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A DUAL DILEMMA: AN EXAMINATION OF BODY DISSATISFACTION AMONG
ASIAN AMERICAN FEMALES IN EMERGING ADULTHOOD

A thesis submitted in partial fulfillment of the requirements for the degree of Master of
Science at Virginia Commonwealth University

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Abstract

A DUAL DILEMMA: AN EXAMINATION OF BODY DISSATISFACTION AMONG ASIAN AMERICAN FEMALES IN EMERGING ADULTHOOD

By Sarah J. Javier, B.S.

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science at Virginia Commonwealth University.

Virginia Commonwealth University, 2013.

Major Director: Faye Z. Belgrave,
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The purpose of this study was to examine what factors contribute to and result from body dissatisfaction using the theoretical framework of the Tripartite Model of Influence, which included family, peer, and media influence. Participants were recruited from SONA and student organizations and participated in an online survey ($N = 148$). A MANCOVA indicated that Asian and White females did not differ in body dissatisfaction and other health outcomes. Thin-ideal internalization mediated the relationships between media influence, peer influence, and body dissatisfaction among Asian American females. Moderation analyses indicated that ethnic identity, Asian American identity, and acculturation did not moderate the relationship between the three tripartite influences and body dissatisfaction. Finally, a series of multiple regressions indicated that body dissatisfaction significantly predicted disordered eating, cosmetic surgery endorsement, and cigarette use among Asian Americans. Findings suggest that Asian American body dissatisfaction may be more related to Western influence than current literature shows.

Keywords: acculturation, Asian American, body dissatisfaction, college, emerging adulthood, ethnic identity, family, health behaviors, media, peer, thin-ideal internalization, tripartite influence

An Examination of Body Dissatisfaction among Asian American Females in Emerging Adulthood

Imagine feeling unhappy in your body with little to no control over your ability to change it. Dissatisfaction with one's body is something most everyone struggles with at some point in life. Body dissatisfaction has been defined differently across studies, with the two most common interpretations involving either a negative evaluation about one's appearance (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999) or an individual's perceptions about whether they are underweight or overweight (Al Sabbah et al., 2009). Commonly, body dissatisfaction has been interpreted as an affective outcome of body image. Body image can be conceptualized as a subjective outlook on one's body that includes behavioral, cognitive, and affective processes (Thompson, Altabe, Johnson, & Stormer, 1994; Banfield & McCabe, 2002). Most instruments used to assess body image use difference scores between an individual's actual body and their ideal body. The more discrepant these scores are, the greater body dissatisfaction the individual is purported to have (Allaz, Bernstein, Rouget, Archinard, & Morabia, 1998).

Although body dissatisfaction is epidemic in all areas of the world, it seems to be an especially common problem in Western countries. Over the past couple of decades, body dissatisfaction has become increasingly prevalent for females in Western societies, with more girls and women reporting dissatisfaction with their body size and shape than men (Phares, Steinberg, & Thompson, 2004; Thompson & Stice, 2001). Further, this gap has increased largely for females in the United States, with almost half of all women reporting body

dissatisfaction (Thompson et al., 1999). This thesis explored potential causes of body dissatisfaction for Asian American females in the United States.

While body dissatisfaction may start in early development, with 46% of girls and 26% of boys reporting significant distress with their body shape and size (Neumark-Sztainer, Story, Hannan, Perry, & Irving, 2002; McCabe & Ricciardelli, 2003), body dissatisfaction may be especially salient during emerging adulthood. Emerging adulthood is the period of development between ages 18 and 25, when individuals transition into a period of introspection and self-identity (Arnett, 2000). This exploration of self may include an examination of physical appearance, which may be a large part of one's individual identity. The university environment in particular may influence body image. Individuals entering college encounter more frequent exposure to peers and prospective dating partners, thus increasing self and body consciousness (Gillen & Lefkowitz, 2006). This may lead to an increase in body dissatisfaction and subsequent behavioral outcomes. For example, Delinsky and Wilson (2008) found that there is an increase in women's disordered eating behavior during college. Additionally, body dissatisfaction is especially high for female undergraduates during their first year (Gillen & Lefkowitz, 2006). The saliency of body consciousness during emerging adulthood calls attention to the need for a more complete examination of its causes and consequences.

Body dissatisfaction in females has been linked to several subsequent aversive psychological effects such as low self-esteem and disordered psychosocial functioning (Smolak & Levine, 2001) and negative self-perception and depressed mood (Grogan, 1999; Thompson et al., 1999). In addition to these psychologically-linked outcomes, body dissatisfaction among females has also been linked to a number of other negative health

behaviors. These include, but are not limited to disordered eating (e.g. anorexia and bulimia) in adolescence and adult life (Shisslak et al., 1999), an increase in alcohol use (Nelson, Lust, Story, & Ehlinger, 2009), motivation to smoke cigarettes (Lopez, Drobles, Thompson, & Brandon, 2008), and even unprotected, sexual intercourse (Wingood, DiClemente, Harrington, & Davies, 2002). These behavioral implications go far beyond negative affect and may lead to an overall reduced quality of life, as disordered eating, alcohol and substance use, and risky sexual behaviors have been linked to a number of different health issues.

Females are disproportionately affected by negative feelings about body image. Therefore, it is important to parse out the origin of these negative evaluations among females in order to better understand them. One way to do this is to explore within-group differences and why some females have a more positive body image than others. Given the vast amount of diversity within the United States, ethnic identity and culture may be important factors in understanding why body dissatisfaction can vary widely within one cultural group.

Body Dissatisfaction among Asian American Females

Research on body image and body dissatisfaction has been conducted on several racial and ethnic minority groups. For example, Roberts and colleagues (2006) found that African American women report greater satisfaction with the size and appearance of their body than White women. A similar study by Paeratakul and colleagues (2002) found that Latino women have greater body satisfaction than White females. One explanation for this greater body satisfaction is that the cultural ideals of African American and Latino women lend themselves to supporting a rounder, more realistic body type than the thin-ideal of White women (Roberts et al., 2006; Paeratakul et al., 2002). This may indicate that support

for a rounder shape among some ethnic minority females is a protective factor against negative consequences of body dissatisfaction.

There has been less research conducted on body dissatisfaction with Asian American females than females from other ethnic groups, and conclusions from this research have been unequivocal. Findings range from Asian American females being significantly more satisfied with their bodies than their White counterparts (Franzoi & Chang, 2002; Tyłka, 2004) to little to no difference between reported body dissatisfaction between the two ethnic groups (Arriaza & Mann, 2001; Cash, Melnyk, & Hrabosky, 2004; Siegel, 2002). A reason for these discrepancies in body satisfaction is that different studies may include different Asian subgroups. The Office of Management and Budget (OMB) of the U.S. Census Bureau defines an Asian American as an individual who is “a person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent, including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam” (U.S. Census Bureau, 2012). Asian Americans consist of a conglomerate group of people from different cultures and regions, and thus their ideas about the body may differ greatly.

Differences among Asian subgroups. Asians and Asian Americans have historically been placed in the same category due to the assumption that there are many shared cultural differences between subgroups (Ng, 1999). This is problematic because it ignores cultural and even physiological differences that can be worlds apart. Additionally, there are further assumptions of shared cultural values within regions, such as similarity in values among Eastern Asian individuals. For example, Inglehart and colleagues (1998) found that Chinese, Japanese, and South Korean individuals significantly differed on whether

or not they endorsed values such as individualism and parental respect. Yet, these subgroups are often assumed to be culturally similar due to their proximity to one another.

Other contrasts set apart Asian cultures by different regions. Southeastern Asian groups (e.g. Cambodia, Laos, Philippines, Vietnam) differ from Eastern Asian (e.g. Japan, China, Korea) groups on several dimensions, such as physical appearance, religiosity, and even patriarchy. For example, using the Asian Values Scale, Kim, Yang, Atkinson, Wolfe, & Hong, (2001) found that Filipino Americans differed greatly from Chinese, Japanese, and Korean Americans on “traditional” Asian values such as emotional self-control, family recognition through achievement, filial piety, conformity to norms, and collectivism. Additionally, many South Asian countries (e.g. India, Pakistan, Bangladesh, Iran) differ from other Asian groups on body image dimensions. For instance, South Asians are more likely to believe that a larger body type is indicative of good health (Patel, Phillips-Caesar, & Boutin-Foster, 2012). There is a movement towards more individualized research on different subgroups of Asians and Asian Americans and for good reason; these cultures are very different from one another.

Shared cultural values. Despite the variation in study findings, there is increasing evidence that body dissatisfaction is growing across all Asian American subgroups. One reason for this may be that the experience of the Asian American woman may be more similar across subgroups than an Asian woman who is exposed only to the body ideals of their native country. Grabe and Hyde (2006) conducted a meta-analysis that examined differences in body dissatisfaction among ethnic groups. The meta-analysis included 98 studies published in 41 different journals. The authors included only White, African American, Asian American, and Latino women, as these ethnic minorities have been studied

the most of all ethnicities in the U.S. The study samples ranged in age from 12 years old and younger to over 22 years of age. Most individuals were in the 18-22 year old age range, corresponding to women in emerging adulthood. Several well-known and valid and reliable scales measured body dissatisfaction. Most of the scales used were silhouette scales, and included the Body Dissatisfaction Scale – Eating Disorders Inventory, which measures satisfaction with weight-relevant areas of the body (BDS-EDI; Garner et al., 1983), the Figure Rating Scale (FRS; Stunkard et al., 1983), the Body Areas Satisfaction Scale of the Multidimensional Body Self-Relations Questionnaire (BASS-MBSRQ; Brown et al., 1990), the Body-Esteem Scale (BES; Franzoi & Shields, 1984), the Body Shape Questionnaire (Cooper, Taylor, Cooper, & Fairburn, 1987), the Body Cathexis Scale (BCS; Secord & Jourard, 1953), the Body-Esteem Scale (Mendelson & White, 1985), and the Body-Image Ideals Questionnaire (Cash & Szymanski, 1995). Additionally, the authors included unstandardized scales that were constructed to measure global body dissatisfaction. The results of the meta-analysis indicated in this comprehensive sample ($N = 42,667$) of White, Asian American, African American, and Latino women, that there were no significant differences in body dissatisfaction between White and Asian American women, White women and Latino women, and Latino women and Asian American women. These findings were consistent across age groups, with the only notable difference being that Latino females' body dissatisfaction was greater during adolescence (13-18 years old) and adulthood (22 and older) and Asian American's body dissatisfaction was greater during young adulthood (18-22 years old). This finding suggests that during young adulthood, the mainstream body ideal becomes more salient to Asian American women than to other ethnic

minorities. Overall, this meta-analysis provided some evidence that the gap is decreasing between ethnic minorities' and White women's body dissatisfaction.

Another recent study suggests that both White and Asian American females' levels of body dissatisfaction may be influenced by similar constructs. Nouri and colleagues (2011) conducted a study on media exposure and body dissatisfaction in a sample of college-aged White and Asian American females. The subgroups included in the study sample included White Americans, Chinese/Taiwanese, Filipino, Vietnamese, Korean, Japanese, and individuals who identified as "Other Asian group." The authors found that media exposure was positively associated with body dissatisfaction for both White and Asian American females, and that this relationship was mediated by internalization of the thin-body ideal. These findings link one potential cause of body dissatisfaction for both White and Asian Americans.

In fact, body dissatisfaction has been found to be a consistent phenomenon across various Asian subgroups in several other studies. Although the majority of the research has been conducted with Asian and Asian American females from eastern Asian countries such as Japan and China, other Asian groups are affected by the ideals of Western beauty. For example, Yates, Edman, & Aruguete (2004) found that there were no differences in body dissatisfaction among Asian American women of Japanese, Filipino, Chinese, Hawaiian, or multiethnic backgrounds. This finding suggests that since Asian American women's levels of body dissatisfaction across different Asian ethnicities are similar, overall, they may be increasingly similar to their White counterparts. If this is the case, it is important to review the literature for information on whether this group will also experience similar physical and mental health outcomes.

Health & Behavioral Outcomes of Body Dissatisfaction

Disordered eating behaviors and psychological health. The consequences of body dissatisfaction in Asian American and White women are almost identical. One major behavioral manifestation of weight and shape dissatisfaction is disordered eating behaviors. The prevalence of disordered eating is similar for White and Asian Americans. Shaw, Ramirez, Trost, Randall, and Stice (2004) conducted a study using a sample of 785 young adult females in order to test the assumption that there would be significant differences in eating disorder symptoms and risk factors for eating pathology across ethnic groups (i.e. White, African American, Latino, and Asian American). The results of the study indicated that there were no significant differences in either eating disorder symptoms (e.g. fear of fat, weight and shape concerns, amenorrhea, compensatory behaviors) or eating pathology risk factors across the ethnic groups studied. In fact, the only notable significant difference was that African American and Latino women experienced significantly less internalization of the thin ideal than did Asian Americans or Whites. One criticism of the Shaw et al. (2004) study is that the authors did not clarify which subgroups of Asian Americans were included in the sample. Therefore, it is not clear if there were significant differences or similarities between subgroups.

A meta-analysis conducted by Wildes and colleagues (2001) further explored disturbed eating behaviors across ethnic subgroups, including Asian Americans. The authors specified that their sample of Asian American women included Chinese, Japanese, Vietnamese, Korean, and Filipino individuals. Eating disturbance and body dissatisfaction outcome variables were measured by bulimia, eating disorder, weight and dieting concerns, restrictive eating, drive for thinness, body dissatisfaction, smaller ideal body, and lower

reported weight. In the meta-analysis, the authors clarify that non-significant findings were found to be as important as significant findings. The results of the analysis indicated that, when studies compared White and Asian American samples, effect sizes were smaller than studies that compared Whites with other ethnic groups. The comparisons between Asian Americans and Whites indicated that Asian Americans actually reported more symptoms of eating pathology and body dissatisfaction than Whites except for bulimia, which was higher among Whites. These findings indicate that Asian American females may be equally prone (if not more) to symptoms of eating pathology as White females.

Negative psychological consequences of body dissatisfaction that are often comorbid with disordered eating may be exacerbated among Asian Americans. Recall that some consequences of body dissatisfaction are disordered psychosocial functioning, depressed mood, and low self-esteem (Smolak & Levine, 2001; Grogan, 1999; Thompson et al., 1999). There is a high comorbidity between disordered eating and child sexual abuse, substance abuse, anxiety, personality disorders, medical complications, and even suicide (Kashubeck-West & Mintz, 2001). Given that Asian Americans appear to experience similar rates of disordered eating as White women, this suggests they are also prone to these negative psychological outcomes. However, Asian American women as well as other ethnic minority women seek treatment for eating disorders at lower rates than White women (Franko, Becker, Thomas, & Herzog, 2007) suggesting that they may cope with body dissatisfaction in other aversive ways.

Substance use and sexual health outcomes. While body dissatisfaction and eating pathology have been linked to other negative health behaviors such as substance abuse, the literature connecting these variables to Asian American females is limited. Disordered eating

and body dissatisfaction among females in emerging adulthood have been associated with alcohol abuse (Nelson, Lust, Story, & Ehlinger, 2009), cigarette use (Lopez Khoury, Litvin, & Brandon, 2009), and risky sexual practices (Littleton, Radecki Breitkopf, & Berenson, 2005). However, most of these studies have either not specified if Asian Americans were included, or included only a small percent in the sample population (i.e. 1-2%), or omitted them from the final analysis. These limitations make it difficult to say whether or not Asian American females with lower body satisfaction are more at risk for other negative health outcomes.

One study by Fang, Barnes-Ceeney, and Schinke (2011) explored the link between body dissatisfaction and substance use behaviors in Asian American females in early adolescence. The authors found that body satisfaction was significantly negatively associated with Asian American girls' 12-month drinking and that body satisfaction and self-efficacy were significantly negatively associated with use of drugs such as cigarettes, inhalants, and marijuana. While the study findings are compelling, it is uncertain as to whether these findings would apply to an older group of Asian American females. However, considering the trend shown in the literature that Asian American female body dissatisfaction does not significantly differ from that of White females, it is important to explore the same outcomes of body dissatisfaction specifically with Asian American females.

What Other Aspects of Body Image are Important to Asian American Women?

While body weight and shape dissatisfaction, as well as body dissatisfaction influences are similar for White and Asian American women, Asian Americans may show even more dissatisfaction with race-related features. A study by Mintz and Kashubeck (1999) found that Asian American women reported less satisfaction with racially defined

features such as eyes, nose, overall face, and height. Additionally, Forbes and Frederick (2008) found that Asian American women reported greater dissatisfaction with breast size than White, African American, or Latino women among a large college sample participating in the UCLA Body Project II. Dissatisfaction with these features is likely due to Asian American features being in opposition to the Western ideal of beauty (Hall, 1995). Since most of these race-related body parts are unalterable via eating or dieting behaviors, Asian American women may be motivated to seek out plastic surgery to conform to a more Western ideal of beauty. In fact, plastic surgery among this group is on the rise, with the number of Asian Americans undergoing procedures increasing by 11% in 2011 from the previous year (American Academy of Facial Plastic and Reconstructive Surgery, AAFPRS, 2011). The most common surgical procedures undergone were blepharoplasty (surgical modification of the eyelid) and rhinoplasty (surgical modification of the nose) (AAFPRS, 2011), indicating that Asian Americans were most motivated to change race-related facial features.

Along with dissatisfaction with race-related features in this group, global body dissatisfaction (i.e. dissatisfaction with one's overall body) seems to also be prevalent. For example, in the Forbes and Frederick (2008) study mentioned previously, Asian Americans were found to have the greatest levels of global body dissatisfaction compared to either White women or other ethnic minority women. Additionally, Asian American and White college-aged women reported similar levels of body dissatisfaction and Asian American women had a significantly greater fear of fat (Sanders & Heiss, 1998). We have seen previously that the drive for thinness and smaller body ideal is related to body dissatisfaction in both White and Asian American females across a wide range of Asian subgroups (Wildes

et al., 2001), demonstrating that Asian American females equally prescribe to the ideal Western body as White women. However, it is important to reiterate that there is a tremendous amount of diversity among Asian subgroups in terms of how similar their body ideals are to Western culture (i.e. some Asian subgroups may hold more Western ideals than others). Until more discrete differences between subgroups are discovered, it is important to explore how expectancies about the ideal body in Asian culture can affect body satisfaction for these individuals in general. One way to begin this exploration is through the lens of sociocultural influence on body dissatisfaction.

Theoretical Framework: Tripartite Model of Influence

Body dissatisfaction as a result of sociocultural image expectations can be understood in terms of the Tripartite Influence Model (Thompson et al., 1999; Heinberg, Altabe, & Tantleff-Dunn, 1999; van den Berg, Thompson, Obremski-Brandon, & Covert, 2002). This model asserts that there are three major influences on body dissatisfaction – peer, family, and media; these work both directly and indirectly to influence body dissatisfaction and eating disorder symptomatology. Peer, family, and media influences have been shown to work directly on body dissatisfaction by affecting an individual’s eating behaviors (i.e. restrictive eating, bulimia) and negative affect (Thompson et al., 1999). Furthermore, these influences also have an indirect effect on BD via the mediational processes of internalization of societal beauty standards and excessive appearance comparison (Thompson et al., 1999; van den Berg, et al., 2002).

The Tripartite Model was supported by a cross-sectional, covariance structure modeling study using a large sample of college females, ages 18-22 (van den Berg, et al., 2002). The final model in the study indicated that the relationship between family and mass

media on body dissatisfaction was mediated by appearance comparison. Body dissatisfaction, in turn, affected restrictive eating and bulimic behaviors. Finally, the study indicated that peer influence had a direct effect on eating restriction. Given the explanatory power of the Tripartite Model in explaining body dissatisfaction in the van den Berg, et al. (2002) sample, I expected this framework to also be useful in understanding the influences of peer, family, and media on disordered eating in Asian American females. Asian American women internalize the thin-ideal more than other ethnic minority groups (Nouri et al., 2011), and thus this model should be appropriate for indirectly assessing this group's body dissatisfaction and disordered eating behaviors.

Family influence. There is limited research on the effect of parental influence on body dissatisfaction among Asian American females, and especially for different subgroups of this population. One study by Tsai and colleagues (2003) explored the influence of parental control on the development of eating disorders in a sample of both Taiwanese and Taiwanese American female college students. The authors found that the role of parental control on eating disorder development was non-significant. However, they also asserted that parental influence should not be disregarded, as other components of familial influence were not included in their study (i.e. family conflict, family cohesion). In general, prior research with large samples of different ethnicities has shown that women who experience general family social support have more positive body images than women who do not receive that support (Kearny-Cooke, 2002). Additionally, women are more likely to have a positive body image if they were raised by mothers who model positive eating habits, accept their own shape, and demonstrate that they reject the thin ideal (Thompson et al., 1999). It is important to look at the relationship between specific kinds of familial influences on body

dissatisfaction in future studies with Asian American females in order to determine whether these trends also apply to this population specifically.

Conversely, negative familial interactions have been shown to increase negative body image among samples of females (including Asian Americans). Research has determined that body dissatisfaction may be related to family conflicts and interactions (Minuchin et al., 1978), parental personality features (Kalucy et al., 1977), and familial transmission (Strober & Humphrey, 1987). For Asian American women, the central reason for these familial pressures on body dissatisfaction may be a “culture clash,” or opposing ideals from parents and individuals about the individual’s identity. For example, Asian American women may feel pressure from their family and Asian community to identify more greatly with their native culture, as opposed to aligning with the ideals of the dominant culture. In a video presentation conducted at Columbia University (Sun, 2007), several Asian American students spoke of the pressures to appear stereotypically Asian as a result of pressure from the Asian community (including family members). Common themes were that Asian women need to appear frail, small, and thin. These stereotypical views of beauty are akin to the cultural ideal of beauty in the United States in that thinness is preferred over greater adiposity and curviness, but also differs in that appearing petite is esteemed over the tall, statuesque ideal of White women. For an Asian American female, having two similar yet different ideologies of what it means to be beautiful may add to increased body dissatisfaction in that it may be almost impossible to meet these ideals simultaneously.

Media influence. There is emerging evidence that mass media influence may be the most influential of the three tripartite influences, on body dissatisfaction among ethnic minority females. Studies have shown that females in ethnic minority groups may be at risk

for high body dissatisfaction because the ideal Western body type as portrayed in magazines, the internet, and on television, may be discrepant from how they actually look or perceive themselves to look (e.g. Evans & McConnell, 2003; Hall, 1995). The ideal thin, White body type that is deemed beautiful by mainstream Western society may be unattainable for minority women, especially in regards to skin tone, facial features, and body proportions (Evans & McConnell, 2003). We have seen that Asian American females have similar high levels of body dissatisfaction to White American women. In Western cultures, Asian American women may compare themselves to a standard that is very discrepant from how they themselves appear (i.e., thinness, blonde hair, statuesque, European facial features vs. petite frame, shorter, heavier legs, different skin tone) (Hall, 1995; Kaw, 1993; Sue & Kitano, 1973). This discrepancy may create a disconnect in actual and ideal body and may lead to body dissatisfaction and negative body image among Asian American women.

Peer influence. Peers have a great influence on the body dissatisfaction of females. For instance, a recent study of college students conducted by Ridolfi and colleagues (2011) found that social comparisons with peers were associated with greater body checking and body guilt. The authors suggest that this may have occurred because peers are more proximal, attainable, and salient comparison targets than media images, which may lead to an increased examination of body and subsequent guilt if an individual perceives their body as less desirable. A limitation of the Ridolfi et al. (2011) study is that the sample was comprised mainly of White American females, and included only 2.2% of Asian females. Thus, it is uncertain whether the conclusions of the study apply to Asian Americans. It is important to explore the effect of peer influence on Asian Americans to see if it is also an influential source.

There has been a recent surge in the body image literature around “fat talk,” or negative banter between women about the size and shape of their bodies (Nichter & Vuckovic, 1994). Fat talk may be another domain important in explaining how peers influence body dissatisfaction. A study by Salk and colleagues (2011) explored the fat talk phenomenon among college women. The authors found that often, fat talk involves two individuals endorsing the thin-ideal internalization and how their bodies are discrepant from that ideal. Additionally, the more often fat talk occurred, the higher the level of body dissatisfaction. Although the sample the authors used included 21% of females who identified as either East Asian, Indian, biracial, or other, it is unclear what specific subgroups of Asians were represented in the study. This is a clear limitation in terms of examining peer influence on body dissatisfaction among Asian groups, but nonetheless the study indicates that peer influence in the form of negative banter may be an important source of body dissatisfaction for females in emerging adulthood.

Peer influence can extend beyond body dissatisfaction in Asian Americans in that peer influence has also been found to influence level of acculturation in this group. A study conducted by Thai and colleagues (2010) examined the relationship between race/ethnicity, acculturation, peer substance use, and academic achievement on adolescent substance use among Asian Americans. The study sample consisted of Whites, African Americans, and several different Asian American subgroups: Filipino, Chinese, Korean, Vietnamese, Japanese, and Asian Indian. The mean age for the sample was 16.7 years, and gender totals were not indicated. Results showed that peer substance use was a partial mediator of the effects of acculturation on use of cigarettes, alcohol, and marijuana among Asian Americans. Peers may be integral in promoting acculturation and may also act as a risk factor for

substance use in this group. Considering that substance use may be a behavioral outcome of body dissatisfaction in Asian American females, it may be necessary to look at the relationship of peer influence and acculturation for a college sample to see if this relationship still holds.

Overall, the literature surrounding peer influence on body dissatisfaction specifically in Asian American females in college is sparse. Similarities in the rate of body dissatisfaction between Asian American and White women would suggest that Asian American females may be prone to the same influences, and so it is important to examine peer influences on body dissatisfaction for this group.

While we have seen that the tripartite influences of family, mass media, and peers may be implicated in both Asian American and White females' feelings about their bodies, it is important to also examine factors that are specifically integral in Asian American body dissatisfaction. Three such factors to consider are acculturation, ethnic identity, and cultural identity. The inclusion of these variables might improve our understanding of body dissatisfaction in this group.

Cultural Values

Acculturation. We have seen that a major limitation of studies that have addressed the tripartite influences of family, media, and peer influences is that they are not culturally specific, and thus it is difficult to say if their conclusive messages apply to all ethnic groups. Among ethnic minorities, certain moderators may act as either buffers or exacerbators of these influences. One such moderator may be how acculturated an individual is to Western culture and conversely, how much the individual maintains the values of their native culture. Acculturation has been defined as “a process of attitudinal and behavioral change undergone

by individuals who reside in multicultural societies or who come in contact with a new culture” (Marin, 1992). For Asian females in America, the process of acculturation may involve a change in values, beliefs, and norms from a collectivist orientation to a more individual orientation, especially for Asian Americans with backgrounds in Eastern Asian countries (Ying, Lee, Tsai, Hun, Lin, & Wan, 2001). In past years, it was thought that complete acculturation to a host culture eliminated the values, cognitions, and behaviors of an ethnic minority individual’s native culture (Gordon, 1964). However, rate of acculturation is bidirectional, and lower acculturation indicates retention of the native culture (Cortes, Rogler, & Malgady, 1994). This bidirectional relationship has been shown to influence psychosocial domains such as values, identity, attitudes, lifestyle choices, and even lesser domains, such as food preference (Kim & Abreu, 2001).

It follows from the Marin (1992) definition that the more acculturated an ethnic minority female is in Western society, the more they will adopt the Western body ideals and subsequently compare themselves with those ideals. Acculturation has been found to be a significant moderating variable in the relationship between ethnicity and body dissatisfaction in Asian American adolescents (Xie et al., 2010). It could very well also be a moderator for this relationship for Asian Americans in emerging adulthood, in which there may be more pressure to adapt to the dominant culture.

Ethnic identity. Another construct tied to acculturation and that may be central to body dissatisfaction among ethnic minorities is how strong an individual’s ethnic identity is. Ethnic identity can be defined as a sense of belonging to one’s native ethnic group, including components such as affirmation and commitment to the group (Phinney & Ong, 2007). Stronger ethnic identity is associated with stronger attachment to the ethnic group. Thus it

follows that there would be a less of a likelihood to reject the cultural values, behaviors, and cognitions of that group in favor of a host, dominant culture. A literature review conducted by Root (1990) reported that certain ethnic minorities are protected against a dominant culture's expectations about appearance via a high sense of ethnic identity (i.e., African American women).

Ethnic identity has been inextricably linked to acculturation for decades, with some research stating that acculturation forms a major component of ethnic identity (Clark, Kaufman, & Pierce, 1976) and even that ethnic identity is an extension of how acculturated an individual is to the host culture (Makabe, 1979). Taking this relationship into account, one must also consider how an individual's native culture may affect their ethnic identity development. By being less acculturated to the dominant culture and maintaining a high ethnic identity, individuals may hold themselves to the standard of the body ideal of the native culture as opposed to an unattainable ideal of the host culture. Subsequently, their level of body dissatisfaction may be lower since their body ideals are more in line with how they actually appear. Furnham and Alibhai (1983) found that rejection of previous cultural ideals and acceptance of body ideals of a host culture support the view that social and cultural factors play a dominant role in the perception of one's body. It follows from this that individuals who are less likely to engage in social comparison may be protected against negative perception of one's body by maintaining their native culture's body ideals in opposition to accepting the thinner ideals of a host culture.

Asian American identity. While ethnic identity may serve as a buffer to the negative effects of sociocultural influences on body image, one must also consider whether the reverse is also true. Asian American females who are either integrating into Western

society as first-generation immigrants or who are second-generation individuals may experience increased pressure to be thin from two different cultures with similarly thin ideals (especially in terms of familial influence). In this case, identification with Asian values may play a role in body dissatisfaction, but it is unclear whether or not it is a protective factor or risk factor. Indeed, past research has found that high levels of ethnic identity in Asian Americans may intensify rather than protect against high levels of body dissatisfaction. For example, a study by Lau and colleagues (2006) found that Asian American women who identified more strongly with traditional Asian values also reported greater body dissatisfaction with those who did not identify as strongly. In the same vein, Phan and Tylka (2006) found that stronger identification with their ethnic group made Asian American women more prone to experience pressure to behave in a way that reflected their community values.

Probably the most comprehensive and pointed study to date concerning the effects of culture and cultural values (both Western and Asian) on body dissatisfaction in Asian American females is a qualitative exploration of therapists' experiences with treating Asian American women with eating disorders (Smart, Tsong, Mejia, Hayashino, & Braaten, 2011). The study involved clients from several Asian subgroups including 9 Korean Americans, 4 Chinese Americans, 2 biracial individuals, 1 Japanese American, 1 Filipino American, 1 Indian American, 1 former USSR individual, and 8 of an unidentified Asian descent. All of the women had been diagnosed with a form of eating disturbance. Therapists described that their clients often discussed that the major stressors causing them to engage in disordered eating behaviors included idealization of Western beauty norms and familial pressure. In terms of familial pressure, there is a tendency for Asian parents to engage in an authoritarian

parenting style, resulting in intrusiveness and direct, often scathing comments about body and weight. The enormity and complication of these individuals' situation may be encapsulated in the following excerpt: "...clients often struggled with trying to be pleasing to others (especially parents), and meeting expectations to be selfless, accomplished, and attract the proper mate. Filial piety (respect for elders) required that young women, for example, not reject food offered to them by elders, but gender role norms also required that they not gain weight" (p. 311). In conjunction with the culture clash discussed so far, it seems as if the individuals in the Smart et al. study are constantly experiencing a "double pressure" to conform to the ideals of both their Asian culture and the dominant, Western society. Further, the study verified that cultural expectations in a family are important variables in determining why these women may develop body dissatisfaction.

We have seen that, in general, Asian Americans experience negative pressure from both Western society and their native culture to meet a bodily ideal. One important point to consider is how different Asian subgroups may have differing cultural values, as these may be important components in how the female views her body. In some Asian subgroups, the pressure to appear a certain way may be exacerbated more so than in other subgroups, as the bodily ideals may vary. For example, it may be more difficult for a female whose native country (e.g. India) esteems voluptuousness to adhere both to those ideals and the thin-ideal of American culture.

In this investigation, I will apply the theoretical framework of the Tripartite Model of Influence with the addition of culturally specific moderators to understand body dissatisfaction in Asian American females. The possible moderating variables of ethnic identity, Asian American identity, and acculturation may be important for understanding and

identifying ways in which body dissatisfaction among Asian American females can be prevented.

Purpose of Study

The purpose of the present study was to use the Tripartite Model of Influence to examine the influence of family, media, and peers on body dissatisfaction in Asian American females. I first replicated previous research on ethnicity and body dissatisfaction by examining whether Asian American females differ from White females in body dissatisfaction, disordered eating behaviors, and behavioral outcomes such as substance use, endorsement of cosmetic surgery, and sexual risk behaviors. I then determined whether the tripartite influences are correlated with body dissatisfaction through the variables of ethnic identity, acculturation, and Asian American identity. I then determined whether media, family, and peer influences have a direct effect on body dissatisfaction and disordered eating behaviors in Asian American females and an indirect effect through internalization of the thin ideal. Finally, I examined whether other effects (i.e., greater substance use, greater endorsement of plastic surgery to change appearance of the tripartite influences can be seen in this group).

Hypotheses

My first hypothesis was that there will be no significant differences in body dissatisfaction, disordered eating behaviors, or other behavioral and health outcomes between White females and Asian American females. This hypothesis follows from the research findings that Asian American females' level of body dissatisfaction and determinants of body dissatisfaction do not significantly differ from that of White females (Grabe & Hyde, 2006; Nouri et al., 2011).

The second hypothesis was that the tripartite influences of family, media, and peers will have an indirect effect on body dissatisfaction through the mediating variable of internalization of the thin ideal for Asian American females. A study conducted by Nouri and colleagues (2011) indicated that internalization of the thin ideal was a driving factor for body dissatisfaction in Asian American females (See Figure 1).

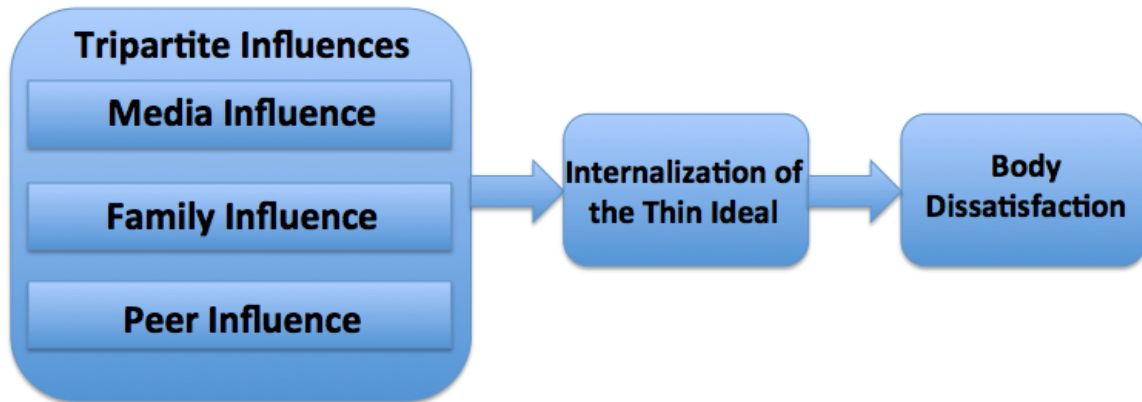


Figure 1. Hypothesis 2 – Internalization of the thin ideal as a mediator of tripartite influences and body dissatisfaction (A.A. sample)

My third hypothesis was that the tripartite influences of family, media, and peer pressures will have an indirect effect on body dissatisfaction through the moderating variables of ethnic identity, acculturation, and Asian American identity. These moderators will work under the assumption that both ethnic identity, acculturation, and cultural values may act as risk factors for Asian American females. Under conditions in which media, peer, and family influence are high (rather than low), higher rates of ethnic identity are expected to lead to higher body dissatisfaction (See Figure 2). Similarly, higher rates of acculturation will also lead to greater body dissatisfaction when media, peer, and family influence are also high (See Figure 3). Finally, higher endorsement of Asian cultural values as measured by

Asian American identity, will lead to greater body dissatisfaction when media, peer, and family influence are also high (See Figure 4).

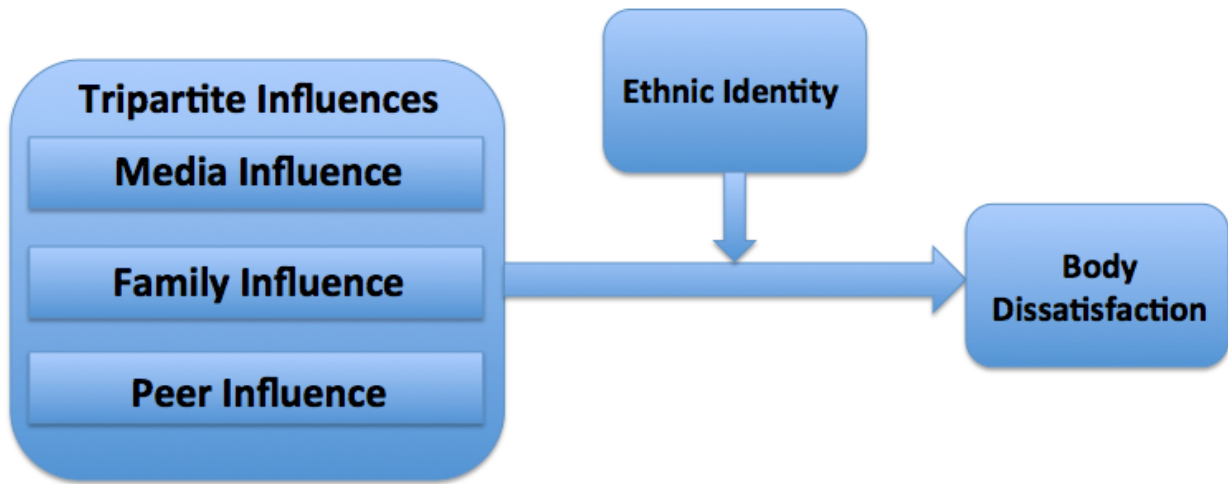


Figure 2. Ethnic identity as a moderator of tripartite influences and body dissatisfaction
(A. A. sample)

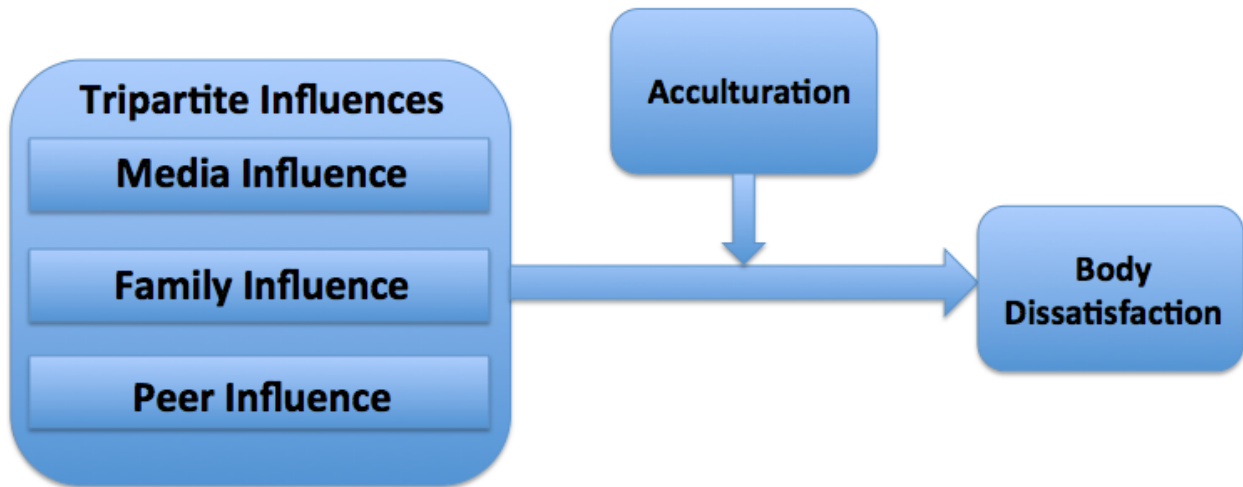


Figure 3. Acculturation as a moderator of tripartite influences and body dissatisfaction
(A. A. sample)

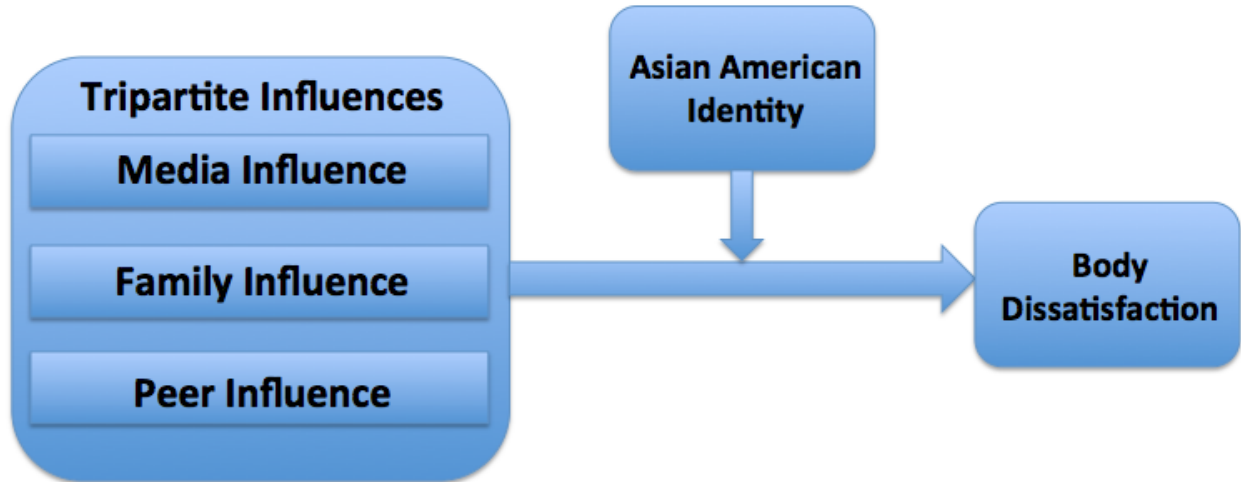


Figure 4. Asian American identity as a moderator of tripartite influences and body dissatisfaction (A. A. sample)

My final hypothesis was that body dissatisfaction will be related to disordered eating behaviors, bulimic symptomatology, and other adverse health and behavioral outcomes for Asian American females. These health and behavioral outcomes include weight control behaviors such as cigarette smoking, coping behaviors such as alcohol and marijuana use, higher endorsement of plastic surgery as a way to change one's appearance, and greater sexual risk behaviors. Past findings on behavioral health implications in other ethnic groups (e.g. Nelson et al., 2009) and the emerging evidence of behavioral implications for Asian Americans (e.g. Fangs et al., 2011) call attention to the need to examine these behaviors in more depth and in different age groups (See Figure 5).

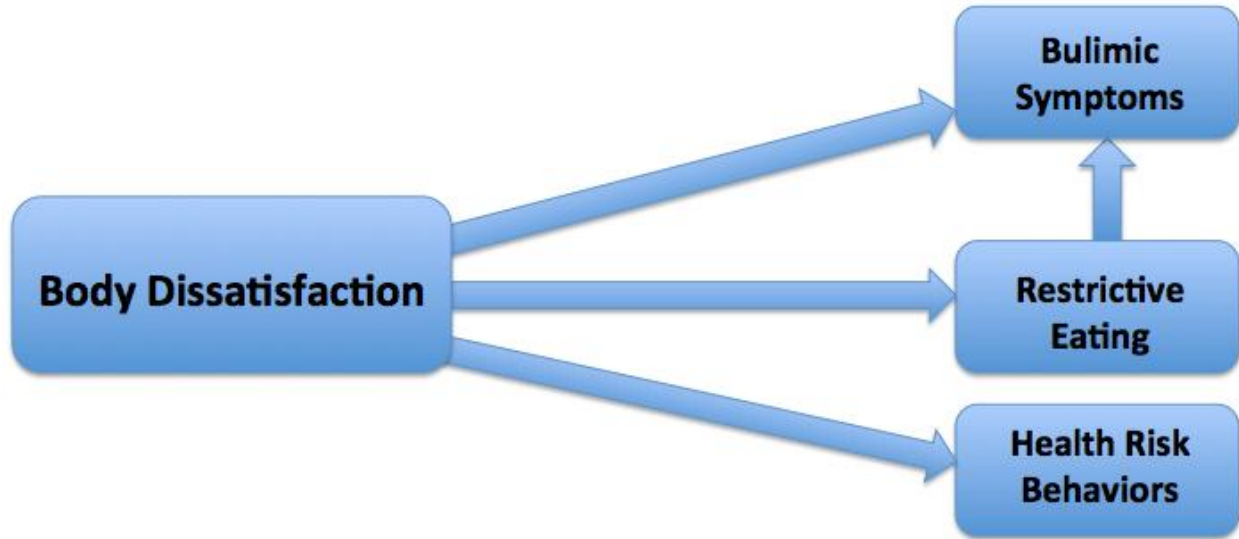


Figure 5. The effects of body dissatisfaction on health and behavioral outcomes

(A. A. sample)

Methods

Power Analysis

Power analyses were computed to determine the appropriate sample size for testing hypothesis 1 (MANCOVA analysis comparing White females to Asian American females) and hypotheses 2-4 (mediation, moderation, and multiple regression analyses). A power analysis revealed that a sample size of 128 individuals was needed in order to achieve a statistical power level of .80 and alpha of .05 for the first analysis with two groups (comparison between Asian American and White females) (hypothesis 1). This sample size of $N = 128$ was needed to detect an effect of .15 at $\alpha = .05$, which is considered a medium effect size (Cohen, 1988). A second power analysis dictated that, in order to achieve a power level of .80 and $\alpha = .05$ with three main predictors (i.e. family influence, ethnic identity, and family influence X ethnic identity for the moderation analyses) and two control variables, a sample size of at least 77 Asian American individuals was needed. Seventy-seven individuals were needed to detect an effect of .15 (Cohen, 1988). The final sample

consisted of 71 White participants and 77 Asian American participants. This sample was large enough to achieve the desired statistical power to address all four hypothesis.

Participants

Participants were 148 undergraduate females recruited from a large university in the Mid-Atlantic region of the United States. Participants identified as either White ($N = 71$) or Asian American ($N = 77$) and were between the ages of 18 and 25. Students who identified as Asian, but not as Asian American, were included if they identified that they were first-generation but migrated to the U.S. with family members. This was determined by the variables “Country of birth,” “Parent’s country of birth,” “Did you come to the U.S. with any family members?,” and “Years in the U.S.” ($N = 35$).

The mean age for White participants was 20.63 years, and the majority (49.3%) were in their Freshman year of college. Additionally, 19.7% were in their Sophomore year of college, 22.5% were Juniors, 5.6% were Seniors, and 2.8% were non-degree seeking students .

The mean age for the sample of Asian American females was 20.30 years. Most were in their Freshman year of college (53.8%), with Sophomores (15.0%), Juniors (15.0%), and Seniors (11.3%). The mean number of years in the U.S. for this sample was 15.83 years. The sample of Asian American women included the following subgroups: Cambodian (2.6%), Chinese (18.2%), Indian (20.8%), Korean (11.7%), Pakistani (6.5%), Filipino (13.0%), Thai (3.9%), Vietnamese (19.5%), and other, including Laotian, Burmese, Middle-Eastern, and Bangladeshi (3.9%).

Measures

The measures appeared in the following order: body dissatisfaction measures, eating disorder scale, health behaviors, plastic surgery endorsement scale, Tripartite Influence Scale, identity measures, acculturation, internalization of the thin ideal, and demographic questions.

Different versions of the survey were constructed for White females and Asian American females. All individuals, regardless of ethnicity, completed the measures of Tripartite Influences, internalization of the thin ideal, body dissatisfaction, disordered eating behaviors, and other health outcomes. However, only Asian American females completed the measures on ethnic identity, Asian American identity, and acculturation.

Outcome Measures: Body Dissatisfaction

Body dissatisfaction was measured by two separate measures that focus on different aspects of body dissatisfaction: discrepancy between actual and ideal shape and satisfaction with certain body parts.

Body Parts Satisfaction Scale (BPSS). The Body Parts Satisfaction Scale (BPSS; Berscheid, Walter, & Bohrnstedt, 1973) is a list of 24 body parts (e.g., eyes, nose, mouth) about which individuals express satisfaction or dissatisfaction. The responses range from 1 (*extremely dissatisfied*) to 6 (*extremely satisfied*), with lower scores indicating greater body dissatisfaction. In two diverse college-aged samples comparing construct reliability and validity of the BPSS for minority and non-minority women, the scale showed sound psychometric properties (Petrie, Tripp, & Harvey, 2002). In the current sample of Asian American women, the scale showed high reliability (Cronbach's alpha = .92). There was also good reliability among the current sample of White women (Cronbach's alpha = .89).

Body Image Assessment Scale – Body Dimensions (BIAS-BD). The Body Image Assessment Scale – Body Dimensions (BIAS-BD; Gardner, Jappe, & Gardner, 2008) is a figural rating scale consisting of 17 female contour-line drawings ranging in size from 60% below average BMI to 140% above average BMI. This measure addresses problems used in existing silhouette scales, such as the presence of ethnic and facial features that could give inaccurate results. Using the scale, individuals choose the figure that best represents what they believe they look like and the figure that they perceive to be their ideal shape. Greater discrepancy between actual and ideal shape indicates greater body dissatisfaction. The BIAS-BD showed good test-retest reliability in its initial development, as well as good concurrent validity (Cronbach's alpha was approximately .80 for both undergraduate males and females; Gardner et al., 2008).

The scores from the BPSS and the BIAS-BD were combined to create a composite body dissatisfaction scale in order to have a measure that assessed body dissatisfaction as a discrepancy between actual and ideal appearance (Allaz et al., 1998) and a measure that tapped into unhappiness with an aspect of one's appearance (Thompson et al., 1999). Both measures of body dissatisfaction are related constructs.

To create the composite scale, items on the BPSS were first reverse-scored so that higher scores indicated higher body dissatisfaction (as opposed to higher body satisfaction according to the original rating system). Then, discrepancy between actual and ideal body was calculated for the BIAS-BD, with higher discrepancies indicating higher body dissatisfaction. These scores were then added to the BPSS scores to create the composite scale.

Disordered eating behaviors. Disordered eating behaviors was measured using the Eating Disorder Examination Questionnaire (EDE-Q; Fairburn & Beglin, 1994). This is a 36-item measure that has been used in the diagnosis of DSM-IV eating disorders and disruptive eating behaviors including binge eating and dietary restraint (Garner, 2002). The EDE-Q consists of four subscales: Restraint, Eating Concern, Weight Concern, and Shape Concern. An example of an item from this measure is, “On how many of the past 28 days have you been deliberately trying to limit the amount of food you eat to influence your shape or weight (whether or not you have succeeded)?” Responses range from 0 (*No days*) to 6 (*Every day*).

The EDE-Q has been found to have high overall internal consistency in a diverse sample of women with an average age of 25.7 years (Cronbach’s alpha = .90; Peterson et al., 2007). In the current study, the measure had high internal consistency for the sample of Asian American women (Cronbach’s alpha = .94) and for the current sample of White women (Cronbach’s alpha = .95).

Other Health Outcome Measures

ACHA-NCHA II. In order to measure other behavioral health outcomes, a scale consisting of selected items from the American College Health Association National College Health Assessment (ACHA-NCHA-II, 2011) was used. The ACHA-NCHA II was developed by the American College Health Association and helps post secondary institutions to collect annual data concerning health behaviors. Items used in this study included condom use during vaginal sex, alcohol use, cigarette use, and marijuana use.

Alcohol use was measured by the item, “Within the last 30 days, on how many days did you use alcohol (beer, wine, liquor)?” Cigarette use had a similar question format:

“Within the last 30 days, on how many days did you use cigarettes?” Marijuana use was measured by the item, “Within the last 30 days, on how many days did you use marijuana (pot, weed, hashish, hash oil)?” Response items for questions about substance use included *Never used, Have used, but not in the last 30 days, 1-2 days, 3-5 days, 6-9 days, 10-19 days, 20-29 days, and Used daily.*

Condom use during vaginal sex consisted of a one-item measure from the ACHA-NCHA II that was intended to gauge protective sexual behaviors among the sample. The item used was, “Within the last 30 days, how often did you or your partner(s) use a condom or other protective barrier (e.g. male condom, female condom, dam, glove) during vaginal intercourse?” Response items for this question included *N/A, Never did this sexual activity, Have not done this activity during the last 30 days, Never, Rarely, Sometimes, Most of the time, and Always.*

The ACHA-NCHA has been found to be a reliable and valid construct for representing the health behaviors of college students nationally when compared to other representative databases (ACHA, 2012).

Acceptance of Cosmetic Surgery Scale (ACSS). The Acceptance of Cosmetic Surgery Scale (ACSS; Henderson-King & Henderson-King, 2005) is a 15-item scale that measures an individual’s acceptance of cosmetic surgery for social and intrapersonal reasons. The ACSS consists of three subscales: Intrapersonal, Social, and Consider. One example item from the Intrapersonal subscale is, “It makes sense to have minor cosmetic surgery rather than spending years feeling bad about the way you look,” with intrapersonal questions gauging personal reasons for why an individual would obtain cosmetic surgery. An example item from the Social subscale is, “I would seriously consider having cosmetic surgery if my

partner thought it was a good idea.” An example item from the Consider subscale is, “If I could have a surgical procedure done for free I would consider trying cosmetic surgery.” Response items on this scale range from 1 (*Strongly Disagree*) to 7 (*Strongly Agree*), on a Likert Scale, with higher scores on the ACSS indicating a higher acceptance of cosmetic surgery.

The ACSS has shown good internal consistency, with Cronbach’s alpha = .92 (Henderson-King, & Henderson-King, 2005). In the current sample, reliability was also high for Asian American women (Cronbach’s alpha = .96) and White women (Cronbach’s alpha = .92).

Independent Measures: Family, Peer, & Media Influences

The independent variables, the tripartite influences of peer, family, and media influence, were assessed using the Tripartite Influence Scale (Keery et al., 2004b). This measure consists of 43-items that assess whether the tripartite influences lead to body dissatisfaction and disordered eating behaviors. The original measure (Keery et al., 2004b) was developed by combining items from different measures and scales that assessed family, media, and peer influence:

Included in the Family Influence subscale are the Perception of Teasing Scale-Weight Teasing Frequency Subscale (six items; Thompson, Cattarin, Fowler, & Fisher, 1995), the Perceived Family Preoccupation with Weight and Dieting Scale (nine items; Schutz et al., 2002), Family Influence Scale (three items; Levine, Smolak, & Hayden, 1994), and the Parental Involvement Scale (Levine et al., 1994). An example item from the parent/family subscale is, “How concerned is your father about whether you weigh too much or are too fat

or might become too fat?” The Family subscale showed excellent reliability in the current sample of Asian American women, Cronbach’s alpha = .91.

The Peer Influence scale included four subscales: the Perception of Teasing Scale-Weight Teasing Frequency Subscale (six items; Thompson, Cattarin, et al., 1995), the Perceived Friend Preoccupation with Weight and Dieting Scale (nine items; Schutz et al., 2002), the Peer Influence Scale (Levine et al., 1994), and the McKnight Risk Factor Survey (two items; Shisslak et al., 1999). An example item from the peer influence subscale is, “Do you think that your friends and classmates take a lot of notice in each other’s weight and shape?” The Peer subscale showed good reliability in the current sample of Asian American women, Cronbach’s alpha = .91.

Scales included in the Media Influence subscale include Media Influence Scale (three items; Levine et al., 1994), the Interest Scale (six items; Harrison, 2000), and two items from the Perceived Sociocultural Pressure Scale (Stice, Ziemba, Margolis, & Flick, 1996). An example item from the media subscale is, “The magazines I read and the TV shows I watch emphasize the importance of appearance (shape, weight, clothing).” The Media subscale showed good reliability in the current sample of Asian American women (Cronbach’s alpha = .83).

Moderation Variables: Cultural Measures

Ethnic identity. The Multigroup Ethnic Identity Measure – Revised (MEIM-R; Phinney & Ong, 2007) was utilized to measure ethnic identity. This measure consists of 6 items and is a revision of the original MEIM (Phinney, 1992). Two subscales that measure exploration and commitment were used. Three items in each of the subscales are rated on a five-point Likert scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Higher

scores on the scale are associated with greater exploration and commitment to one's native, ethnic group. A sample item from the exploration subscale of the MEIM-R is "I have spent time trying to find out more about my ethnic group, such as its history, traditions, and customs." An example item from the commitment subscale is, "I feel a strong attachment towards my own ethnic group." A psychometric assessment of the MEIM-R conducted by Yoon (2011) showed that the overall scale had excellent construct validity and reliability for ethnic minority groups (with Asian Americans comprising the second largest group – 12.5%) (Cronbach's alpha = .88). The current sample yielded excellent reliability, Cronbach's alpha = .93.

Asian American identity. An additional measure of cultural identity more specific to Asian American individuals was also used – the Asian American Identity Scale (Oysterman & Sakamoto, 1997). This is a 12-item scale that measures Asian American identity in a sociocultural context. Four subscales of the measure include connectedness, family focus, interdependent achievement, and awareness of racism. An example item from the Family Focus subscale is, "My relationship with my family is more important than other relationships I have." Response items are measured on a Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). In the original study, all subscales had acceptable reliabilities (Cronbach's alphas = .63-.77; Oysterman & Sakamoto, 1997). Psychometric assessment of this scale was also acceptable for the current sample, Cronbach's alpha = .85.

Acculturation. Acculturation and enculturation were measured using the Acculturation Rating Scale for Mexican Americans – II adapted for Asian Americans (ARSMA-II for Asian Americans; Lee, Yoon, & Liu-Tom, 2006). This scale was adapted from the original ARSMA-II constructed by Cuellar, Arnold, & Maldonado (1995) and

consists of 17 questions measuring an individual's orientation towards Asian culture (enculturation) and 13 items assessing American culture (acculturation). The scale is bi-dimensional and includes a total of 30-items on language use, cultural activities, ethnic identity, cultural activities, and social interactions. The response are measured on a Likert scale ranging from 1 (*not at all*) to 5 (*extremely often or almost always*), with higher scores indicating a greater orientation to either Asian or Western culture. An example item from the enculturation scale is "My friends now are of Asian descent" while an example from the acculturation scale is "My friends are of Caucasian/European descent." Psychometric assessment of the ARSMA-II for Asian Americans indicated that both the enculturation and acculturation scales and their subsets had adequate to good internal reliability (Cronbach alphas $> .70$; Lee et al., 2006). The current sample yielded good reliability, Cronbach's alpha = .83. I chose to use this measure because of its advantages over other acculturation scales of addressing bi-directionality of acculturation (Lee et al., 2006).

Items that indicated greater enculturation (e.g. "I associate with Asians and/or Asian Americans") were reverse-scored in the current study in order to indicate that higher scores indicate higher acculturation to Western culture.

Mediation Variable

Internalization of the thin ideal. Internalization of the Thin Ideal was assessed using the 9-item internalization subscale from the Sociocultural Attitudes Towards Appearance Questionnaire – 3 (SATAQ-3; Thompson, van den Berg, Roehrig, Guarda, & Heinberg, 2004). Internalization items in this scale assess to what extent one incorporates messages of attractiveness from the media into one's feelings about their own appearance. An example item would be, "I would like my body to look like the models who appear in

magazines.” Responses are measured on a Likert scale and ranges from 1 (*Definitely Disagree*) to 5 (*Definitely Agree*). Higher scores on this subscale indicate higher degree of appearance internalization. The internalization subscale has moderate consistency (Cronbach’s alpha = .69) among young women (Stice, Mazotti, Weibel, & Agras, 2000). In the current study, this measure had very high consistency both in the sample of Asian American women (Cronbach’s alpha = .98) and White women (Cronbach’s alpha = .97).

Demographic Questions

Several demographic questions were asked of both the White and Asian American participants. These items included birthdate, Asian ethnicity, primary language spoken, other languages spoken, country born, how old they were when they came into the U.S., if they came to the U.S. with relatives. Several questions were also asked about mother and father (ethnicity, country born, level of education), type of living situation, year in college, first-generation college student status, religious background, and height and weight. Participants were also asked for their weight and height.

Variables that could potentially confound the primary relationships of interest in this study were measured and controlled for during analyses. These included Years in the United States and BMI. Height and weight were used to calculate BMI. The mathematical formula used for this calculation was: $\text{weight (lb.)} / [\text{height (in.)}]^2 \times 703$ (Centers for Disease Control and Prevention, 2013). Additionally, Years in the U.S. was calculated by subtracting the participant’s current age from the age they reported when they came to the U.S. These two variables (BMI and Years in U.S.) were used as control variables for all of the analyses. Past research has shown among ethnic minority individuals that time spent in the United States affects outcomes such as acculturation, ethnic identity, and ascription to media and peer

influences (e.g. Ryder, Alden, & Paulhus, 2000). Additionally, BMI has been cited as one of the most potent predictors of body dissatisfaction (Jones, 2004); thus BMI was used as a control variable.

Procedure

The study was first approved by the University's Institutional Review Board. Participants were recruited primarily through SONA and received course credit for their participation. SONA is a web-based program that is utilized by the psychology department for recruitment, sign-up, and extra-credit management. Participants who signed up for the survey via SONA received a link to the questionnaire after meeting the SONA pre-screen restrictions. The survey was constructed on Survey Monkey, a web-based survey builder. The participant then followed the link to this secure website and after reading a consent form and accepting the terms of the study, completed the questionnaire. Students received course credit toward their Psychology 101 grade.

Additional Asian American students were recruited through Asian student organizations. The primary researcher contacted these organizations and offered participants the option to either take a paper-based version of the survey in person or to be sent a link to the on-line version. Students who were recruited through organizations were entered into a raffle to receive a \$100.00 gift card. Eleven students recruited this way expressed interest in the survey, but only five students completed the survey in full. These five participants were then added to the overall dataset. None of the students recruited through student organizations opted to take the survey in-person, but chose to do the on-line version instead.

Data was collected from the beginning of February 2013 to mid-April 2013.

Although this was a relatively short time frame for data collection, a sufficient sample size was obtained to reach adequate power, which was discussed previously.

Data Analysis Plan

Hypothesis 1, that there will be no significant difference in body dissatisfaction, disordered eating behaviors, or other behavioral and health outcomes between White females and Asian American females, was tested using a MANCOVA. The outcome variables were body dissatisfaction, disordered eating behaviors, and other behavioral health outcomes.

Hypothesis 2, that internalization of the thin ideal will act as a mediating variable between the tripartite influences of family, peer, and media influences and body dissatisfaction for Asian American females, was tested using the mediation method recommended by Baron and Kenny (1986). This involved three multiple regression analyses. In the first regression, the main independent variable of the tripartite influences was correlated with the main outcome of body dissatisfaction. In the second regression, the mediator of internalization of the thin ideal was regressed onto the main independent variable of the tripartite influences. In the third regression, both the tripartite influences and the mediator of internalization of the thin ideal were entered as predictor variables, with body dissatisfaction entered as the outcome variable. For thin-ideal internalization to mediate the relationship between the tripartite influences and body dissatisfaction, three conditions had to be met. First, the tripartite influences must affect the main outcome of body dissatisfaction in the first regression. Second, the tripartite influences must affect the mediator of internalization of the thin ideal in the second regression. Finally, the mediator of internalization of the thin ideal must affect the main outcome of body dissatisfaction in

the third regression. Internalization of the thin ideal will be established as a mediator if the effect of the tripartite influences on body dissatisfaction is smaller in the third regression than in the first regression. Control variables were years in the United States and BMI.

Hypothesis 3, that ethnic identity, acculturation, and Asian American identity will act as moderating variables between the tripartite influences and body dissatisfaction in Asian American females, was tested using the method recommended by Baron and Kenny (1986). This involved six multiple, hierarchical regression analyses. Prior to analysis, the main independent variables of family influence, peer influence, and media influence were centered. Additionally, the moderators of ethnic identity, acculturation, and cultural values were centered. For each regression, the main independent variable (e.g. family influence) was entered into the first step. The moderator (e.g., ethnic identity) was entered into the second step. In the third step, the interaction between the independent variable and moderator was entered (e.g. family influence X ethnic identity). Moderation occurred if the interaction between the tripartite influences and the moderator variables of ethnic identity, Asian American identity, and acculturation were significant.

Hypothesis 4, that body dissatisfaction will be related to disordered eating, bulimic symptomatology, and other health and behavioral outcomes for Asian American females were tested using separate hierarchical regression analyses. Variables held constant were years in the United States and BMI.

Results

Preliminary Analysis

The data was first downloaded from the Survey Monkey server and opened in SPSS version 20.0. Prior to checking statistical assumptions, data were screened for outliers and

missing data. Missing data were dealt with using regression imputation, in which missing values were replaced with predicted values from the regression equation of the variable of interest. However, missing data for the variable of “condom use during vaginal sex” were dealt with using listwise deletion because the overwhelming majority of Asian participants responded “N/A, never did this sexual activity” to this item. After the initial data check, individual items were combined into scales, with reverse-coding on select items in order to create consistency in the interpretation of the scores. For example, on the Acceptance of Cosmetic Surgery Scale, the item “I would never have any kind of plastic surgery” was reverse-coded to indicate that higher scores on this scale indicate higher levels of endorsement of cosmetic surgery. These new variables were then used for the assumption-checking process for each analysis.

Due to the amount of missing data on condom use, the a priori decision was made to run a separate univariate ANCOVA analysis with condom use during vaginal sex as the sole outcome variable. This decision was made in order to avoid loss of power if including in the MANOVA with other outcome variables.

Assumptions of ANOVA were checked prior to the MANCOVA analysis including body dissatisfaction, alcohol, cigarette, and marijuana use, disordered eating, and cosmetic surgery. The Box *M* statistic for this analysis was not significant, thus meeting the assumption of homogeneity of covariance matrices (Box’s $M = 29.29, p = .19$). Of these variables, all met the assumption of homogeneity of variance (Levene statistic $> .05$) except for alcohol use and marijuana use. These variables were then transformed using a square-root transformation. After this transformation, alcohol use met the assumption of homogeneity of variance (Levene statistic = $.02, p = .89$), but marijuana use still violated this

assumption. The marijuana use variable was then transformed using a log transformation, but still violated the assumption following transformation. The most extreme transformation of taking the inverse of this variable was then applied. After re-checking the Levene statistic, this variable was excluded from analysis after violating the assumption a third time. Other MANCOVA assumptions were met.

Assumptions of ANOVA were also checked prior to the ANCOVA analysis involving condom use during vaginal sex. This analysis met the assumption of homogeneity of variance, Levene's statistic = .01, $p = .92$, and all other assumptions of ANOVA were met.

Assumptions of regression were checked prior to mediation, moderation, and regression analyses. The variables of disordered eating and family influence were positively skewed and kurtotic upon the initial check. The variable of tripartite family influence was also skewed slightly more than moderately, and thus was transformed using a log transformation. After making these adjustments, the variables of disordered eating and family influence reached normalcy of skewness and kurtosis. Additional assumptions of regression were met for these variables.

Descriptive Analysis

White females. Frequencies were calculated to determine where participants fell on each of the scales in the current study. White females were more dissatisfied than satisfied with their bodies, according to their scores on the BPS ($M = 68.53$, minimum = 65.00, maximum = 126.00). There were moderate discrepancies between actual and ideal body among White women in the current sample ($M = 6.79$, minimum = 0.00, maximum = 17.00, with "0.00" indicating no difference between actual body and ideal body). White females reported moderate levels of disordered eating (EDE-Q) ($M = 70.24$, minimum = 29.00,

maximum = 153.00). Additionally, White females reported moderate levels of alcohol use ($M = 3.56$, minimum = 1.00, maximum = 8.00), low levels of cigarette use ($M = 2.20$, minimum = 1.00, maximum = 8.00), and low levels of marijuana use ($M = 1.85$, minimum = 1.00, maximum = 6.00). White females also reported moderate levels of condom use during vaginal sex ($M = 3.24$, minimum = 1.00, maximum = 6.00). Finally, White females reported moderate levels of endorsement of cosmetic surgery ($M = 44.45$, minimum = 15.00, maximum = 105.00).

Additional descriptive statistics for White females are shown in Table 1.

Table 1.

Demographic Statistics for White Females (N = 71)

Variable	Mean	SD	Minimum	Maximum
Age	20.63	2.30	18.38	25.00
Year in college	<i>N</i>	<i>%</i>		
Freshman	35	49.3		
Sophomore	14	19.7		
Junior	16	22.5		
Senior	4	5.6		
Non-degree seeking	2	2.8		
	<i>N(%)</i>			
	Mother	Father		
Parent's education level				
Grade school to high school	11 (15.5)	13 (18.3)		
GED				
Some college, vocational, or trade	21 (29.6)	19 (26.8)		
School				
Attended a four-year college	25 (35.2)	21 (29.6)		
Earned a graduate or professional	14 (19.7)	18 (25.3)		
Degree				
	Mean	SD	Minimum	Maximum
Weight (lbs.)	146.23	38.19	95.00	290.00
Height (inches)	64.89	2.63	60.00	72.00
BMI	24.34	5.69	16.97	48.25

A correlation matrix was constructed for White females using the variables of body dissatisfaction, disordered eating, alcohol, cigarette, and marijuana use, condom use during vaginal sex, and endorsement of cosmetic surgery (Table 2). Bivariate correlations indicated that body dissatisfaction was positively correlated with disordered eating ($p < .05$) and negatively correlated with condom use ($p < .05$). Alcohol use was positively correlated with both cigarette and marijuana use (p 's $< .001$). Cigarette use was positively correlated with

marijuana use ($p < .001$), and marijuana use was positively correlated with cosmetic surgery ($p < .05$). No other bivariate correlations were significant.

Table 2.

Correlation Matrix of Variables for White Participants (N = 71)

Variable	Body Dissatisfaction	Disordered Eating	Alcohol Use	Cigarette Use	Marijuana Use	Condom Use during Sex	Cosmetic Surgery
Body Dissatisfaction	1.000						
Disordered Eating	.355*	1.000					
Alcohol Use	-.164	.008	1.000				
Cigarette Use	-.091	-.185	.486**	1.000			
Marijuana Use	-.191	-.054	.412**	.490**	1.000		
Condom Use during Sex	-.239*	.004	.215	.218	.165	1.000	
Cosmetic Surgery	.101	.108	.073	.057	.270*	.006	1.000

Note. * $p < .05$, ** $p < .001$

Asian American females. Descriptive statistics were also computed for Asian American females to see where they fell on the distribution of each scale. Asian Americans were more dissatisfied than satisfied with body parts, according to their scores on the BPS ($M = 74.02$, minimum = 23.00, maximum = 97.00). There were moderate discrepancies in actual and ideal body for this sample ($M = 6.7$, minimum = 0.00, maximum = 19.80, with “0.00” indicating no difference between actual body and ideal body). There was a relatively low prevalence of disordered eating (EDE-Q) reported among this sample ($M = 59.32$, minimum = 28.00, maximum = 151.00). Additionally there was low rates of alcohol use ($M = 2.22$, minimum = 1.00, maximum = 7.00), cigarette use ($M = 1.72$, minimum = 1.00, maximum = 8.00), and marijuana use ($M = 1.33$, minimum = 1.00, maximum = 6.00) among Asian females in this study. Asian females in this study also tended to have low rates of sexual activity, ($M = 2.42$, minimum = 1.00, maximum = 7.00). Asian women were divided on the ACSS ($M = 43.58$, minimum = 15.00, maximum = 99.00).

Descriptive statistics from the tripartite influence scale yielded interesting results for Asian American females. Family influence tended to be relatively low in this sample ($M = 45.45$, minimum = 21.00, maximum = 120.00). Media influence ($M = 36.82$, minimum = 13.00, maximum = 53.00) and peer influence were moderately high ($M = 31.08$, minimum = 23.00, maximum = 55.00). Ethnic identity was high in this sample ($M = 21.07$, minimum = 6.00, maximum = 30.00), as was Asian American identity ($M = 49.59$, minimum = 36.00, maximum = 60.00). A large proportion of the sample reported being very acculturated to U.S. culture in with higher scores indicating higher acculturation ($M = 89.21$, minimum = 57.00, maximum = 128.00). Finally, a high proportion of Asian American females endorsed

the thin-ideal ($M = 90.14$, minimum = 30.00, maximum = 148.00). Additional demographic and descriptive information on Asian American females is in Table 3.

Table 3.

Demographic Statistics for Asian Females (N =77)

Variable	Mean	SD	Minimum	Maximum
Age	20.30	2.05	18.02	25.00
Years in the U.S.	15.83	6.79	1.00	25.00
Year in college	N	%		
Freshman	43	53.8		
Sophomore	12	15.0		
Junior	12	15.0		
Senior	9	11.3		
Non-degree seeking	0	0.0		
	N(%)			
	Mother	Father		
Parent's education level				
Grade school to high school	27 (35.5)	24 (31.2)		
GED				
Some college, vocational, or trade school	18 (23.7)	13 (16.9)		
Attended a four-year college	18 (23.7)	17 (22.1)		
Earned a graduate or professional degree	13 (17.1)	23 (29.9)		
	N	%		
Ethnicity				
Cambodian	2	2.6		
Chinese	14	18.2		
Indian	16	20.8		
Korean	9	11.7		
Pakistani	5	6.5		
Filipino	10	13.0		
Thai	3	3.9		
Vietnamese	15	19.5		
Other	3	3.9		
	Mean	SD	Minimum	Maximum
Weight (lbs.)	125.04	24.68	80.00	210.00
Height (inches)	63.04	2.26	56.00	68.00
BMI	22.04	4.14	14.17	38.73

Additionally, a correlation matrix was constructed for Asian American females using the variables of body dissatisfaction, disordered eating, alcohol, cigarette, and marijuana use, condom use during vaginal sex, and endorsement of cosmetic surgery (Table 4). Bivariate correlations indicated that body dissatisfaction was positively correlated with disordered eating ($p < .001$), cigarette use ($p < .05$), and cosmetic surgery ($p < .001$). Additionally, disordered eating was positively correlated with alcohol use ($p < .05$), cigarette use ($p < .001$), and cosmetic surgery ($p < .001$); alcohol use was positively correlated with cigarette use, marijuana use, and cosmetic surgery ($p < .001$); cigarette use was positively correlated with marijuana use and cosmetic surgery ($p < .001$); and marijuana use was positively correlated with cosmetic surgery ($p < .05$). No other bivariate correlations were significant.

Table 4.

Correlation Matrix of Variables for Asian Participants (N = 77)

Variable	Body Dissatisfaction	Disordered Eating	Alcohol Use	Cigarette Use	Marijuana Use	Condom Use during Sex	Cosmetic Surgery
Body Dissatisfaction	1.000						
Disordered Eating	.593**	1.000					
Alcohol Use	.151	.289*	1.000				
Cigarette Use	.278*	.493**	.523**	1.000			
Marijuana Use	.040	.064	.510**	.329**	1.000		
Condom Use during Sex	-.103	.123	.114	.102	.061	1.000	
Cosmetic Surgery	.331**	.340**	.352**	.457**	.277*	.019	1.000

Note. * $p < .05$, ** $p < .001$

Hypothesis 1

Hypothesis 1 stated that there will be no significant difference in body dissatisfaction, disordered eating behaviors, or other behavioral and health outcomes between White females and Asian American females. A one-way MANCOVA was performed to test this hypothesis, with ethnicity as the primary independent variable and the dependent variables being body dissatisfaction, disordered eating, alcohol, marijuana, and cigarette use, and cosmetic surgery.

MANCOVA. A one-way MANCOVA revealed a significant multivariate main effect for ethnicity (Wilks' $\lambda = .845$, $F(5, 136) = 4.72$, $p = .001$, partial eta squared = .16). Power to detect this effect was .97. Thus, the hypothesis that White and Asian females would not differ significantly on body dissatisfaction and other health outcomes was not confirmed.

Given the significance of the overall test, the univariate main effects were examined. There were no significant univariate main effects for race on the variables of body dissatisfaction, cigarette use, cosmetic surgery, and disordered eating, p 's $> .05$. However, a significant univariate main effect for race were obtained for alcohol use, $F(1, 136) = 20.43$, $p < .001$, partial eta squared = .13. The covariate of BMI was also included in this analysis. A significant univariate main effect for BMI was obtained for body dissatisfaction, $F(1, 136) = 13.35$, $p < .001$, partial eta squared = .09.

A series of pairwise comparisons revealed that White females ($M = 1.81$) had higher mean use of alcohol use than Asian females ($M = 1.41$). See Table 5.

ANCOVA. A one-way ANCOVA controlling for BMI revealed a nonsignificant effect for ethnicity on the outcome of condom use during vaginal sex, $F(1, 85) = .05$, $p =$

.54. This analysis supports the hypothesis that there is not a significant difference in protective sexual health behaviors between White and Asian females (See Table 6).

Table 5.

Between-Subjects Effects of a MANCOVA comparing White (N = 71) and Asian American (N = 65) Females on Body Dissatisfaction and Other Health Variables

	White Females		Asian American Females		Mean Square	F	Sig.
	Mean	SD	Mean	SD			
Body dissatisfaction	70.82	15.81	70.60	19.51	134.80	.471	$p = .49$
Disordered eating	70.24	30.07	59.91	27.56	1636.81	2.09	$p = .15$
Alcohol use*	1.81	.55	1.41	.46	5.37	20.43	$p < .001$
Cigarette use	2.20	2.10	1.68	1.90	11.17	2.76	$p = .10$
Cosmetic surgery	44.45	22.51	44.97	24.03	1252.29	12.27	$p = .88$

*Note: * $p < .05$*

Table 6.

Between-Subjects Effects of an ANCOVA comparing White (N = 54) and Asian American (N = 31) Females on Condom Use During Vaginal Sex

	White Females		Asian American Females		Mean Square	F	Sig.
	Mean	SD	Mean	SD			
Condom use during vaginal sex	3.28	.27	3.19	.36	.18	.05	$p = .83$

Hypothesis 2

Hypothesis 2 stated that internalization of the thin ideal will mediate the relationship between the tripartite influences of family, peer, and media, and body dissatisfaction for Asian American females. This hypothesis was tested using three mediation analyses as per the recommendation of Baron and Kenny (1986), with family influence, media influence, and peer influences as the independent variables and body dissatisfaction as the outcome variable. Control variables included years in the U.S. and BMI.

Mediation analyses. The initial regression between the main predictor of family influence and body dissatisfaction was not significant ($\beta = .10, p = .38$) and so the mediation of thin-internalization on the relationship between family influence and body dissatisfaction was not pursued (See Table 7).

Table 7.

The Mediating Effect of Thin-Ideal Internalization on the Impact of Family Influence on Body Dissatisfaction with an Asian American Female Sample (N = 77)

Variable	B	SE B	β	Sig.(p)
Block 1				
Years in U.S.	-.112	.31	-.04	.72
BMI	1.80	.51	.39	.001
Block 2				
Family Influence	5.27	5.94	.10	.38

Notes. Dependent variable: Body dissatisfaction.
 $R^2 = .18$

In the second mediation analysis, the relationship between media influence and body dissatisfaction was found to be fully mediated by thin-ideal internalization among Asian American females in this sample ($N = 77$). In the first regression model, media influence was

found to predict body dissatisfaction ($\beta = .26, p = .02$). Additionally in this regression model, the covariate of BMI was positively associated with body dissatisfaction ($\beta = .36, p = .001$). In the second regression model, a significant relationship was established indicating that media influence also predicted thin-ideal internalization ($\beta = .50, p < .001$). Neither covariate of years in the U.S. nor BMI were associated with thin-ideal internalization. When both media influence and thin-ideal internalization were included in a third regression model, the relationship between thin-ideal internalization and body dissatisfaction was significant ($\beta = .38, p = .001$), while the relationship between media influence and body dissatisfaction dropped to non-significance ($\beta = .07, p = .52$). A Sobel test (Preacher & Leonardelli, 2001) confirmed that the relationship between media influence and body dissatisfaction was indirect, such that the relation between media influence and body dissatisfaction was explained by thin-ideal internalization ($z = 3.70, p < .001$). Additionally, the covariate of BMI was positively associated with body dissatisfaction in this model ($\beta = .34, p = .001$) (See Table 8 and Figure 6).

Table 8.

The Mediating Effect of Thin-Ideal Internalization on the Impact of Media Influence on Body

Dissatisfaction using an Asian American Female Sample (N = 77)

Variable	<i>B</i>	<i>SE B</i>	β	Sig.(<i>p</i>)
Block 1				
Years in U.S.	-.003	.30	-.001	.99
BMI	1.65	.49	.36	.001*
Block 2				
Media Influence	.61	.25	.26	.02*

Note. Dependent variable: Body dissatisfaction.

Variable	<i>B</i>	<i>SE B</i>	β	Sig.(<i>p</i>)
Block 1				
Years in U.S.	.32	.47	.07	.50
BMI	.44	.76	.06	.56
Block 2				
Media Influence	1.82	.39	.50	<.001**

Note. Dependent variable: Thin-ideal internalization.

Variable	<i>B</i>	<i>SE B</i>	β	Sig.(<i>p</i>)
Block 1				
Years in U.S.	-.08	.28	-.03	.78
BMI	1.55	.46	.34	.001*
Block 2				
Media Influence	.17	.27	.07	.52
Thin-ideal Internalization	.24	.07	.38	.001*

Notes. Dependent variable: Body dissatisfaction.

p* < .05, *p* < .001

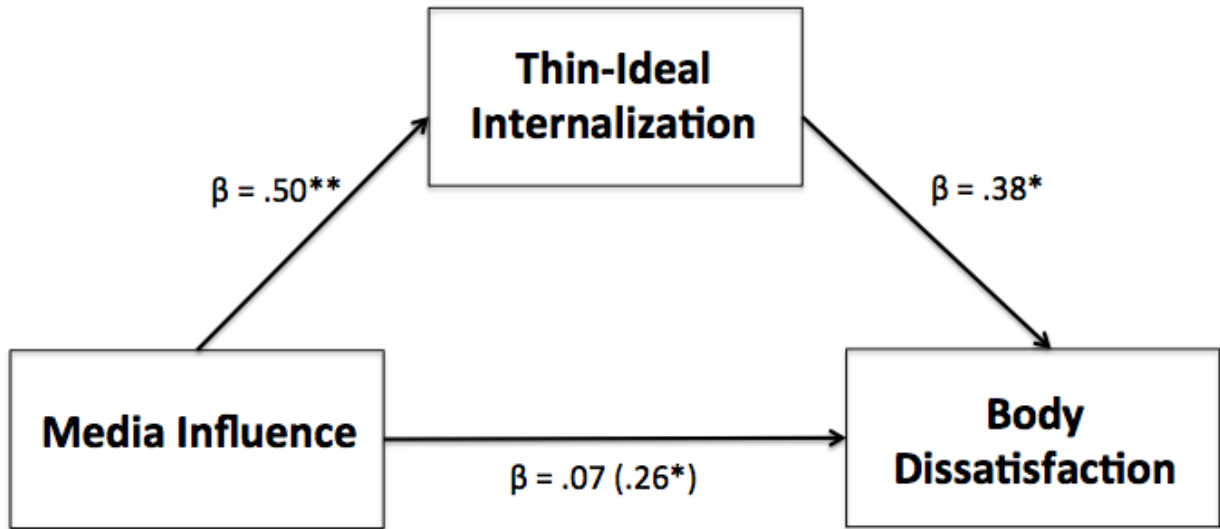


Figure 6. The mediating effect of thin-ideal internalization on the impact of media influence on body dissatisfaction with an Asian American female sample (N = 77)

The third mediation analysis determined that thin-ideal internalization partially mediated the relationship between peer influence and body dissatisfaction in this sample. First, a relationship between peer influence and body dissatisfaction was established such that greater peer influence was indicative of higher body dissatisfaction ($\beta = .42, p < .001$). The covariate of BMI was significantly associated with body dissatisfaction in this model ($\beta = .38, p < .001$). The second regression established a significant relationship between peer influence and thin-ideal internalization ($\beta = .36, p = .001$). Finally, when both the main predictor of peer influence and mediator of thin-ideal internalization were entered simultaneously into the model, both thin-ideal internalization ($\beta = .30, p = .003$) and peer influence ($\beta = .31, p = .002$) significantly predicted body dissatisfaction. Using a Sobel test, the magnitude of the relation between peer influence and body dissatisfaction was found to be partially explained by thin-ideal internalization, ($z = 2.26, p = .02$). The covariate of BMI was also significantly associated with body dissatisfaction in this third model ($\beta = .34, p < .001$) (See Table 9 and Figure 7).

Table 9.

The Mediating Effect of Thin-Ideal Internalization on the Impact of Peer Influence on Body

Dissatisfaction with an Asian American Female Sample (N = 77)

Variable	<i>B</i>	<i>SE B</i>	β	Sig.(<i>p</i>)
Block 1				
Years in U.S.	.05	.28	.02	.85
BMI	1.73	.44	.38	<.001**
Block 2				
Peer Influence	.88	.20	.42	<.001**

Note. Dependent variable: Body dissatisfaction.

Variable	<i>B</i>	<i>SE B</i>	β	Sig.(<i>p</i>)
Block 1				
Years in U.S.	.18	.50	.04	.72
BMI	.94	.79	.13	.24
Block 2				
Peer Influence	1.20	.36	.36	.001*

Note. Dependent variable: Thin-ideal internalization.

Variable	<i>B</i>	<i>SE B</i>	β	Sig.(<i>p</i>)
Block 1				
Years in U.S.	.02	.26	.01	.94
BMI	1.55	.42	.34	<.001**
Block 2				
Peer Influence	.65	.21	.31	.002*
Thin-ideal Internalization	.19	.06	.30	.003*

Notes. Dependent variable: Body dissatisfaction.

p* < .05, *p* < .001

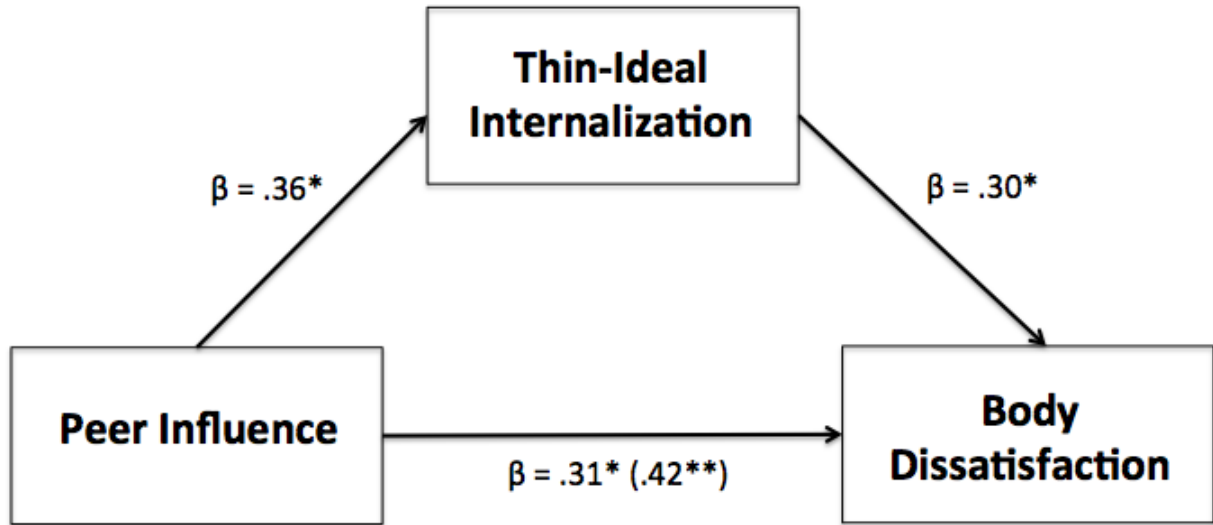


Figure 7. The mediating effect of thin-ideal internalization on the impact of peer influence on body dissatisfaction using an Asian American female sample (N = 77)

Hypothesis 3

The third hypothesis stated that ethnic identity, Asian American identity, and acculturation will act as moderating variables between the tripartite influences (independent variables) and body dissatisfaction (outcome variable) among Asian American females. This hypothesis was tested using 9 separate moderation analyses

Moderation analyses. To test hypothesis 3, multiple regression models were conducted to determine whether the association between family, peer, and media influence on body dissatisfaction depends on the variables of ethnic identity, acculturation, and cultural identity for Asian females. Additionally, interaction terms were created for family influence-by-ethnic identity, family influence-by-acculturation, family influence-by-Asian American identity, media influence-by-ethnic identity, media influence-by-acculturation, media influence-by-Asian American identity, peer influence-by-ethnic identity, peer influence-by-acculturation, and peer influence-by-Asian American identity (Baron & Kenny, 1986).

In the first three moderation analyses, the hypothesis that family influence and its association with body dissatisfaction depends on ethnic identity (moderation 1), acculturation (moderation 2), and cultural identity (moderation 3) were tested. The variables of years in the U.S. and BMI were controlled for. Results of this analysis indicated that family influence was not significantly associated with body dissatisfaction., $p's > .05$. Additionally, the variables of ethnic identity ($p = .66$), acculturation ($p = .86$), and Asian American identity ($p = .65$) were not significantly associated with body dissatisfaction, $p's > .05$ and the interactional terms for family influence X ethnic identity ($p = .91$), family influence X acculturation ($p = .46$), and family influence X Asian American identity ($p = .10$) were not significantly associated with body dissatisfaction, $p's > .05$. Thus, moderation was not established for these analyses (See Tables 10, 11 and 12).

Table 10.

The Moderating Effect of Ethnic Identity on the Impact of Family Influence on Body

Dissatisfaction with an Asian American Female Sample (N = 77)

Variable	B	SE B	β	Sig.(p)
Step 1				
Years in the U.S.	-.11	.31	-.04	.72
BMI	1.80	.51	.39	.001*
Family Influence	5.27	5.94	.10	.38
Step 2				
Years in the U.S.	-.12	.31	-.04	.70
BMI	1.78	.51	.39	.001*
Family Influence	5.23	5.97	.10	.38
Ethnic Identity	.16	.33	.05	.63
Step 3				
Years in the U.S.	-.11	.33	-.04	.74
BMI	1.78	.52	.39	.001*
Family Influence	5.13	6.07	.10	.40
Ethnic Identity	.15	.34	.05	.66
Family Influence	-.13	1.12	-.01	.91
X Ethnic Identity				

Note. * $p < .05$

$R^2 = .178$ for Step 1; $\Delta R^2 = .180$ for Step 2; $\Delta R^2 = .181$ for Step 3 ($p > .05$).

Table 11.

*The Moderating Effect of Acculturation on the Impact of Family Influence on Body**Dissatisfaction with an Asian American Female Sample (N = 77)*

Variable	<i>B</i>	<i>SE B</i>	β	Sig.(<i>p</i>)
Step 1				
Years in the U.S.	-.11	.31	-.04	.72
BMI	1.80	.51	.39	.001*
Family Influence	5.27	5.94	.10	.38
Step 2				
Years in the U.S.	-.09	.35	-.03	.80
BMI	1.80	.51	.39	.001*
Family Influence	5.51	6.18	.10	.38
Acculturation	-.03	.18	-.02	.88
Step 3				
Years in the U.S.	-.11	.35	-.04	.76
BMI	1.80	.51	.39	.001*
Family Influence	6.25	6.28	.11	.32
Acculturation	-.03	.18	-.02	.86
Family Influence X Acculturation	.39	.53	.08	.46

Note. * $p < .05$ $R^2 = .178$ for Step 1; $\Delta R^2 = .178$ for Step 2; $\Delta R^2 = .184$ for Step 3 ($p > .05$).

Table 12.

*The Moderating Effect of Asian American Identity on the Impact of Family Influence on Body**Dissatisfaction with an Asian American Female Sample (N = 77)*

Variable	<i>B</i>	<i>SE B</i>	β	Sig.(<i>p</i>)
Step 1				
Years in the U.S.	-.11	.31	-.04	.72
BMI	1.80	.51	.39	.001*
Family Influence	5.27	5.94	.10	.38
Step 2				
Years in the U.S.	-.11	.31	-.04	.73
BMI	1.80	.51	.39	.001*
Family Influence	5.64	6.13	.10	.36
Asian American Identity	-.09	.32	-.03	.79
Step 3				
Years in the U.S.	-.02	.31	-.01	.94
BMI	1.85	.50	.40	<.001**
Family Influence	4.31	6.10	.08	.48
Asian American Identity	-.14	.32	-.05	.65
Family Influence	-1.39	.84	-.18	.10
X Asian American Identity				

Note. * $p < .05$, ** $p < .001$

$R^2 = .178$ for Step 1; $\Delta R^2 = .179$ for Step 2; $\Delta R^2 = .210$ for Step 3 ($p > .05$).

In the second group of moderation analyses, the hypothesis that media influence and its association with body dissatisfaction depends on ethnic identity (moderation 4), acculturation (moderation 5), and Asian American identity (moderation 6) were tested. During these analyses, the variables of years in the U.S. and BMI were controlled for. Results of these moderation analyses indicated that greater media influence was associated with higher body dissatisfaction for moderation 4 ($\beta = .26$, $p = .02$), moderation 5 ($\beta = .26$, $p = .02$), and moderation 6 ($\beta = .26$, $p = .02$). The variables of ethnic identity ($p = .54$),

acculturation ($p = .97$) and Asian American identity ($p = .58$) were not significantly associated with body dissatisfaction. Additionally, the interaction terms for media influence X ethnic identity ($p = .70$), media influence X acculturation ($p = .83$), and media influence X Asian American identity ($p = .40$) were not significantly associated with body dissatisfaction. Moderation was not established for these analyses (See Tables 13, 14, and 15).

Table 13.

The Moderating Effect of Ethnic Identity on the Impact of Media Influence on Body Dissatisfaction with an Asian American Female Sample (N = 77)

Variable	B	SE B	β	Sig.(p)
Step 1				
Years in the U.S.	-.003	.30	-.001	.99
BMI	1.65	.49	.36	.001*
Media Influence	.61	.25	.26	.02*
Step 2				
Years in the U.S.	-.01	.30	-.004	.97
BMI	1.64	.49	.36	.001*
Media Influence	.61	.25	.26	.02*
Ethnic Identity	.13	.32	.04	.68
Step 3				
Years in the U.S.	-.02	.30	-.01	.96
BMI	1.66	.50	.36	.001*
Media Influence	.59	.25	.26	.02*
Ethnic Identity	.12	.33	.04	.72
Media Influence	-.02	.04	-.04	.70
X Ethnic Identity				

Note. * $p < .05$
 $R^2 = .233$ for Step 1; $\Delta R^2 = .235$ for Step 2; $\Delta R^2 = .236$ for Step 3 ($p > .05$).

Table 14.

The Moderating Effect of Acculturation on the Impact of Media Influence on Body

Dissatisfaction with an Asian American Female Sample (N = 77)

Variable	B	SE B	β	Sig.(p)
Step 1				
Years in the U.S.	-.003	.30	-.001	.99
BMI	1.65	.49	.36	.001*
Media Influence	.61	.25	.26	.02*
Step 2				
Years in the U.S.	.002	.34	.001	.99
BMI	1.65	.49	.26	.001*
Media Influence	.61	.25	.26	.02*
Acculturation	-.01	.17	-.004	.97
Step 3				
Years in the U.S.	.01	.34	.002	.99
BMI	1.65	.49	.36	.001*
Media Influence	.61	.25	.26	.02*
Acculturation	-.03	.20	-.02	.89
Media Influence X Acculturation	-.004	.02	-.03	.83

Note. * $p < .05$

$R^2 = .233$ for Step 1; $\Delta R^2 = .233$ for Step 2; $\Delta R^2 = .233$ for Step 3 ($p > .05$)

Table 15.

*The Moderating Effect of Asian American Identity on the Impact of Media Influence on Body**Dissatisfaction with an Asian American Female Sample (N = 77)*

Variable	<i>B</i>	<i>SE B</i>	β	Sig.(<i>p</i>)
Step 1				
Years in the U.S.	-.003	.30	-.001	.99
BMI	1.65	.49	.36	.001*
Media Influence	.61	.25	.26	.02*
Step 2				
Years in the U.S.	.004	.30	.001	.99
BMI	1.67	.49	.36	.001*
Media Influence	.63	.25	.27	.02*
Asian American Identity	-.14	.30	-.05	.65
Step 3				
Years in the U.S.	.01	.30	.01	.97
BMI	1.76	.50	.38	.001*
Media Influence	.60	.26	.26	.02*
Asian American Identity	-.22	.32	-.08	.50
Media Influence	-.03	.03	-.09	.40
X Asian American Identity				

Note. * $p < .05$, ** $p < .001$

$R^2 = .233$ for Step 1; $\Delta R^2 = .235$ for Step 2; $\Delta R^2 = .243$ for Step 3 ($p > .05$).

The final group of moderation analyses sought to answer whether the association between peer influence and body dissatisfaction depends upon ethnic identity (moderation 7), acculturation (moderation 8), and Asian American identity (moderation 9). Years in the U.S. and BMI were controlled for during these analyses. Greater peer influence was associated with higher body dissatisfaction for analyses in this set (moderation 7: $\beta = .41$, $p < .001$; moderation 8: $\beta = .43$, $p < .001$; moderation 9: $\beta = .42$, $p < .001$). The variables of ethnic identity ($p = .83$), acculturation ($p = .73$), Asian American identity ($p = .86$), peer influence X ethnic identity ($p = .49$), peer influence X acculturation ($p = .88$), and peer influence X Asian American identity ($p = .64$) were not significant. Moderation was not concluded for these analyses (See Table 16, 17, and 18).

Table 16.

*The Moderating Effect of Ethnic Identity on the Impact of Peer Influence on Body**Dissatisfaction with an Asian American Female Sample (N = 77)*

Variable	<i>B</i>	<i>SE B</i>	β	Sig.(<i>p</i>)
Step 1				
Years in the U.S.	.05	.28	.02	.85
BMI	1.73	.44	.38	<.001**
Peer Influence	.88	.20	.42	<.001**
Step 2				
Years in the U.S.	.05	.28	.02	.86
BMI	1.72	.45	.38	<.001**
Peer Influence	.88	.20	.42	<.001**
Ethnic Identity	.06	.30	.02	.85
Step 3				
Years in the U.S.	.01	.28	.01	.79
BMI	1.69	.45	.37	<.001**
Peer Influence	.86	.21	.41	<.001**
Ethnic Identity	.07	.30	.02	.83
Peer Influence	.03	.04	.07	.49
X Ethnic Identity				

Note. * $p < .05$, ** $p < .001$

$R^2 = .342$ for Step 1; $\Delta R^2 = .342$ for Step 2; $\Delta R^2 = .347$ for Step 3 ($p > .05$).

Table 17.

*The Moderating Effect of Acculturation on the Impact of Peer Influence on Body**Dissatisfaction with an Asian American Female Sample (N = 77)*

Variable	B	SE B	β	Sig.(p)
Step 1				
Years in the U.S.	.05	.28	.02	.85
BMI	1.73	.44	.38	<.001**
Peer Influence	.88	.20	.42	<.001**
Step 2				
Years in the U.S.	.10	.31	.04	.75
BMI	1.74	.45	.38	<.001**
Peer Influence	.89	.20	.43	<.001**
Acculturation	-.05	.16	-.04	.73
Step 3				
Years in the U.S.	.10	.31	.03	.76
BMI	1.74	.45	.38	<.001**
Peer Influence	.89	.21	.43	<.001**
Acculturation	-.06	.16	-.04	.73
Peer Influence	.004	.02	.02	.88
X Acculturation				

Note. * $p < .05$, ** $p < .001$

$R^2 = .342$ for Step 1; $\Delta R^2 = .343$ for Step 2; $\Delta R^2 = .343$ for Step 3 ($p > .05$)

Table 18.

*The Moderating Effect of Asian American Identity on the Impact of Peer Influence on Body**Dissatisfaction with an Asian American Female Sample (N = 77)*

Variable	B	SE B	β	Sig.(p)
Step 1				
Years in the U.S.	.05	.28	.02	.85
BMI	1.73	.44	.38	<.001**
Peer Influence	.88	.20	.42	<.001**
Step 2				
Years in the U.S.	.05	.28	.02	.85
BMI	1.74	.45	.38	<.001**
Peer Influence	.88	.20	.42	<.001**
Asian American Identity	-.06	.28	-.02	.84
Step 3				
Years in the U.S.	.04	.28	.01	.89
BMI	1.71	.45	.38	<.001**
Peer Influence	.88	.21	.42	<.001**
Asian American Identity	-.05	.28	-.02	.86
Peer Influence	-.01	.03	.05	.64
X Asian American Identity				

Note. * $p < .05$, ** $p < .001$

$R^2 = .342$ for Step 1; $\Delta R^2 = .342$ for Step 2; $\Delta R^2 = .344$ for Step 3 ($p > .05$).

Hypothesis 4

The final hypothesis stated that body dissatisfaction (independent variable) will be related to disordered eating and behavioral and health outcomes (e.g. alcohol use, marijuana use, and cigarette use, and endorsement of cosmetic surgery) among Asian American females.

Regression analyses. Several hierarchical regression analyses were computed to determine whether there were significant relationships between body dissatisfaction and subsequent health outcomes for the sample of Asian American females. Years in the U.S.

and BMI were entered into the first block of all analyses, and body dissatisfaction was entered into the second block. The first regression indicated that body dissatisfaction was positively correlated with the overall disordered eating scale in this sample, $\beta = .48$, $p < .001$. Body dissatisfaction in this sample accounted for 16.9% of the variance in disordered eating. Control variables for this analysis included BMI and years in the U.S., with BMI also significantly predicting disordered eating behavior, $\beta = .30$, $p = .003$. Additional regressions were conducted to determine the relationships between body dissatisfaction and restricted eating behaviors and body dissatisfaction and bulimic symptomatology. Body dissatisfaction was positively correlated with both restricted eating ($\beta = .34$, $p = .004$) and bulimic symptomatology ($\beta = .46$, $p < .001$) in this sample.

In the second series of regressions, body dissatisfaction positively and significantly predicted cigarette use in the past 30 days, $\beta = .33$, $p = .008$. Body dissatisfaction accounted for 9.3% of the variance in past 30-day cigarette use. Control variables included BMI and years in the U.S., neither of which were significantly correlated with cigarette use. Body dissatisfaction was not found to be a significant predictor of alcohol use or marijuana use, p 's $> .05$. Furthermore, body dissatisfaction did not significantly predict condom use during vaginal sex in this sample, $p = .78$.

In the final regression, body dissatisfaction positively predicted endorsement of cosmetic surgery, $\beta = .30$, $p = .01$. Body dissatisfaction accounted for 7.7% of the variance in endorsement of cosmetic surgery in this sample of women. Control variables for this analysis included BMI and years in the U.S. Years in the U.S. was also negatively correlated with endorsement of cosmetic surgery in this sample, $\beta = .30$, $p = .01$ (See Table 19).

Table 19.

*The Effect of Body Dissatisfaction on Health and Behavioral Outcomes for an Asian**American Female Sample (N = 77)*

Outcome variable	<i>B</i>	<i>SE B</i>	β	<i>F</i>	Sig. (<i>p</i>)	ΔR^2
Disordered eating	.68	.14	.48	18.95	<.001**	.19
Restrictive eating	.13	.04	.34	8.37	.004*	.10
Bulimic symptomatology	.19	.05	.46	10.08	<.001**	.18
Alcohol use	.01	.01	.18	1.50	.15	.03
Cigarette use	.03	.01	.33	2.75	.008*	.09
Marijuana use	.004	.01	.10	.54	.44	.08
Condom use during vaginal sex	-.01	.02	-.06	.47	.78	.02
Cosmetic surgery	.38	.14	.30	6.25	.01*	.08

Note. Independent variable: Body dissatisfaction; Control variables: Years in U.S., BMI
 * $p < .05$, ** $p < .001$

Discussion

The purpose of the current study was to determine what factors contribute to body dissatisfaction among Asian American women in emerging adulthood (ages 18-25). This thesis used the theoretical framework of the Tripartite Model of Influence and applied it to a sample of Asian American college students. The study contributes to the expanding body of literature discerning ethnic differences in body image by studying the phenomenon of body dissatisfaction in an underrepresented population. Additionally, there is a paucity of research on health and behavioral outcomes of body dissatisfaction among Asian American women, and this thesis sought to add insight to this topic as well.

Research has been mixed on this topic, but most literature has maintained that body dissatisfaction is similar between White women and Asian women (e.g. Arriaza & Mann, 2001; Cash, et al., 2004; Siegel, 2002). Accordingly, the first hypothesis was that there would be no significant differences between White women and Asian women in terms of body dissatisfaction and other health behaviors (e.g., disordered eating, alcohol, cigarette, and marijuana use, and endorsement of cosmetic surgery). This hypothesis was confirmed for body dissatisfaction as there were no differences between the two groups. There were differences for alcohol use, as White women had significantly higher alcohol use in the past 30 days than Asian American women in this sample. Previous research has shown that alcohol use is generally lower among Asian Americans than other ethnic groups in university settings (United States Department of Health and Human Services, 2012), which explain this finding.

Apart from this significant relationship, there were no significant differences between ethnicities on the other health outcome variables including cigarette use, disordered eating, endorsement of cosmetic surgery, and condom use during vaginal sex. Thus, the hypothesis that Asian women and White women would not differ on body dissatisfaction and other health and behavioral outcomes was mostly confirmed. Implications of this finding will be discussed further.

The second hypothesis stated that, thin-ideal internalization would mediate the relationship between family influence, media influence, and peer influence and the outcome of body dissatisfaction. This hypothesis was partially confirmed in the current study. While thin-ideal internalization did not mediate the relationship between family influence and body dissatisfaction, it mediated the relationship between media influence and body dissatisfaction

as well as peer influence and body dissatisfaction. This finding indicates that thin-ideal internalization acts as a causal pathway between media influence, peer influence and body dissatisfaction. Media/peer influence influences thin-ideal internalization, which in turn, influences body dissatisfaction. This indicates that this indirect relationship between media/peer influence and body dissatisfaction only occurs through thin-ideal internalization. Furthermore, thin-ideal internalization accounted for all of the relationship between media influence and body dissatisfaction in the current study (full mediation), and accounted for some of the relationship between peer influence and body dissatisfaction (partial mediation).

There are a couple of reasons why thin-ideal internalization may not have mediated the relationship between family influence and body dissatisfaction. For one, the Asian sample was composed of comparable numbers of females from different Asian sub-groups. It may be the case that Asian women from South Asia (e.g., India and Pakistan) cultures have a different body ideal than Eastern Asian women who may be more likely to endorse a thinner ideal. Thus, the impact of family pressure on a thin ideal may differ among Asian subgroups. For example, individuals from Eastern Asian cultures are may likely to endorse the thin ideal (Nouri et al., 2011; Wildes et al., 2001), and family may be a factor in this endorsement. A second explanation for the lack of mediation is that there may be some other factor that connects family influence and thin-ideal internalization. For example, a familial focus on weight may not affect an individual unless that influence causes the individual to become self-conscious. This increase in consciousness and the subsequent evaluation comparison may in turn, lead to body dissatisfaction. Future studies should explore this type of relationship.

The mediations of media influence and body dissatisfaction and peer influence and body dissatisfaction were confirmed. Thin-ideal internalization fully mediated the relationship between media influence and body dissatisfaction in this sample. Previous studies have indicated that media influence has a large effect on body dissatisfaction among Asian American women (Evans & McConnell, 2003; Hall 1995). Asian American females may be more influenced by media pressure to appear a certain way due to either underrepresentation of Asian females in the media or the inability to look up to Asian entertainers as appearance role models. The more media pressure women experience, the more this thin-ideal is internalized. The thin-ideal affects level of body dissatisfaction when women find themselves discrepant from the ideal.

Additionally, thin-ideal internalization partially mediated the relationship between peer influence and body dissatisfaction. There is not a large body of literature on how peers influence body dissatisfaction among Asian American females. However, the current study indicated that peers are a proximal influence on body dissatisfaction. This finding suggests that discrepancies between an Asian female's appearance and her peer's appearance has a significant effect on body dissatisfaction. This effect has not been discussed in current literature.

One implication of the finding of partial mediation for peers on body dissatisfaction is that Asian females with White female friends may be dissatisfied with certain aspects of their bodies that are discrepant from their White friends. For example, more race-related features or structure of their bodies would be areas of discrepancies. This type of body dissatisfaction may led to a greater endorsement of cosmetic surgery to change these features. Body dissatisfaction was correlated with greater endorsement of cosmetic surgery in this study.

The third hypothesis sought to determine whether the tripartite influences of family, media, and peer influence and their relationship with body dissatisfaction was moderated by the variables of ethnic identity, Asian American identity, and acculturation. None of these moderations showed significance, and further, none of the cultural variables independently predicted body dissatisfaction. Thus, this hypothesis was not confirmed.

The finding that these variables were not related to body dissatisfaction in the current study may indicate that cultural factors such as ethnic identity and Asian American identity are not closely tied to body dissatisfaction across all Asian subgroups. Most studies examining the phenomenon of ethnic identity affecting body dissatisfaction have been conducted with groups primarily comprised of Eastern Asian individuals (e.g. Lau et al., 2006; Phan & Tylka, 2006). Thus, items on the Asian American Identity scale that measured more Eastern Asian values that such as, “Respect for my elders is an important part of how I was raised” may not be applicable to all individuals.

The finding that ethnic identity was not a significant moderator of peer and media influence and body dissatisfaction is inconsistent with other research that have shown ethnic identity to be a protective factor against a host of health outcomes (e.g. Root, 1990). In this study, the measure of ethnic identity consisted of exploration and commitment subscales, which are behavioral in nature. This measure of ethnic identity may not have tapped into underlying intrapersonal processes that may be more related to body dissatisfaction, such as self-consciousness or self-esteem (Smolak & Levine, 2001).

Acculturation was not independently or indirectly related to body dissatisfaction in any of the moderation analyses. This finding is consistent with literature that has shown that acculturation is not related to eating pathology and body image disturbance among Asian

women (Wildes et al., 2001). Acculturation in and of itself is a multi-dimensional construct that includes behavioral components (Akan & Grilo, 1995), years spent living in the U.S. (Sanders & Heiss, 1998), and also may include a transition in values (Kim, Atkinson, & Yang, 1999). The measure of acculturation used in the current study (the ARSMA-II for Asian Americans, Lee et al., 2006) measured mainly behavioral indicators of acculturation, similar to the measure of ethnic identity. Body dissatisfaction may have been better gauged with a measure of value-related acculturation that emphasizes Western values such as individuality, egocentricity, and separateness (Nathan, Marsella, Horvath, & Coolidge, 1999). Such values may represent body dissatisfaction among Asian American women as an implicit outcome motivated by intrapersonal reasons, rather than interpersonal reasons.

The final hypothesis stated that body dissatisfaction would be linked to several outcomes specifically for Asian American females, including restricted eating, bulimic symptomatology, alcohol use, cigarette use, marijuana use, and endorsement of cosmetic surgery. Body dissatisfaction was positively and significantly correlated with restricted eating, bulimic symptomatology, cigarette use, and endorsement of cosmetic surgery in this sample. Past research confirms that body dissatisfaction is linked to disordered eating among Asian American women (e.g. Wildes et al., 2001). Additionally, to my knowledge, no empirical studies have examined endorsement of cosmetic surgery among a diverse sample of Asian American college women, but cosmetic surgery has increased among Asian Americans in recent years (AAFPRS, 2011).

The finding that body dissatisfaction was positively correlated with past-30 day cigarette use among Asian American women contributes to the literature on causes of smoking and bears further investigation. This relationship may indicate that Asian American

women who are body dissatisfied may turn to cigarette use as a coping method (e.g. Granner, Black, & Abood, 2002) or as a method to control weight (e.g. Lopez Khoury et al., 2009).

Further research is needed to explore this relationship in-depth.

Implications

Examining implicit determinants of body dissatisfaction. Overall, the findings from the current study point to the growing problem of body dissatisfaction among Asian American women. The findings that thin-ideal internalization mediates both the relationship between media influence and body dissatisfaction and peer influence and body dissatisfaction indicate that this factor must be examined in future research studies, as well as emphasized in intervention programs. The behavioral indicators of ethnic identity, Asian American identity, and acculturation were not found to be significantly related to body dissatisfaction. Taken together, these results point to the importance of intrapersonal, rather than behavioral factors in determining body dissatisfaction among Asian American females in emerging adulthood.

The importance of media influence. Media and peer influence were found to be significant predictors of body dissatisfaction in this group above and beyond the control variable of years in the U.S. Among the current sample of college-educated Asian American females, these influences (media and peer) were found to be positively and significantly correlated with body dissatisfaction, while family influence was not. Since the family is the central unit in many Asian cultures, family influence has often been cited as influential in determining body dissatisfaction among Asian American females. However, there may be secular trends in the U.S. that are changing the nature of this family dynamic with more emphasis on individualism in Asian families. Additionally, the majority of Asian American females in the current study had lived in the U.S. for about 16 years, or the majority of their

lives. Past studies examining family influence on body dissatisfaction may not have taken into account time spent in the U.S. into account. It may be assumed that the longer an individual lives in the U.S., the more she might ascribe to Western influences such as peer and media pressures, rather than family pressures. Another plausible reason for the lack of support for family influence on body dissatisfaction may be because most of the students were freshman and during the first year of adaptation to college, the family may be less salient in the students' day-to-day activities.

When all an Asian female sees on television and in magazines are White women, negative self-feelings may be exacerbated. For example, Asian American actresses are severely underrepresented on television shows and magazines that are targeted at females in emerging adulthood, while White females are overrepresented. Furthermore, even when Asian women *are* in the media, there may be an overrepresentation of certain subgroups of Asian women. Asian American females in underrepresented subgroups may find it difficult to find Asian role models from their own subgroup in the media.

The importance of peer influence. Peer influence was also found to be integral in body dissatisfaction for the current study. Peers are a proximal group to which individuals can compare themselves. It is unclear whether the majority of Asian females in the current study had groups of friends who were also Asian, White, or of other ethnic backgrounds. Regardless, Asian women and their peers may share phenomena such as fat talk, which may exacerbate thin-ideal internalization and subsequent body dissatisfaction.

The majority of Asian females in this study were in their first year of college. Past research has shown that the first-year of college is associated with body dissatisfaction due to a sudden increase in peer exposure (Gillen & Lefkowitz, 2006). This may be the age group

that is most vulnerable to the effects of peer influence on body dissatisfaction. More constant exposure to peers may increase comparisons between individuals, and when there is a discrepancy in appearance, dissatisfaction may result. Additionally, there may be more pressure to date or pursue relationships in college, and individuals may be motivated to appear a certain way to achieve that end.

An additional factor to consider is whether these individuals belonged to certain student groups which may also exacerbate peer influence on body checking. This was not a factor examined in the current study, but it may be the case that Asian females who are apart of students groups that place greater emphasis on appearance (e.g. sororities) may be at especially high risk for body dissatisfaction. Future studies should ask what types of student groups an individual belongs to and whether or not they feel that looking a certain way is a pressure they feel from being a member of that group.

Risk behaviors. The current study indicated that restrictive eating, bulimic symptomatology, cigarette use, and endorsement of cosmetic surgery were all correlated with body dissatisfaction for Asian American females. There is a small amount of literature focusing on health and behavioral correlates apart from disordered eating among Asian American women in emerging adulthood. Findings from this study suggest that these individuals are at risk for negative health behaviors that are related to changing one's appearance. For example, since cigarette use has been associated with appetite suppression, Asian American females may be motivated to use cigarettes for this reason. Additionally, Asian American females may be motivated by unhappiness with certain body parts to obtain cosmetic surgery in order to correct these discrepancies. More research is needed to explore specific motivations behind these risk behaviors.

Limitations

One limitation relates to sample size. Although the sample was large enough to detect a medium effect, a larger sample was needed to detect a small effect for the cultural variables of ethnic identity, acculturation, and Asian American identity.

A second limitation is the data was cross-sectional and causality cannot be inferred. Although it is recommended that mediation variables be longitudinal in nature, thin-ideal internalization was used due to its implicit nature and the assumption that this type of internalization does not happen at one point in time, but is an on-going process.

A third limitation of the study is that there were not enough participants to do within-group comparisons, and thus Asian ethnicities had to be grouped together. However, there were comparable numbers of Indian, Chinese, and Vietnamese individuals, as well as other Asian groups represented in the sample. Thus, the current sample deviates away from studies that use predominantly Eastern Asian individuals to generalize to all Asian individuals.

Another limitation of the study is that participants self-reported weight and height and self-reports may not be entirely accurate. Since this was an on-line questionnaire, it was not possible to obtain objective measures of weight and height.

One final limitation may lie in the nature of the items used in the thin body internalization measure. These items are similar to the media subscale of the Tripartite Influence Scale, which may have increased the significant relationships between media influence and internalization of the thin body ideal. Future studies should incorporate a more general scale of internalization that touches on pressures other than media pressure.

Recommendations and Future Research

Inclusion of more Asian women in the media. Given that media has a strong influence on body dissatisfaction, it may help for Asian women to see more representation on TV, in magazines, and on the internet. Campaigns aimed at reducing body dissatisfaction among women should take care to include more representative samples of women as their spokespeople, and include different types of Asian women. Also, media sources could include more Asian role models in general. As one of the fastest growing minority groups, it is important for Asian women to have role models that appear in likeness to them. Otherwise, the discrepancy between their actual appearance and what is deemed beautiful may be highly unattainable. .

Interventions aimed at reducing body dissatisfaction among Asian American women should include a media component in which representative groups of Asian women are presented as the central characters. For example, using a form of entertainment education, an intervention can be modeled around a television program centered around a group of Asian American women of different body types. Alternately, an intervention could include already existing television shows with an Asian woman as the main character (e.g. *The Mindy Show*), a component focused on Asian American magazine publications, blogs, or even a focus on Asian American musical artists. These interventions can attempt to increase positive attitudes towards different Asian body types, as well as acceptance of one's own body type and appearance.

Emphasis on peer influence. Additionally, peer influence was a significant predictor of body dissatisfaction, and retained significance even when thin-ideal internalization was kept as a mediating variable. There is a dearth of literature focusing on peer influence on

body dissatisfaction among Asian American females. However, the current study indicates that peer influence is an important factor leading to thin-ideal internalization and subsequent body dissatisfaction. Future interventions aimed at reducing body dissatisfaction might take an approach to recruit dyads or small groups of Asian American women and their peers.

If one wished to target Asian American females prior to entering college, another approach may be to develop a school-based intervention. This type of intervention could involve going into classrooms and discussing how engaging in fat talk or appearance comparisons, are linked to increases in body dissatisfaction.

Reduction of health risk behaviors. One final implication of this study is that future interventions aimed at reducing body dissatisfaction among Asian American women should take into account the potential negative health effects from body dissatisfaction. In the current sample, cigarette smoking, restrictive eating, bulimic symptomatology, and endorsement of cosmetic surgery were all positively correlated with body dissatisfaction. Interventions and programs aimed at reducing body dissatisfaction should be comprehensive and cover these topics as potential risks resulting from low body-esteem among Asian American women. These types of interventions should clarify what factors related to body dissatisfaction may put these individuals at risk for these behaviors (e.g. media and peer influence). Campaigns aimed at reducing tobacco use among women should be aware that minority status and motivation either to cope with body dissatisfaction or prevent weight gain may be potential risk factors for use. Overall, future research on body dissatisfaction should pay close attention to between as well as within-group disparities that may exacerbate this problem. Furthermore, prevention efforts should be made early in development in order to

slow the growth of body dissatisfaction before it affects mental and physical health outcomes in emerging adulthood.

Conclusion

In conclusion, Asian American women in emerging adulthood experience body dissatisfaction through mechanisms that current literature has not examined in detail. The current study found that the influences of media, peers, and thin-ideal internalization bore more weight in predicting body dissatisfaction than family influence and cultural factors. These factors must be considered when promoting healthy body image among Asian American females.

List of References

List of References

- Akan, G. E., & Grilo, C. M. (1995). Sociocultural influences on eating attitudes and behaviors, body image, and psychological functioning: A comparison of African-American, Asian American, and Caucasian college women. *International Journal of Eating Disorders, 18*, 181-187.
- Al Sabbah, H., Vereecken, C. A., Elgar, F. J., Nansel, T., Aasvee, K., Abdeen, Z., et al. (2009). Body weight dissatisfaction and communication with parents among adolescents in 24 countries: International cross-sectional survey. *BMC Public Health, 9*(52).
- Allaz, A. F., Bernstein, M., Rouget, P., Archinard, M., & Morabia, A. (1998). Body weight preoccupation in middle age and ageing women: A general population survey. *International Journal of Eating Disorders, 23*(3), 287-294.
- Altabe, M. (1998). Ethnicity and body image: Quantitative and qualitative analysis. *International Journal of Eating Disorders, 23*(2), 153-159.
- The American Academy of Facial Plastic and Reconstructive Surgery. (2012). *2011 AAFPRS membership study*. Media, PA: International Communications Research.
- American College Health Association. *National college health assessment: Generalizability, reliability, and validity analysis*. (2012). Retrieved 9/17/2012, from <http://www.acha-ncha.org/grvanalysis.html>
- American college health association-national college health assessment II: Reference group data report spring 2011* (2011). Hanover, MD: American College Health Association.
- Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist, 55*(5), 469-480.
- Arriaza, C., & Mann, T. (2001). Ethnic differences in eating disorder symptoms among college students: The confounding role of body mass index. *Journal of American College Health, 49*(6), 309-315.

- Banfield, S. S., & McCabe, M. P. (2002). An evaluation of the construct of body image. *Adolescence, 37*(146), 373-393.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173-1182.
- Berscheid, E., Walster, E., & Bohrnstedt, G. (1973). Body image. *Psychology Today, 76*, 119-131.
- Brown, T. A., Cash, T. F., & Milulka, P. J. (1990). Attitudinal body image assessment: Factor analysis of the body-self relations questionnaire. *Unpublished Manuscript*.
- Cash, T. F., & Szymanski, M. L. (1995). The development and validation of the body-image ideals questionnaire. *Journal of Personality Assessment, 64*, 466-477.
- Cash, T., Melnyk, S., & Hrabosky, J. (2004). The assessment of body image investment: An extensive revision of the appearance schemas inventory. *International Journal of Eating Disorders, 35*(3), 305-316.
- Centers for Disease Control and Prevention. (2013). BMI formula and calculation. Retrieved from http://www.cdc.gov/healthyweight/assessing/bmi/childrens_bmi/childrens_bmi_formula.html on May 2, 2013.
- Clark, M., Kaufman, S., & Pierce, R. (1976). Explorations of acculturation - toward a model of ethnic identity. *Human Organization, 35*(3), 231-238.
- Cohen, J. (1992). A power primer. *Psychological Bulletin, 112*(1), 155-159.
- Cooper, P. J., Taylor, M. J., Cooper, Z., & Fairburn, C. G. (1987). The development and validation of the body shape questionnaire. *International Journal of Eating Disorders, 6*, 485-494.
- Cortés, D. E., Rogler, L. H., & Malgady, R. G. (1994). Biculturalism among Puerto Rican adults in the United States. *American Journal of Community Psychology, 22*(5), 707-721.
- Cuéllar, I., Arnold, B., & Maldonado, R. (1995). Acculturation rating scale for Mexican Americans-II: A revision of the original ARSMA scale. *Hispanic Journal of Behavioral Sciences, 17*(3), 275-304.
- Delinsky, S. S., & Wilson, G. T. (2008). Weight gain, dietary restraint, and disordered eating in the freshman year of college. *Eating Behaviors, 9*(1), 82-90.

- Evans, P. C., & McConnell, A. R. (2003). Do racial minorities respond in the same way to mainstream beauty standards? Social comparison processes in Asian, Black, and White women. *Self and Identity*, 2, 153-167.
- Fairburn, C. G., & Bèglin, S. J. (1994). Assessment of eating disorders: Interview or self-report questionnaire? *International Journal of Eating Disorders*, 16(4), 363-370.
- Fang, L., Barnes-Ceeney, K., Lee, R. A., & Tao, J. (2011). Substance use among Asian-American adolescents: Perceptions of use and preferences for prevention programming. *Social Work in Health Care*, 50(8), 606-624.
- Forbes, G. B., & Frederick, D. A. (2008). The UCLA body project II: Breast and body dissatisfaction among African, Asian, European, and Hispanic American college women. *Sex Roles*, 58(7-8), 449-457.
- Franko, D. L., Becker, A. E., Thomas, J. J., & Herzog, D. B. (2007). Cross-ethnic differences in eating disorder symptoms and related distress. *International Journal of Eating Disorders*, 40(2), 156-164.
- Franzoi, S. L., & Shields, S. A. (1984). The body-esteem scale: Multidimensional structure and sex differences in a college population. *Journal of Personality Assessment*, 48, 173-178.
- Franzoi, S., & Chang, Z. (2002). The body esteem of Hmong and Caucasian young adults. *Psychology of Women Quarterly*, 26(1), 89-91.
- Franzoi, S., & Shields, S. (1984). The body esteem scale - multidimensional structure and sex-differences in a college population. *Journal of Personality Assessment*, 48(2), 173-178.
- Fredrickson, B. L., & Roberts, T. (1997). Objectification theory: Toward understanding women's lived experiences and mental health risks. *Psychology of Women Quarterly*, 21(2), 173-206.
- Furnham, A., & Alibhai, N. (1983). Cross-cultural differences in the perception of female body shapes. *Psychological Medicine*, 13(4), 829-837.
- Gardner, R. M., Jappe, L. M., & Gardner, L. (2009). Development and validation of a new figural drawing scale for body-image assessment: The BIAS-BD. *Journal of Clinical Psychology*, 65(1), 113-122.
- Garner, D. M. (2002). Measurement of eating disorder psychopathology. In C. G. Fairburn, & K. D. Brownell (Eds.), *Eating disorders and obesity: A comprehensive handbook* (2nd ed., pp. 141-146). New York: The Guilford Press.

- Garner, D. M., Olmstead, M. P., & Polivy, J. (1983). Development and validation of a multidimensional eating disorder inventory for anorexia nervosa and bulimia. *International Journal of Eating Disorders*, 2(2), 15-34.
- Gillen, M. M., & Lefkowitz, E. S. (2006). Gender role development and body image among male and female first year college students. *Sex Roles*, 55(1-2), 25-37.
- Gillen, M. M., & Lefkowitz, E. S. (2009). Emerging adults' perceptions of messages about physical appearance. *Body Image*, 6(3), 178-185.
- Gordon, M. (1964). *Assimilation in American life*. New York: Oxford University Press.
- Grabe, S., & Hyde, J. S. (2006). Ethnicity and body dissatisfaction among women in the United States: A meta-analysis. *Psychological Bulletin*, 132(4), 622-640.
- Granner, M. L., Black, D. R., & Abood, D. A. (2002). Levels of cigarette and alcohol use related to eating-disorder attitudes. *American Journal of Health Behaviors*, 26(1), 43-55.
- Grogan, S. (1999). *Body image: Understanding body dissatisfaction in men, women and children*. London: Routledge.
- Hall, C. C. (1995). Asian eyes: Body image and eating disorders of Asian and Asian American women. *Eating Disorders*, 3, 8-19.
- Harrison, K. (2000). The body electric: Thin-ideal media and eating disorders in adolescence. *Journal of Communication*, 50(3), 119-143.
- Henderson-King, D., & Henderson-King, E. (2005). Acceptance of cosmetic surgery: Scale development and validation. *Body Image*, 2(2), 137-149.
- Jones, D. C. (2004). Body image among adolescent girls and boys: A longitudinal study. *Developmental Psychology*, 40, 823-835.
- Kalucy, R. S., Crisp, A. H., & Harding, B. (1977). A study of 56 families with anorexia nervosa. *British Journal of Medical Psychology*, 50, 381-395.
- Kashubeck-West, S., & Mintz, L. B. (2001). Eating disorders in women: Etiology, assessment, and treatment. *The Counseling Psychologist*, 29(5), 627-634.
- Kaw, E. (1993). Medicalization of racial features: Asian-American women and cosmetic surgery. *Medical Anthropology Quarterly*, 7(1), 74-89.
- Kearney-Cooke, A. (2002). Familial influences on body image development. In T. F. Cash, & T. Pruzinsky (Eds.), *Body image: A handbook of theory, research, and clinical practice* (pp. 99-108). New York: Guilford Press.

- Keery, H., van, d. B., & Thompson, J. K. (2004). An evaluation of the tripartite influence model of body dissatisfaction and eating disturbance with adolescent girls. *Body Image, 1*(3), 237-251.
- Khoury, E. N. L., Litvin, E. B., & Brandon, T. H. (2009). The effect of body image threat on smoking motivation among college women: Mediation by negative affect. *Psychology of Addictive Behaviors, 23*(2), 279-286.
- Kim, B. S., & Abreu, J. M. (2001). Acculturation measurement: Theory, current instruments, and future directions. In J. G. Ponterotto, J. M. Casas, L. A. Suzuki & C. M. Alexander (Eds.), (pp. 394-424). Thousand Oaks, CA, US: Sage Publications, Inc.
- Kim, B. S., Atkinson, D. R., & Yang, P. H. (1999). The Asian values scale: Development, factor analysis, validation, and reliability. *Journal of Counseling Psychology, 46*, 342-352.
- Kim, B. S., Yang, P. H., Atkinson, D. R., Wolfe, M. M., & Hong, S. (2001). Cultural value similarities and differences among Asian American ethnic groups. *Cultural Diversity and Ethnic Minority Psychology, 7*(4), 343-361.
- Lau, A. S. M., Lum, S. K., Chronister, K. M., & Forrest, L. (12). Asian American college women's body image: A pilot study. *Cultural Diversity and Ethnic Minority Psychology, 12*(2), 259-274.
- Lee, R. M., Yoon, E., & Liu-Tom, H. T. (2006). Structure and measurement of acculturation/enculturation for Asian Americans using the ARSMA-II. *Measurement and Evaluation in Counseling and Development, 39*(42), 55.
- Levine, M. P., Smolak, L., & Hayden, H. (1994). The relation of sociocultural factors to eating attitudes and behaviors among middle school girls. *Journal of Early Adolescence, 14*, 471-490.
- Littleton, H., Radecki Breitkopf, C., & Berenson, A. (2005). Body image and risky sexual behaviors: An investigation in a tri-ethnic sample. *Body Image, 2*(2), 193-198.
- Lopez, E. N., Drobles, D. J., Thompson, J. K., & Brandon, T. H. (2008). Effects of a body image: Challenge on smoking motivation among college females. *Health Psychology, 27*, S243-S251.
- Makabe, T. (1979). Ethnic-identity scale and social-mobility - the case of Nisei in Toronto. *Canadian Review of Sociology and Anthropology-Revue Canadienne De Sociologie Et D Anthropologie, 16*(2), 136-146.
- Marín, G. (1992). Issues in the measurement of acculturation among Hispanics. (pp. 235-251). Washington, DC, US: American Psychological Association.

- McCabe, M., & Ricciardelli, L. (2003). Sociocultural influences on body image and body changes among adolescent boys and girls. *Journal of Social Psychology, 143*(1), 5-26.
- McKinley, N. M. (1998). Gender differences in undergraduates' body esteem: The mediating effect of objectified body consciousness and actual/ideal weight discrepancy. *Sex Roles, 39*(1-2), 113-123.
- McKinley, N. M., & Hyde, J. S. (1996). The objectified body consciousness scale: Development and validation. *Psychology of Women Quarterly, 20*(2), 181-215.
- Mendelson, B. K., & White, D. R. (1985). Development of self-body-esteem in overweight youngsters. *Developmental Psychology, 21*, 90-96.
- Mintz, L., & Kashubeck, S. (1999). Body image and disordered eating among Asian American and Caucasian college students - an examination of race and gender differences. *Psychology of Women Quarterly, 23*(4), 781-796.
- Minuchin, S., Rosman, B. L., & Baker, L. (1978). *Psychosomatic families*. Cambridge, MA: Harvard University Press.
- Nadal, K. L. (2004). Filipino American identity development model. *Journal of Multicultural Counseling and Development, 32*, 44-61.
- Nathan, J. H., Marsella, A. J., Horvath, A. M., & Coolidge, F. L. (1999). The concepts of individual, self, and group in Japanese national, Japanese-American, and European-American samples: A semantic differential analysis. *International Journal of Intercultural Relations, 23*, 711-725.
- Ng, K. S. (1999). *Counseling Asian families from a systems perspective*. Alexandria, VA: American Counseling Association.
- Nelson, M. C., Lust, K., Story, M., & Ehlinger, E. (2009). Alcohol use, eating patterns, and weight behaviors in a university population. *American Journal of Health Behavior, 33*(3), 227-237.
- Neumark-Sztainer, D., Story, M., Hannan, P., & Croll, F. (2002). Overweight status and eating patterns among adolescents: Where do youths stand in comparison with the healthy people 2010 objectives? *American Journal of Public Health, 92*(5), 844-851.
- Nichter, M., & Vuckovic, N. (1994). Agenda for an anthropology of pharmaceutical practice. *Social Science & Medicine, 39*(11), 1509-1525.
- Nouri, M., Hill, L. G., & Orrell-Valente, J. K. (2011). Media exposure, internalization of the thin ideal, and body dissatisfaction: Comparing Asian American and European American college females. *Body Image, 8*(4), 366-372.

- Oyserman, D., & Sakamoto, I. (1997). Being Asian American: Identity, cultural constructs, and stereotype perception. *The Journal of Applied Behavioral Science*, 33, 435-453.
- Paeratakul, S., White, M. A., Williamson, D. A., Ryan, D. H., & Bray, G. A. (2002). Sex, Race/Ethnicity, socioeconomic status, and BMI in relation to self-perception of overweight. *Obesity Research*, 10, 345-350.
- Patel, M., Phillips-Caesar, E., & Boutin-Foster, C. (2012). Barriers to lifestyle behavioral change in migrant South Asian populations. *Journal of Immigrant Minority Health*, 14, 774-785.
- Peterson, C. B., Crosby, R. D., Wonderlich, S. A., Joiner, T., Crow, S. J., Mitchell, J. E., et al. (2007). Psychometric properties of the eating disorder examination-questionnaire: Factor structure and internal consistency. *International Journal of Eating Disorders*, 40(4), 386-389.
- Petrie, T. A., Tripp, M. M., & Harvey, P. (2002). Factorial and construct validity of the body parts satisfaction scale-revised: An examination of minority and nonminority women. *Psychology of Women Quarterly*, 26(3), 213-221.
- Phan, T., & Tylka, T. (2006). Exploring a model and moderators of disordered eating with Asian American college women. *Journal of Counseling Psychology*, 53(1), 36-47.
- Phares, V., Steinberg, A. R., & Thompson, J. K. (2004). Gender differences in peer and parental influences: Body image disturbance, self-worth, and psychological functioning in preadolescent children. *Journal of Youth and Adolescence*, 33(5), 421-429.
- Phinney, J. S., & Ong, A. D. (2007). Conceptualization and measurement of ethnic identity: Current status and future directions. *Journal of Counseling Psychology*, 54(3), 271-281.
- Phinney, J. S. (1992). The multigroup ethnic identity measure: A new scale for use with diverse groups. *Journal of Adolescent Research*, 7(2), 156-176.
- Phinney, J. S., & Ong, A. D. (2007). Conceptualization and measurement of ethnic identity: Current status and future directions. *Journal of Counseling Psychology*, 54(3), 271-281.
- Ridolfi, D. R., Myers, T. A., Crowther, J. H., & Ciesla, J. A. (2011). Do appearance focused cognitive distortions moderate the relationship between social comparisons to peers and media images and body image disturbance? *Sex Roles*, 65(7-8), 491-505.
- Roberts, A., Cash, T. F., Feingold, A., & Johnson, B. T. (2006). Are black-white differences in females' body dissatisfaction decreasing? A meta-analytic review. *Journal of Consulting and Clinical Psychology*, 74(6), 1121-1131.

- Root, M. P. P. (1990). Resolving "other" status: Biracial identity development. In L. P. Brown, & M. P. P. Root (Eds.), *Complexity and diversity in feminist theory and therapy* (pp. 191-211). New York: The Haworth Press, Inc.
- Ryder, A. G., Alden, L. E., & Paulhus, D. L. (2000). Is acculturation unidimensional or bidimensional? A head-to-head comparison in the prediction of personality, self-identity, and adjustment. *Interpersonal Relations and Group Processes*, 79(1), 49-65.
- Sabik, N. J., Cole, E. R., & Ward, L. M. (2010). Are all minority women equally buffered from negative body image? Intra-ethnic moderators of the buffering hypothesis. *Psychology of Women Quarterly*, 34(2), 139-151.
- Salk, R. H., & Engeln-Maddox, R. (2011). "If you're fat, then I'm humongous!": Frequency, content, and impact of fat talk among college women. *Psychology of Women Quarterly*, 35(1), 18-28.
- Sanders, N. M., & Heiss, C. J. (1998). Eating attitudes and body image of Asian and Caucasian college women. *Eating Disorders: The Journal of Treatment and Prevention*, 6(1), 15-27.
- Schutz, H. K., Paxton, S. J., & Wertheim, E. H. (2002). Investigation of body comparison among adolescent girls. *Journal of Applied Social Psychology*, 32(9), 1906-1937.
- Secord, P. F., & Jourard, S. M. (1953). The appraisal of body cathexis: Body cathexis and the self. *Journal of Consulting Psychology*, 17, 343-347.
- Shaw, H., Ramirez, L., Trost, A., Randall, P., & Stice, E. (2004). Body image and eating disturbances across ethnic groups: More similarities than differences. *Psychology of Addictive Behaviors*, 18(1), 12-18.
- Shisslak, C., Renger, R., Sharpe, T., Crago, M., McKnight, K., Gray, N., et al. (1999). Development and evaluation of the McKnight risk factor survey for assessing potential risk and protective factors for disordered eating in preadolescent and adolescent girls. *International Journal of Eating Disorders*, 25, 195-214.
- Shroff, H., & Thompson, J. K. (2006). Peer influences, body-image dissatisfaction, eating dysfunction and self-esteem in adolescent girls. *Journal of Health Psychology*, 11(4), 533-551.
- Siegel, J. (2002). Body image change and adolescent depressive symptoms. *Journal of Adolescent Research*, 17(1), 27-41.
- Smart, R., Tsong, Y., Mejia, O. L., Hayashino, D., & Braaten, M. E. T. (2011). Therapists' experiences treating Asian American women with eating disorders. *Professional Psychology-Research and Practice*, 42(4), 308-315.

- Smolak, L., & Levine, M. P. (2001). Body image in children. In J. K. Thompson, & L. Smolak (Eds.), *Body image, eating disorders, and obesity in youth: Assessment, prevention, and treatment* (pp. 41-66). Washington, DC: American Psychological Association.
- Stice, E., Mazotti, L., Weibel, D., & Agras, W.S. (2000). Dissonance prevention program decreases thin-ideal internalization, body dissatisfaction, dieting, negative affect, and bulimic symptoms: A preliminary experiment. *International Journal of Eating Disorders, 27*, 206–217.
- Stice, E., Ziemba, C., Margolis, J., & Flick, P. (1996). The dual pathway model differentiates bulimics, subclinical bulimics, and controls: Testing the continuity hypothesis. *Behavior Therapy, 27*, 531-549.
- Strober, M., & Humphrey, L. (1987). Familial contributions to the etiology and course of anorexia nervosa and bulimia. *Journal of Consulting and Clinical Psychology, 55*, 654-659.
- Stunkard, A. J., Sorenson, T., & Schlusinger, F. (1983). Use of the danish adoption register for the study of obesity and thinness. In S. Kety, L. P. Rowland, R. L. Sidman & S. W. Matthaysse (Eds.), *The genetics of neurological and psychiatric disorders* (pp. 115-120). New York: Raven Press.
- Sue, S., & Kitano, H. H. L. (1973). Stereotypes as a measure of success. *Journal of Social Issues, 29*, 83-98.
- Sun, C. (2007, April 26). *Asian American beauty: Female body image*. Retrieved September 19, 2012 from <http://www.youtube.com/watch?v=mv-WI6Vlrpk>.
- Swami, V., Taylor, R., & Carvalho, C. (2011). Body dissatisfaction assessed by the photographic figure rating scale is associated with sociocultural, personality, and media influences. *Scandinavian Journal of Psychology, 52*(1), 57-63.
- Thai, N. D., Connell, C. M., & Tebes, J. K. (2010). Substance use among Asian American adolescents: Influence of race, ethnicity, and acculturation in the context of key risk and protective factors. *Asian American Journal of Psychology, 1*, 261-274.
- Thompson, J. K., Altabe, M., Johnson, S., & Stormer, S. M. (1994). Factor analysis of multiple measures of body image disturbance: Are we all measuring the same construct?. *International Journal of Eating Disorders, 16*(3), 311-315.
- Thompson, J. K., Cattarin, J., Fowler, B., & Fisher, E. (1995). The perception of teasing scale (POTS): A revision and extension of the physical appearance related teasing scale (PARTS). *Journal of Personality Assessment, 65*, 146-157.

- Thompson, J. K., Heinberg, L. J., Altabe, M., & Tantleff-Dunn, S. (1999). *Exacting beauty: Theory, assessment, and treatment of body image disturbance*. Washington, DC: American Psychological Association.
- Thompson, J. K., Heinberg, L. J., Altabe, M., & Tantleff-Dunn, S. (1999). Interpersonal factors: Peers, parents, partners, and perfect strangers. (pp. 175-207). Washington, DC, US: American Psychological Association.
- Thompson, J., & Stice, E. (2001). Thin-ideal internalization: Mounting evidence for a new risk factor for body-image disturbance and eating pathology. *Current Directions in Psychological Science*, *10*(5), 181-183.
- Thompson, J., van den Berg, P., Roehrig, M., Guarda, A., & Heinberg, L. (2004). The sociocultural attitudes towards appearance scale-3 (SATAQ-3): Development and validation. *International Journal of Eating Disorders*, *35*(3), 293-304.
- Tiggemann, M., & Kuring, J. K. (2004). The role of body objectification in disordered eating and depressed mood. *British Journal of Clinical Psychology*, *43*(3), 299-311.
- Tiggemann, M., & Lynch, J. E. (2001). Body image across the life span in adult women: The role of self-objectification. *Developmental Psychology*, *37*(2), 243-253.
- Tsai, G., Curbow, B., & Heinberg, L. (2003). Sociocultural and developmental influences on body dissatisfaction and disordered eating attitudes and behaviors of Asian women. *Journal of Nervous and Mental Disease*, *191*(5), 309-318.
- Tylka, T. (2004). The relation between body dissatisfaction and eating disorder symptomatology: An analysis of moderating variables. *Journal of Counseling Psychology*, *51*(2), 178-191.
- United States Department of Health and Human Services. (2012). *Results from the 2011 national survey on drug use and health: Summary of national findings*. Retrieved 4/8/2013 from <http://www.samhsa.gov/data/nsduh/2k11results/nsduhresults2011.htm#3.1.4>
- van den Berg, P., Thompson, J., Obremski-Brandon, K., & Coover, M. (2002). The tripartite influence model of body image and eating disturbance - A covariance structure modeling investigation testing the mediational role of appearance comparison. *Journal of Psychosomatic Research*, *53*(5), 1007-1020.
- Weinreich, P. (2009). 'Enculturation', not 'acculturation': Conceptualising and assessing identity processes in migrant communities. *International Journal of Intercultural Relations*, *33*(2), 124-139.

- Wildes, J. E., Emery, R. E., & Simons, A. D. (2001). The roles of ethnicity and culture in the development of eating disturbance and body dissatisfaction: A meta-analytic review. *Clinical Psychology Review, 21*(4), 521-551.
- Wingood, G. M., DiClemente, R. J., Harrington, K., & Davies, S. L. (2002). Body image and African American females' sexual health. *Journal of Women's Health & Gender-Based Medicine, 11*(5), 433-439.
- Xie, B., Unger, J. B., Gallaher, P., Johnson, C. A., Wu, Q., & Chou, C. (2010). Overweight, body image, and depression in Asian and Hispanic adolescents. *American Journal of Health Behavior, 34*(4), 476-488.
- Yates, A., Edman, J., & Aruguete, M. (2004). Ethnic differences in BMI and body/self-dissatisfaction among whites, Asian subgroups, pacific islanders, and African-Americans. *Journal of Adolescent Health, 34*(4), 300-307.
- Ying, Y., Lee, P. A., Tsai, J. L., Hung, Y., Lin, M., & Wan, C. T. (2001). Asian American college students as model minorities: An examination of their overall competence. *Cultural Diversity and Ethnic Minority Psychology, 7*, 59-74.
- Yokoyama, K. (2007). The double binds of our bodies: Multiculturally-informed feminist therapy considerations for body image and eating disorders among Asian American women. *Women & Therapy, 30*(3-4), 177-192.
- Yoon, E. (2011). Measuring ethnic identity in the ethnic identity scale and the multigroup ethnic identity measure-revised. *Cultural Diversity and Ethnic Minority Psychology, 17*(2), 144-155.

Appendix A

Body Parts Satisfaction Scale

Response items: *extremely dissatisfied* (1) to *extremely satisfied* (6)

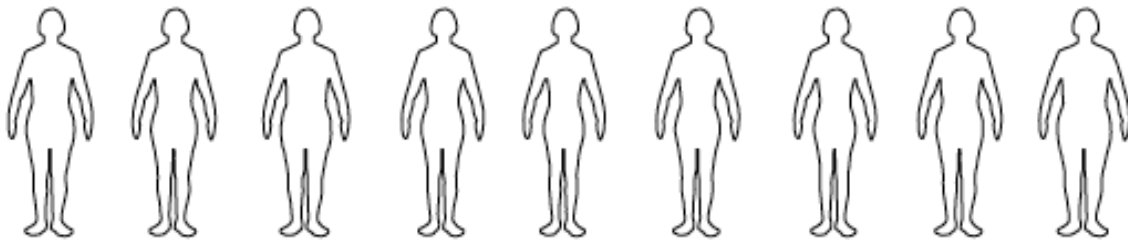
1. Height
2. Weight
3. Hair
4. Eyes
5. Ears
6. Nose
7. Mouth
8. Teeth
9. Voice
10. Chin
11. Complexion
12. Overall Facial Attractiveness
13. Shoulders
14. Breasts
15. Arms
16. Hands
17. Size of Abdomen
18. Buttocks
19. Hips (upper thighs)
20. Legs and Ankles
21. Feet
22. General Muscle Tone
23. How satisfied are you with your overall body appearance?

Note. Adapted from the Berscheid et al. (1973) scale

Appendix B

Body Image Assessment Scale – Body Dimensions

1. Please select and mark the figure that best represents your actual size with an A.
2. Next, select and mark the figure that best represents your ideal size with an I.



Female

Appendix C

Eating Disorder Examination Questionnaire

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

Response items: *No days, 1-5 Days, 6-12 Days, 13-15 Days, 16-22 Days, 23-27 Days, Every Day*

On How Many of the Past 28 Days...

1. Have you been deliberately trying to limit the amount of food you eat to influence your shape or weight (whether or not you have succeeded?)
2. Have you gone for long periods of time (8 waking hours or more) without eating anything at all in order to influence your shape or weight?
3. Have you tried to exclude from your diet any foods that you like in order to influence your shape or weight (whether or not you have succeeded)?
4. Have you tried to follow definite rules regarding your eating (for example, a calorie limit) in order to influence your shape or weight (whether or not you have succeeded)?
5. Have you have a definite desire to have an empty stomach with the aim of influencing your shape or weight?
6. Have you had a definite desire to have a totally flat stomach?
7. Has thinking about food, eating, or calories made it very difficult to concentrate on things you are interested in (for example, working, following a conversation, or reading)?
8. Has thinking about shape or weight made it very difficult to concentrate on things you are interested in (for example, working, following a conversation, or reading)?
9. Have you had a definite fear of losing control over eating?
10. Have you have a definite fear that you might gain weight?
11. Have you felt fat?
12. Have you have a strong desire to lose weight?
13. How many times have you eaten what other people would regard as an unusually large amount of food (given the circumstances)?
14. On how many times did you have a sense of having lost control over your eating (at the time that you were eating)?
15. On how many days have such episodes of overeating occurred (i.e., you have eaten an unusually large amount of food and have had a sense of loss of control at the time)?
16. How many times have you made yourself sick (vomit) as a means of controlling your shape or weight?
17. How many times have you taken laxatives as a means of controlling your shape or weight?
18. How many times have you exercised in a "driven" or "compulsive" way as a means of controlling your weight, shape or amount of fat, or to burn off calories?

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

19. On how many days have you eaten in secret (i.e., furtively)?*Do not count episodes of binge eating*
20. On what proportion of the times that you have eaten have you felt guilty (felt that you've done wrong) because of its effects on your shape or weight? *Do not count episodes of binge eating.*
21. How concerned have you been about other people seeing you eat? *Do not count episodes of binge eating.*

Instructions: Please check the appropriate number on the right. Remember that the questions only refer to the past four weeks (28 days).

Response items: *Not at all, Slightly, Moderately, Markedly*

Over the past 28 days...

22. Has your weight influenced how you think about (judge) yourself as a person?
23. Has your shape influenced how you think about (judge) yourself as a person?
24. How much would it had upset you if you had been asked to be weigh yourself once a week (no more, or less, often) for the next four weeks?
25. How dissatisfied have you been with your weight?
26. How dissatisfied have you been with your shape?
27. How uncomfortable have you felt seeing your body (for example, seeing your shape in the mirror, in a shop window reflection, while undressing or taking a bath or shower)?
28. How uncomfortable have you felt about others seeing your shape or figure (for example, in communal changing rooms, when swimming, or wearing tight clothes)?

Appendix D

American College Health Association – National College Health Assessment

Response Items: *Never used, Have use but not in the last 30 days, 1-2 days, 3-5 days, 6-9 days, 10-19 days, 20-29 days, Used daily*

1. Within the last thirty days, on how many days did you use: Cigarettes?
2. Within the last thirty days, on how many days did you use: Alcohol (beer, wine, liquor)?
3. Within the last thirty days, on how many days did you use: Marijuana (pot, weed, hashish, hash oil)?

Response Items: *N/A Never did this sexual activity, Have not during the last 30 days, Never, Rarely, Sometimes, Most of the time, Always*

4. Within the last 30 days, how often did you or your partner(s) use a condom or other protective barrier (e.g. male condom, female condom, dam, glove) during vaginal intercourse?

Note. Items are taken from the NCHA survey

Appendix E

Acceptance of Cosmetic Surgery Scale

Response items: *Strongly disagree* (1) to *Strongly agree* (7)

1. It makes sense to have minor cosmetic surgery rather than spending years feeling bad about the way you look.
2. Cosmetic surgery is a good thing because it can help people feel better about themselves.
3. In the future, I could end up having some kind of cosmetic surgery.
4. People who are very unhappy with their physical appearance should consider cosmetic surgery as one option.
5. If cosmetic surgery can make someone happier with the way they look, then they should try it.
6. If I could have a surgical procedure done for free, I would consider trying cosmetic surgery.
7. I have sometimes thought about having cosmetic surgery.
8. I would seriously consider having cosmetic surgery if my partner thought it was a good idea.
9. I would never have any kind of plastic surgery (R).
10. I would think about having cosmetic surgery in order to keep looking young.
11. If it would benefit my career I would think about having plastic surgery.
12. I would seriously consider having cosmetic surgery if I thought my partner would find me more attractive.
13. Cosmetic surgery can be a big benefit to people's self-image.
14. If a simple cosmetic surgery procedure would make me more attractive to others, I would think about trying it.

Appendix F

Tripartite Model of Influence Scale

1. The magazines I read and TV shows I watch emphasize that it is important to be thin
Response items: *never* (1) to *often* (4)
2. The magazines I read and the TV shows I watch emphasize the importance of appearance (shape, weight, clothing)
Response items: *never* (1) to *often* (4)
3. The magazines I read and TV shows I watch emphasize dieting to lose weight
Response items: *never* (1) to *often* (4)
4. I have felt pressure from the media to lose weight
Response items: *none* (1) to *a lot* (5)
5. I would be interested in watching a new TV show if the topic is dieting
Response items: *less* (1), *neither* (2), *more* (3)
6. I would be interested in watching a new TV show if the topic is fitness and exercise
Response items: *less* (1), *neither* (2), *more* (3)
7. I would be interested in watching a new TV show if the topic is fashion
Response items: *less* (1), *neither* (2), *more* (3)
8. I would be interested in reading a new magazine if the topic is dieting
Response items: *less* (1), *neither* (2), *more* (3)
9. I would be interested in reading a new magazine if the topic is fitness and exercise
Response items: *less* (1), *neither* (2), *more* (3)
10. I would be interested in reading a new magazine if the topic is fashion
Response items: *less* (1), *neither* (2), *more* (3)
11. How concerned is your mother about whether you weigh too much or are too fat or might become too fat?
Response items: *not at all* (1) to *very concerned* (4)
12. How important is it to your mother that you be thin?
Response items: *I do not have contact with anyone that I think of as a "mother"* (0), *never* (1), *a little* (2), *sometimes* (3), *a lot* (4)
13. How concerned is your father about whether you weigh too much or are too fat or might become too fat?
Response items: *not at all* (1) to *very concerned* (4)
14. How important is it to your father that you be thin?
Response items: *I do not have contact with anyone that I think of as a "father"* (0), *never* (1), *a little* (2), *sometimes* (3), *a lot* (4)
15. My father is on a diet to lose weight
Response items: *never* (1) to *often* (4)
16. It is important to my father that he be as thin as possible
Response items: *not at all* (1) to *very important* (4)

17. My father's physical appearance (shape, weight, clothing) is important to him
Response items: *not at all* (1) to *very important* (4)
18. My mother is on a diet to lose weight
Response items: *never* (1) to *often* (4)
19. It is important to my mother that she be as thin as possible
Response items: *not at all* (1) to *very important* (4)
20. My mother's physical appearance (shape, weight, clothing) is important to her
Response items: *not at all* (1) to *very important* (4)
21. Your father made comments or teased you about your appearance.
Response items: *Never* (1) to *Very often* (5)
22. Your mother made comments or teased you about your appearance.
Response items: *Never* (1) to *Very often* (5)
23. How often do your parents comment on each other's weight?
Response items: *Never* (1) to *All the time* (6)
24. How often do your parents encourage each other to lose weight?
Response items: *Never* (1) to *All the time* (6)
25. How often do your parents talk about weight or dieting?
Response items: *Never* (1) to *All the time* (6)
26. How often do your parents worry about their weight?
Response items: *Never* (1) to *All the time* (6)
27. How often do your parents worry about what they eat?
Response items: *Never* (1) to *All the time* (6)
28. How often do your parents diet?
Response items: *Never* (1) to *All the time* (6)
29. Do you think your parents take a lot of notice of each other's weight and shape?
Response items: *definitely not* (1) to *a lot, yes* (5)
30. Are weight and shape important to your parents?
Response items: *definitely not* (1) to *a lot, yes* (5)
31. One or more of my friends and classmates is on a diet to lose weight
Response items: *never* (1) to *often* (4)
32. It is important to my friends and classmates that they be as thin as possible
Response items: *not at all* (1) to *very important* (4)
33. My friends and classmates' physical appearance (shape, weight, clothing) is important to them
Response items: *not at all* (1) to *very important* (4)
34. Your friends and classmates made comments or teased you about your appearance
Response items: *Never* (1) to *Very often* (5)
35. How often do your friends and classmates comment on each other's weight?
Response items: *Never* (1) to *All the time* (5)

36. How often do your friends and classmates encourage each other to lose weight?
Response items: *Never* (1) to *All the time* (5)
37. How often do your friends and classmates talk about weight or dieting?
Response items: *Never* (1) to *All the time* (5)
38. How often do your friends and classmates worry about their weight?
Response items: *Never* (1) to *All the time* (5)
39. How often do your friends and classmates worry about what they eat?
Response items: *Never* (1) to *All the time* (5)
40. How often do your friends and classmates diet?
Response items: *Never* (1) to *All the time* (5)
41. How often do your friends and classmates skip meals?
Response items: *Never* (1) to *All the time* (5)
42. Do you think that your friends and classmates take a lot of notice in each other's weight and shape?
Response items: *definitely not* (1) to *a lot, yes* (5)
43. Are weight and shape important to your friends and classmates?
Response items: *definitely not* (1) to *a lot, yes* (5)

Appendix G

Multigroup Ethnic Identity Measure – Revised

Response items: *strongly disagree* (1) to *strongly agree* (5)

1. I have spent time trying to find out more about my ethnic group, such as its history, traditions, and customs.
2. I have a strong sense of belonging to my own ethnic group.
3. I understand pretty well what my ethnic group membership means to me.
4. I have often done things that will help me understand my ethnic background better.
5. I have often talked to other people in order to learn more about my ethnic group.
6. I feel a strong attachment towards my own ethnic group.

Appendix H

Asian American Identity Scale

Response items: strongly disagree (1) to strongly agree (5)

1. It is important to me to learn about my group's traditions, customs and values.
2. I try to carry out at least some of my group's customs and traditions (e.g., relating to holidays, food, language).
3. I want my children to be raised with my group's traditions.
4. I feel a lot of pride in the achievements of my group.
5. My relationship with my family is more important than other relationships I have.
6. Respect for my elders is an important part of how I was raised.
7. It is difficult for me to imagine celebrating major holidays without my family.
8. Working hard and getting good grades are a part of who I am as a member of my ethnic group.
9. It is important for me as a member of my ethnicity to work towards a socially respected career such as medicine or law.
10. Every time a member of my ethnicity receives public recognition for occupational or academic success, it helps my group achieve success.
11. Most people are prejudiced against Asians in at least some ways.
12. As a member of my group I will probably have to work harder than most people in order to get ahead.

Appendix I

The Acculturation Rating Scale for Mexican Americans-II Adapted for Asian Americans

Response items: *not at all* (1) to *extremely often or almost always* (5)

1. I speak an Asian language.
2. I speak English.
3. I enjoy speaking an Asian language.
4. I associate with Caucasians.
5. I associate with Asians and/or Asian Americans.
6. I enjoy listening to Asian language music.
7. I enjoy listening to the English language music.
8. I enjoy Asian language TV.
9. I enjoy English language TV.
10. I enjoy English language movies.
11. I enjoy Asian language movies.
12. I enjoy reading in an Asian language (e.g., books).
13. I enjoy reading in the English language (e.g., books)
14. I write in an Asian language (e.g., letters)
15. I write in the English language (e.g., letters)
16. My thinking is done in the English language.
17. My thinking is done in an Asian language.
18. My contact with an Asian country has been _____.
19. My contact with the United States has been _____.
20. My father identifies or identified himself as “Asian.”
21. My mother identifies or identified herself as “Asian.”
22. My friends, while I was growing up, were of Asian descent.
23. My friends, while I was growing up, were of Caucasian/European descent.
24. My family cooks Asian foods.
25. My friends are of Caucasian/European descent.
26. My friends now are of Asian descent.
27. I like to identify myself as Caucasian.
28. I like to identify myself as Asian American.
29. I like to identify as Asian.
30. I like to identify myself as an American.

Appendix J

Internalization-General Subscale of the Sociocultural Attitudes Toward Appearance Questionnaire – 3 (F)

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

Response Items: *Definitely Disagree* (1) to *Definitely Agree* (5)

1. I would like my body to look like the body of people who are on TV.
2. I compare my body to the bodies of people who are on TV and movie stars.
3. I would like my body to look like the models who appear in magazines.
4. I compare my appearance to the appearance of TV and movie stars.
5. I would like my body to look like the people who are in movies.
6. I compare my body to the bodies of people who appear in magazines.
7. I wish I looked like the models in music videos.
8. I compare my appearance to the appearance of people in magazines.
9. I try to look like the people on TV.

Appendix K

Demographic Questions

1. What is your birth date?
2. If you consider your race to be “Asian,” what Asian ethnicity do you consider yourself to be?
 - a. Cambodian
 - b. Chinese
 - c. Indian
 - d. Japanese
 - e. Korean
 - f. Malaysian
 - g. Pakistani
 - h. Filipino
 - i. Thai
 - j. Vietnamese
 - k. Other (please specify)
3. What is the primary language you speak?
 - a. English
 - b. Other (please specify)
4. What other languages do you speak? _____
5. What country were you born in?
 - a. United States
 - b. Other (please specify)
6. If you were not born in the U.S., how old were you when you came to the U.S.?
 - a. I was ___ years old when I came to live in the U.S.
7. If you were not born in the U.S., did you come to the U.S. with any relatives?
 - a. Yes
 - b. No

Instructions: The next few questions are about your mother and father.

8. My mother’s race/ethnicity is: (check all that apply)
 - a. Latino/Hispanic
 - b. American Indian or Alaska Native
 - c. Asian
 - d. Black or African American
 - e. Native Hawaiian or other Pacific Islander
 - f. White
 - g. Other (please specify)

9. My father's race/ethnicity is: (check all that apply)
 - a. Latino/Hispanic
 - b. American Indian or Alaska Native
 - c. Asian
 - d. Black or African American
 - e. Native Hawaiian or other Pacific Islander
 - f. White
 - g. Other (please specify)
10. What country was your mother born in?
 - a. United States
 - b. Other (please specify)
11. What country was your father born in?
 - a. United States
 - b. Other (please specify)
12. What best describes your mother's highest level of education?
 - a. Attended some grade school but did not go to high school
 - b. Attended some high school but did not graduate
 - c. Graduated from high school or obtained a GED
 - d. Attended some college, vocational, or trade school
 - e. Graduated from a four-year college
 - f. Attended some graduate or professional school after college
 - g. Earned a graduate degree (Master's, PhD, MD, JD, etc.)
13. What best describes your father's highest level of education?
 - a. Attended some grade school but did not go to high school
 - b. Attended some high school but did not graduate
 - c. Graduated from high school or obtained a GED
 - d. Attended some college, vocational, or trade school
 - e. Graduated from a four-year college
 - f. Attended some graduate or professional school after college
 - g. Earned a graduate degree (Master's, PhD, MD, JD, etc.)
14. Where do you live?
 - a. A house/apartment/etc.
 - b. A residence hall/dorm
 - c. Fraternity/sorority house
 - d. Other (please specify)
15. What year are you in college?
 - a. Freshman
 - b. Sophomore
 - c. Junior
 - d. Senior
 - e. Graduate/Professional
 - f. Non-degree seeking student
16. Are you the first person in your immediate family to attend college? By immediate family we mean your parents and siblings.
 - a. Yes
 - b. No

17. What best describes your religious background?
 - a. Protestant or other Christian
 - b. Catholic
 - c. Jewish
 - d. Buddhist
 - e. Hindu
 - f. Muslim
 - g. No religious background
 - h. Other (please specify)
18. What is your current weight in pounds (e.g. 125 lbs.)? Give your best estimate.
19. What is your height (e.g. 5 feet and 7 inches)? Give your best estimate.
20. Have you ever been diagnosed with an eating disorder?
 - a. Yes
 - b. No
 - c. If yes, what type of disorder

Vita

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