income was less per month ( $M$  income university participants = 3479.70;  $M$  income community participants = 2351.94).

## **Measures**

In addition to information on a number of demographic variables, separate measures were utilized to assess acculturation, acculturative stress, objectified body consciousness, and body dissatisfaction. The outcome variable, body dissatisfaction, was operationalized by utilization of four subscales from the Eating Disorder Inventory (Body Dissatisfaction, Bulimia, Drive for Thinness, and Ineffectiveness) as well as a measure of body esteem (Body Esteem Scale). The three subscales (Surveillance, Body Shame, and Control) of the Objectified Body Consciousness Scale (OBCS) were used to measure internalization of mainstream ideals. The Acculturation Rating Scale for Mexican Americans-II (ARSMA-II) and the Hispanic Women's Social Stressor Scale (HWSSS) were utilized to assess level of acculturation and acculturative stress, respectively. The ARSMA-II and the HWSSS were available in English and Spanish from the authors; however, the additional measures (OBCS, the EDI, and the BES) were only available in English and were translated into Spanish for the current study. Each measure was translated and back translated and compared for semantic parity across languages. Discrepancies were resolved through discussion. Community participants were given the option to complete whichever language version they felt most comfortable using.

**Demographic measures.** Participants provided information on the following demographic variables: gender, age in years, marital status, birthplace, the number of years having resided in the United States, by whom they had been raised, level of

education in years, occupation, generational status, and monthly income. Participants were also requested to provide their height and weight to facilitate calculation of body mass indexes. See Appendix A.

**Acculturation.** To assess level of acculturation, the Acculturation Rating Scale for Mexican Americans-II (ARSMA-II) was used (Cuéllar, Arnold, & Maldonado, 1995). The ARSMA-II has two scales, which are used to generate different levels of acculturation. The ARSMA-II measures behavioral aspects of acculturation (e.g., “I speak English.”) and some affective aspects of acculturation (e.g., “I enjoy Spanish language movies.”). Scale 1 is comprised of two subscales. The Anglo Orientation Subscale (AOS) contains 13 items on a Likert-Type scale ranging from 1 (*not at all*) to 5 (*extremely often or almost always*) with higher scores indicating greater Anglo orientation. The Mexican Orientation Subscale (MOS) contains 17 items and is scaled in the same manner as the AOS with higher scores indicating greater Mexican orientation. Mean scores are obtained by summing the scores for each subscale and dividing by the total number of items (13 and 17, respectively).

A linear acculturation score can be obtained by subtracting the mean MOS score from the mean AOS score, which provides a measure of integration and assimilation ranging from very Mexican in orientation ( $< -1.33$ ) to balanced bicultural to very Anglo in orientation ( $> 2.45$ ). Very Mexican oriented individuals have a high MOS score and a low AOS score while very Anglo oriented individuals have a high AOS score and a low MOS score. Bicultural integration refers to individuals who endorse aspects of both cultures rather than highly affiliated with one culture or the other. The linear acculturation measure is considered a multidimensional measure of acculturation rather

than a unidimensional measure as one's endorsement of each orientation is independently derived and greater endorsement of one or the other orientation does not presuppose a parallel decrease in the other. See Appendix B.

Cuellar et al stated that Scale one demonstrated a test-retest reliability coefficient of .96 after 1 week (1995). Comparisons between the ARSMA and the ARMSA-II indicated good concurrent validity (Pearson's product-moment = .89). Construct validity was demonstrated by significant correlations between degree of acculturation and generational status as reported by participants (Cuellar et al., 1995).

Marginalization is measured by Scale 2. This scale has 18 items divided across three subscales: Anglo Marginality (ANGMAR), Mexican Marginality (MEXMAR), and Mexican American Marginality (MAMARG). Each subscale is comprised of 6 Likert-type items ranging from 1 (*not at all*) to 5 (*extremely often or almost always*) and measure levels of acceptance of the ideas, beliefs, customs, and values of each orientation (Cuellar et al., 1995). Higher scores indicate greater marginalization. For example, an item on the scale asks participants to rate the degree to which they agree with the statement, "I have difficulty accepting certain attitudes held by Anglos." Subscale scores are obtained by adding the items for each scale and comparing them to the cut points. Individuals are considered to be marginalized if they score  $\geq 17.34$  on ANGMAR and  $\geq 16.82$  on MEXMAR and  $\geq 14.98$  on MAMARG indicating a lack of connection to any orientation. Cuellar et al. (1995) reported good overall internal consistency for the marginality scale (coefficient alpha = .87), but they noted lower internal consistency for the Mexican marginality subscale. Scale 1 and Scale 2 together can then be used to



generate five levels of acculturation – Scale 1: Mexican Orientation, Anglo Orientation (assimilation), and Integration (bicultural), and Scale 2: Marginalization and Separation.

**Acculturative stress.** Two subscales of the Hispanic Women’s Social Stressor Scale (HWSSS) were used to assess acculturative stress (Goodkind, Gonzales, Malcoe, & Espinosa, 2008). This is a 41-item scale specifically designed to assess social stress for Mexican American women. The measure is comprised of six subscales of social stressors: immigration, socioeconomic, racism-related, familial, parental, and employment. Participants indicate whether they experienced the stressor over the past year and if they did, then they rate each stressor on a Likert-type scale indicating the level of stress experienced ranging from 0 (*Not at all stressful*) to 3 (*Very stressful*). Mean scores are obtained for each subscale. Thus, total scale scores range from 0 to 3 with higher scores indicating increased stress. Twelve items measure stress related to immigration, eight items measure socioeconomic stress and lack of social support, six items measure stress from racial discrimination, five items measure family –related stressors, five items measure child rearing stressors, and four items measure work related stress. Cronbach’s alpha coefficients ranged from .73 to .94 indicating good internal consistency (Goodkind et al., 2008). The subscales measuring stress related to immigration and racial discrimination were used in the current study. The immigration stress subscale measured the amount of stress individuals were experiencing in relation to having moved to the United States. For example, one question asked participants to rate the stressfulness of, “not understanding U.S. values and culture.” The racial discrimination subscale asked questions to assess the degree of stress individuals were experiencing in relation to experiences of racism and discrimination. For example,

participants were asked to rate the amount of stress related to, “being ignored or getting poor services at stores or offices because you are Hispanic.” This measure was designed to be administered in an interview format therefore the wording of the instructions was changed slightly to allow for a written survey format. See Appendix C.

**Body dissatisfaction.** Four subscales from the Eating Disorders Inventory (EDI; Garner, Olmstead, & Polivy, 1983) were used to assess indicators of body dissatisfaction and the propensity for eating disordered behaviors/ideation: The Body Dissatisfaction (BD) subscale is a 9-item, Likert-type scale, which measures dissatisfaction with a number of body parts such as the stomach and hips, and in particular concern that specific body parts are too large. Higher scores indicate greater Body Dissatisfaction. Five items are reversed scored. Cronbach’s alpha was reported at .90 for a subgroup of women diagnosed with anorexia and .91 for a female comparison group (Garner et. al, 1983). The Body Dissatisfaction subscale of the EDI is reported to be the most frequently used measure of body satisfaction (Grabe & Hyde, 2006). The Drive for Thinness (DT) is a subscale consisting of 7-item on a Likert-type scale. A Drive for Thinness is indicative of a preoccupation with weight and is considered to be a key component of anorexia nervosa (Garner et. al, 1983). Individuals who endorse considerable Drive for Thinness are concerned with dieting and weight loss and express fear of gaining weight. An example Drive for Thinness question is as follows, “I am preoccupied with the desire to be thinner.” Cronbach’s alpha was reported at .85 (Garner et. al, 1983). One item is reversed scored. Higher scores represent a greater Drive for Thinness. The Bulimia subscale consists of 7 items rated on a Likert-type scale with higher scores indicative of greater endorsement of Bulimic behaviors. Specifically, the Bulimia subscale measures the

propensity or desire to engage in bingeing and self-induced vomiting. For example, one question on the Bulimic subscale asks participants to indicate how often they engage in the following behavior, “I stuff myself with food.” For Cronbach’s alpha was reported at .90 and .83 (Garner et. al, 1983). The Ineffectiveness subscale is comprised of 10 items rated on a Likert-type scale with higher scores representing endorsement of higher levels of ineffectiveness. This subscale measures negative states that have been associated with Anorexia Nervosa including feeling inadequate, insecure, and worthless as well as not feeling in control of one’s life. Cronbach’s alpha was report at .90 and .86 (Garner et. al, 1983). Four items are reverse scored. For each of the subscales, items range from 0 to 3 across six response options: *always, usually, often, sometimes, rarely, or never* and are added to achieve a subscale total score (Garner et. al, 1983). The authors would collapse the 3 lowest scores (i.e., sometimes, rarely, and never) into a score of 0; however, in the current study, researchers chose to keep the expanded Likert scale options to retain the distinction between those who never endorse the behaviors and attitudes assessed and those who did so even if only sometimes ore rarely. Items were scored ranging from 1 to 6. The EDI as a whole has demonstrated good convergent validity with the EAT with the former being more conservative in identifying weight preoccupation. Cronbach’s alpha coefficients across scales ranged from .83 to .91, indicating good internal consistency (Garner et. al, 1983). See Appendix E.

In addition, the Body Esteem Scale (BES) developed by Franzoi and Shields (1984) was used to assess body dissatisfaction in terms of body esteem. Franzoi and Shields conceptualize body esteem for women as having three components: sexual attractiveness, weight concern, and physical condition. The sexual attractiveness

component consists of one's assessment of body parts associated with physical attractiveness that cannot be changed through exercise such as lips. The weight concern component consists of attitudes toward body parts that can be altered through exercise such as thighs. The physical condition component assesses body esteem in terms of stamina, strength, and agility. This scale is comprised of 35 items rated on a Likert-type scale ranging from 1 (*Have strong negative feelings*) to 5 (*Have strong positive feelings*). Higher scores indicate positive body-esteem. Examples of items include ratings for waist, thighs, breasts, and appearance of eyes. Cronbach's alpha coefficients were reported at .78 for attractiveness, .87 for weight concerns, and .82 for physical condition (Franzoi & Shields, 1984). See Appendix F.

**Body mass.** Participants' body mass index (BMI) was calculated using self-reported weight and height. A BMI is obtained by dividing an individual's weight by height squared ( $BMI = \text{Kg}/\text{M}^2$ ) (Wing & Polley in Baum; Revenson, & Singer, 2001). A BMI of 25 – 29.9 is categorized as overweight, and a BMI of greater than 30 is defined as obese.

**Objectified body consciousness.** To assess objectified body consciousness, the Objectified Body Consciousness scale (OBC) was used (McKinley & Hyde, 1996). The OBC consists of three subscales: Surveillance, Body Shame, and Control Beliefs. The Surveillance subscale measures the degree to which individuals begin to objectify their bodies by judging how they look from an external point of view. For example, participants are asked to what extent they agree with the following statement (item is reverse scored), "I think more about how my body feels than how my body looks." The Surveillance subscale is an 8-item, Likert-type scale; 6 items are reverse scored. The

second subscale is Body Shame, which is also an 8-item, Likert-type scale; 2 items are reverse scored. The Body Shame subscale measures the degree to which societal standards have been internalized and the desire to meet them is seen as a personal choice that cannot be met. An example Body Shame item is, “When I’m not the size I think I should be, I feel ashamed.” The third subscale is Control Beliefs, which includes 8 items on a Likert-type scale (6 items are reverse scored). The Control Beliefs subscale measures the degree to which women feel they have the power to change their appearance. Each scale ranges from 1 (*strongly disagree*) to 7 (*strongly agree*). There is a midpoint of neither agree or disagree and an option to circle not applicable. Scores on each subscale are obtained by adding and dividing by the number of items to obtain a mean score. Higher scores indicate greater objectified body consciousness, specifically increased surveillance and body shame, as well as an increased sense of control over one’s body. McKinley and Hyde (1996) reported moderate to high internal consistencies as follows: Surveillance (.89), Body Shame (.75), and Control Beliefs (.72). McKinley and Hyde also reported intercorrelations between subscales as follows: Surveillance and Body Shame (.66), Surveillance and Control Beliefs (.30), and Body Shame and Control Beliefs (.23). See Appendix D for scale.

## **Procedures**

After giving consent, participants completed questionnaires that assessed demographic characteristics, level of acculturation, acculturative stress, level of objectified body consciousness, and body dissatisfaction as represented by a direct measure of body dissatisfaction as well as a drive for thinness, bulimic symptoms, a sense

of being ineffective, and overall body esteem. California State University, San Bernardino students were able to access the survey online using the SONA-systems data collection system utilized by the university. Students were able to obtain extra credit toward their classes for their participation. For community participants, as noted earlier, the primary researcher utilized bilingual assistants to distribute and collect surveys. As a number of the surveys were collected at the Festival de la Uva, the primary researcher and bilingual assistants were available during administration of the questionnaires to explain procedures and answer questions. Community participants were given the opportunity to enter a drawing for a ten dollar gift card to compensate for their willingness to participate in the study; one card was raffled for every ten surveys collected. To maintain confidentiality, participants were not asked to provide any identifying information such as names or social security numbers on the survey.

### **Research Design**

A descriptive analysis was conducted to assess demographic characteristics for the sample as a whole as well as to compare university and community participants. For the variables of interest, a correlation matrix was calculated. Structural Equation Modeling (SEM) was applied to test the model in Figure 1 using the EQS software developed by Bentler (1995). Structural Equation Modeling was chosen as it allows for the examination of several variables of interest at once and can be used to test for the indirect effects of intervening variables, which is an approach that is believed to be more powerful than the Baron and Kenny approach for examining mediating variables (Ullman cited in Tabachnick & Fidell, 2007, p. 772). Specifically, as SEM allows for the inclusion

of multiple variables in one model and examination of direct and indirect effects, it is possible to account for confounding effects and suppression and to better understand situations where mediation is occurring in the absence of a statistically significant relationship between the independent and dependent variable (Mackinnon, Krull, & Lockwood, 2000; Preacher & Hayes, 2008). The Comparative Fit Index (CFI) and Root Mean Square Error of Approximation (RMSEA) fit indices were applied to assess the overall fit of the model to the data. The cut-off for adequate fit for CFI was .90 to .93. The cut-off for adequate fit for RMSEA was .08 to .05. The total number of participants (352) well exceeded the minimum number of participants suggested to provide power of .90 for a medium effect size with an eight predictor multiple regression and is applicable to a SEM model (Jackson, 2003; Jackson, 2001; Ullman, 2007).

## Results

The mean scores and standard deviations were calculated for each of the following key variables: Body Mass Index (BMI), Linear Acculturation (LA), Mexican Orientation Subscale (MOS), Anglo Orientation Subscale (AOS), HWSSS Immigration stress (HWSSSI), HWSSS Racism stress (HWSSSR), OBC Surveillance (OBCS), OBC Body Shame (OBCBS), OBC Control (OBCC), EDI Body Dissatisfaction (EDIBD), EDI Drive for Thinness (EDIDT), EDI Bulimia (EDIB), EDI Ineffectiveness (EDIE), Body Esteem Scale (BES). See Table 2. Overall sample characteristics were identified based on the mean scores. On average, participants tended to have BMI scores within the overweight range (A BMI of 25 – 29.9 is categorized as overweight). Using the cutoff scores provided by the authors of the ARSMA-II (Cuéllar, Arnold, & Maldonado, 1995), in general, the sample fell within the balanced bicultural range (Mexican oriented to approximately balanced bicultural  $\geq -1.33$  and  $\leq -.07$ ), and acculturative stress was low with respondents' mean score indicating little or no stress. The mean score on OBC fell within the midrange for the sample. The overall sample mean scores on the EDI subscales of Drive for Thinness, Bulimia, Body Dissatisfaction, and Ineffectiveness ranged between rarely and often. The sample mean score on the BES indicated that in general participants had no feelings one way or the other to moderately positive feelings with regard to body esteem.



Table 2

*Means and Standard Deviations for BMI, LA, MOS, AOS, HWSSSI, HWSSSR, OBCS, OBCBS, OBCC, EDIBD EDIDT, EDIB, EDIE, and BES*

Variable <i>n</i> = 352	Scale Range	<i>M</i>	<i>SD</i>
Body Mass Index (BMI)		26.154	5.990
Linear Acculturation (LA)	< -1.33 to >2.45	-.159	1.352
Mexican Orientation Subscale (MOS)	1 to 5	3.800	.802
Anglo Orientation Subscale (AOS)	1 to 5	3.642	.833
HWSSS Immigration stress (HWSSSI)	0 to 3	.705	.721
HWSSS Racism stress (HWSSSR)	0 to 3	.745	.798
OBC Surveillance (OBCS)	1 to 7	4.308	1.195
OBC Body Shame (OBCBS)	1 to 7	3.693	1.284
OBC Control (OBCC)	1 to 7	4.731	1.034
EDI Body Dissatisfaction (EDIBD)	1 to 6	3.489	1.092
EDI Drive for Thinness (EDIDT)	1 to 6	3.306	1.238
EDI Bulimia (EDIB)	1 to 6	2.123	.995
EDI Ineffectiveness (EDIE)	1 to 6	2.424	.983
Body Esteem Scale (BES)	1 to 5	3.348	.739

*Note.* Linear Acculturation (LA) = (AOS *M* – MOS *M*), HWSSS = Hispanic Women's Social Stressor Scale, OBC = Objectified Body Consciousness, EDI = Eating Disorder Inventory.

The mean scores and standard deviations were also calculated for each of the key variables for community and university participants separately to examine overall differences in sample characteristics. See Table 3. On average, community participants tended to have higher BMI scores within the upper end of the overweight range (A BMI of 25 – 29.9 is categorized as overweight) whereas university participants tended to have BMI scores within the lower end of the overweight range. University participants identified as more acculturated and endorsed a stronger Anglo orientation and were less likely to endorse a Mexican orientation as compared to the community participants. Acculturative stress in the form of immigration stress and stress from racism was lower for university participants than it was for community participants. For OBC, mean scores

for the university participants indicated that they were more likely to endorse body surveillance and to feel they had control than were community participants, but there were no significant differences in endorsement of body shame between the two groups. The university participants mean scores on the EDI subscales of Drive for Thinness, Bulimia, and Body Dissatisfaction were higher than the community participant scores, but not significantly so. Similarly, community participants and university participants endorsed similar levels of body esteem; however, the mean score on the EDI – Ineffectiveness subscale indicated community participants felt less effective than did university participants.

Table 3

*Means and Standard Deviations for Community and University Participants for BMI, LA, MOS, AOS, HWSSSI, HWSSSR, OBCS, OBCBS, OBCC, EDIBD EDIDT, EDIB, EDIE, and BES*

Variable	Community ( <i>n</i> = 116)		University ( <i>n</i> = 236)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Body Mass Index	28.435***	6.095	25.033	5.619
Linear Acculturation	-1.198***	1.404	.353	.984
Mexican Orientation Subscale	4.166***	.620	3.621	.821
Anglo Orientation Subscale	2.967***	1.025	3.974	.432
HWSSS Immigration stress	1.009***	.833	.556	.607
HWSSS Racism stress	.899*	.860	.669	.756
OBC Surveillance	3.815***	1.036	4.550	1.195
OBC Body Shame	3.842	1.229	3.621	1.306
OBC Control	4.465**	1.096	4.862	.979
EDI Body Dissatisfaction	3.350	.998	3.557	1.131
EDI Drive for Thinness	3.273	1.240	3.321	1.240
EDI Bulimia	2.080	.963	2.143	1.011
EDI Ineffectiveness	2.592*	1.062	2.341	.933
Body Esteem Scale	3.437	.773	3.304	.719

*Note.* HWSSS = Hispanic Women's Social Stressor Scale, OBC = Objectified Body Consciousness, EDI = Eating Disorder Inventory.

\**P* < .05; \*\**P* < .01; \*\*\**P* < .001.

As the purpose of including university and community participants was to obtain a wider range of acculturation levels within the study, mean scores were compared for each of the acculturation indices. Community participants were significantly less acculturated than were university participants with regard to overall acculturation level ( $t(350) = 12.007, p < .001$ ). Community participants were significantly more likely to endorse a Mexican orientations ( $t(350) = -6.315, p < .001$ ) and significantly less likely to endorse an Anglo orientation ( $t(350) = 12.936, p < .001$ ) than were university participants.

The five levels of acculturation, as identified by Cuellar et al. (1995), which incorporate an individual's identification with both cultures, was calculated by subtracting the MOS mean score from the AOS mean score. Acculturation levels using the formula as presented by the authors of the ARSMA-II are given below (Table 4). The majority of the participants endorsed a bicultural level of acculturation while approximately a third of the sample self-identified as either very Mexican oriented or very Anglicized.

Using the Marginalization scale created by Cuellar et al., the number of participants who would be classified as marginalized was also identified. Individuals were considered to be marginalized if their scores were as follows:  $ANGMAR \geq 17.34$  and  $MEXMAR \geq 16.82$  and  $MAMARG \geq 14.98$  (Cuellar et al., 1995). Of the 352 participants in the study, only 34 met the criteria to be categorized as marginalized, an insufficient number for inclusion in further analyses using SEM. As such, for the SEM analyses, Level of Acculturation was calculated and measured using the formula for Linear Acculturation (LA) provided by Cuellar et al. (1995).

Table 4

*Acculturation Level as a Percentage for the Total Sample (Frequencies in Parentheses)*

Acculturation Level		Total Sample (n = 352)
I	Very Mexican Oriented	15.3 (54)
II	Mexican Oriented to Approximately Balanced Bicultural	37.5 (132)
III	Slightly Anglo Oriented Bicultural	32.1 (113)
IV	Strongly Anglo Oriented	13.1 (46)
V	Very Assimilated; Anglicized	2.0 (7)

*Note.* I = < 1.33; II =  $\geq -1.33$  and  $\leq -.07$ ; III =  $> -.07$  and < 1.19; IV =  $\geq 1.19$  and < 2.45; and V =  $> 2.45$ .

Table 5

*Acculturation Level as a Percentage for Community and University Participants (Frequencies in Parentheses)*

Acculturation Level		Community (n = 116)	University (n = 236)
I	Very Mexican Oriented	44.0 (51)	1.3 ( 3)
II	Mexican Oriented to Approximately Balanced Bicultural	32.8 (38)	39.4 (93)
III	Slightly Anglo Oriented Bicultural	19.0 (22)	38.1 (90)
IV	Strongly Anglo Oriented	3.4 ( 4)	16.9 (40)
V	Very Assimilated; Anglicized	0.0 ( 0)	3.0 ( 7)
Missing		.9 ( 1)	1.3 ( 3)

*Note.* I = < 1.33; II =  $\geq -1.33$  and  $\leq -.07$ ; III =  $> -.07$  and < 1.19; IV =  $\geq 1.19$  and < 2.45; and V =  $> 2.45$ .

## Correlations

Prior to running the SEM analyses, bivariate correlations among variables of interest in the study were examined. Four latent factors were developed for analysis using SEM. Specifically, The SES factor was comprised of age and education, the

Acculturative Stress factor was comprised of the Hispanic Women's Social Stressor subscales of immigration and racism stress, the Objectified Body Consciousness factor was comprised of the three subscales – Body Dissatisfaction, Body Shame, and Control Beliefs, and the Body Dissatisfaction factor was comprised of the outcome variables (the 4 subscales of the EDI and the Body Esteem Scale). Acculturation was examined using the Linear Acculturation measure. For the correlations, relationships among the latent factors and the Linear Acculturation measure utilized in the subsequent SEM analysis were examined. Linear Acculturation was significantly correlated with the outcome measure of Body Dissatisfaction indicating increased body dissatisfaction with increased acculturation. See table 6.

Table 6

*Summary of Intercorrelations for Key Variables and Factors in the SEM Analysis: Socioeconomic Status, Linear Acculturation, Hispanic Women’s Social Stressor Scale Average, Objectified Body Consciousness, and Body Dissatisfaction*

Variables	1	2	3	4	5
1. SES	---	.650*	-.401*	.221*	.093
2. LA		---	-.617*	.341*	.178*
3. HWSSSA			---	-.210*	-.110*
4. OBC				---	.591*
5. BD					---

*Note.* Intercorrelations for study participants ( $n = 352$ ) are presented. SES = Socioeconomic Status measured by income and education, with higher scores indicating greater SES. LA = Linear Acculturation level (AOS  $M - MOS M$ ) with higher scores representing a stronger Anglo orientation and lower scores indicating a stronger Mexican orientation. HWSSSA = Hispanic Women’s Social Stressor Scale Average score, which is a combined score for the two subscales - Immigration stress and Racism stress. Higher scores on the HWSSSA indicate higher levels of stress. OBC = Objectified Body Consciousness scale, which is comprised of Surveillance; Body Shame, and Control Beliefs. Higher scores indicate greater Objectified Body Consciousness. Body Dissatisfaction is comprised of the four subscales of the EDI – Body Dissatisfaction, Drive for Thinness, Bulimia, and Ineffectiveness, and the Body Esteem Scale, with higher scores indicating greater Body Dissatisfaction.

\* $p < 0.05$ .

Individuals of lower SES were less likely to be acculturated and more likely to report acculturative stress in the form of immigration stress and racism. Increasing overall acculturation was negatively correlated with acculturative stress. Increased Objectified Body Consciousness was associated with greater Body Dissatisfaction. Linear Acculturation was correlated with Objectified Body Consciousness and Body Dissatisfaction with greater acculturation being associated with increased Objectified

Body Consciousness and Body Dissatisfaction. Acculturative Stress was not associated with Objectified Body Consciousness or Body Dissatisfaction. Additional specific correlations between all of the individual variables in the study can be found in Appendices G through N (Tables 11 through 18).

### **Structural Equation Model Analyses**

For the Structural Equation Model, the multivariate normality was violated (Mardia's Normalized Coefficient = 8.032). As such, a robust model was estimated using maximum likelihood estimation and tested with the Satorra-Bentler scaled chi square. The standard errors were adjusted to the extent of the nonnormality. An attempt was made to run the model as hypothesized, but reliable parameter estimates could not be obtained using the original configuration. Model modifications were performed to fit the model. Specifically, using the Lagrange Multiplier test, as well as theoretical relevance, two residual covariances were estimated (Sample group – whether data were drawn from the university or the community as a predictor of age, and age as a predictor of BMI). Additionally, using the Wald Test for dropping parameters, four paths were eliminated from the model (age as a predictor of level of Acculturation and Objectified Body Consciousness, and Acculturative Stress as a direct predictor of Body Dissatisfaction, and Acculturative Stress as a predictor of Objectified Body Consciousness). The two direct paths involving Acculturative Stress were key components of the hypothesized model, indicating non-support for the first and third hypotheses as modeled, and the relevance of their elimination is discussed later within the context of the specific hypothesis for each. In addition, the correlation between Objectified Body Consciousness and Body



Dissatisfaction was such that the model required inclusion of covariance between the two constructs, which indicated that OBC Body Shame was more highly correlated with the latent construct of Body Dissatisfaction than it was with the latent construct of Objectified Body Consciousness and that OBC Control cross loaded on both constructs. The implications of this are discussed below. Marginal support was found for the modified model: Satorra-Bentler  $\chi^2$  (125,  $n = 352$ ) = 352.319,  $p < .0001$ , Robust CFI = .88, RMSEA = .072. The final model with standardized coefficients can be seen in Figure 2.

Body Dissatisfaction, a latent factor, was well defined by each of its measured variables: The Body Esteem Scale (standardized coefficient =  $-.79$ ,  $p < .05$ ,  $R^2 = .63$ ); EDI – Drive for Thinness (standardized coefficient =  $.86$ ,  $p < .05$ ,  $R^2 = .74$ ); EDI – Bulimia (standardized coefficient =  $.67$ ,  $p < .05$ ,  $R^2 = .45$ ); EDI – Body Dissatisfaction (standardized coefficient =  $.73$ ,  $p < .05$ ,  $R^2 = .62$ ); EDI – Ineffectiveness (standardized coefficient =  $.70$ ,  $p < .05$ ,  $R^2 = .48$ ).

The latent factor of Objectified Body Consciousness was best defined by the measured variable of OBC – Body Surveillance (standardized coefficient =  $.72$ ,  $p < .05$ ,  $R^2 = .52$ ). The other two dimensions of this construct cross-loaded with Body Dissatisfaction with Body Shame being less representative of Objectified Body Consciousness (standardized coefficient =  $-.19$ ) and more representative of Body Dissatisfaction (standardized coefficient =  $.86$ ) with the total  $R^2 = .59$ ,  $p < .05$ . Similarly, the dimension of Control was representative of Objectified Body Consciousness (standardized coefficient =  $.45$ ), but was also representative of Body Dissatisfaction (standardized coefficient =  $-.58$ ) with a total  $R^2 = .23$ ,  $p < .05$ . Greater overall Objectified

Body Consciousness was represented by increased Surveillance and control while greater Body Dissatisfaction was represented by increased Body Shame and decreased Control.

To analyze the latent factor of Acculturative Stress, the measured variables, HWSSS - Racism and HWSSS - Immigration Stress were subdivided into four indices: work, language, deportation, and status. Results indicate that Acculturative Stress was well defined by the measured variables: Work (standardized coefficient = .69,  $p < .05$ ,  $R^2 = .48$ ); Language (standardized coefficient = .84,  $p < .05$ ,  $R^2 = .70$ ); Deportation (standardized coefficient = .79,  $p < .05$ ,  $R^2 = .63$ ); and Status (standardized coefficient = .74,  $p < .05$ ,  $R^2 = .54$ ) Increased Acculturative Stress was represented by greater endorsement of having experienced Racism and Immigration Stress.

The latent factor of Socioeconomic Status was best defined by level of education (standardized coefficient = .62,  $p < .05$ ,  $R^2 = .38$ ) and less so by income (standardized coefficient = .31,  $p < .05$ ,  $R^2 = .09$ ). Increased SES was represented by higher levels of education and to a lesser degree by increased income. This was further demonstrated by the fact that overall, being a university student was predictive of having a higher SES than those participants drawn from the general community (standardized coefficient = -.84,  $p < .05$ ,  $R^2 = .70$ ). Higher SES was predictive of an increased level of acculturation (standardized coefficient = .65,  $p < .05$ ,  $R^2 = .42$ ) as well.

Initially, it was expected that increasing age would be predictive of greater Objectified Body Consciousness and higher levels of Acculturation, but these pathways were nonsignificant. Both of the added residual covariances accounted for a significant portion of variance in the model. Increasing age was predictive of higher BMI (standardized coefficient = .34,  $p < .05$ ,  $R^2 = .11$ ), and being a participant who was drawn

from the community predicted being older (standardized coefficient = .51,  $p < .05$ ,  $R^2 = .26$ ).

When examining the first hypothesis, it was found that Acculturative Stress did not mediate the relationship between level of Acculturation and Body Dissatisfaction. Level of Acculturation was predictive of Acculturative Stress (standardized coefficient =  $-.62$ ,  $p < .05$ ,  $R^2 = .38$ ), with acculturative stress decreasing as one acculturated, which is contrary to what was expected. Acculturative Stress, however, was not directly predictive of Body Dissatisfaction.

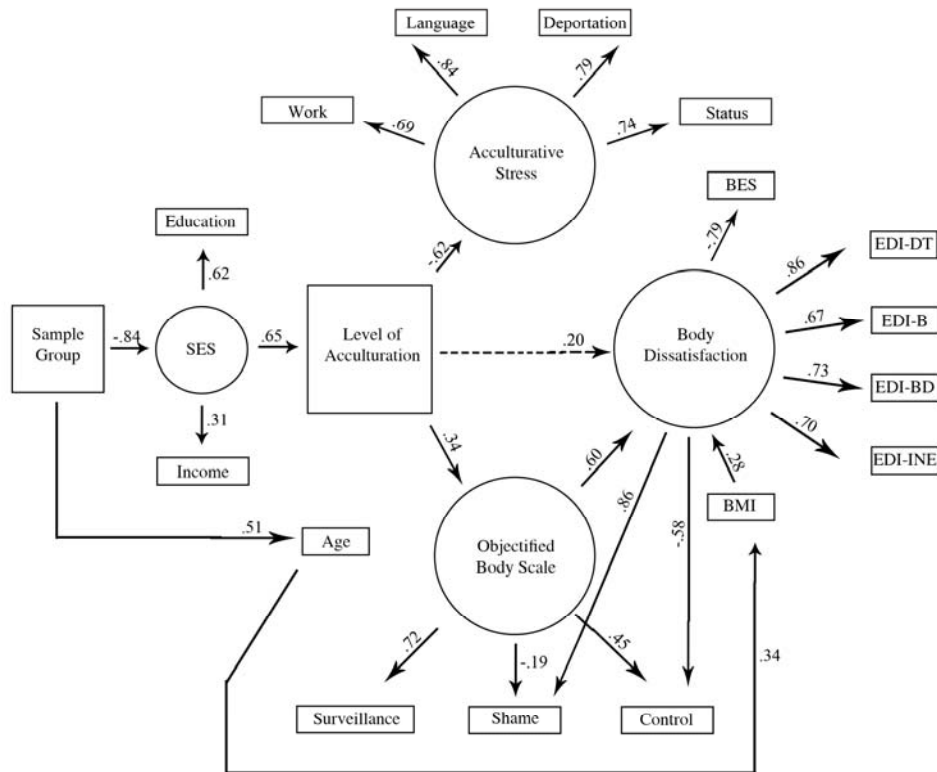
When examining the second hypothesis, Objectified Body Consciousness was found to mediate the relationship between level of Acculturation and Body Dissatisfaction. A significant amount of variance in Objectified Body Consciousness was predicted by Level of Acculturation (standardized coefficient =  $.34$ ,  $p < .05$ ,  $R^2 = .12$ ) with more acculturated individuals experiencing greater Objectified Body Consciousness in terms of increased Body Surveillance and Control. In turn, Body Dissatisfaction was associated with increased Objectified Body Consciousness (standardized coefficient =  $.60$ ,  $p < .05$ ) and to a lesser degree by higher Body Mass Index (standardized coefficient =  $.28$ ,  $p < .05$ ). As Objectified Body Consciousness increased, participants endorsed higher levels of Body Dissatisfaction in the form of increased Drive for Thinness, Bulimia, Body Dissatisfaction and Ineffectiveness as measured by the EDI and lower Body Esteem. With regard to the cross-loading of the Objectified Body Consciousness scale, increased Body Dissatisfaction was also represented by increased Body Shame and decreased Control. Together, the OBC (which was represented predominantly by

increased Surveillance with an additional aspect of increased Control) and BMI variables accounted for a significant portion of variance in Body Dissatisfaction ( $R^2 = .43$ ).

When examining the third hypothesis, a significant direct relationship was not found between Acculturative Stress and Objectified Body Consciousness, which indicated that Acculturative Stress was not related to Objectified Body Consciousness.

Together the first three hypotheses address the overall question as to whether there is a relationship between Acculturation and Body Dissatisfaction. In the final model, there was an indirect effect of Acculturation on Body Dissatisfaction through the intermediating variables. Specifically, the intermediating variables of OBC and Acculturative Stress represented a significant indirect effect between Acculturation and Body Dissatisfaction,  $t(350) = 4.15, p < .05$ .

The fourth hypothesis, which proposed exploration of the relationship between Objectified Body Consciousness and Acculturative Stress for women who identified as highly integrated and Marginalized (utilizing the four separate categories of acculturation) could not be analyzed due to the minimal number of individuals who identified as marginalized.



*Figure 2.* Final SEM of the relationship between Level of Acculturation and Body Dissatisfaction. Sample Group = whether participants were from the community or the university; SES = socioeconomic status; BES = Body Esteem Scale; BMI = Body Mass Index; EDI-DT = Eating Disorder Inventory – Drive for Thinness; Eating Disorder Inventory – Bulimia; Eating Disorder Inventory – Body Dissatisfaction; Eating Disorder Inventory – Ineffectiveness. The dotted line from Level of Acculturation to Body Dissatisfaction is indicative of a significant indirect effect, which is accounted for by the intermedating variables. All testable pathways were statistically significant,  $p < .05$ .

### **Additional Analyses**

Post-hoc analyses were ran after examining the final SEM. Given that Acculturative Stress was not directly associated with Body Dissatisfaction, but rather was associated with Acculturation, the relationship between Level of Acculturation, Acculturative Stress, and Objectified Body Consciousness was further analyzed. Specifically, whether Acculturative Stress moderated the relationship between Level of Acculturation and Objectified Body Consciousness was examined using a hierarchical moderated regression. Further, as preliminary analyses precluded the possibility of examining the four levels of acculturation proposed in prior research due to the minimal number of participants who met the criteria for marginalization, participants' level of Mexican Orientation was examined separately from level of Anglo Orientation (rather than using the linear measure of acculturation) with regard to the foregoing variables. The covariates of age, SES, and BMI were included on the first step of each of the models to control for their impact on Objectified Body Consciousness. Additionally, to remain consistent with the analysis of the data using SEM, the same latent factors (SES, Acculturative Stress, Objectified Body Consciousness, and Body Dissatisfaction) developed for the SEM were utilized for the hierarchical regression analyses.

In the first analysis of Objectified Body Consciousness, the overall model was significant,  $F(351) = 3.65, p < .01$ . Age, SES, and BMI were entered on the first step; however, only BMI accounted for a small but significant portion of the variance  $F(3,348) = 4.03, p < .01$ . Acculturative Stress and Mexican Orientation were added on the second step. The main effect of Acculturative Stress contributed significantly to the model,  $F(2,346) = 3.14, p < .05$  while Mexican Orientation did not. Specifically, there was a

significant effect for Acculturative Stress such that an increase in Acculturative Stress was associated with an increase in Objectified Body Consciousness. On the third step, increased BMI and increased Acculturative Stress were associated with increased Objectified Body Consciousness, but Mexican Orientation was not and the interaction between Acculturative Stress and Mexican Orientation did not add significantly to the model. See Table 7.

In the second analysis of Objectified Body Consciousness, the overall model was significant,  $F(351) = 3.51, p < .01$ . Age, SES, and BMI were added on the first step; only the covariate of BMI accounted for a small but significant portion of the variance,  $F(3,348) = 4.03, p < .01$ . Acculturative Stress and Anglo Orientation were added on the second step. The main effect, Acculturative Stress, also added significantly to the model,  $F(2,346) = 4.38, p < .05$ , but Anglo Orientation did not. Specifically, increased Acculturative Stress was associated with increased Objectified Body Consciousness. On the third step, BMI and the main effect of Acculturative Stress continued to account for a significant portion of variance in the model; however, neither Anglo Orientation nor the interaction were significant. As BMI increased, it was associated with greater Objectified Body Consciousness as was increased Acculturative Stress. See Table 8.

Table 7

*Hierarchical Multiple Regression Analyses Predicting Objectified Body Consciousness as a function of Mexican Orientation and Acculturative Stress*

Predictor	Objectified Body Consciousness		
	$R^2$	$\Delta R^2$	$\beta$
Step 1	.034**	.034**	
Age in Years			-.070
SES Factor			-.056
BMI			.182***
Step 2	.051**	.017*	
Age in Years			-.083
SES Factor			-.037
BMI			.184***
Acculturative Stress Factor (AS)			.142*
Mexican Orientation (MO)			-.040
Step 3	.060**	.009	
Age in Years			-.065
SES Factor			-.039
BMI			.182***
Acculturative Stress Factor (AS)			.173**
Mexican Orientation (MO)			-.073
AS by MO Interaction			-.103
<i>n</i>	352		

*Note.* SES Factor included level of education and family income. Acculturative Stress Factor included Racial and Immigration Stress. Objectified Body Consciousness Factor included Body, Body Shame, and Control Beliefs.

\* $p < 0.05$ ; \*\* $p < 0.01$ , \*\*\* $p \leq 0.001$ .



Table 8

*Hierarchical Multiple Regression Analyses Predicting Objectified Body Consciousness as a function of Anglo Orientation and Acculturative Stress*

Predictor	Objectified Body Consciousness		
	$R^2$	$\Delta R^2$	$\beta$
Step 1	.034**	.034**	
Age in Years			-.070
SES Factor			-.056
BMI			.182***
Step 2	.057***	.024*	
Age in Years			-.048
SES Factor			-.060
BMI			.184***
Acculturative Stress Factor (AS)			.168**
Anglo Orientation (AO)			.115
Step 3	.058**	.000	
Age in Years			-.046
SES Factor			-.060
BMI			.184***
Acculturative Stress Factor (AS)			.171**
Anglo Orientation (AO)			.111
AS by AO Interaction			.016
<i>n</i>	352		

*Note.* SES Factor included level of education and family income. Acculturative Stress Factor included Racial and Immigration Stress. Objectified Body Consciousness Factor included Body Surveillance, Body Shame, and Control Beliefs.

\* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p \leq 0.001$ .

Two additional analyses were conducted to examine the relationship between Objectified Body Consciousness, Acculturation, and Body Dissatisfaction. Participants' level of Mexican Orientation was examined separately from level of Anglo Orientation. Specifically, two hierarchical moderated regressions were conducted to examine whether maintaining a Mexican Orientation or an Anglo Orientation, respectively, moderated the

relationship between Objectified Body Consciousness and Body Dissatisfaction. The covariates of age, SES, BMI, and Acculturative Stress were included on the first step of each of the models to control for their impact on Body Dissatisfaction.

In the first analysis of Body Dissatisfaction, the overall model was significant,  $F(351) = 56.64, p < .001$ . Age, SES, BMI, and Acculturative Stress were added on the first step. The covariates of Age, BMI, and Acculturative Stress accounted for a significant portion of variance in the model,  $F(4,347) = 9.72, p < .001$ ; SES did not. On the second step, the main effects of Objectified Body Consciousness and Mexican Orientation added significantly to the model,  $F(2,345) = 161.10, p < .001$ . Specifically, as Mexican Orientation decreased, Body Dissatisfaction increased, and as Objectified Body Consciousness increased Body Dissatisfaction also increased. On the third step, being older was associated with less Body Dissatisfaction while increased BMI, Acculturative Stress, and Objectified Body Consciousness were associated with increased Body Dissatisfaction, but SES was not. Greater Mexican Orientation was associated with less Body Dissatisfaction, but the interaction between Objectified Body Consciousness and Mexican Orientation did not add significantly to the model. See Table 9.

Table 9

*Hierarchical Multiple Regression Analyses Predicting Body Dissatisfaction as a function of Mexican Orientation and Objectified Body Consciousness*

Predictor	Body Dissatisfaction		
	$R^2$	$\Delta R^2$	$\beta$
Step 1	.101***	.101***	
Age in Years			-.162**
SES Factor			.002
BMI			.308***
Acculturative Stress Factor (AS)			.127*
Step 2	.535***	.434***	
Age in Years			-.104*
SES Factor			.008
BMI			.195***
Acculturative Stress Factor (AS)			.091*
Objectified Body Consciousness Factor (OBC)			.653***
Mexican Orientation (MO)			-.163***
Step 3	.535***	.000	
Age in Years			-.105*
SES Factor			.005
BMI			.195***
Acculturative Stress Factor (AS)			.091*
Objectified Body Consciousness Factor (OBC)			.654***
Mexican Orientation (MO)			-.162***
OBC by MO Interaction			-.021
<i>n</i>	352		

*Note.* SES Factor included level of education and family income. Acculturative Stress Factor included Racial and Immigration Stress Objectified Body Consciousness Factor included Body Surveillance, Body Shame, and Control Beliefs. Body Dissatisfaction Factor included EDIBD = Eating Disorder Inventory Body Dissatisfaction; EDIDT = Eating Disorder Inventory Drive for Thinness; EDIB = Eating Disorder Inventory Bulimia; EDIE = Eating Disorder Inventory Ineffectiveness and the BES - Body Esteem Scale.

\* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ .

For the final analysis of Body Dissatisfaction, the overall model was significant,  $F(351) = 52.55, p < .001$ . Age, SES, BMI, and Acculturative Stress were added on the first step. The covariates of Age, BMI, and Acculturative Stress accounted for a small but significant portion of variance in the model,  $F(4, 347) = 9.72, p < .001$ . SES did not account for variance in the model. Objectified Body Consciousness and Anglo Orientation were added on the second step. The main effect of Objectified Body Consciousness added significantly to the model,  $F(2,345) = 148.39, p < .001$  while Anglo Orientation did not. Specifically, Increased Body Dissatisfaction was associated with increased Objectified Body Consciousness. On the third step, higher BMI and Objectified Body Consciousness continued to be associated with increased Body Dissatisfaction, but the interaction between Objectified Body Consciousness and Anglo Orientation with regard to Body Dissatisfaction was not significant. See Table 10.

Table 10

*Hierarchical Multiple Regression Analyses Predicting Body Dissatisfaction as a function of Anglo Orientation and Objectified Body Consciousness*

Predictor	Body Dissatisfaction		
	$R^2$	$\Delta R^2$	$\beta$
Step 1	.101***	.101***	
Age in Years			-.162**
SES Factor			.002
BMI			.308***
Acculturative Stress Factor (AS)			.127*
Step 2	.517***	.416***	
Age in Years			-.082
SES Factor			.000
BMI			.189***
Acculturative Stress Factor (AS)			.068
Objectified Body Consciousness Factor (OBC)			.653***
Anglo Orientation (AO)			.080
Step 3	.517***	.000	
Age in Years			-.081
SES Factor			.000
BMI			.188***
Acculturative Stress Factor (AS)			.068
Objectified Body Consciousness Factor (OBC)			.654***
Anglo Orientation (AO)			.081
OBC by AO Interaction			-.012
<i>n</i>	352		

*Note.* SES Factor included level of education and family income. Acculturative Stress Factor included Racial and Immigration Stress. Objectified Body Consciousness Factor included Body Surveillance, Body Shame, and Control Beliefs. Body Dissatisfaction Factor included EDIBD = Eating Disorder Inventory Body Dissatisfaction; EDIDT = Eating Disorder Inventory Drive for Thinness; EDIB = Eating Disorder Inventory Bulimia; EDIE = Eating Disorder Inventory Ineffectiveness and the BES - Body Esteem Scale.

\* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ .

## Discussion

The purpose of the current study was to expand prior research and to shed light on the unique factors that trigger body dissatisfaction among Mexican American women. Specifically, it was hypothesized that there would be a relationship between acculturation and body dissatisfaction, which would be mediated through the variables of Objectified Body Consciousness and Acculturative Stress while also taking into account SES, age, and BMI.

Results supported the hypothesis that Objectified Body Consciousness mediated the relationship between Acculturation and Body Dissatisfaction. Specifically, Mexican American women who had a higher overall level of Acculturation (i.e., a stronger Anglo orientation more so than a stronger Mexican orientation) endorsed a higher level of Objectified Body Consciousness. In turn, increased Objectified Body Consciousness was significantly correlated with increased Body Dissatisfaction. When examined concurrently with the other variables in the model, there was a significant indirect relationship between level of Acculturation and Body Dissatisfaction indicating that whether acculturating individuals are negatively impacted by exposure to the dominant culture's ideals of beauty depends on the degree to which they begin to internalize these standards, as represented by Objectified Body Consciousness. This parallels prior findings that have found that internalization of societal body expectations are correlated with increased body shame and body dissatisfaction (McKinley & Hyde, 1996; Mercurio & Landry, 2008).

Current results suggest that the Objectified Body Consciousness is not a cohesive construct with regard to its measured factors. Specifically, internalization is best captured by the construct of Surveillance and next by Control with increases in each being significant predictors of increased Body Dissatisfaction, but Body Shame was found to be much more representative of the construct Body Dissatisfaction and the dimension of Control related differently to each construct – positively with Objectified Body Consciousness and negatively with Body Dissatisfaction. As such, Control beliefs were indicative of increased Body Dissatisfaction with less Control being associated with higher Body Dissatisfaction. Prior research indicates that although the construct OBC is similar to body dissatisfaction, it represents a different aspect of dissatisfaction (Lindberg, Hyde, & McKinley, 2006; Lindberg Grabe, & Hyde, 2007), which seems to be best captured by the component of Surveillance as a measure of internalization that then manifests as Body Shame. Although the construct continues to be examined as a whole in some current studies, many have also used the three subscales separately and frequently examine Surveillance specifically as a predictor of Body Shame (Haine, Erchull, Liss, Turner, Nelson, Ramsey, & Hurt, 2008; Knauss, Paxton, & Alsaker, 2008; Lindberg et al., 2007), which is consistent with findings in the current study. Additionally, because of the variability in how the Control subscale relates to outcomes, some studies have elected to exclude it (Haine et al., 2008; Knauss et al., 2008).

While no directional hypotheses were made with regard to Control and Body Dissatisfaction, it is interesting to note that in the current study greater Body Dissatisfaction was correlated with increased Body Shame and Surveillance and less Control. The decrease in a sense of control in relation to an increase in the other variables

is opposite findings reported by McKinley and Hyde (1996). In their studies, greater Body Shame and Surveillance was associated with higher Control and increased disordered eating. They proposed that having a sense of control perhaps increased the likelihood of engaging in disordered eating behavior as a means of exercising that control.

With regard to Objectified Body Consciousness, findings do not clarify which aspects of one's body one feels ashamed of or whether one's body shame is specifically related to aspects of self that participants are relating to their ethnicity. Similarly, it is not clear as to why less control is associated with higher body dissatisfaction. Whether or not one has the perception of control does not elucidate how control or the lack thereof is interpreted. Thus, while some individuals may take pride in their bodies if they have a sense of having greater control in creating the body they want, other individuals may be less content with themselves if they feel they have control but do not exercise that control in working toward their ideal bodies. Similarly, a lack of control may buffer one's sense of responsibility for not meeting the perceived ideal, but may also create a sense of helplessness. The current study supports that later possibility that feeling like one does not have control over how one's body looks leads to an increased sense of body dissatisfaction. One possibility is that individuals who engage in surveillance and experience body shame not only evaluate themselves negatively, but also view those characteristics as being unchangeable resulting in greater overall body dissatisfaction. This may be especially salient for ethnic minorities who begin to internalize mainstream ideals, which they feel they cannot embody, and then to evaluate themselves negatively (Hall, 1995; Mok, 1998). In the current study, this possible relationship was examined in



terms of acculturative stress highlighting perhaps the helplessness individuals feel in the face of racism and the inability to effect change with regard to aspects of self that are being negatively viewed.

The hypothesis that the impact of level of Acculturation on Body Dissatisfaction would also be mediated by Acculturative Stress was not supported as modeled. This does not coincide with prior research indicating that acculturative stress such as discrimination may play a direct role in problems with disordered eating (Iyer & Haslam, 2003; Perez et al., 2002). Level of Acculturation did significantly predict Acculturative Stress. This relationship, however, was opposite than expected with individuals who were less acculturated endorsing higher levels of acculturative stress in the form of racism and immigration stress than did more acculturated individuals. Acculturative Stress, however, in turn did not directly predict increased Body Dissatisfaction. Nor was the third hypothesis supported – that Acculturative Stress would be directly positively correlated with Objectified Body Consciousness. However, conflicting findings were found in the post-hoc analyses with Acculturative Stress being significantly correlated with Objectified Body Consciousness as well as with Body Dissatisfaction in three of the four analyses. And again, there was a significant indirect effect of Acculturation on Body Dissatisfaction through the intermediating variables in the model. The difference is likely due to the way in which acculturation was examined in the SEM model (linear acculturation ranging from very Anglo to very Mexican oriented) versus the post-hoc analyses (Anglo and Mexican orientation as separate categories). Taken together, the analyses would suggest that increased Acculturative Stress is associated with increased Objectified Body Consciousness, but this is likely moderated by one's level of

acculturation with the impact of Acculturative Stress on Objectified Body Consciousness being obscured in the SEM model by the fact that Acculturative Stress is associated with less Acculturation while greater Acculturation is associated with higher Objectified Body Consciousness. The implication is that less acculturation is associated with lower Objectified Body Consciousness and body dissatisfaction, but that if one experiences acculturative stress, having a lower level of acculturation may still be accompanied by increased Objectified Body Consciousness. This would indicate that negative experiences translate into negative self-evaluations. This parallels prior findings that increased acculturative stress is associated with increased body dissatisfaction (Iyer & Haslam, 2003). Similarly, Perez et al. found that acculturative stress moderated the relationship between body dissatisfaction and bulimic symptoms for Latin and African American women. Additional research is needed to further elucidate how the internalization of negative experiences related to acculturation such as racism and discrimination contribute to whether individuals begin to view their bodies negatively.

The forgoing results indicate that both the process of becoming more acculturated to main stream ideals and the experience of acculturative stress contribute to increased Objectified Body Consciousness, which in turn is strongly predictive of greater body dissatisfaction and body shame, drive for thinness, and bulimic symptoms, as well as feelings of ineffectiveness and lower levels of overall body esteem or a sense of control. The amount of variance in Objectified Body Consciousness that is accounted for by level of acculturation and acculturative stress, however, is moderate indicating that other factors may better account for Objectified Body Consciousness among Mexican American women.

In addition to Acculturation, Acculturative Stress, and Objectified Body Consciousness, the model accounted for age, body mass index, and socioeconomic status when examining ethnicity and body dissatisfaction. Findings did not support the hypotheses that age would be a significant factor in predicting level of acculturation or Objectified Body Consciousness. One's age did not appear to predict whether one internalizes body ideals; however, it was still a noteworthy variable in the model. Specifically, university participants were significantly younger than community participants as one might expect. This highlights the importance of going beyond convenience samples, perhaps particularly in the Mexican American community, where there is a considerable difference in the demographics of those typically surveyed at college campuses and the general population. In addition, increasing age was predictive of increased BMI, which in turn was predictive of greater Body Dissatisfaction. Prior studies have also found weight to be a key variable in determining one's body satisfaction (BenTovim & Walker, 1991; Pepper & Ruiz, 2007; Sinclair & Myers, 2004). As BMI also accounted for a portion of the variance in Body Dissatisfaction independent of exposure to or internalization of Anglo ideals, this finding in the current study underscores the importance of parceling out these variables (age and BMI) when examining other factors related to body dissatisfaction.

As SES has previously been found to impact acculturation, acculturative stress, and attitudes toward weight and shape, it was also examined as a potentially confounding variable in the model. Bove and Olson (2006) had proposed that lower rather than higher SES would be associated with body dissatisfaction due to factors associated with poverty such as food insecurity. In the current study, higher SES was associated with increased

Acculturation. This supports Molloy & Herzberger's (1998) assertion that greater financial stability might translate into social mobility that would bring ethnic minorities into contact with mainstream ideals through the process of acculturation. While Molloy and Herzberger did not find support for their hypothesis, they noted that this may have been due to the lack of variability with regard to acculturation within their sample of college students. Differing results in the current study may reflect the greater variability in both SES and acculturation.

In keeping with the bidimensional model of acculturation and the conceptualization of acculturation as resulting in four possible separate categories of acculturation, the current study had proposed to explore the relationship between Body Dissatisfaction and each of the mediating variables (Objectified Body Consciousness and Acculturative Stress) for women who would be identified as highly integrated (who endorse similar levels of both Mexican and Anglo orientations) and marginalized women (those who did not endorse a Mexican or an Anglo orientation). Specific hypotheses were not made given the paucity of prior research. The current findings echoed prior research that has found limited utility with the Four Fold theory of acculturation in that few individuals identify as marginalized. This highlights, perhaps, the central role that one's cultural orientation continues to have in self-definition for the majority of people. Thus while it makes theoretical sense to use a bidirectional model of acculturation that encompasses four aspects of acculturation, bidirectional measures of acculturation such as Scale 1 of the ARSMA-II, which captures Anglo, Mexican, and bicultural orientations, appear to have more real-world utility in terms of how individuals define themselves.

Due to the limited utility of the Four Fold model of acculturation, a number of post-hoc analyses were run to examine the two central orientations (Anglo and Mexican) with regard to acculturation and their relationship with Objectified Body Consciousness and Body Dissatisfaction. Two of the post-hoc analyses examined the interaction between Acculturation and Acculturative Stress and the impact on Objectified Body Consciousness. As noted earlier, increased Acculturative Stress was associated with increased Objectified Body Consciousness, but it did not moderate the relationship between having a Mexican orientation or an Anglo orientation and Objectified Body Consciousness.

Additional post-hoc analyses examined whether having an Anglo or a Mexican orientation, respectively, moderated the relationship between Objectified Body Consciousness and Body Dissatisfaction. Neither one's Anglo orientation, nor Mexican orientation moderated this relationship. As in prior studies (Frederick et al., 2007; McKinley & Hyde, 1996), increased Objectified Body Consciousness was associated with increased Body Dissatisfaction as was increased BMI. A stronger Mexican orientation and being older was associated with lower Body Dissatisfaction. One implication of study findings is that it may be important to assist Mexican American women in maintaining a positive connection with their culture of origin including body ideals. With regard to body dissatisfaction and disordered eating, this may include helping Mexican American women to identify women within their culture of origin and/or outside the mainstream ideal whom they can look to as role models. As noted earlier, acculturation is a process that occurs when two different cultures interact and influence one another (as cited in Berry, 1999), and while in general the minority culture

shifts to encompass the beliefs and attitudes of the dominant culture, changes also occur in the dominant culture with the influx of new perspectives brought by others. Perhaps then, as women are able to look to their cultures of origin and beyond mainstream ideals of beauty, the cultural norms will expand to include a breadth of possibilities for what it means to be attractive for women today. This may be particularly salient with regard to body dissatisfaction in relation to one's weight as prior research has found greater acceptance for variance in weight in Latino culture and among those who maintain a Mexican orientation as opposed to a higher Anglo orientation (Cachelin et al., 2006; Olver et al., 2005, Shaw et al., 2004).

Similarly, given the significant relationship between internalization of ideals and body dissatisfaction, it would be important to assist Mexican and Mexican American women to critically evaluate and challenge the ideals with which they are confronted rather than just accepting them as a standard to be met. Perhaps ethnic minority women and women in general would be less likely to internalize narrow mainstream ideals of attractiveness if they were able to bring the internalization process into conscious awareness allowing them to actively refute unrealistic expectations.

Finally, the impact of racism and discrimination on one's wellbeing is underscored with regard to self-evaluation and body satisfaction. This may be particularly true for women whose appearance singles them out from mainstream culture. As Cabassa (2003) stated, receptivity of the host culture may alter the acculturative experience. One implication is that when working with Mexican and Mexican American women, and perhaps with ethnic minority women in general, who are struggling with body image and

disordered eating, it would be remiss to fail to discuss the impact of their ethnicity, experience of racism, and acculturation on their attitudes toward their bodies.

What is most clear, however, is that there continues to be a paucity of research specific to Mexican American women. While the current study highlights some specific avenues for further exploration, additional research is needed to better understand how these findings would translate into useful information for clinical application.

### **Limitations**

One limitation is that while SEM allows for analysis of multiple pathways at one, the results are in essence correlational, not causal. And, while this study highlighted many important relationships among specific variables, there might be other key variables that determine the relationship between acculturation and body dissatisfaction for Mexican American women that have yet to be identified in the current body of research.

Another limitation of the current study may have been the measure of acculturative stress. While it appeared to be an excellent measure of acculturative stress for capturing stress created by racism and discrimination in general and immigration stress as a whole, it was not focused on the experience of acculturative stress in the form of racial slurs or discrimination based on one's appearance. A measure more specific to this aspect of racism may better clarify the relationship between acculturation, acculturative stress, and objectified body consciousness as well as body dissatisfaction.

Another possibility is that acculturation is becoming a less salient issue in today's society as individuals have access more and more to Anglo cultural norms through the

use of technology (Rudmin, 2003). Additionally, many cultures place emphasis on women's bodies and evaluate them according to cultural criteria, which may result in body dissatisfaction in relation to the cultural ideal whether it is one's culture of origin or the Anglo ideal. Other factors that may influence body dissatisfaction might include more proximal influences such as evaluations made by significant others (i.e. spouses/boyfriends) and expectations, ideals, and eating behaviors modeled by one's closest associates.

The measure of Objectified Body Consciousness also presented problems in the current study due to the differing correlations among the three dimensions of the scale. One could argue that the three subscales do not represent a single construct. Further the significant correlation between the Body Shame subscale and the latent construct of Body Dissatisfaction was problematic in terms of differentiating the internalization of Anglo ideals from the subsequent consequences of the internalization process.

Another limitation of the current study is inherent to the use of online surveys such as Survey Monkey and the SONA System. A key concern is that there is no way to verify whether individuals have represented themselves accurately, and it is evident that some students access the online surveys as a means of accruing extra credit with no intention of actually completing the surveys. These issues reduce the overall reliability of the information collected. This problem may be resolved over time with technological advances that will allow for eliminating issues, but also speaks to the importance of replicating online studies using face to face means of collecting data.

With regard to participants drawn from the community, possible limitations included language barriers, as well as unfamiliarity and/or discomfort with participating



in research. For example, some participants asked questions of the bilingual research assistants indicating unfamiliarity with how to fill out the surveys. Other potential participants declined interest in filling out the surveys due to fears related to immigration issues.

With regard to the participants, it is also important to note sampling limitations. Many of the community participants were recruited at the Festival de la Uva, which attracted individuals from the surrounding communities in the area who may or may not be representative of the larger Latina population. Similarly, the university participants were drawn from a Southern California school with a large Mexican American student body, which may differentially impact their experiences as Mexican American women as compared to other areas of the country where fewer Mexican Americans reside and where perhaps there is less emphasis placed on appearance than is thought to be characteristic of Southern California.

## **Conclusions**

The current study adds significantly to the existing body of research by examining the relationship between acculturation, acculturative stress, objectified body consciousness, and body dissatisfaction among Mexican American women. The paucity of research on Latina women and the fact that Latinos now represent the largest and fastest growing ethnic minority in the United States underscores the need for more research addressing this segment of the population. Further, the current study was particularly relevant for Southern California where Latinos comprise a significant portion of the population. The information gathered is important in that it helps to identify the

unique factors that trigger body dissatisfaction for Latinas as well as areas for potential research.

Findings suggest that body dissatisfaction and behaviors related to disordered eating are relevant issues for Mexican American women. They also echo prior research that indicates acculturation does not have a direct influence on body dissatisfaction for Mexican American women, but does have an indirect influence mediated through additional factors. While much research has pointed to exposure to mainstream ideals as the mechanism through which changes occur in minority individuals, this seems to be less relevant than whether Mexican American women endorse and apply those ideals to self. In particular, this study extends prior research on the construct of Objectified Body Consciousness by examining its applicability with Mexican American women, which is an area that has only begun to be studied. Findings indicate a key factor in determining whether acculturating Mexican American women experience body dissatisfaction appears to be the degree to which they internalize the standards they encounter.

As Objectified Body Consciousness was strongly associated with body dissatisfaction in the current study, it would be valuable to examine what, in turn, is predictive of Objectified Body Consciousness for Mexican American women. In other studies, a number of variables have been found to be associated with Objectified Body Consciousness for Caucasian women and may also be applicable to Mexican American women. Variables studied have included more proximal influences such as social pressure in the form of sorority membership (Basow, Foran, & Bookwala, 2007), pubertal development and peer sexual harassment among adolescents (Lindberg et al., 2007), as well as body ideals conveyed through the media (Knauss et al., 2008). Future research

should continue to explore internalization of mainstream ideals as a determining factor for body dissatisfaction for ethnic minority women and Mexican American women in particular. This would include identification of protective factors as well as ways to decrease internalization of unrealistic or unhealthy standards.

Although the role of acculturative stress needs to be further elucidated, the negative reflections of self individuals encounter through the experience of racism and immigration stress is important to consider and potentially has significant clinical implications for Mexican American women. In particular, less acculturated Mexican and Mexican American women may be experiencing increased stress. More generally, clinicians who are assessing Mexican American women in regard to body dissatisfaction and eating pathology should include questions on the how they are relating to societal body ideals and whether the experience of racism relates to their self-evaluation. Culturally sensitive interventions for Mexican American women endorsing body dissatisfaction would need to consider the possibility of added stress in the form of racism, and research is needed to understand how to best aid in reducing this stress if present. Further, for Mexican American women, body dissatisfaction included feeling less effective and less able to exert control. Clinically, it may be important to help Mexican American women identify aspects of their bodies or other aspects of who they are that they feel they can control or help them identify avenues toward empowerment. Continued research will give clarity and voice to the unique concerns of Mexican American women.

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## Appendix A

### Demographic Questions

Female: \_\_\_\_\_ Male: \_\_\_\_\_: Note this survey is for Mexican American women only. Please do not continue if you are male.

Age: \_\_\_\_\_

Marital Status: \_\_\_\_\_

Where were you born? \_\_\_\_\_

If born outside of the US, how long have you been in the United States? \_\_\_\_\_

Growing up did you live with:

\_\_\_ Both parents    \_\_\_ Mother    \_\_\_ Father    Other \_\_\_

Last grade you completed in school: (*Circle your choice*)

1. Elementary-6
2. 7-8
3. 9-12
4. Some college, no degree
5. AA degree
6. BA/BS degree
7. MA/MS degree
8. Ph.D. degree
9. Currently enrolled: If so, indicate what year and degree you are working towards:  
\_\_\_\_\_

If you are not in college, what is your occupation? \_\_\_\_\_

*(Circle the generation that best applies to you. Circle only one)*

1. 1<sup>st</sup> generation = You were born in Mexico or other country.
2. 2<sup>nd</sup> generation = You were born in USA; either parent born in Mexico or other country.
3. 3<sup>rd</sup> generation = You were born in USA, both parents born in USA.

What is your height in feet and inches: \_\_\_\_\_ meters: \_\_\_\_\_

What is your weight in pounds: \_\_\_\_\_ kilograms: \_\_\_\_\_

Please indicate your family's average monthly income: \_\_\_\_\_

## Appendix B

### Acculturation Rating Scale for Mexican Americans – Revised (ARSMA-II)

#### SCALE1

*[Circle a number between 1-5 next to each item that best applies.]*

		Not at all	Very little or not very often	Moder- ately	Much or very often	Extremely often or almost always
1.	I speak Spanish	1	2	3	4	5
2.	I speak English	1	2	3	4	5
3.	I enjoy speaking Spanish	1	2	3	4	5
4.	I associate with Anglos	1	2	3	4	5
5.	I associate with Mexican and/or Mexican American	1	2	3	4	5
6.	I enjoy listening to Spanish language music	1	2	3	4	5
7.	I enjoy listening to English language music	1	2	3	4	5
8.	I enjoy Spanish language TV	1	2	3	4	5
9.	I enjoy English language TV	1	2	3	4	5
10.	I enjoy English language movies	1	2	3	4	5
11.	I enjoy Spanish language movies	1	2	3	4	5
12.	I enjoy reading (e.g., books in Spanish)	1	2	3	4	5
13.	I enjoy reading (e.g., books in English)	1	2	3	4	5
14.	I write (e.g., letters in Spanish)	1	2	3	4	5
15.	I write (e.g., letters in English)	1	2	3	4	5
16.	My thinking is done in the English language	1	2	3	4	5
17.	My thinking is done in the Spanish language	1	2	3	4	5
18.	My contact with Mexico has been	1	2	3	4	5



		<b>Not at all</b>	<b>Very little or not very often</b>	<b>Moderately</b>	<b>Much or very often</b>	<b>Extremely often or almost always</b>
19.	My contact with the USA has been	1	2	3	4	5
20.	My father identifies or identified himself as “Mexicano”	1	2	3	4	5
21.	My mother identifies or Identified herself as “Mexicana”	1	2	3	4	5
22.	My friends, while I was growing up, were of Mexican origin	1	2	3	4	5
23.	My friends, while I was growing up, were Anglo origin	1	2	3	4	5
24.	My family cooks Mexican foods	1	2	3	4	5
25.	My friends now are of Anglo origin	1	2	3	4	5
26.	My friends now are of Mexican origin	1	2	3	4	5
27.	I like to identify myself as an Anglo American	1	2	3	4	5
28.	I like to identify myself as Mexican American	1	2	3	4	5
29.	I like to identify myself as Mexican	1	2	3	4	5
30.	I like to identify myself as an American	1	2	3	4	5

*Note.* The AOS is comprised of 13 items (2, 4, 7, 9, 10, 13, 15, 16, 19, 23, 25, 27, and 30). The MOS is comprised of 17 items (1, 3, 5, 6, 8, 11, 12, 14, 17, 18, 20, 21, 22, 24, 26, 28, and 29).

SCALE 2

*[Use the scale below to answer questions 1-18 below.]*

		<b>Not at all</b>	<b>Very little or not very often</b>	<b>Moderately</b>	<b>Much or very often</b>	<b>Extremely often or almost always</b>
1.	I have difficulty accepting some ideas held by Anglos	1	2	3	4	5
2.	I have difficulty accepting certain attitudes held by Anglos	1	2	3	4	5
3.	I have difficulty accepting some behaviors exhibited by Anglos	1	2	3	4	5
4.	I have difficulty accepting some values held by Anglos	1	2	3	4	5
5.	I have difficulty accepting practices and customs commonly found in some Anglos	1	2	3	4	5
6.	I have, or think I would have, difficulty accepting Anglos as close personal friends	1	2	3	4	5
7.	I have difficulty accepting ideas held by some Mexicans	1	2	3	4	5
8.	I have difficulty accepting certain attitudes held by Mexicans	1	2	3	4	5
9.	I have difficulty accepting some behaviors exhibited by Mexicans	1	2	3	4	5
10.	I have difficulty accepting some values held by Mexicans	1	2	3	4	5
11.	I have difficulty accepting practices and customs commonly found in some Mexicans	1	2	3	4	5
12.	I have, or think I would have, difficulty accepting Mexicans as close personal friends	1	2	3	4	5

		<b>Not at all</b>	<b>Very little or not very often</b>	<b>Moderately</b>	<b>Much or very often</b>	<b>Extremely often or almost always</b>
13.	I have difficulty accepting ideas held by some Mexican Americans	1	2	3	4	5
14.	I have difficulty accepting certain attitudes held by Mexican Americans	1	2	3	4	5
15.	I have difficulty accepting some behaviors exhibited by Mexican Americans	1	2	3	4	5
16.	I have difficulty accepting some values held by Mexican Americans	1	2	3	4	5
17.	I have difficulty accepting certain practices and customs commonly found in some Mexican Americans	1	2	3	4	5
18.	I have, or think I would have, difficulty accepting Mexican Americans as close personal friends	1	2	3	4	5

*Note.* The ANGMAR subscale is comprised of 6 items (1, 2, 3, 4, 5, and 6). The MEXMAR subscale is comprised of 6 items (7, 8, 9, 10, 11, and 12). The MAMARG subscale is comprised of 6 items (13, 14, 15, 16, 17, and 18).

## SCALE1

*[Marque con un círculo el número entre 1 y 5 la respuesta que sea más adecuada para usted.]*

		Nada	Un poquito o a veces	Moderado	Mucho o muy frecuente	Muchísimo Casi todo el tiempo
1.	Yo hablo Español	1	2	3	4	5
2.	Yo hablo Inglés	1	2	3	4	5
3.	Me gusta hablar en Español	1	2	3	4	5
4.	Me asocio con Anglos	1	2	3	4	5
5.	Yo me asocio con Mexicano o con Norte Americanos	1	2	3	4	5
6.	Me gusta la música Mexicana (música en idioma Español)	1	2	3	4	5
7.	Me gusta la música de idioma Inglés	1	2	3	4	5
8.	Me gusta ver programas en la televisión que sean en Español	1	2	3	4	5
9.	Me gusta ver programas en la televisión que sean en Inglés	1	2	3	4	5
10.	Me gusta ver películas en Inglés	1	2	3	4	5
11.	Me gusta ver películas en Español	1	2	3	4	5
12.	Me gusta leer (e.g., libros) en Español	1	2	3	4	5
13.	Me gusta leer (e.g., libros) en Inglés	1	2	3	4	5
14.	Escribo (e.g., cartas) en Español	1	2	3	4	5
15.	Escribo (e.g., cartas) en Inglés	1	2	3	4	5
16.	Mis pensamientos ocurren en el idioma Inglés	1	2	3	4	5
17.	Mis pensamientos ocurren en el idioma Español	1	2	3	4	5
18.	Mi contacto con México ha sido	1	2	3	4	5
19.	Mi contacto con los Estados Unidos de América ha sido	1	2	3	4	5
20.	Mi padre se identifica (o se identificaba) como Mexicano	1	2	3	4	5

		Nada	Un poquito o a veces	Moderado	Mucho o muy frecuente	Muchísimo Casi todo el tiempo
21.	Mi madre se identifica (o se identificaba) como Mexicana	1	2	3	4	5
22.	Mi amigos(as) de mí niñez eran de origen Mexicano	1	2	3	4	5
23.	Mi amigos(as) de mí niñez eran de origen Anglo Americano	1	2	3	4	5
24.	Mi familia cocina comidas mexicanas	1	2	3	4	5
25.	Mis amigos recientes son Anglo Americanos	1	2	3	4	5
26.	Mis amigos recientes son Mexicanos	1	2	3	4	5
27.	Me gusta identificarme como Anglo Americano	1	2	3	4	5
28.	Me gusta identificarme como Norte Americano*	1	2	3	4	5
29.	Me gusta identificarme como Mexicano	1	2	3	4	5
30.	Me gusta identificarme como un(a) Americano(a)	1	2	3	4	5

**\*Estadounidenses de origen Mexicano**

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SCALE 2

*[Utilice la escala que sigue para contestar preguntas 1-18.]*

		Nada	Un poquito o a veces	Moderado	Mucho o muy frecuente	Muchísimo Casi todo el tiempo
1.	Tengo dificultad aceptando ideas de algunos Anglo Americanos	1	2	3	4	5
2.	Tengo dificultad aceptando ciertas actitudes de los Anglo Americanos	1	2	3	4	5
3.	Tengo dificultad aceptando algunos comportamientos de los Anglo Americanos	1	2	3	4	5
4.	Tengo dificultad aceptando algunos valores que tienen los Anglo Americanos	1	2	3	4	5
5.	Tengo dificultad aceptando ciertas costumbres entre algunos Anglo Americanos	1	2	3	4	5
6.	Tengo, o creo que sí tuviera, dificultad aceptando Anglo Americanos como buenos amigos	1	2	3	4	5
7.	Tengo dificultad aceptando ideas de algunos Mexicanos	1	2	3	4	5
8.	Tengo dificultad aceptando ciertas actitudes de algunos Mexicanos	1	2	3	4	5
9.	Tengo dificultad aceptando algunos comportamientos de los Mexicanos	1	2	3	4	5
10.	Tengo dificultad aceptando algunos valores que tienen los Mexicanos	1	2	3	4	5
11.	Tengo dificultad aceptando ciertas costumbres entre algunos Mexicanos	1	2	3	4	5
12.	Tengo, o creo que sí tuviera, dificultad aceptando a Mexicanos como buenos amigos	1	2	3	4	5

		Nada	Un poquito o a veces	Moderado	Mucho o muy frecuente	Muchísimo Casi todo el tiempo
13.	Tengo dificultad aceptando ideas de algunos Mexico-Americanos*	1	2	3	4	5
14.	Tengo dificultad aceptando ciertas actitudes de algunos Mexico-Americanos*	1	2	3	4	5
15.	Tengo dificultad aceptando algunos comportamientos de los Mexico-Americanos*	1	2	3	4	5
16.	Tengo dificultad aceptando algunos valores que tienen Mexico-Americanos*	1	2	3	4	5
17.	Tengo dificultad aceptando ciertas costumbres entre algunos Mexico-Americanos*	1	2	3	4	5
18.	Tengo, o creo que si tuviera, dificultad aceptando Mexico-Americanos* como buenos amigos	1	2	3	4	5

**\*Estadounidenses de origen Mexicano**

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## Appendix C

### The Hispanic Women's Social Stressor Scale

#### Immigration subscale

1. Feeling the need to learn English.
2. Not being understood in stores/offices because you could not speak English well.
3. Losing the status or independence you had in Mexico.
4. Thinking you or family members might be deported.
5. Thinking about what might happen if you or a family member were deported.
6. Not having the same job opportunities as Anglo women.
7. Having to wait longer than others or being treated poorly because you could not speak English well.
8. Being concerned about the welfare of family or friends in Mexico.
9. Missing the help and support of your family in Mexico.
10. Not understanding U.S. values and culture.
11. Someone threatening to report you or your children to the Immigration & Naturalization Service.
12. Your husband or partner having a hard time finding a job or being forced to accept a low paying job.

#### Racism subscale

1. Your children being placed in lower classes or having fewer school opportunities because they are Hispanic.
2. Having doctors or hospital staff look down on you or treat you poorly because you are Hispanic.
3. Being treated as if you don't deserve medical or social services by staff because you are Hispanic.
4. Having to be careful about the quality of your work so others would not think you were lazy.
5. Being ignored or getting poor services at stores or offices because you are Hispanic.



6. Being paid less or having a hard time getting promotions or raises because you are Hispanic.

## Appendix D

### The Objectified Body Consciousness Scale

#### Surveillance subscale

1. I rarely think about how I look.
2. I think it is more important that my clothes are comfortable than whether they look good on me.
3. I think more about how my body feels than how my body looks.
4. I rarely compare how I look with how other people look.
5. During the day, I think about how I look many times.
6. I often worry about whether the clothes I am wearing make me look good.
7. I rarely worry about how I look to other people.
8. I am more concerned with what my body can do than how it looks.

#### Body Shame subscale

1. When I can't control my weight, I feel like something must be wrong with me.
2. I feel ashamed of myself when I haven't made the effort to look my best.
3. I feel like I must be a bad person when I don't look as good as I could.
4. I would be ashamed for people to know what I really weigh.
5. I never worry that something is wrong with me when I am not exercising as much as I should.
6. When I'm not exercising enough, I question whether I am a good enough person.
7. Even when I can't control my weight, I think I'm an okay person.
8. When I'm not the size I think I should be, I feel ashamed.

### Control Beliefs subscale

9. I think a person is pretty much stuck with the looks they are born with.
10. A large part of being in shape is having that kind of body in the first place.
11. I think a person can look pretty much how they want to if they are willing to work at it.
12. I really don't think I have much control over how my body looks.
13. I think a person's weight is mostly determined by the genes they are born with.
14. It doesn't matter how hard I try to change my weight, it's probably always going to be about the same.
15. I can weight what I'm supposed to when I try hard enough.
16. The shape you are in depends mostly on your genes.

## **Appendix E**

### **Body Dissatisfaction**

**As measured by 4 subscales of the Eating Disorder Inventory (EDI)**

#### Drive for Thinness Subscale

1. I eat sweets and carbohydrates without feeling nervous.
2. I think about dieting.
3. I feel extremely guilty after overeating.
4. I am terrified of gaining weight.
5. I exaggerate or magnify the importance of weight.
6. I am preoccupied with the desire to be thinner.
7. If I gain a pound, I worry that I will keep gaining.

#### Bulimia Subscale

1. I eat when I am upset.
2. I stuff myself with food.
3. I have gone on eating binges where I have felt that I could not stop.
4. I think about bingeing (overeating).
5. I eat moderately in front of others and stuff myself when they're gone.
6. I have the thought of trying to vomit in order to lose weight.
7. I eat or drink in secrecy.

### Body Dissatisfaction Subscale

1. I think that my stomach is too big.
2. I think that my thighs are too large.
3. I think that my stomach is just the right size.
4. I feel satisfied with the shape of my body.
5. I like the shape of my buttocks.
6. I think my hips are too big.
7. I think that my thighs are just the right size.
8. I think my buttocks are too large.
9. I think that my hips are just the right size.

### Ineffectiveness Subscale

1. I feel ineffective as a person.
2. I feel alone in the world.
3. I feel generally in control of things in my life.
4. I wish I were someone else.
5. I feel inadequate.
6. I feel secure about myself.
7. I have a low opinion of myself.
8. I feel that I can achieve my standards.
9. I feel that I am a worthwhile person.
10. I feel empty inside (emotionally).

## Appendix F

### The Body Esteem Scale

1. Body scent
2. Appetite
3. Nose
4. Physical stamina
5. Reflexes
6. Lips
7. Muscle strength
8. Waist
9. Energy level
10. Thighs
11. Ears
12. Biceps
13. Chin
14. Body build
15. Physical coordination
16. Buttocks
17. Agility
18. Width of shoulders
19. Arms
20. Chest or breasts
21. Appearance of eyes
22. Cheeks/cheekbones
23. Hips
24. Legs
25. Figure of physique
26. Sex drive
27. Feet
28. Sex organs
29. Appearance of stomach
30. Health
31. Sex activities
32. Body hair
33. Physical condition
34. Face
35. Weight

## Appendix G

Table 11

*Summary of Intercorrelations for Age, Income, Education, BMI, and Scores on the EDIBD, EDIDT, EDIB, EDIE, and the BES*

Measure	1	2	3	4	5	6	7	8	9
1. Age	----	-.074	-.392**	.349**	-.006	-.031	-.023	.030	.105*
2. Income		---	.153**	-.099	-.065	-.031	-.029	-.112*	.112*
3. ED			---	-.186**	.091	.018	-.024	-.075	-.119*
4. BMI				---	.386**	.176**	.159**	.116*	-.192**
5. EDIBD					---	.656**	.438**	.484**	-.637**
6. EDIDT						---	.495**	.513**	-.565**
7. EDIB							---	.590**	-.476**
8. EDIE								---	-.570**
9. BES									---

*Note.* Intercorrelations for study participants ( $n = 352$ ) are presented. For Age, Income, Education, and BMI (Body Mass Index), higher scores indicate higher levels. EDIBD = Eating Disorder Inventory Body Dissatisfaction; EDIDT = Eating Disorder Inventory Drive for Thinness; EDIB = Eating Disorder Inventory Bulimia; EDIE = Eating Disorder Inventory Ineffectiveness. For each of the EDI subscales, higher scores indicate increased endorsement of eating disorder symptoms. BES = Body Esteem Scale. Higher scores on the BES indicate greater body esteem.

\* $p < 0.05$ ; \*\* $p < 0.01$ .

## Appendix H

Table 12

*Summary of Intercorrelations for Scores on the LA, MOS, AOS, MARG, EDIBD, EDIDT, EDIB, EDIE, and the BES*

Measure	1	2	3	4	5	6	7	8	9
1. LA	---	-.819**	.834**	.105*	.181**	.101	.081	-.052	-.071
2. MOS		---	-.367**	-.124*	-.135*	-.090	-.108*	-.012	.082
3. AOS			---	.050	.164**	.078	.027	-.096	-.036
4. MARG				---	.080	.128*	.217**	.200**	-.182**
5. EDIBD					---	.656**	.438**	.484**	-.637**
6. EDIDT						---	.495**	.513**	-.565**
7. EDIB							---	.590**	-.476**
8. EDIE								---	-.570**
9. BES									---

*Note.* Intercorrelations for study participants ( $n = 352$ ) are presented. LA = linear acculturation level (AOS  $M$  – MOS  $M$ ) with higher scores representing a stronger Anglo orientation and lower scores indicating a stronger Mexican orientation. MOS = Mexican Orientation Scale; AOS = Anglo Orientation Scale; MARG = Marginalization. Higher scores on the MOS and the AOS represent increased endorsement of a Mexican or an Anglo orientation, respectively. Higher scores on the MARG indicate greater marginalization. EDIBD = Eating Disorder Inventory Body Dissatisfaction; EDIDT = Eating Disorder Inventory Drive for Thinness; EDIB = Eating Disorder Inventory Bulimia; EDIE = Eating Disorder Inventory Ineffectiveness. For each of the EDI subscales, higher scores indicate increased endorsement of eating disorder symptoms. BES = Body Esteem Scale. Higher scores on the BES indicate greater body esteem.

\* $p < 0.05$ ; \*\* $p < 0.01$ .



## Appendix I

Table 13

*Summary of Intercorrelations for Scores on the HWSSA, HWSSI, HWSSR, EDIBD, EDIDT, EDIB, EDIE, and the BES*

Measure	1	2	3	4	5	6	7	8
1. HWSSA	---	.974**	.912**	-.045	.061	.143**	.251**	-.036
2. HWSSI		---	.794**	-.075	.043	.113*	.227**	-.016
3. HWSSR			---	.018	.085	.175**	.258**	-.069
4. EDIBD				---	.656**	.438**	.484**	-.637**
5. EDIDT					---	.495**	.513**	-.565**
6. EDIB						---	.590**	-.476**
7. EDIE							---	-.570**
8. BES								---

*Note.* Intercorrelations for study participants ( $n = 352$ ) are presented. HWSSA = Hispanic Women's Social Stressor Scale Average score, which is a combined score for the two subscales (HWSSI and HWSSR). HWSSI = Hispanic Women's Social Stressor Scale Immigration stress subscale. HWSSR = Hispanic Women's Social Stressor Scale Racism stress subscale. For the three HWSS scales, higher scores indicate higher levels of stress. EDIBD = Eating Disorder Inventory Body Dissatisfaction; EDIDT = Eating Disorder Inventory Drive for Thinness; EDIB = Eating Disorder Inventory Bulimia; EDIE = Eating Disorder Inventory Ineffectiveness. For each of the EDI subscales, higher scores indicate increased endorsement of eating disorder symptoms. BES = Body Esteem Scale. Higher scores on the BES indicate greater body esteem.

\* $p < 0.05$ ; \*\* $p < 0.01$ .

## Appendix J

Table 14

*Summary of Intercorrelations for Scores on the OBCS, OBCBS, OBCC, EDIBD, EDIDT, EDIB, EDIE, and the BES*

Measure	1	2	3	4	5	6	7	8
1. OBCSU	---	.299**	.010	.355**	.448**	.161**	.274**	-.367**
2. OBCBS		---	-.319**	.566**	.650**	.432**	.517**	-.514**
3. OBCC			---	-.165**	-.198**	-.318**	-.337**	.189**
4. EDIBD				---	.656**	.438**	.484**	-.637**
5. EDIDT					---	.495**	.513**	-.565**
6. EDIB						---	.590**	-.476**
7. EDIE							---	-.570**
8. BES								---

*Note.* Intercorrelations for study participants ( $n = 352$ ) are presented. OBCSU = Objectified Body Consciousness Surveillance; OBCBS = Objectified Body Consciousness Body Shame; OBCC = Objectified Body Consciousness Control Beliefs. For OBCS, higher scores indicate more surveillance. For OBCBS, higher scores indicate more body shame. For OBCC, higher scores indicate believing one has more control. EDIBD = Eating Disorder Inventory Body Dissatisfaction; EDIDT = Eating Disorder Inventory Drive for Thinness; EDIB = Eating Disorder Inventory Bulimia; EDIE = Eating Disorder Inventory Ineffectiveness. For each of the EDI subscales, higher scores indicate increased endorsement of eating disorder symptoms. BES = Body Esteem Scale. Higher scores on the BES indicate greater body esteem.

\* $p < 0.05$ ; \*\* $p < 0.01$ .

## Appendix K

Table 15

*Summary of Intercorrelations for Age, Income, Education, BMI, and Scores on the HWSSA, HWSSI, and the HWSSR*

Measure	1	2	3	4	5	6	7
1. Age	---	-.074	-.392**	.349**	.177**	.205**	.104
2. Income		---	.153**	-.099	-.095	-.109*	-.057
3. Education			---	-.186**	-.282**	-.323**	-.171**
4. BMI				---	.074	.091	.033
5. HWSSA					---	.974**	.912**
6. HWSSI						---	.794**
7. HWSSR							---

*Note.* Intercorrelations for study participants ( $n = 352$ ) are presented. For Age, Income, Education, and BMI (Body Mass Index), higher scores indicate higher levels. HWSSA = Hispanic Women's Social Stressor Scale Average score, which is a combined score for the two subscales (HWSSI and HWSSR). HWSSI = Hispanic Women's Social Stressor Scale Immigration stress subscale. HWSSR = Hispanic Women's Social Stressor Scale Racism stress subscale. For the three HWSS scales, higher scores indicate higher levels of stress.

\* $p < 0.05$ ; \*\* $p < 0.01$ .

## Appendix L

Table 16

*Summary of Intercorrelations for Age, Income, Education, BMI, and Scores on the LA, MOS, AOS, and the MARG*

Measure	1	2	3	4	5	6	7	8
1. Age	---	-.074	-.392**	.349**	-.359**	.138**	-.449**	.019
2. Income		---	.153**	-.099	.243**	-.196**	.205**	.029
3. Education			---	-.186**	.397**	-.197**	.454**	.064
4. BMI				---	-.174**	.099	-.187**	.055
5. LA					---	-.819**	.834**	.105*
6. MOS						---	-.367**	-.124*
7. AOS							---	.050
8. MARG								---

*Note.* Intercorrelations for study participants ( $n = 352$ ) are presented. For Age, Income, Education, and BMI (Body Mass Index), higher scores indicate higher levels. LA = linear acculturation level (AOS  $M -$  MOS  $M$ ) with higher scores representing a stronger Anglo orientation and lower scores indicating a stronger Mexican orientation. MOS = Mexican Orientation Scale; AOS = Anglo Orientation Scale; MARG = Marginalization. Higher scores on the MOS and the AOS represent increased endorsement of a Mexican or an Anglo orientation, respectively. Higher scores on the MARG indicate greater marginalization..

\* $p < 0.05$ ; \*\* $p < 0.01$ .

## Appendix M

Table 17

*Summary of Intercorrelations for Age, Income, Education, BMI, and Scores on the OBCSS, OBCSBS, OBCSC, EDIBD, EDIDT, EDIB, EDIE, and the BES*

Measure	1	2	3	4	5	6	7
1. Age	---	-.074	-.392**	.349**	-.232**	.046	-.176**
2. Income		---	.153**	.153**	.021	-.133*	.049
3. Education			---	-.186**	.228**	-.001	.238**
4. BMI				---	-.105*	.239**	-.158**
5. OBCSU					---	.299**	.010
6. OBCBS						---	-.319**
7. OBCC							---

*Note.* Intercorrelations for study participants ( $n = 352$ ) are presented. For Age, Income, Education, and BMI (Body Mass Index), higher scores indicate higher levels. OBCSU = Objectified Body Consciousness Surveillance; OBCBS = Objectified Body Consciousness Body Shame; OBCC = Objectified Body Consciousness Control Beliefs. For OBCSU, higher scores indicate more surveillance. For OBCBS, higher scores indicate more body shame. For OBCC, higher scores indicate believing one has more control.

\* $p < 0.05$ ; \*\* $p < 0.01$ .

## Appendix N

Table 18

*Summary of Intercorrelations for Predictor Variables: LA, MOS, AOS, HWSSI, HWSSR, OBCS, OBCBS, and OBCC*

Measure	1	2	3	4	5	6	7	8	9
1. LA	---	-.819**	.834**	-.508**	-.566**	-.335**	.212**	.012	.247**
2. MOS		---	-.367**	.367**	.399**	.261**	-.101	-.009	-.167**
3. AOS			---	-.471**	-.535**	-.292**	.247**	.011	.240**
4. HWSSA				---	.974**	.912**	-.108*	.098	-.266**
5. HWSSI					---	.794**	-.137*	.079	-.271**
6. HWSSR						---	-.042	.118*	-.220**
7. OBCSU							---	.299**	.010
8. OBCBS								---	-.319**
9. OBCC									---

*Note.* Intercorrelations for study participants ( $n = 352$ ) are presented. LA = linear acculturation level (AOS  $M$  – MOS  $M$ ) with higher scores representing a stronger Anglo orientation and lower scores indicating a stronger Mexican orientation. MOS = Mexican Orientation Scale; AOS = Anglo Orientation Scale; MARG = Marginalization. Higher scores on the MOS and the AOS represent increased endorsement of a Mexican or an Anglo orientation, respectively. Higher scores on the MARG indicate greater marginalization. HWSSA = Hispanic Women’s Social Stressor Scale Average score, which is a combined score for the two subscales (HWSSI and HWSSR). HWSSI = Hispanic Women’s Social Stressor Scale Immigration stress subscale. HWSSR = Hispanic Women’s Social Stressor Scale Racism stress subscale. For the three HWSS scales, higher scores indicate higher levels of stress. OBCSU = Objectified Body Consciousness Surveillance; OBCBS = Objectified Body Consciousness Body Shame, and higher scores indicate more body shame; OBCC = Objectified Body Consciousness Control Beliefs. For OBCSU, higher scores indicate more surveillance. For OBCC, higher scores indicate believing one has more control.

\* $p < 0.05$ ; \*\* $p < 0.01$ .