Media Influences on Body Image Dissatisfaction: the Moderating Role of Collectivism vs. Individualism

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Body image is a multidimensional construct that reflects attitudes and perceptions about an individual's physical appearance under the cultural norms and ideals rather than on actual body dimension. Previous research argues that body image problems are linked to many potentially harmful behaviors and mental illnesses, such as obsessive exercise, low self-esteem, substance abuse and eating disorders. Early study primarily focuses on analyzing and comparing body image dissatisfaction of women in particular countries. However, cross-cultural studies need to move on from simply comparing the absolute levels to investigating the relationships between several variables. It is still unclear about the influences of specific cultures, namely collectivism vs. individualism, on both thin-ideal media effect and body image dissatisfaction. There is no integrated research analyzing how various levels of acculturation and different cultures interact, thus further influencing women's body image dissatisfaction. The underlying psychological mechanisms that resulted from acculturation are still less explored.

Current study hypothesized that thin-ideal media exposure increases women's body image dissatisfaction. Additionally, thin-ideal media and cultures were predicted to interact. Collectivist group with high acculturation differed from the collectivist group with low acculturation and fell close to the individualist group in body image dissatisfaction. Thus, researcher predicted that thin-ideal media effects on body image dissatisfaction were stronger for females in collectivist group with low acculturation than for the other two culture groups. In general, women living in the collectivistic societies would report more body image dissatisfaction than those living in the individualistic societies.

This study used a 3 x 2 x 2 mixed design to examine the moderating role of collectivism vs. individualism on media influences on body image dissatisfaction among 133 female college students, aged from 18 to 23 years old, attending the University of Texas at Austin.

The results indicated that thin-ideal media significantly increased women's body image dissatisfaction, whereas healthy media decreased women's body image dissatisfaction. In general, women living in the collectivistic society reported more body image dissatisfaction than women living in the individualistic society. Contrary to the prediction, body image dissatisfaction of women in the collectivistic group with high acculturation did not differ from those in the collectivistic group with low acculturation. Therefore, the moderating role of acculturation was not found.

Keywords: Body image dissatisfaction; media; culture; psychology

Introduction

In South Korea, Diva is paid millions of dollars to eat enormous servings of food on the online Eating Broadcast in order to satisfy the desires of binge eating of people dieting excessively and with anorexia (Cha, 2014). In Japan, *Kawaii* in Japanese no longer has its original meaning of cute, but describes the unrealistically thin ideal among young girls (Mori, 2013). In America, the clothing size of Marilyn Monroe changes from 16 to the roughly equivalent of an 8 today to encourage slimness (Hiskey, 2012). In Canada, a girl's dietitian says that she is fainting because she is weak from constantly losing weight and need to eat something (Amy, 2013).

Plenty of research (Ayala, Mickens, Galindo, & Elder, 2007; Franzoi & Klaiber, 2007; Grabe, Ward, & Hyde, 2008; Halliwell, 2012; Warrant & Rios, 2013) reveals that individuals living in western culture contexts are encouraged to attain the highly valued yet unrealistic skinny appearance promoted by the thin-ideal media exposure. Moreover, several cross-cultural studies examine the relationship between the endorsement of western thin-ideal media and body image dissatisfaction among different ethnic groups (Warren & Rios, 2013; Forbes, Jung, Vaamonde, Omar, Paris, & Formiga, 2012; Tiggemann, Verri & Scaravaggi, 2005). However, cultural influence, specifically collectivism vs. individualism, on media effect and body image dissatisfaction is much less explored (Schwartz, Unger, Zamboanga, & Szapocznik, 2010; Grabe, Ward, & Hyde, 2008). The purpose of the present study is to examine the moderating role of collectivism vs. individualism on media influences on women's body image dissatisfaction.

Emerging *Cover Girl Culture* Illusion

Dittmar & Ashikali (2012) recognizes two ubiquitous ideals in the contemporary consumer culture: the body-perfect ideal and the material good life. The body-perfect ideal underscores beauty by showing ultra-thin female models, and the material good life highlights an affluent lifestyle, money, and expensive material goods along with happiness and success (Dittmar, 2009). Based on Bessenoff's analysis (2006), these two consumer culture ideals are closely linked because having a thin appearance and an affluent lifestyle are typically represented together in the media. Consequently, young females learn that their appearances are important to their identities and begin to perceive themselves by their looks instead of their internal characteristics, such as their personality, generosity, and intellect (Tylka & Calogero, 2011). Nicole Clark's documentary (2008), *Cover Girl Culture: Awakening the Media Generation,* demonstrates that exposure to the thin-ideal appearance and glamorous lifestyle

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reveals plenty of mental illnesses and societal problems among young women.

Contextualizing *Cover Girl Culture* illusion into reality

The media intentionally creates unrealistically thin-ideal images and associates them with good fortune, wealth, health, and happiness in order to manipulate consumers to buy products (Tylka & Calogero, 2011). The media successfully primes materialism in women's responses to the thin-ideal body image by making them spend tremendous amounts of time and energy pursuing material goods and wealth. Therefore, young women fail to realize the relative importance of intrinsic life goals, such as self-actualization, affiliation, and community involvement (Ashikali & Dittmar, 2012).

Additionally, young women become more likely to internalize the thin-ideal body image, thereby blaming their bodies and themselves for failing to achieve the flawless image that is portrayed in the media. The *Cover Girl Culture* (Clark, 2008) reflects that corporations see young women as a new market, thereby featuring weight loss products in advertisements as well as magazines that instructed potential readers to fix their bodies. Advertisements and articles further indicate that a woman's work is never done throughout their life in order to encourage women to focus excessively on the ideal physical appearance (Tylka & Calogero, 2011). Furthermore, this strategy allows young female readers to develop and positively reinforce a contextualization schema, which means that a person identifies the thin-ideal problem on a societal level rather than an individual level (Muehlenkamp, Swanson, & Brausch, 2005). Fredrickson & Roberts (1997) also propose that the societal contextualization schema of women teaches them to internalize an outsider's opinion of thin-ideal appearance and generate continually negative attitudes towards their bodies. Several researchers (Fredrickson, Roberts, Noll, Quinn, & Twenge, 1998) conclude that female contextualization of social media predicts body image dissatisfaction and extremely restrictive eating. Muehlenkamp, Swanson, & Brausch's study (2005) supports previous research by indicating that societal contextualization of thin-ideal body image directly contributes to women's body image dissatisfaction as well as disordered eating behaviors.

Media Influences on Body Image Dissatisfaction

Research argues that thin-ideal media exposure increases women's body image dissatisfaction, negative affectual states and disordered eating behaviors (Stice, Schupak-Neuberg, Shaw, & Stein, 1994; Morry & Staska, 2001; Bissell & Zhou, 2004; Grabe, Ward, & Hyde, 2008). On the other hand, plenty of studies also demonstrate that healthy-ideal media exposure can positively influence women's body image satisfaction (Owen & Spencer, 2013; Grabe, Ward, & Hyde, 2008). Additionally, research reiterates the importance of the mediating role of internalization of thin-ideal body images (Thompson & Stice, 2001; Halliwell, 2013).

Body image dissatisfaction

Body image is a multidimensional construct that reflects attitudes and perceptions about an individual's physical appearance under the cultural norms and ideals rather than on actual body dimension (Warren & Rios, 2013). Research (Cafri et al., 2002; McCreary & Sasse, 2000; Olivardia et al., 2004) argues that body image problems are linked to many potentially harmful behaviors and mental illnesses, such as obsessive exercise, low self-esteem, substance abuse and eating disorders. Leon Festinger (1954) proposes that people tend to evaluate themselves by comparing their attributes, such as abilities and physical appearance, to others.

Thin-ideal media effect

Research indicates that body image dissatisfaction among women increases with exposure to fashion magazines or television featuring thin-ideal body images (Stice, Schupak-Neuberg, Shaw, & Stein, 1994; Morry & Staska, 2001; Bissell & Zhou, 2004). Meta-analyses further confirm that exposure to thin-ideal appearance in the media has a small to moderate negative influence on body image dissatisfaction, negative affectual states and disordered eating behaviors among young women (Grabe, Ward, & Hyde, 2008; Groesz, Levin, & Murnen, 2002; Halliwell, 2013). In other words, after viewing thin appearance-focused stimuli, women's body image dissatisfaction decreases (Cusumano & Thompson, 1997). The longitudinal studies identify women's body image dissatisfaction caused by thin-ideal media exposure as one of the most consistent factors for eating disorders, low self-esteem, depression, anxiety and obesity, thereby becoming a core aspect of women's physical and psychological health (Grabe, Hyde, & Lindberg, 2007; Johnson & Wardle, 2005; Neumark-Sztianer, Paxton, Hannan, Haines, & Story, 2006). Grabe, Ward, & Hyde's experiment (2008) further summarizes that generalized media exposure is tightly linked to women's generalized body image dissatisfaction. Therefore, the thin-ideal media exposure leads to more negative body images because people generally use upward comparison, thus viewing themselves as less attractive than the models (Barlett et al., 2008; Myers & Crowther, 2009; Warren & Rios, 2013).

Healthy-ideal media effect

Simultaneously, several articles focus on positive and healthy-ideal media effects. Posavac, Posavac, & Posavac's three experiments (1998) indicate that female college students with negative body images who are given a 7 minute psycho-educational presentation are less likely to be affected by thin-ideal body images than those students without prior education. Furthermore, Dittmar and Howard (2004) demonstrate that women report less body-image anxiety after seeing several attractive yet average-sized models. When average-sized models and ultra-thin models represented in the media are equally attractive, the media industry is equally effective in selling the products (Dittmar & Howard, 2004; Halliwell & Dittmar, 2004).

Therefore, Owen and Spencer (2013) investigate whether using healthy weight models in the media, such as Dove Campaign for Real Beauty, can increase body image

satisfaction. Their experiment (Owen & Spencer, 2013) shows that individuals report significantly more positive affect about their body images after viewing healthy weight models than after viewing thin-ideal models. Papies and Nicolaije (2012) approve previous findings by stating that female participants even report increased body satisfaction after viewing images of overweight models. Moreover, Grabe, Ward, & Hyde (2008) point out that individuals with higher baseline body image dissatisfaction are more susceptible to the negative impact of thin-ideal images, as well as the positive impact of healthy-ideal images (Owen & Spencer, 2013). These findings suggest that the use of healthy-ideal or average-sized models in the media can protect young women from developing body image dissatisfaction, thereby avoiding exacerbation of both physical and psychological problems.

Mediating role of the internalization of thin ideals

Thin-ideal internalization is defined as whether or not women internalized sociocultural pressures and the media influences toward thinness rather than simply being aware of the thin-ideal body image (Dittmar, Halliwell, & Stirling, 2009). Under this condition, women are more likely to adopt the thin ideal as their personal goals and values (Thompson & Stice, 2001; Halliwell, 2013). Stice, Schupak-Neuberg, Shaw and Stein's research (1994) support that the internalization of the thin-ideal body mediates the relationship between media exposure and body image dissatisfaction, as well as eating pathology. Their study (Stice et al., 1994) further demonstrates that greater thin-ideal body stereotype internalization predicts more body image dissatisfaction. Dittmar and Howard's experiment (2004) supports that the thin ideal body internalization serves as a reliable mediator of media exposure effects. It is the thoughts that are aroused internally in women when they are exposed to thin models that are crucial (Dittmar, Halliwell, & Stirling, 2009). In other words, the internalization of unachievable idealized standards of attractiveness causes greater body image dissatisfaction (Moradi, Dirks, & Matteson, 2005).

Although all women may realize the cultural ideal of thinness that is presented in the media, not all women tend to consider it as the dominant ideal. Halliwell (2013) elaborates that women who accept not only the thin-ideal body images but also view their bodies (which may not match their ideal) with respect, love or positive attitudes, will be less likely to experience more body image dissatisfaction. Moreover, Dittmar, Halliwell, & Stirling' research (2009) concludes that women's high level of body appreciation protects them from negative media exposure effects by changing the way that women process and internalize the thin-ideal body images. Thus, researchers cannot ignore the mediating role of thin-ideal internalization while examining the causality between media exposure effects and body image dissatisfaction.

Moderating Role of Collectivism vs. Individualism on Media Effects on Body Image Dissatisfaction

Different cultures not only influence how people perceived and evaluate their body images, but also play a significant role in determining the media effects. In individualistic cultures, the goals, needs, values, and individual rights outweigh the aims, responsibilities, and obligations of the entire group (Cai & Fink, 2002; Allison & Emmers-Sommer, 2011). According to Triandis, McCusker, & Hui's empirical research (1990), individualism is very high in the United States, Britain, and Australia. Collectivism, on the other hand, values more on the goals, responsibilities, and obligations of the group as well as conformity and cooperation. Thus, people living in the collectivistic societies are more likely to define themselves in terms of their relationships, family or coworkers (Allison & Emmers-Sommer, 2011). Triandis, McCusker, & Hui (1990) identify several places, namely Africa, Asia, and Latin America, as collectivism. From the effects of media globalization, Sun and Wang (2010) argue that younger generations shift from traditional collectivistic values to modern individualistic values through many aspects of daily lives under the media influences. Notwithstanding, people still interpret the media within their own cultural contexts and values (Allison & Emmers-Sommer, 2011).

Consequently, it is crucial to notice the moderating role of collectivism vs. individualism on thin-ideal media effects (Hsu and Barker, 2013).

Cultural differences on body image dissatisfaction: the sociocultural theory

Sociocultural theory emphasizes the influences of cultural differences on body image dissatisfaction among young women. Jones, Vigfusdottir, and Lee (2004) argue that societal factors have a powerful impact on the development and maintenance of body image through the cultures that value and reinforce the thin-ideal body shapes. Different media images can be considered central consequences of different cultures (Levine, Smolak, & Hayden, 1994). Because thin-ideal internalization is fostered by perceived pressure to be thin (Boone, Soenens, & Braet, 2011), individuals will be more likely to experience body image dissatisfaction when encountering stressful messages (Jones, Vigfusdottir, & Lee, 2004). Furthermore, the pressure to be thin can come from social comparisons, such as family, peers or the entire collectivity (Fitzsimmons-Craft, Harney, Koehler, Danzi, Riddell, & Bardone-Cone, 2012; Pompper, Soto, & Piel, 2007). Morrison et al. (2012) further indicate that general social comparison is significantly associated with body image dissatisfaction among college women. Most studies (Botta, 1999; Harrison & Cantor, 1997; Sheldon, 2010) suggest that social comparisons with thin-ideal media images increase women's body image dissatisfaction, and body image dissatisfaction leads to more comparisons.

However, there are cultural differences between collectivism and individualism regarding body image dissatisfaction (Grabe & Hyde, 2006). Makino, Hashizume, Yasushi, Tsuboi, & Dennerstein (2006) demonstrate that Asian women experience high levels of body image dissatisfaction because of the collectivist culture which values social conformity, the need for social approval, and sensitivity to public scrutiny. Additionally, Markus & Kitayama's research (1991) suggests that individuals who identify themselves with collectivistic cultures are more likely to have interdependent relationships and prioritize harmonious social ties with others. Therefore, social comparisons through friends and cultural values play a crucial role on women's

body image dissatisfaction (Sheldon, 2010; Grabe & Hyde, 2006). However, Cordero's experiment (2011) with collectivistic Hispanic undergraduates shows that they are less likely to internalize the thin-ideal body. This is because they focus more on their relationships than to their own appearance unless they learn from their peers that thinness is socially desirable (Gil-Kashiwabara, 2002). It is also reported that Black women with individualistic cultures generally are more satisfied with their body image than their white counterparts because black women adopt a larger ideal body size, and so experience less social pressure about weight (Grabe & Hyde, 2006). On the contrary, American women with individualistic cultures reports more body image dissatisfaction under the thin-ideal media influences since they are inclined to describe their body ideal by emphasizing a set of fixed physical attributes, such as tall, thin, blonde hair, and so forth (Grabe & Hyde, 2006; Boone, Soenens, & Braet, 2011).

Argentina, Brazil, and the U.S.

Forbes, Jung, Vaamonde, Omar, Paris, & Formiga (2012) do their cross-cultural comparisons between Argentina, Brazil, and the U.S. The results (Forbes et al., 2012) weakly support that the Argentine and Brazilian samples has greater body image dissatisfaction than the U.S. sample. Forbes et al. (2012) demonstrates that both Argentina and Brazilian samples report less drives for thinness and lower pressure than the U.S. sample. Because of the cultures where food shortage is relatively common, skinny bodies are associated with physical weakness, illness, and reduced reproductive fitness (Cassidy, 1991). Therefore, the traditional preference for relatively heavy women bodies delays the acceptance of the thin-ideal body images in the Argentina and Brazil (Forbes et al., 2012). Additionally, research from Forbes et al. (2012) fails to find consistent evidence for Meehan and Katzman's arguments (2001) that Argentines adopt an exaggerated version of the U.S.'s thin body ideals.

Australia and Italy

The cross-cultural study between Australia and Italy contributes to a greater understanding of the body image dissatisfactions across different cultures (Tiggemann, Verri & Scaravaggi, 2005). Even though these two countries differ in many ways including language spoken, media ownership, and cultural values, research (Tiggemann et al., 2005) finds that the general levels of women's body image dissatisfaction are very similar. Both samples largely internalize thin ideals so that both groups experience strong social pressure to be thin (Tiggemann et al., 2005). However, Australian women report higher body image dissatisfaction as well as more disordered eating behaviors than do Italian women (Tiggemann et al., 2005). One possible reason is that family structure in Italy, with its emphasis on food, protects women against body image concerns (Rozin, Kabnick, Pete, Fischler, & Shields, 2003). Research further argues that different cultures create different social and ecological attitudes towards food (Tiggemann et al., 2005). Women in Mediterranean countries are less sensitive to media influences and experience less thin-ideal media pressures, thereby are less likely to internalize the thin-ideal body images (Tiggemann et al., 2005).

Role of Individualism on western media effect

The ideal body shape for women in the western media becomes increasingly thinner in recent decades (Wiseman, Gray, Mosimann, & Ahrens, 1992). In individualistic/ western culture, media portrays thinness as an important criterion of the cultural ideal of female beauty and further associates it with fitness and health, whereas obesity is implied a sense of unattractiveness, laziness, and lack of self-control (Warren & Rios, 2013). Since individualistic cultures highlights individual's will and self-reliance, people's behaviors are rarely greatly influenced by in-groups or the entire collectivities (Triandis, McCusker, & Hui, 1990). Although women in individualistic societies may appear to have greater opportunities to identifying their true selves than those in the collectivistic societies, they may still struggle to affirm their selfhood under the powerful thin-ideal media effects (Allison & Emmers-Sommer, 2011). Moreover, the thin-ideal media could have profound impacts on women in the individualistic societies, especially when thin-ideal body image is successfully associated with an affluent and desirable lifestyle or goals (Warren & Rios, 2013).

Role of collectivism on western media effect

Hsu and Barker (2013) demonstrate that many advertisements capture people's interest because they are western, which indicates the desire for people in the East to acquire a western and individualistic lifestyle. Additionally, Cheng (1997) finds that instead of merely advertising collectivistic values, both eastern and western cultural values are frequently portrayed in Chinese and Korean media. Furthermore, imported products or ideas from western society are correlated with higher reputations and better lifestyles in Eastern society (Hsu & Barker, 2013). People in the collectivistic societies are influenced very much by few stable yet broad in-groups, for collectivism valued highly on conformity, cooperation, and avoidance of confrontation (Triandis, McCusker, & Hui, 1990). Coupled with people's conformity to the majority opinions in the collectivistic societies, most people believe that western ideas or products are tightly associated with better lives and affluence (Hsu & Barker, 2013). As a result, young generations are more likely to adhere and advocate contents from western media (Hsu & Barker, 2013).

Hence, women from collectivistic cultures often experience more pressure to be thin indirectly from the unrealistically thin-ideal media, and directly from family, friends, and partners who encourage thin-ideal prototypes to conform to their peers (Phan & Tylka, 2006). Women who are surrounded by greater pressures to be thin from western media are more inclined to internalize the thin ideals (Phan & Tylka, 2006). Consequently, women who internalize the thin-ideal body frequently compare their bodies with the unrealistically societal ideals, thereby experiencing more body image dissatisfaction (Fredrickson & Roberts, 1997). Despite stereotypical perceptions of Asian women not having any weight concerns because they are naturally thin, trying to be thinner and losing weight becomes common practices and themes among women in the collectivistic societies (Jung & Lee, 2006). The western thin-ideal media effects on women in the collectivistic societies may be enlarged and exaggerated

due to people's greater endorsement of western cultural values and ideals of physical appearance (Jung & Lee, 2006; Warren & Rios, 2013).

Values acculturation in Asian American women

Acculturation is a key contributor to body image dissatisfaction for women of color, especially for those who are more acculturated to the dominant culture (Mastria, 2002). Research from Lau, Lum, Chronister, & Forrest (2006) shows significant correlations between acculturation, body image dissatisfaction, and media effects. To be more specific, Lau et al.'s study (2006) indicates that the levels of values acculturation play a crucial role in Asian American women's perceptions of their bodies. Moreover, the thin-ideal media significantly affects their body image dissatisfaction (Lau et al., 2006). Women, who adhere to more traditional Asian values but predominantly internalize western media standards of beauty, report more body image dissatisfaction (Lau et al., 2006). However, Lau et al.'s study (2006) is the only empirical study to examine the relationship among media effect, body image dissatisfaction, and values acculturation with small sample size.

Previous research extensively examines women's body image dissatisfaction among various locations (Forbes et al., 2012; Tiggemann et al., 2005; Lau et al., 2006). They (Forbes et al., 2012; Tiggemann et al., 2005; Lau et al., 2006) further explain that the differences of women's body image dissatisfaction may be because women from different countries inherit different values. Former studies (Forbes et al., 2012; Tiggemann et al., 2005; Lau et al., 2006) mainly focus on locations and then associated them with culture differences. However, the psychological mechanisms underlying the culture effects are still under-researched.

The Present Study

The purpose of this study is to examine the moderating role of collectivism vs. individualism on media influences on body image dissatisfaction among 133 female college students, aged from 18 to 23 years old. Participants are sampled from the University of Texas at Austin. The media message, either thin ideal or healthy ideal, is brought under experimental control. Participants are randomly assigned into either thin-ideal media exposure condition (experimental condition) or healthy-ideal media exposure condition (control condition). This study additionally measures women's body image dissatisfaction under media effects.

The strength of the present study is that it focuses primarily on the moderating role between two specific yet far-reaching cultures on media effects and body image dissatisfaction. Previous research (Forbes et al., 2012; Tiggemann et al., 2005) primarily focuses on analyzing and comparing body image dissatisfaction of women in particular countries (such as Argentine, Brazil, Australia, Italy, and U.S.). Lau et al.'s study (2006) further examines the impacts of acculturation on body image dissatisfaction for women who grew up with different cultures but currently lived in the U.S. Although several research have explored the cultural aspects on women's body image dissatisfaction under the thin-ideal media, cross-cultural studies need to move on from simply comparing the absolute levels to investigating the

relationships between several variables (Tiggemann et al., 2005). It is still unclear about the influences of specific cultures, namely collectivism vs. individualism, on both thin-ideal media effect and body image dissatisfaction (Grabe, Ward, & Hyde, 2008). Additionally, there is no integrated research analyzing how various levels of acculturation and different cultures interact, thus further influencing women's body image dissatisfaction (Lau et al., 2006). The underlying psychological mechanisms that resulted from acculturation are still less explored.

Current study not only fundamentally emphasizes on the tremendous impacts of the original culture that women grew up with, but also examines the influences of different levels of acculturation on women's body image dissatisfaction (Dittmar, Halliwell, & Stirling, 2009; Halliwell, 2013; Owen & Spencer, 2013). The present study uses empirical experiments with collectivism vs. individualism conditions to provide a more comprehensive understanding of the underlying psychological mechanism between thin-ideal media effects and body image dissatisfaction (Lau et al., 2006). Furthermore, the study compares three different groups in body image dissatisfaction: collectivist group with high acculturation, collectivist group with low acculturation, and individualist group. Thus, current study is both theoretically and practically important in the clinical and multicultural psychology areas.

Integrating previous research on media effects and body image dissatisfaction in different countries, we hypothesize that thin-ideal media exposure increases women's body image dissatisfaction (Grabe, Ward, & Hyde, 2008; Dittmar & Howard, 2004; Halliwell, 2013; Warren & Rios, 2013). Additionally, thin-ideal media and cultures are predicted to interact. Collectivist group with high acculturation differs from the collectivist group with low acculturation and falls close to the individualist group in body image dissatisfaction (Lau et al., 2006). Thus, we predict that thin-ideal media effects on body image dissatisfaction are stronger for females in collectivist group with low acculturation than for the other two culture groups (Hsu & Barker, 2013; Phan & Tylka, 2006; Allison & Emmers-Sommer, 2011). In general, women living in the collectivistic societies report more body image dissatisfaction than those living in the individualistic societies (Tiggemann, Verri & Scaravaggi, 2005; Lau, Lum, Chronister, & Forrest, 2006). The figure 1 below showed the moderating relationships.
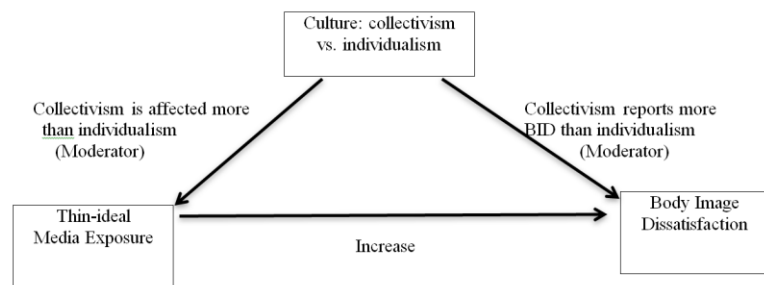

Figure 1: Moderating relationships

Method

Design

The experiment used a 3 x 2 x 2 mixed design. The independent variable was thin-ideal media effect. Two experimental conditions were manipulated by videos: thin-ideal media exposure and healthy-ideal media exposure. In each culture group, participants were randomly assigned into either experimental condition. The moderator was culture. Based on preliminary questionnaires, all the participants were divided into three groups: collectivism with low acculturation, collectivism with high acculturation, and individualism. The dependent variable was female participants' body image dissatisfaction that was measured by two body image dissatisfaction scales at two time points: before and after the experimental manipulation. Additional covariates in all analyses were women's body mass index (BMI), socioeconomic status and history of dieting.

Participants

We selected 133 participants, based on a power analysis, with an alpha level of 0.05, assuming a moderate effect size, and power of 0.80. One hundred thirty three female college students, aged between 18 and 23 (M=18.85, SD=1.02), attending the University of Texas at Austin participated in this study. Most participants were recruited via SONA, an online registration site where students at the University of Texas at Austin sign up to gain course credits for psychology experiments. Nearly two third of the female participants (N = 81) were self-identified with collectivism and the other one third (N =52) was self-identified with individualism.

Measures

Demographics and self-identity

Participants provided their age, marital status, the length of residency in their current location and their first-spoken language. Participants also provided information regarding the ethnicity that they identified with. Researchers further used the Pictorial Identity Fusion (PIF) and Verbal Measure of Fusion (VMF) to measure the individual's relationship with a certain group (Swann, Gómez, Seyle, Morales, & Huici, 2009; Swan et al., 2011).

Pictorial identity fusion. The PIF (Swan et al., 2009) has five choices. In each choice, there are two circles overlapping in different percentage: 0 percentage, 30 percentage, 60 percentage, 90 percentage, and 100 percentage. One of the circles represents the Individual and the other one represents the Group. In the present study, researchers referred to Group circles as participants' ethnic groups.

Verbal measure of fusion. The VMF (Swan et al., 2011) consists of 7 questions measuring individual's identity fusion (e.g., "My country is me," and "I feel immersed in my country"). Participants used six-point scales ranging from '0' (totally disagree) to '6' (totally agree) to respond to each question. The scores range from 0 to 42, with higher scores indicating stronger heritage cultural identities.

Acculturation

Acculturation was assessed by an adapted version of the Vancouver Index of Acculturation (VIA, Ryder et al., 2000; Brokhoff et al., 2012). Items in the original version are represented in pairs, with endorsement of a specific aspect of cultural preference (e.g., whether their preferred romantic partners come from their "heritage culture" vs. the "mainstream culture," or whether they preferred certain entertainments from the "heritage culture" vs. the "mainstream culture") evaluated separately in the context of individual's 'heritage culture' and mainstream culture (Brokhoff et al., 2012). The standard VIA has good reliability and internal validity in measuring personality, identity and psychosocial adjustment (Huynh & Howell, 2009; Ryder et al., 2000; Brokhoff et al., 2012). Participants used nine-point Likert scales ranging from '1' (strongly disagree) to '9' (strongly agree) to respond to each item. In the present study, the same items were presented, but researcher listed the target culture as 'collectivistic culture' or 'individualistic culture'. The heritage culture score is the mean of the odd-numbered questions, whereas the mainstream culture score is the mean of the even-numbered items (Ryder, Alden, & Paulhus, 2000). Acculturation level is calculated by comparing the mean of the heritage culture score and the mean of the mainstream culture score.

Body image dissatisfaction

Body image dissatisfaction was evaluated by the Body Shape Questionnaire (BSQ; Cooper, Taylor, Cooper, & Fairburn, 1987; Baillie & Copeland, 2013) and the Figure Rating Scale of Fallon and Rozin (1985; Tiggemann, Verri, & Scaravaggi, 2005).

Body Shape Questionnaire (BSQ)

The BSQ is a 34-item self-report questionnaire that assesses severity of body shape concerns. Participants rated the frequency of their body image concerns (e.g., "Have you been afraid that you might become fat or fatter?" "Have you felt excessively large and rounded?" and "Have you vomited in order to feel thinner?"), using a six-point Likert scale ranging from '1' (Never) to '6' (Always) (Cooper et al., 1987). Scores on the BSQ are correlated with other measures of body image concerns and eating attitudes (Cooper et al., 1987; Baillie & Copeland, 2013). It has excellent reliability and internal validity (Cronbach's alpha of 0.97 among women; Pook, Tuschen-Caffier, & Brahler, 2008; Cooper et al., 1987). The BSQ has been used in samples of Asian women and girls in Britain (Ogden & Elder, 1998; Baillie & Copeland, 2013). The overall scores range from 34 to 204. In the present study, the BSQ was used as a measurement of women's overall body image dissatisfaction, with higher scores indicating greater dissatisfaction (Baillie & Copeland, 2013). Less than 80 indicate no dissatisfaction with body shape; 80 to 110 indicate mild dissatisfaction; 111 to 140 indicate moderate dissatisfaction; over 140 indicate marked dissatisfaction with body shape.

Figure Rating Scale of Fallon and Rozin (FRS)

The FRS consists of nine schematic silhouette drawings ranging from '1' (extremely thin) to '9' (obese) (Tiggemann,

Verri, & Scaravaggi, 2005). Participants were asked to indicate: (1) the figure that looks like their current figure (Current); (2) the figure that they would like to look like (Ideal); (3) the figure that they think would be most attractive to the opposite sex (Attractive). In the present study, body image dissatisfaction was calculated by subtracting ideal ratings from current ratings, with higher scores indicating higher body image dissatisfaction (Tiggemann et al., 2005).

Media effect

Two experimental conditions were manipulated by two 5-minute videos: thin-ideal video vs. healthy ideal video. The thin-ideal video consisted of 2 Victoria Secret commercials and 1 thin-ideal video, whereas the healthy ideal video was from 2 Dove Campaign of Real Beauty commercials. The 2 Victoria Secret commercials emphasize the beauty and attractiveness of thinness. However, the 2 Dove Campaign of Real Beauty commercials focus more on realizing and embracing the real beauty inside of everyone.

Procedure

Prior to initiating the experiment, participants are required to sign the informed consent forms online. Meanwhile, participants were told that the entire experiment consisted of two sessions, with the second one following 2 weeks later.

First session

After signing the consent form, participants followed the instruction and opened new web links to enter the first part of the experiments. Participants completed the demographic questionnaires (see Appendix A) and acculturation evaluations (see Appendix B). Additionally, participants finished two body image dissatisfaction scales (see Appendix C). After completing all the questionnaires and scales, participants finished the first session of the experiment.

Second session

Participants received researcher's emails that informed them the location and time for the second session of the experiment 2 weeks after participants completed the first session of the experiment. The returned participants were randomly assigned into two experimental conditions. Participants in each condition were shown one of two 5-min videos (thin-ideal video vs. healthy ideal video; see Appendix D). After watching the video, participants completed the same two body image dissatisfaction scales (see Appendix C) again. Lastly, researcher thanked and debriefed to the participants.

Data were analyzed in a 3 (cultural group) X 2 (media condition) X 2 (time) mixed-design analysis of variance.

Results

Preliminary Analyses

Reliability of Measurements. Before examining hypotheses, the reliability of the Vancouver Index of Acculturation (VIA) was assessed by Cronbach's alpha coefficients. The internal reliability coefficient was $\alpha = .79$ for the six-item Heritage subscale and .75 for the six-item Mainstream subscale. The Cronbach's alpha of the Body Shape Questionnaire (BSQ) was .909, indicating that the

questions of the scale converge to the same construct. The Figure Rating Scale (FRS) showed high internal reliability with a Cronbach's alpha of .936.

Correlation among Dependent Variable Measures. To evaluate concurrent validity of the measurements for women's body image dissatisfaction, Pearson's correlation coefficients were calculated between BSQ and FRS. BSQ shows a strongly positive correlation with FRS (r = .610, ρ < .001).

Hypotheses Analyses

Overview of the Data. The total number of participants randomly assigned into thin-ideal media condition was 67, and the total number of participants randomly assigned into healthy media condition is 66 (N = 133). In the thin-ideal media condition, participants had the increased frequency of higher BSQ and FRS scores, compared to their baseline scores, as shown in Table 1. In the healthy media condition, participants had the increased frequency of lower BSQ and FRS scores, compared to their baseline scores, as shown in Table 2.

Table 1: Frequency of body shapes questionnaires and figure rating scale under thin-ideal media

Baseline BSQ	Frequency	Percent	Thin BSQ	Frequency	Percent
0	25	37.3	0	19	28.4
1	22	32.8	1	17	25.4
2	12	17.9	2	20	29.9
3	8	11.9	3	11	16.4
Total	67	100.0	Total	67	100.0

Baseline FRS	Frequency	Percent	Thin FRS	Frequency	Percent
0	15	22.4	0	12	17.9
1	34	50.7	1	22	32.8
2	13	19.4	2	23	34.3
3	4	6.0	3	8	11.9
5	1	1.5	4	1	1.5
Total	67	100.0	6	1	1.5
			Total	67	100.0

Table 2: Frequency of body shapes questionnaires and figure rating scale under healthy media

	Frequency	Percent		Frequency	Percent
Baseline BSQ			Healthy BSQ		
0	7	10.6	0	23	34.8
1	17	25.8	1	29	43.9
2	34	51.5	2	13	19.7
3	8	12.1	3	1	1.5
Total	66	100.0	Total	66	100.0

	Frequency	Percent		Frequency	Percent
Baseline FRS			Healthy FRS		
0	11	16.7	0	24	36.4
1	32	48.5	1	35	53.0
2	16	24.2	2	6	9.1
3	5	7.6	3	1	1.5
4	2	3.0	Total	66	100.0
Total	66	100.0			

Media Exposure and Body Image Dissatisfaction. To examine the main effect between media exposure and women's body image dissatisfaction, researcher compared three cultural group's body image dissatisfaction under two types of media exposures (thin-ideal vs. Healthy) at the two time-points. A 3 (cultural group) x 2 (media condition) x 2 (time) mixed design ANOVA was conducted. Dependent variable was women's body image dissatisfaction, which was measured by two separate scales.

Hypothesis 1 stated that thin-ideal media exposure would increase women's body image dissatisfaction. Indeed, the main effect of thin-ideal media exposure was significantly associated with higher women's body image dissatisfaction in terms of BSQ. ($F (2, 64) = 19.430$, $\rho = .000$) women in the thin-ideal media condition had higher BSQ scores ($M = 1.34$, $SD = 1.067$) compared to baseline ($M = 1.04$, $SD = 1.021$), as shown in Figure 2. FSQ scores also stated that thin-ideal media exposure significantly increased women's body image dissatisfaction. ($F (2, 64) = 40.724$, $\rho = .000$) Women in the thin-ideal media condition had higher FRS scores ($M = 1.52$, $SD = 1.119$) compared to baseline ($M = 1.15$, $SD = .942$), as shown in Figure 2.
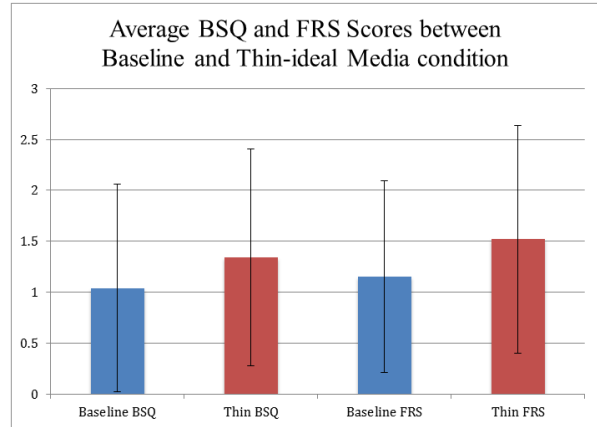

Figure 2: Average BSQ and FRS scores between baseline and thin-ideal media condition

Healthy media exposure was significantly associated with lower women's body image dissatisfaction based on BSQ scores. ($F (2, 63) = 147.612$, $\rho = .000$) Women in the healthy media condition had lower BSQ scores ($M = .88$, $SD = .775$) compared to baseline ($M = 1.65$, $SD = .832$), as shown in Figure 3. The FRS scores also indicated that healthy media exposure significantly lowered women's body image dissatisfaction. ($F (2, 63) = 57.650$, $\rho = .000$) Women in the thin-ideal media condition had lower FRS scores ($M = .76$, $SD = .681$) compared to baseline ($M = 1.32$, $SD = .947$), as shown in Figure 3.
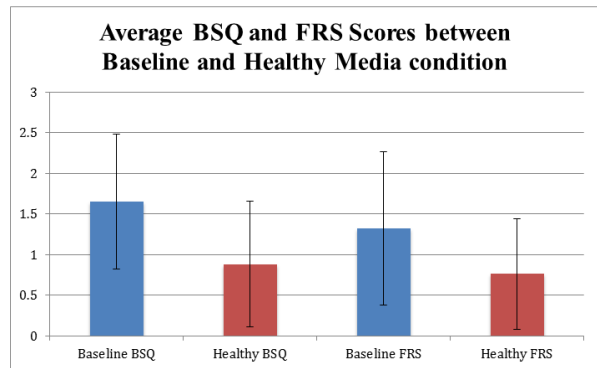

Figure 3: Average BSQ and FRS scores between baseline and healthy media condition

Culture and Body Image Dissatisfaction. Hypothesis 2 stated that in general, women living in the collectivistic societies would report more body image dissatisfaction than those living in the individualistic societies. To examine the relationship between culture and body image dissatisfaction, we compared the Baseline body image dissatisfaction of two main cultural groups (Individualism vs. Collectivism). An independent two-sample t-test analysis was conducted. Dependent variable was women's initial body image dissatisfaction, which was measured by two separate scales.

As hypothesized, women in the collectivism group had higher body image dissatisfaction than those in the individualism group, with respectively BSQ scores, (t (102) =

3.199, ρ = .002) and FRS scores. (t (102) = 2.140, ρ = .035) The Baseline body image dissatisfaction in collectivism group measured by BSQ scale had a mean of 1.615 (SD = .911), compared to a mean of 1.038 (SD = .928) in the individualism group. The Baseline body image dissatisfaction in collectivism group measured by FRS scale had a mean of 1.346 (SD = .968), compared to a mean of .962 (SD = .862) in the individualism group. Figure 4 shows the comparisons of both BSQ and FRS scores respectively.
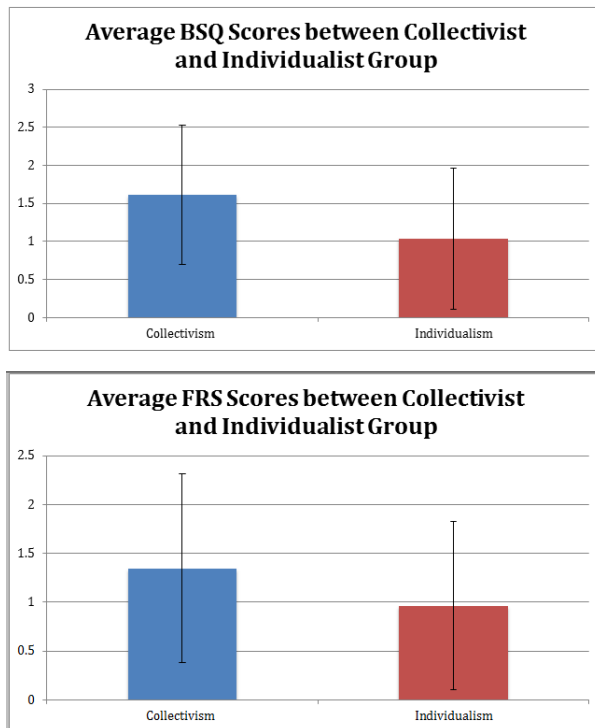

Figure 4: Average BSQ and FRS scores between collectivist and individualist group

Acculturation as a Moderator. Hypothesis 3 stated that thin-ideal media and acculturation would interact. We predicted that thin-ideal media effects on body image dissatisfaction would not be significantly different between individualist group and collectivist with high acculturation group. However, the thin-ideal media effects on body image dissatisfaction would be stronger for females in collectivist group with low acculturation than for the other two cultural groups. To test the interaction, we compared three cultural groups' body image dissatisfaction under thin-ideal media effects at the two time-points. A 3 x 2x 2 post hoc test using the Tuckey HSD test was conducted. Dependent variable was women's body image dissatisfaction, which was measured by two separated scales.

According to BSQ scores, contrary to the hypothesis, in the thin-ideal media condition, women's body image dissatisfaction in the collectivist group with high acculturation were not significantly differ with the collectivist group with low acculturation. (t (38) = .427, ρ = .672). The mean score for the collectivist group with high acculturation (M = 1.696, SD = .876) was not significantly different than the collectivist group with low acculturation (M = 1.824, SD = 1.015).

However, thin-ideal media effects on women's body image dissatisfaction in the individualist group significantly differed with both collectivist groups with high acculturation (t (48) = 3.595, ρ = .001) and collectivist group with low acculturation. (t (42) = 3.512, ρ = .001) The mean score for the individualist group (M = .741, SD = .984) was significantly different than both collectivist groups. Figure 5 demonstrates the comparisons among the three groups.
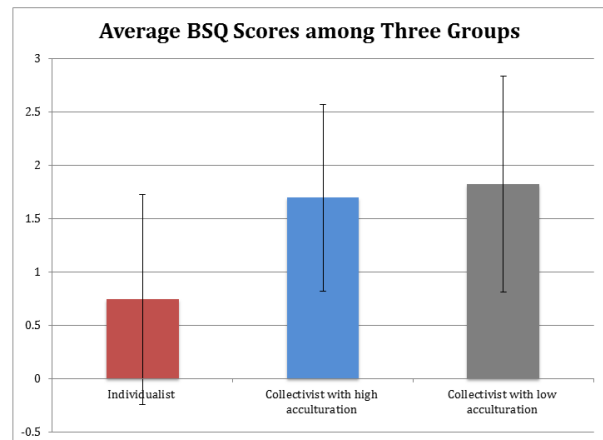

Figure 5: Average BSQ scores among three groups

Based on FRS scores, also on the counter to the hypothesis, thin-ideal media effects on women's body image dissatisfaction in the collectivist group with high acculturation were not significantly differ with the collectivist group with low acculturation. (t (38) = .086, ρ = .932) The mean score for the collectivist group with high acculturation (M = 1.913, SD = .900) was not significantly different than the collectivist group with low acculturation (M = 1.882, SD = 1.364). However, thin-ideal media effects on women's body image dissatisfaction in the individualist group significantly differed with both collectivist groups with high acculturation (t (48) = 3.725, ρ = .001) and collectivist group with low acculturation. (t (42) = 2.702, ρ = .010) The mean score for the individualist group (M = .963, SD = .878) was significantly different than both collectivist groups. Figure 6 demonstrates the comparisons among the three groups. Figure 7 shows the comparisons of BSQ scores between participants' baseline levels of body image dissatisfaction and under the thin-ideal media condition among three cultural groups. Additionally, Figure 8 shows the comparisons of FRS scores between participants' baseline levels of body image dissatisfaction and under the thin-ideal media condition among three cultural groups.
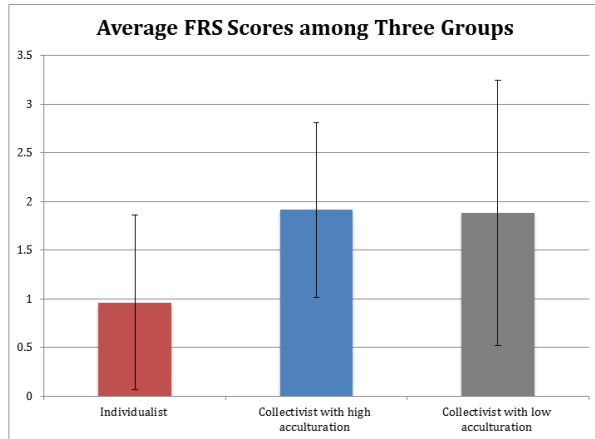
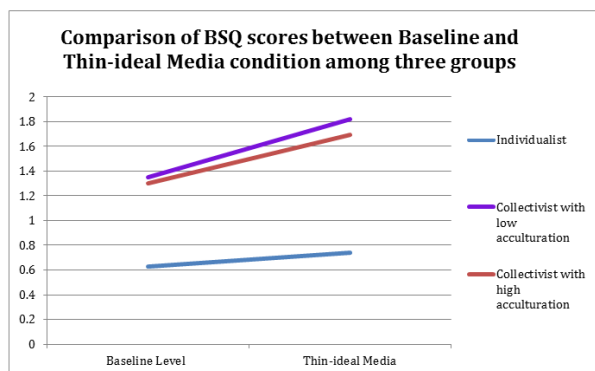**Figure 6:** Average FRS scores among three groups

Figure 7: Comparison of BSQ scores between baseline and thin-ideal media condition among three groups
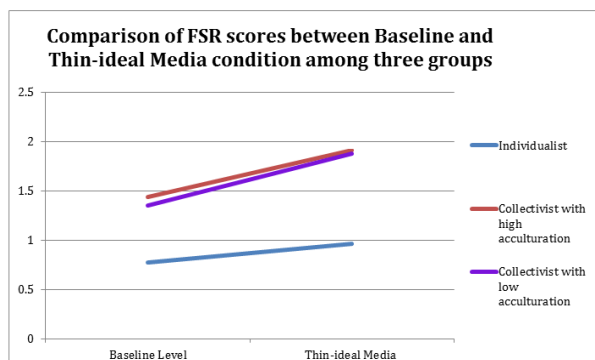

Figure 8: Comparison of FSR scores between baseline and thin-ideal media condition among three groups

Additional Analysis

Healthy Media Effects. Additional analyses were conducted to gain more insights about media effects on women's body image dissatisfaction from the cultural perspective. However, according to BSQ scores in healthy media condition, there is no significant difference among individualist group, collectivist group with high acculturation, and collectivist group with low acculturation. (t1 (47) = .533, ρ = .596; t2 (40) = .063, ρ = .950; t3 (39) = .574, ρ = .569) Furthermore, based on FRS scores, there is also no significant difference among

the three cultural groups. (t1 (47) = .480, ρ = .633; t2 (40) = .155, ρ = .878; t3 (39) = .262, ρ = .795) Figure 9 shows the comparisons of BSQ scores between participants' baseline levels of body image dissatisfaction and under the healthy media condition among three cultural groups, respectively with the means of .84 (SD = .850), .958 (SD = .690), and .824 (SD = .809). Figure 10 shows the comparisons of FRS scores between participants' baseline levels of body image dissatisfaction and under the healthy media condition among three cultural groups, respectively with the means of .80 (SD = .707), .708 (SD = .624), and .765 (SD = .752).
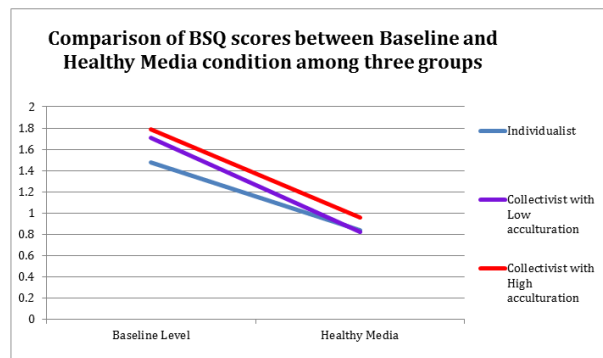

Figure 9: Comparison of BSQ scores between baseline and healthy media condition among three groups
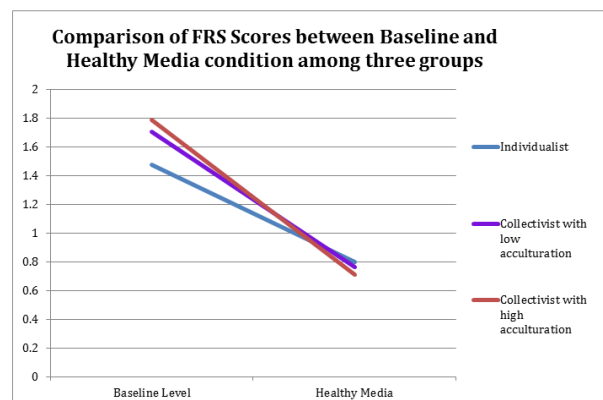

Figure 10: Comparison of FRS scores between baseline and healthy media condition among three groups

Discussion

This study examined the relationships between media influences, women's body image dissatisfaction, acculturation, and the moderating role of collectivism vs. individualism in the sample of 133 female college students from University of Texas at Austin. With regard to the core study findings, we found that thin-ideal media exposure significantly increased women's body image dissatisfaction, whereas healthy media exposure was significantly associated with lower body image dissatisfaction. The current results also suggested that women living in the collectivistic societies generally reported more body image dissatisfaction than those living in the individualistic societies. However, there was no significant difference in body image dissatisfaction between the collectivist group with high acculturation and collectivist

group with low acculturation. On the contrary, women's body image dissatisfaction in the individualist group significantly differed from the other two collectivist groups. These findings incrementally extend previous research of media impacts on body image dissatisfaction by examining the moderating role of culture and acculturation in empirical experiments.

Media Effects

The findings were consistent with previous longitudinal studies (Grabe et al., 2007; Johnson & Wardle, 2005; Neumark-Sztianer et al., 2006) demonstrating that thin-ideal media exposure was strongly associated with higher women's body image dissatisfaction (Stice et al., 1994; Morry & Staska, 2001; Bissell & Zhou, 2004). This study also confirmed Owen and Spencer's conclusions (2013) about the positive impacts of healthy media on individual's body image, demonstrating that participants report significantly lower body image dissatisfaction after exposing to healthy commercials. The finding indicated that healthy media exposure decreased body dissatisfaction by almost one standard deviation, compared to their baseline scores. Extending earlier research examining respectively the causality between body image dissatisfaction (Barlett et al., 2008; Myers & Crowther, 2009; Warren & Rios, 2013) and thin-ideal and the overall influences of healthy media (Posavac et al., 1998; Dittmar & Howard, 2004), the current study compared the effects of both thin-ideal media and healthy media exposures. Researcher found that the score of women's body image dissatisfaction in the thin-ideal media condition nearly as twice as it was in the healthy media condition. The results may revealed a powerful underlying mechanism associated with thin-ideal media exposure, women's body image concerns (Grabe et al., 2008), negative affectual states (Halliwell, 2013), and low self-esteem (Johnson & Wardle, 2005), and eating disorders (Stice et al., 1994).

Culture Influences and Its Moderating Role

The current results indicated that women in the collectivist group had higher body image dissatisfaction than those in the individualist group. The finding confirmed previous research (Fredrickson & Roberts, 1997) that women living in a collectivistic society tended to experience more body image dissatisfaction probably because the collectivistic culture primarily emphasized the social conformity, the need for social approval, and the interdependent relationships (Makino et al., 2006). Women in the collectivist group experienced higher peer pressures of being unrealistically thin (Phan & Tylka, 2006), more conformity of internalizing the thin ideals (Jung & Lee, 2006), and greater endorsement of western values (Warren & Rios, 2013). Research from Stice et al. (1994) suggested that greater thin-ideal body stereotype internalization predicted more body image dissatisfaction. Moreover, the results also highlighted the important role of social comparisons on thin-ideal media effects and women's body image concerns (Morrison et al., 2012; Sheldon, 2010; Grabe & Hyde, 2006).

However, the current study showed that women in individualist group scored nearly a third less on body image dissatisfaction than those in the collectivist group. This

finding did not support previous study, which demonstrated that thin-ideal media had more profound impacts on women in the individualistic societies due to the association between thin-ideal and an affluent and desirable lifestyle (Warren & Rios, 2013; Allison & Emmers-Sommer, 2011).

Contrary to predictions, acculturation to maintain mainstream individualistic culture and attachment to collectivistic culture were not significantly correlated with women's body image dissatisfaction. Present study results did not support former research (Lau et al., 2006; Mastria, 2002) about the moderating role of culture and acculturation on women's body image dissatisfaction. The results indicated there was no significant difference between collectivist group with high acculturation and collectivist group with low acculturation. Women who lived in a more traditional collectivistic society but predominantly internalize western ideals of beauty, did not report more body image dissatisfaction. Although acculturation directly relates to endorsement of western media values of body image dissatisfaction (Lau et al., 2006), acculturation to mainstream individualistic culture did not directly associated with women's higher body image dissatisfaction. Broadening earlier research, current results showed that women's body image dissatisfaction score in the individualist group was almost one standard deviation lower than it in the collectivist group with high acculturation, and more than one half lower than it in the collectivist group with low acculturation. The results were noteworthy because they demonstrated that culture played a crucial role in how women perceived and felt about their body images. Furthermore, culture significantly influenced women's endorsement and internalization of thin-ideal images from media.

Theoretical Implications

This study contributes to the research literature on cultural differences in body image dissatisfaction by distinguishing specific cultural impacts on female samples. It also reaffirms the negative impacts of thin-ideal media exposure as well as the positive impacts of healthy media exposure on women's body image dissatisfaction. To understand why media could have such a powerful impact on women's perception of beauty, theory and research need to elucidate more about the process of internalization of thin-ideal images, the complexity of transaction between perceiver and media stimuli, and the individual differences in the motivation of social comparison (Grabe et al., 2008; Stice et al., 1994). Research (Martin & Gentry, 1997) indicated that women who compared themselves with the thin-ideal images for the purpose of self-evaluation tended to feel less physically attractive, whereas those who compared themselves with the thin ideal images for the purpose of self-improvement felt more physically attractive. All these findings demonstrate a broad application of social comparison theory and multidimensional methodology in understanding the impacts of thin ideal and healthy media.

Moreover, Asians and Asian American women may be at more risk than American women under the thin ideal media because this study showed a strong interaction between culture and body image dissatisfaction (Lau et al., 2006). No differences between the collectivist group with high acculturation and the collectivist group with low acculturation

indicated the important and powerful influences of heritage culture on women's perception of beauty. The assessment and treatment of body image dissatisfaction may be different when working with women living in collectivistic society versus women living in individualistic society. The results of this study suggested that women who felt more connected to collectivistic culture or traditional Asian values might suffer from more body image dissatisfaction.

Practical Implications

Given that the relationship between thin-ideal media exposure and women's higher body image dissatisfaction (Stice et al., 1994; Morry & Staska, 2001; Bissell & Zhou, 2004; Barlett et al., 2008), researchers should consider using media literacy interventions, which informed women about the artificial nature of thin-ideal media images, to prevent body image dissatisfaction (Posavac et al., 1998; Halliwell et al., 2011). These interventions would be more effective for women living in the collectivistic societies than for those living in the individualistic societies. The current findings also supported that healthy media images lowered women's body image dissatisfaction, protecting women from external pressures of being thin (Posavac et al., 1998; Halliwell, 2013). Therefore, promoting positive and healthy body images by media became a central aspect of decreasing women's body image dissatisfaction.

Moreover, due to the fact that collectivistic culture negatively impacted women's body images, it is important for researchers to explore how women living in the collectivistic society coped with their body images and the pressure related to thin-ideal images (Halliwell, 2013). One possible reason was the peer pressures from the social comparison model (Warren & Rios, 2013; Grabe et al., 2008). Thus, researchers and clinicians need to incorporate body appreciation techniques, which focused on self-acceptance and psychological wellbeing, such as mindfulness, into body image interventions to increase women's resilience to thin-ideal media (Stewart, 2004; Halliwell, 2013). Because there was a significant difference between women's body image dissatisfaction in the individualistic culture and it in the collectivistic culture, the assessments and treatments of body image concerns may be very different (Lau et al., 2006).

Limitations

Despite these significant findings, some limitation should be considered when interpreting these data. One limitation is the small sample size. Secondly, there was no manipulation check for the media exposure. The researcher simply trusted the participants' focus on the videos. There was no measurement to ensure that participants paid full attentions on the experimental manipulations. Thirdly, current research relied heavily on self-report questionnaires. Participants might not response honestly or objectively because of social desirability, personal understanding, and introspective abilities (Halliwell, 2013; Grabe et al., 2008; Warren & Rios, 2013). Fourthly, participant's body image dissatisfaction was measured at two-time point. However, the time apart was only one week. Thus, the media effects on the body image dissatisfaction might not be strong enough. The last limitation was the homogeneity of the participants and the lack of variety and representativeness. All the participants were recruited from introductory psychology class in the University of Texas at Austin.

Future Research

To increase the validity and reliability, future research should replicate this study with a large and more representative sample size. Future research also needs to provide a preliminary manipulation check about the media exposure. Researchers should apply a longer time gap between the two measurements, such as three weeks or four weeks. In order to generalize the results widely, future research needs to include a more diverse sample of participants, not restricting to female college students. It was crucial for researchers to examine the differences in body image dissatisfaction among more specific samples, such as internationally Asian women and American-born Asian women (Lau et al., 2006). Although culture's role in women's body image dissatisfaction was important, other factors undoubtedly affect body images that were not directed tested in the study, such as participants' BMI, biological factors, interpersonal relationships, and familial factors, and should be examined in future research (Warren & Rios, 2013; Grabe et al., 2008). Additionally, current study only tested the broad construct of acculturation so that future research could continue explore the construct of acculturation, perhaps teasing apart how attitudinal, behavioral, and identity-based aspects of acculturation impacted women's body image dissatisfaction (Schwartz et al., 2010; Warren & Rios, 2013).

Conclusion

Although this study has limited generalization due to using a small sample size and to relying on self-report questionnaires, it did suggest some critical relationships among media effects, culture, acculturation, and women's body image dissatisfaction. On the one hand, thin-ideal media exposure significantly increased women's body image dissatisfaction. On the other hand, healthy media exposure significantly was associated with lower body image dissatisfaction (Dittmar & Howard, 2004; Halliwell & Dittmar, 2004; Owen & Spencer, 2013). Overall, women with collectivistic culture experienced more body image dissatisfaction than women with individualistic culture (Hsu & Barker, 2013; Phan & Tylka, 2006; Lau et al., 2006). However, acculturation and acculturative stress did not indicate any moderating roles on media effects and women's body image dissatisfaction. To explain these effects, we suggested to further explore a multi-dimensional model cross-culturally that considered individual's self-perception and internalization of thin-ideal images, biological factors related to body images, and social comparisons through peers and families.

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