SELF-ESTEEM, BODY IMAGE AND APPEARANCE MANAGEMENT BEHAVIORS AMONG KOREAN AND CAUCASIAN-AMERICAN WOMEN: ASSOCIATIONS TO ATTITUDES TOWARD SOCIAL COMPARISON AND MODEL’S ETHNICITY IN ADVERTISEMENTS

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By

Miran Yang, B.A., M.S.

Graduate Program in Human Ecology

The Ohio State University

2013

Dissertation Committee:

Nancy A. Rudd, Advisor
Jay Kandampully
Sharon Seiling
Patricia Cunningham
Copyrighted by

Miran Yang

2013
ABSTRACT

A thin body and an attractive face are considered to define the desirable feminine beauty ideal and this narrow concept of beauty has been promoted through mass media. Women often compare themselves with the idealized images in the media and such comparisons may lead to body dissatisfaction and lower self-esteem. Individuals who are dissatisfied with their body are likely to engage in appearance management behaviors, such as makeup, dieting, eating disorders, and cosmetic surgery. Sociocultural theory has been used to explain the development of body dissatisfaction as negative effects of exposure to the societal beauty ideal (Posavac, Posavac, & Posavac, 1998) and social comparison theory has been used to explain how women experience body dissatisfaction and psychological problems, such as lower self-esteem and eating disorders (Richins, 1991).

The level of attitudes toward social comparison an individual holds may be an important predictor of the negative outcomes of exposure to ideal media images. In addition, the impact of exposure to ideal media images may differ by similarity or dissimilarity of a comparison target to the person making the comparison. Thus, this study examined the association of attitudes toward social comparison to female models in advertisements with self-esteem, body image, and appearance management behaviors among Korean and Caucasian-American women. Furthermore, this study investigated the
association of attitudes toward social comparison by model type (i.e., Korean vs. Caucasian models) as a comparison reference with self-esteem, body image and appearance management behaviors. This study also examined how strongly a female body figure is valued on dimensions of thinness and attractiveness among Korean and Caucasian-American women.

Results of this study found a negative association of attitudes toward social comparison with self-esteem and body image, and a positive association with appearance management behaviors among both Korean and Caucasian-American participants. Korean women showed stronger attitudes toward comparison with a similar comparison target. There was a positive impact of attitudes toward social comparison with a similar comparison target on body image among the two groups. Both Korean and Caucasian-American women considered average-size models as more attractive than thin models. The findings of this study provide support for the idea that social comparison with models in the media would result in body dissatisfaction, lower self-esteem, and more appearance management behavior tendencies. Similarity of the comparison target to the person making the comparison may moderate the effect of social comparison. Implications and suggestions for future research are discussed based on the findings of this study.
Dedicated To My Mother
ACKNOWLEDGMENTS

I would like to express my most sincere appreciation and gratitude to my advisor, Dr. Nancy A. Rudd, for her endless guidance and help to complete my dissertation. I am grateful to her for her countless hours of proof reading, mentoring and most of all patience throughout the entire process. Her encouragement throughout my studying has truly motivated me to do my best. I also wish to thank to my committee members, Dr. Jay Kandampully, Dr. Sharon Seiling and Dr. Patricia Cunningham, for agreeing to serve on my committee and for their hours of proof reading, valuable suggestions and comments.

I would like to thank my friend, Eun-Hyung Lim, for helping me to collect data in Korea. I am grateful to my husband, Dong-Cheon, and my wonderful children, Ester and David, for supporting, understanding and helping me deal with each challenge that I faced through the course of my studying and this dissertation. I would also like to thank my parents, mother-in-law, my brother and sisters for their encouragement and endless prayers for my successful academic achievement. Without my family’s love and prayers, I could not have reached this goal.

I thank my Lord, Jesus Christ, for guiding me all along.
VITA

1987..................................................B.A. Italian, Hankuk University of Foreign Studies, Seoul, Korea. Minor: English

1995 - 1999 ..................................Graduate Teaching/Research Associate, Department of Textiles and Clothing, The Ohio State University

1997..................................................M.S. Department of Textiles and Clothing, The Ohio State University

June 1997 - September 1997 ...............Internship, Marshall Field’s, Columbus, Ohio


May 1999 – February 2000 .................Freelancer, Lane Bryant, Columbus, Ohio

1999 - 2000 ..................................Instructional Aids Assistant, Department of Textiles and Clothing, The Ohio State University

2000 - 2002 ..................................Manager, Nasign Co., Ltd., Seoul, Korea

2002 - 2004 ..................................Manager, Panko Corporation, Seoul, Korea

2004 - 2006 .................................Director, ELC Korea, Seoul, Korea

2008 - 2011 ..................................Graduate Teaching Associate, Department of Consumer Sciences, The Ohio State University

2011 - 2012 ..................................Lecturer, Department of Consumer Sciences, The Ohio State University
Publications


Fields of Study

Major Field: Human Ecology

Specialization in Fashion and Retail Studies
# TABLE OF CONTENTS

ABSTRACT ................................................................................................................................. ii  
DEDICATION .............................................................................................................................. iv  
ACKNOWLEDGMENTS ................................................................................................................. v  
VITA ........................................................................................................................................ vi  
LIST OF TABLES ...................................................................................................................... xii  
LIST OF FIGURES .................................................................................................................... xiv  

CHAPTERS:  
1. INTRODUCTION .................................................................................................................. 1  
   Statement of the Problem ...................................................................................................... 7  
   Significance of the Study ..................................................................................................... 9  
   Definitions of Terms ......................................................................................................... 11  

2. REVIEW OF THE LITERATURE ......................................................................................... 13  
   Theoretical Perspectives .................................................................................................... 13  
      Sociocultural Theory of Body Image .............................................................................. 13  
      Social Comparison Theory .............................................................................................. 16  
      Social Comparison Targets ............................................................................................ 18  
      Idealized Media Images ................................................................................................. 19  

viii
Body Image ..............................................................................................................23
  Perception .........................................................................................................24
  Attitudes .........................................................................................................25
Appearance Management Behaviors .................................................................26
Body Image and the Media ..............................................................................27
Social Comparison and Body Dissatisfaction .............................................29
Self-Esteem ........................................................................................................31
Social Comparison, Self-Esteem and Body Image ..................................32
Conceptual Model and Research Hypotheses ........................................35
Research Hypotheses .........................................................................................39

3. METHODOLOGY ...............................................................................................45
  Overview .........................................................................................................45
  Pre-Test of the Questionnaire ........................................................................46
  Primary Study ..................................................................................................47
    Subjects .........................................................................................................47
    Instruments ...................................................................................................47
    Research Design ............................................................................................53
    Data Analysis ...............................................................................................54

4. RESULTS ............................................................................................................55
  Overview of Demographics ..........................................................................55
  Overview of Overall Scores for Measures of Variables .........................59
  Correlational Analyses ....................................................................................66
APPENDICES:

Appendix A: Human Subjects Letter of Approval .............................................149
Appendix B: Self-Esteem Scale .........................................................................152
Appendix C: Appearance Evaluation Scale ......................................................153
Appendix D: Appearance Orientation Scale ......................................................154
Appendix E: Body Areas Satisfaction Scale ......................................................155
Appendix F: Social Comparison Scale ..............................................................156
Appendix G: Advertising Stimuli Photos and Questions .................................157
Appendix H: Appearance Management Behaviors .........................................163
Appendix I: Demographic Information ............................................................165
Appendix J: Cover letter ..................................................................................167
**LIST OF TABLES**

Table 1. Overall Scores of Age, Weight, Height, and BMI ................................................. 56
Table 2. Body Mass Index (BMI) .......................................................................................... 58
Table 3. Overall Scores for Measures of Variables ............................................................. 62
Table 4. Factor Analysis and Reliability of Appearance Management Behaviors ........... 65
Table 5. Correlations for Key Variables among Korean ...................................................... 70
Table 6. Correlations for Key Variables among Caucasian-American .............................. 71
Table 7. Multivariate Effects for Social Comparisons ......................................................... 73
Table 8. Univariate Analyses of Variance for Attitudes toward Social Comparison ...... 73
Table 9. Means and Standard Deviations for Attitudes toward Social Comparison ........ 79
Table 10. Paired Sample T-Test for Korean ............................................................. 81
Table 11. Paired Sample T-Test for Caucasian-American ................................................... 82
Table 12. Multivariate Effects for the Comparison Target1 ............................................... 84
Table 13. Means and Standard Deviations for Comparison Target1 .................................. 85
Table 14. Multivariate Effects for Social Comparison Target2 .......................................... 87
Table 15. Means and Standard Deviations for Comparison Target2 ................................. 88
Table 16. Univariate Analyses of Variance for Social Comparison Target2 ..................... 92
Table 17. Evaluations of Four Models ............................................................................... 97
Table 18. Which model is the most attractive to you? ..................................................... 100
Table 19. Why do you choose one most attractive model to be physically attractive?.. 100

Table 20. Which model is the closest to how you wish to look? ................................. 101
LIST OF FIGURES

Figure 1. Conceptual Model ............................................................... 37

Figure 2. Models of the Effects of Social Comparison on the Construction and Evaluation of Appearance (Rudd & Lennon Model) .................................................. 38
CHAPTER 1

INTRODUCTION

The globalized concept of feminine beauty ideals have been portrayed in mass media with an emphasis on body thinness and facial attractiveness. The media widely convey a globalized concept of beauty throughout the world through print, broadcast, film and internet venues. Daily, people are exposed to the media images conveying sociocultural feminine beauty ideals. Thus, the mass media have potential to influence one’s self-evaluation through the process of social comparison (Bisell & Chung, 2009; Irving, 1990). Thin and attractive media images are likely to be internalized by women and this internalization frequently results in a negative body image as women compare their actual bodies with the media images (Thompson & Stice, 2001).

The idealized media images are unrealistically thin and attractive, which are created artificially using photo manipulation techniques, such as airbrushing or retouching (Ogden & Sherwood, 2008). In particular, photo manipulation to create an unattainable thin body and a flawless face has harmful effects on girls and young women as they compare themselves to those images. As a result, the idealized body images portrayed in the media have been claimed to cause pressure to be thin and body
dissatisfaction among women (Ahem, Bennett, & Hetherington, 2008; Freeman, 1984; Heinberg & Thompson, 1995; Irving, 1990; Pinhas, Toner, Ali, Garfinkel, & Stuckless, 1999; Stice & Shaw, 1994; Thompson & Stice, 2001; Posavac, Posavac, & Posavac, 1998). It is also known that exposure to ideal media images may contribute to a high level of eating disorders among women in Western countries (Irving, 1990; Stephens, Hill, & Hanson, 1994; Thompson & Heinberg, 1993). A research study reported that about 10 million American women have had an eating disorder and one out of four college women suffers from disordered eating behaviors (National Eating Disorder Association, 2012). According to the research data, about 70% of the college women surveyed were dissatisfied with their bodies.

Body image research has shown a trend of substantial increase since 1950 in social and clinical psychology (Brown, Cash, & Mikulka, 1990) and that the drive for thinness leads to body dissatisfaction among women, especially young populations (Cash & Green, 1986; Lowery, Kurpius, Befort, Blanks, Sollenberger, Nicpon, & Huser, 2005). Women sometimes have cosmetic surgery to alter themselves to attain beauty ideals. However, it is impossible to achieve society’s ideal for all women; thus, women are increasingly suffering from body image disturbances that may lead to risky behaviors such as eating disorders (i.e., anorexia, bulimia, or binge eating) (Stice & Shaw, 1994). In fact, body dissatisfaction becomes a leading risk factor for developing such risky appearance management behaviors. Many studies have found that women feel body dissatisfaction after exposure to thin ideal images (Hogg, Bruce, & Hough, 1999; Richins, 1991; Stephens et al., 1994; Tiggemann, & Polivy, 2010). For instance, Richins
(1991) and Stephens et al. (1994) indicated that many young women compared themselves with fashion models in advertisements and, in turn, they felt body dissatisfaction.

Social comparison has been used to explain the association with self-esteem and body dissatisfaction (Martin & Kennedy, 1993; Morse & Gergen, 1970; Richins, 1991; Wood, 1989). These studies have found that exposure to highly attractive advertising models resulted in lowered self-esteem and body dissatisfaction. Further, Heinberg and Thompson (1995) found that comparison with thin and attractive models in advertisements caused more psychological problems, such as depression, anxiety and anger. Hence, these studies imply that women are increasingly feeling pressure to conform to sociocultural standards of beauty, emphasizing unattainable thin body and attractive face. As the result, women may engage in unhealthy appearance management behaviors, such as dieting, fasting, excessive exercise, and cosmetic surgery. For example, Jung, Lennon and Rudd (2001) and Lennon and Rudd (1994) found that young women tended to practice appearance management behaviors (some healthy and some risky) to maintain a thin beauty ideal.

The effect of idealized media images on women’s body satisfaction and self-esteem has been investigated in different cultural settings (Lau, Lum, Chronister, & Forrest, 2006; Zhou, Xue, & Zhou, 2002). Lau et al. (2006) and Zhou et al. (2002) examined the influence of media images on body image satisfaction and self-esteem among Asian American college students and Chinese college students. Both studies found that exposure to media images lowered body satisfaction and self-esteem among
Asian students. Hall (1995) also found that Asian and Asian-American women were increasingly experiencing eating and body image problems.

The cultural ideals of beauty in many cultures world-wide have been influenced by Westernized beauty ideals (Mueller, 1992). Just as the global media play an important role in transmitting messages of what are ideal beauty standards everywhere, advertising in Asian countries has also played an important role in shaping beauty standards in these countries based on Westernized values emphasizing thinness. Therefore, women in Asian countries also desire to pursue these Westernized beauty ideals. Having an attractive face and thin body can thus become a goal of most women in the world. The emphasis on Westernized beauty standards has increased with the use of Western models in advertisements in Asian countries. A cross-cultural analysis of women’s magazine advertising (Frith, Shaw, and Cheng, 2005) showed that significant percentages of Caucasian female models were used in magazine advertising in Singapore (65%) and Taiwan (47%).

Other studies conducted content analysis of Korean magazines (Kim & Lennon, 2006; Jung & Lee, 2009) and found that about one-half of the models in magazine advertising in Korea were Caucasian females. Since the Westernized female beauty ideal is pervasive in Korea, most Korean women admire the Westernized ideal of feminine beauty of being tall and thin, with long legs, big eyes, and large breasts. In particular, women in Korea showed more concern about their physical appearances and paid more attention to their personal attractiveness than those in other Asian countries such as China and Thailand (Watchravesrínkan, 2008). As a result, many Korean young women engage
in cosmetic surgery procedures to attain the Westernized beauty ideal (Lennon, Rudd, Sloan & Kim, 1999). For instance, the “double eyelid” surgery, the creation of an eyelid crease, is the most popular cosmetic surgery among women in Korea to make eyes bigger (Lee & Rudd, 1999; MailOnline, 2012). In particular, by the winter of high school graduation, many senior high school students have the “double eyelid” surgery to begin their college life with enhanced looks (MailOnline, 2012). A survey conducted in 2007 in Korea showed over 40 percent of teenagers had a desire to have cosmetic surgery (Seoul City Government, 2008). Korea is a developed industrial country similar in many ways to the United States. As an example, print and television advertising in Korea are also similar to these in the United States. Thus, Korean women would make similar comparisons to others and have similar attitudes toward social comparison as would American women. However, Korean culture, as a collectivistic culture, places very strong importance on the group (Hofstede & Hofstede, 2005). Social norms in a collectivistic culture greatly influence individuals’ behaviors. In this light, Korean women may strive more for thinness and an attractive face to conform the current beauty norms than Caucasian-American women. Therefore, it is important to investigate the impact of media images on body image, self-esteem, and appearance management behaviors among Korean women as well as Caucasian-American women.

Many women often make upward comparison, especially to thin and attractive media images. However, little is known about the comparison target, to whom people compare in relation to physical appearance. Festinger (1954) suggested that when people engage in social comparison, they are likely to compare themselves with similar others.
Wood (1989) also stated that similarity of the comparison target to the person making the comparison might moderate the social comparison effect. Therefore, stronger attitudes toward comparison with a target perceived as similar may be associated with more positive impact on the outcome of the comparison than comparison with a dissimilar target because the comparison with a similar target would create less discrepancy between the comparer and the comparison target. Hence, it is also interesting to examine the association among attitudes toward comparison with a similar comparison target, self-esteem, body image, and appearance management behaviors among Korean and Caucasian-American women.
Statement of the Problem

Since beauty ideals in many Asian countries have become very Westernized (Jung & Lee, 2009; Kim & Lennon, 2006; Lennon et al., 1999b), advertisements in women’s magazines may possess similar aspects in portraying beauty ideals. The use of Caucasian female models in Korean women’s magazines may imply that Westernized feminine beauty has become an accepted social norm of attractiveness in Korea. Several previous studies have conducted content analyses to investigate how advertising images represent the thin beauty ideal in fashion and beauty magazines mostly in Asian and Western countries (Frith et al., 2005; Jung & Lee, 2009; Kim & Lennon, 2006; Nelson & Paek, 2006). Interestingly, one study found that Asian consumers rated beauty products with Western models in the advertisements as more fashionable, more cosmopolitan, and more modern compared to beauty products with Asian models (Nelson & Paek, 2006). However, few studies have yet examined how attitudes toward social comparison would differ by model’s ethnicity. Hence, it is unclear whether the admiration for attaining Westernized beauty would lead Korean women to compare themselves more with Caucasian models than with Korean models when they see advertisements portrayed with both model types. Furthermore, the impact of comparisons with different model types on self-esteem, body image and appearance management behaviors could be different within the population. Therefore, the proposed study is intended to examine attitudes toward social comparison by model types (i.e., Korean vs. Caucasian models) and by body size (thin or average).
In addition, despite the fact that the majority of women admire idealized media images, not all women are susceptible to the impact of exposure to the media images. People differ in the degree to which they feel about themselves. Thus, the potential impact of comparisons to media images may be smaller for some women. As Han (2003) suggested, the more tendency women make upward comparison to ideal media images, the more they would experience body dissatisfaction and eating disturbances. Attitudes toward social comparison to ideal media images might moderate the outcome of media exposure among women. Hence, this study is also designed to examine the association of attitudes toward social comparison to female models in the media with self-esteem, body image and appearance management behaviors as potential outcomes of media exposure among Korean and Caucasian-American women.
**Significance of the Study**

The proposed research is significant because the results would provide insight to scholars to understand the different impact of female viewer comparisons with Caucasian or Korean/Asian models on self-esteem, body image and appearance management behaviors among Korean and Caucasian-American women. The results would also encourage scholars to conduct similar research to help improve self-esteem and body satisfaction among other Asian populations living in Western countries. In particular, Asians, including Indian, Korean, Chinese, and Japanese, have become the fastest-growing immigrants to the United States (Kirk, 2012). The number of Asian immigrants surpassed Hispanic immigrants by 2009. In 2010, about 430,000 Asians immigrated to the United States, while only 370,000 Hispanics immigrated to the United States (Kirk, 2012). However, relatively little research has focused on Asian groups in the United States in relation to the impact of media exposure on their body image, self-esteem and appearance management behaviors. Therefore, this growing trend of an increasing Asian population in the United States should encourage researchers to examine Asian women’s body image as they become exposed to Western standards of beauty.

Furthermore, it might help companies move toward greater socially responsible advertising by using images that are consistent and realistic with the targeted populations, and those that show healthy bodies of varied sizes, shapes, and ethnic features.

The present study would also contribute to the social psychology literature by providing implications about the relationship of attitudes toward social comparison with self-esteem, body image and appearance management behaviors among Korean and
Caucasian-American women. Specifically, findings of this study might help scholars and consumers better understand how Korean women’s self-esteem and body image might be influenced by the internalization of Western images and by similar or dissimilar comparison targets. Furthermore, this study might help researchers and advertisers better understand how consumers across various cultures perceive specific images in an advertisement.

The findings of this study might provide some implications to advertisers in terms of advertising strategies. Some advertisers of fashion and beauty businesses may believe that the world can be treated as one large market because Westernized beauty standards are emphasized globally and beauty-related product advertisements may be easily standardized (Nelson & Paek, 2005). However, since it is difficult to persuade consumers in different markets or cultures using the same advertising images and messages even though they may hold the same standardized beauty norms, these advertising images and messages should be customized to reflect the local culture to better affirm the particular beauty constructs in each culture. With this reasoning, advertisers need to understand what images and messages provide the most effective way to appeal to target consumers and to encourage their purchasing the advertised products without endangering their psychological and/or physical health and well-being.
The following provides definitions of terms used in this dissertation.

Definitions of Terms

**Self-esteem**: one’s overall evaluation of the self or appraisal of self-worth (McAllister & Caltabiano, 1994).

**Body image**: one’s attitudes and perceptions of his or her own body (Cash & Green, 1986; Fallon, 1990).

**Body image disturbances**: the construction of negative body image encompassing body dissatisfaction and body size distortion (Garner & Garfinkel, 1981).

**Appearance management behaviors**: a collection of activities that individuals practice to maintain ideal body image or enhance their physical appearances (Fallon, 1990; Rudd, 1996).

**Social comparison**: the cognitive judgments that people make about their own attributes compared to others (Jones, 2001, p. 646).

**Upward comparison**: comparison process with others who are superior or better off on the dimension of interest (Richins, 1991).

**Downward comparison**: comparison process with others who are inferior or worse off on the dimension of interest (Richins, 1991).

**Comparison target**: others to whom individuals compare themselves (Lennon, Lillethun, & Buckland, 1999).
**Internalization of societal beauty norms**: attitudes of acceptance of societal beauty norms by individuals as the reference point against which to judge themselves (Tiggemann, 2002, p. 92).

**Social responsibility**: an ethical obligation for an organization to act to benefit society at large (Creyer & Ross, 1997).
CHAPTER 2

REVIEW OF THE LITERATURE

Theoretical Perspectives

Two conceptual frameworks that attempt to explain the association of attitudes toward social comparison with self-esteem, body image and appearance management behaviors include sociocultural theory and social comparison theory.

Sociocultural Theory of Body Image

Sociocultural theory posits that cultural values are important contributions for the development of individuals’ values and behaviors (Jackson, 2002). Sociocultural theory often has been used to explain the connection between the current societal value emphasizing physical attractiveness and problems related to achieving the societal beauty ideal (Brown & Dittmar, 2005; Jackson, 2002; Lau et al., 2006; Posavac et al., 1998; Thompson, Heinberg, Altabe, & Tantleff-Dunn, 2002). Sociocultural theory of body image assumes that women’s body dissatisfaction has often resulted from current societal standards emphasizing body thinness and facial attractiveness, and the tendency for women to perceive the thin and attractive ideals as good and socially accepted (Morrison,
Kalin, & Morrison, 2004). Sociocultural theory of body image suggests that since mass media, including television, newspaper, radio, and magazines are popular and pervasive throughout the world, they play a significant role in communicating sociocultural expectations as defining and perpetuating the thin and attractive ideal. Hence, media images depicting thinness and facial attractiveness are likely to be internalized by women and this internalization results in the development of women’s body image concerns and eating disorders (Polivy & Herman, 2004; Thompson & Stice, 2001). In this regard, body dissatisfaction, eating disorders, and other risky appearance management behaviors are the product of increasing pressures for women in our society to attain body thinness and facial attractiveness (Stice & Shaw, 1994).

Many studies reported results consistent with the sociocultural theory of body image that women feel body dissatisfaction after exposure to thin ideal images (Hogg et al., 1999; Richins, 1991; Stephens et al., 1994; Tiggemann, & Polivy, 2010). Women sometimes have cosmetic surgery or procedures to alter themselves to attain societal ideals of beauty, whether that be breast augmentation, wrinkle fillers, double eyelid surgery, nose reshaping, and so forth. They also engage in other appearance management behaviors such as makeup use, exercise, and dieting to attain these beauty ideals. However, it is impossible for most women to achieve society’s ideal; hence, women increasingly suffer from body image disturbances. Furthermore, the desire to achieve the beauty ideal and the failure to achieve it may lead to psychological risks, such as low self-esteem, stress and depression among women. Stice and Shaw (1994) suggested that exposure to attractive female models in women’s fashion magazines increased levels of
depression, stress, guilt, shame, and insecurity, as well as body dissatisfaction and lower self-esteem. The findings of the study (Stice & Shaw, 1994) suggest that women frequently experience exposure to attractive media images and this exposure leads women to have feelings of dissatisfaction with their bodies and unhealthy eating behaviors. Esnaola, Rodriguez, and Goni (2010) examined gender and age differences on body image and perceived sociocultural pressures. Their study found that body dissatisfaction was highly associated with perceived sociocultural pressure among men and women. They also found that there were greater gender differences among younger groups than older groups of respondents, and gender was a better predictor of body dissatisfaction and perceived sociocultural pressure than age. Thus, women seem to be more prone to the effects of idealized beauty in the media.

What is socially accepted as attractive imagery of female beauty is displayed in magazine advertisements. The gap between ideal beauty, and the real and varied beauty that exists among women can lead to dissatisfaction with some aspect of the self (Jung et al., 2001; Lennon et al., 1999a; Lin & Kulik, 2002; Richins, 1991; Smeesters & Mandel, 2006; Stephens et al., 1994). Since physical appearance is considered to be an important dimension of the self among women regardless of ethnicity, it is interesting to examine the effect of advertising images on women’s body image, self-esteem, and appearance management behaviors in Korea and the United States.
**Social Comparison Theory**

With the sociocultural theory of body image that has been used to explain the development of body dissatisfaction and eating disorders as negative effects of exposure to ideal media images (Posavac, et al., 1998), social comparison theory has often been used to explain how women may experience body dissatisfaction, eating disorders, and lower self-esteem when they are exposed to ideal media images (Adomaitis & Johnson, 2008; Hogg et al., 1999; Jones & Buckingham, 2005; Lennon & Rudd, 1994; Morse & Gergen, 1970; Richins, 1991; Tiggemann & McGill, 2004; Tiggemann & Polivy, 2010). Social comparison theory originated by Festinger (1954) explains the social information process that individuals use in comparing themselves to others to evaluate characteristics that are perceived as socially important. According to the theory, people naturally tend to compare their own attitudes, opinions, and abilities to those of others and such comparison can affect their self-evaluation. This indicates that people compare themselves to others to gain accurate evaluations of themselves.

Self-evaluation is an assessment of one’s attitudes, opinions, and abilities and it is based on the direction of the comparisons. The direction of social comparisons is categorized as either downward comparison or upward comparison (Zhou et al., 2002; Smeesters & Mandel, 2006). Downward comparison occurs when people compare themselves to others who are worse off on the dimension of interest, whereas a comparison to others who are better off on the dimension of interest leads to upward comparison (Richins, 1991). The direction of the comparison influences the self-evaluation in the comparison process. Downward comparison results in positive self-
evaluation by enhancing subjective satisfaction, self-worth, or mood, while upward comparison leads to dissatisfaction, negative self-evaluation, and negative moods (Morse & Gergen, 1970; Richins, 1991).

The media play a powerful role in social comparisons. Comparison with someone who is less attractive will likely raise one’s body satisfaction; however, individuals who compare their appearance to that of more attractive others may experience increased feelings of body dissatisfaction. Many women often make upward comparisons, especially to thin and attractive media images. Comparison to idealized media images is considered to be upward social comparison because the models featured are considered to be more attractive than average people and thus, when individuals compare their own appearances to these models, the comparison can result in increased dissatisfaction with themselves. Since advertisements easily create a gap between “ideal”, narrowly depicted beauty, and “real”, varied appearances of women, the gap can lead to lower women’s body satisfaction and self-esteem (Adomaitis & Johnson, 2008; Richins, 1991; Stephens et al., 1994; Zhou et al., 2002). Previous research has found that advertising images were using as a significant or “target comparison” reference in the social comparison process among women (Adomaitis & Johnson, 2008; Hogg et al., 1999; Richins, 1991). For example, Richins (1991) conducted a focus group study that related the effects of media images and found that female college students tended to make comparisons with attractive models in advertisements and exposure to the attractive models generated body dissatisfaction.
Many cross-cultural studies have identified this globalization of beauty norms across Asian countries (Han, 2003; Jung & Lee, 2006; Jung & Lee, 2009; Lennon et al., 1999b). As the media widely convey globalized beauty standards all over the world, thin and attractive cultural beauty norms are also valued in Korea, and Korean women today are easily exposed to Westernized ideal media images. For example, Han (2003) examined the effects of thin media images on Korean women’s body image and eating disturbances. She found that upward comparisons to thin models in magazine advertisements were associated with body dissatisfaction and eating disturbances among Korean college women. Han (2003) suggested that the more women make upward comparison to ideal media images, the more they would experience body dissatisfaction and eating disturbances. Thus, social comparison theory as well as the sociocultural theory of body image is a useful framework to explain the association of attitudes toward social comparison to idealized media images with body image, self-esteem and appearance management behaviors among Korean and Caucasian-American women.

**Social Comparison Targets**

Festinger (1954) asserted that people tend to compare themselves with similar others on some characteristics that are perceived as socially important because the similar others are a better reference to generate accurate evaluations of abilities and opinions than dissimilar others. Therefore, the tendency to compare with dissimilar others decreases because there exists greater discrepancy between their opinions and abilities. In regards to a cultural ideal of beauty, women tend to make upward comparisons
unconsciously to unrealistic media images and such comparisons often result in negative feelings about the self. However, similarity of the comparison target to the person making the comparison may moderate the effect of social comparison (Wood, 1989). Thus, the outcome of the comparison with a similar target (e.g., in terms of age, sex, or ethnicity) might be more positive than the comparison with a dissimilar target (Lockwood & Kunda, 1997). In this light, Asian women may make upward comparisons to Asian models in advertisements more than to Caucasian models when they are exposed to both models. Since comparison with similar others who are better off would create less discrepancy between the evaluator and the comparison target than comparison with dissimilar others, negative effects from the comparison would be also decreased. However, little is known about the effect of the comparison target on the relationship of exposure to ideal media images with body image, self-esteem and appearance management behaviors. Thus, it is interesting to examine how the comparison target would moderate the negative effects of upward comparison to ideal media images among Korean and Caucasian women.

**Idealized Media Images**

A thin body and an attractive face tend to be perceived as cultural standards of beauty in Western countries and this narrow concept of feminine beauty has been set and promoted through mass media. Therefore, the sociocultural explanation for the development of body dissatisfaction is based on the fact that the mass media play a pivotal role in defining and conveying the beauty ideal (Richins, 1991). In particular, the
thin body with a small waist and little body fat represents the current sociocultural standard of feminine beauty (Low, Charanasomboon, Brown, Hiltunen, Long, Reinhalter, & Jones, 2003). However, the size of the thin ideal is decreasing even more than before. For example, a study examined the covers of the four most popular fashion magazines from 1959 to 1999 and found that the body size of fashion models decreased significantly and full-body portrayals increased substantially over time, making the thin ideal even more difficult to achieve (Sypeck, Gray, & Ahrens, 2004). In addition, the standard for advertising models today is much below the average female body weight. For instance, the average American women are 5 feet 4 inches tall and weigh 140 pounds; however, the average American model is 5 feet 11 inches tall and weighs 117 pounds (National Eating Disorder Association, 2012). This indicates that the thin ideal has been decreasing in size and our society has placed more value on the body of women (Sypeck, Gray, & Ahrens, 2004). The trend of a shift toward thinner and thinner models in the media has resulted in increased eating disorders and body dissatisfaction among women (Polivy & Herman, 2004; Richins, 1991).

Media, such as television, magazines, and newspapers, along with advertisements are the most powerful and influential tool of communication in society because mass media give a real exposure to the mass audience all over the world and affect dominant societal values (Stice & Shaw, 1994). Fashion or beauty magazines are more influential than other media among women to develop negative feelings about themselves by comparison of their looks to attractive models in advertisements (Bisell & Chung, 2009; Han, 2003; Kim & Lennon, 2007). As an example, Lee, Rudd, and Kim (2001) found that
about 90% of Koran participants and 56% of American female participants read fashion magazines. Women’s fashion or beauty magazine advertising especially is full of unrealistic thin and attractive images. The unrealistic images are easily created by the use of photo manipulation techniques (Ogden & Sherwood, 2008). The manipulated ideal media images are so influential in the development of body image among women that they experience body dissatisfaction as they compare their actual bodies with the unrealistic media images (Thompson & Stice, 2001). As a result, women are increasingly feeling pressure to conform to sociocultural standards of beauty, emphasizing an extreme thin body and exceptionally attractive face (Irving, 1990; Lennon et al., 1999a; Richins, 1991). For example, many researchers have investigated the effect of the ideal media images and found that the exposure to the thin ideal influenced women to experience psychological problems, such as anger, depression, body dissatisfaction, low self-esteem and eating disorders (Ahem et al., 2008; Heinberg & Thompson, 1995; Irving, 1990; Pinhas et al., 1999; Stice & Shaw, 1994; Posavac et al., 1998). Thus, as the unattainable media images have been deemed valued in our society, women are increasingly exposed to risks, such as body dissatisfaction and eating disorders, even more than before.

Standards of beauty emphasizing a thin body and attractive face are pervasive in American culture, but these standards of beauty do not differ in Asian cultures. Many cross-cultural studies have identified the globalization of beauty norms across Asian countries (Bissell & Chung, 2009; Han, 2003; Jung & Lee, 2006; Jung & Lee, 2009; Kim & Lennon, 2006; Zhou et al., 2002). Traditionally, cultural norms for attractiveness of Korean women were a round face, almond-shaped eyes, chubby body size, and pale skin
(Han, 2003; Lee, Rudd, & Kim, 2001); thus, thinness was not considered as attractive. However, young Korean women today are so obsessed with having a thin body that they often try to lose weight and engage in unhealthy eating habits (Han, 2003; Jung & Lee, 2006; Kim & Lennon, 2006; Lee & Rudd, 1999). Thus, thin and attractive cultural beauty norms may be more valued in Korea today than in the United States. For example, Lee (1997) conducted research on body image among 219 Korean college women and found that 62% of participants were in the underweight category, the remaining 38% were in the normal weight category, and no one fell in the overweight category. As another example, Jung and Lee’s study (2006) also reported that about 78% of Korean female participants were in the underweight category.

Since US-licensed fashion and beauty magazines, such as Cosmo Korea and Vogue Korea, are the most widely read by Korean college women (Bisell & Chung, 2009), Korean women may feel more discrepancy between their actual bodies and Caucasian model’s images in magazine advertisements. Furthermore, the prevalent use of Caucasian models in Korean magazines (Kim & Lennon, 2006; Lee, 1997) may promote Korean women to have a desire to emulate Western looks. For instance, Jung and Lee (2006) found that Korean women reported greater discrepancies between their actual appearance and ideal media images and they were more dissatisfied with their bodies and had lower self-esteem than American women. Hence, Korean women may be likely to engage in appearance management behaviors, such as exercise, dieting, or cosmetic surgery to attain a Westernized beauty ideal.
Body Image

Body image refers to our attitudes and perceptions of how we feel about our bodies (Cash & Green, 1986; Fallon, 1990). An individual’s body image may be a product of his or her personal experiences and various social and cultural pressures (Fallon, 1990). Body image often plays an important role in one’s life and affects one’s self-concept (Sullivan & Harnish, 1990). Since body image profoundly affects a person’s attitudes, perceptions, and behaviors, body image is considered to be a multidimensional construct (Dorian & Garfinkel, 2002; Gleeson & Frith, 2006; Keeton, Cash, & Brown, 1990; Legenbauer, Vocks, Betz, Puigcerver, Benecke, Troje, & Ruddel, 2011; Prunzinsky & Cash, 2002; Thompson et al., 2002). Rudd and Lennon define body image in terms of the multidimensionality as:

*The perceptual component refers how we ’see’ our size, shape, weight, features, movement, and performance, while the attitudinal component refers to how we feel about these attributes and how our feelings direct our behavior.* (2000, p. 153).

Some researchers have suggested that body image is very related to the attitudes an individual has regarding self-perception, affective feelings, and behaviors related to her/his physical body (Gleeson & Frith, 2006; Keeton et al, 1990; Mazzeo, 1999). The feelings about our own physical appearance, usually in relation to cultural beauty norms, can shape our body image (Irving, 1990). Since concern about weight and body shape is one characteristic related to body dissatisfaction, research on body image disturbance has
focused on the perceptions of and attitudes about one’s body (Hsu & Sobkiewicz, 1991; Keeton et al, 1990).

**Perception.** Body image disturbance refers to the construction of negative body image; thus, it often refers to body size distortion and body dissatisfaction (Garner & Garfinkel, 1981). Body size distortion is a perceptual disturbance involving one’s inaccurate estimation of his/her body size, while body dissatisfaction involves an attitudinal component (Keeton et al., 1990). Feelings about weight may greatly influence overall body satisfaction for both men and women; however, since young women frequently feel concern about their appearance, research on body image disturbance has been focused on young women. Women tend to perceive themselves as larger or heavier than their actual body size or weight (Adame & Frank, 1990; Cash & Green, 1986; Morrison et al., 2004), while men tend to perceive themselves as smaller or thinner than their actual body size (Adame & Frank, 1990; Morrison et al. 2004).

Research on body image shows that women are more concerned with their appearance and less likely to be satisfied with their bodies compared to men (Adame & Frank, 1990; Lowery et al. 2005). For example, a recent study indicated that compared to male students, college women usually have lower physical self-perception and a greater tendency to have a distorted body image (Wharton, Adams, & Hampl, 2008). This study also found that college women who reported having disordered eating behaviors were significantly more likely to estimate their weight inaccurately. Hence, women are more likely to overestimate their body size than men.
*Attitudes.* The perceptual component reflected in body size estimation is closely related to an attitudinal aspect of appearance satisfaction and appearance evaluation (Noles, Cash, & Winstead, 1985). The attitudinal component of body image relates to body satisfaction. Attitudinal, affective, and cognitive aspects of body image include an individual’s attitudes and feelings towards his/her body (Dorian & Garfinkel, 2002; Keeton et al., 1990). Thus, the attitudinal component refers to an individual’s level of satisfaction with her/his body size; this component is the most commonly measured construct of body image (Mazzeo, 1999). The level of attitudes related to weight and body shape is often measured for the attitudinal component of body image. Research on body image has suggested that perceptual overestimation of one’s body size is negatively correlated with one’s body satisfaction. For example, Cash and Green (1986) found that college women who felt more dissatisfied with their appearance were likely to overestimate their body size. Another study suggested the association of perceptual and attitudinal body image with eating disorders (Keeton et al., 1990). People who feel less attractive and are less satisfied with their bodies and body weight usually tend to have higher levels of eating disturbances (Keeton et al., 1990).

Body image research has focused on body dissatisfaction because of the association of negative body image with eating disorders. The association between perceptual distortion of the body and clinical disorders has been found in body image related studies. For example, some studies have assessed body image disturbance in eating disorders and suggested that individuals with anorexia and bulimia experience
greater body dissatisfaction and distorted body image than other women (Hsu & Sobkiewicz, 1991; Keeton et al, 1990).

**Appearance Management Behaviors**

The behavioral components of body image includes an individual’s appearance management behaviors (Noles et al., 1985; Rudd & Lennon. 2000) and the potential avoidance of particular body-related behaviors such as avoiding wearing body-fitted clothes (Kashubeck-West & Mintz, 2001). Appearance management behaviors include behaviors from routine behaviors with little or no risks to one’s health, such as makeup, to risky behaviors, such as disordered eating, excessive exercising, and cosmetic surgery (Lennon & Rudd, 1994). Appearance management behaviors may be linked to body image because individuals with body dissatisfaction are more likely to engage in appearance management behaviors (Jung & Lee, 2006; Lennon & Rudd, 1994). For example, women who regularly exercise showed more preoccupation with losing weight and dissatisfaction with their bodies compared to women who do not exercise (Kennedy & Reis, 1995). Lowery et al. (2005) suggested that women may engage in regular exercise to feel more physically attractive. Another study showed that many women with unhealthy appearance management behaviors such as eating disorders also have negative attitudes toward their bodies (Wharton et al., 2008). It may be that body dissatisfaction is so common as to be considered normative (Silberstein, Striegel-Moore, Timko & Rodin, 1988).
Since perceptual, attitudinal, and behavioral factors play a significant role in the development of body image, the most common elements of body image assessment are dissatisfaction, self-evaluation of body size and weight, attitudes about gaining weight, preoccupations with weight, exercises or eating, and unhealthy appearance management behaviors (Thompson et al. 2002).

**Body Image and the Media**

Societal factors, such as mass media, greatly influence the development of body image (Fallon, 1990). For example, many researchers have investigated extensively to understand the determinants of women’s body image disturbances and they found that when women are exposed to ideal media images, they reported increased body image disturbances (Heinberg & Thompson, 1995; Posavac et al., 1998; Richins, 1991; Stice & Shaw, 1994). The current ideal standards of female beauty emphasize attractiveness and thinness (Rudd & Lennon, 2000). Media are promoting these cultural standards around the world. These cultural standards of beauty greatly influence one’s perceptions of, and satisfaction with, his/her own body; however, standards of beauty have in fact become difficult to attain for women (Dittmar, 2009). Thus, women might engage in extreme appearance management behaviors such as dieting, excessive exercising, eating disorders and cosmetic surgery to change their bodies with the desire to achieve the attractive and thin beauty ideal (Chen, 1993; Kim & Lennon, 2006; Stice, Mazotti, Krebs, & Martin, 1998).
The association of attractive media images with body image dissatisfaction and eating disorders has been investigated to explain the impact of media images (Hargreaves & Tiggemann, 2002; Levine & Murnen, 2009; Thompson & Stice, 2001). For example, young women showed body dissatisfaction, depression, stress, insecurity and low self-esteem after exposed to thin models in advertisements (Hargreaves & Tiggemann, 2002; Ogden & Mundray, 1996; Polivy & Herman, 2004). Media images often serve as a reference point for social comparison. When we compare our bodies with others’ bodies, we make comparisons and internalize these comparisons (Gleeson & Frith, 2006). As a result, our body image is easily altered in this process of comparisons. The discrepancy between an individual’s actual body size and ideal body size may be one factor causing body image disturbance. For instance, Martin and Xavier (2010) stated that women felt more pressure to be thin and felt their actual body size larger after they viewed a thin model in magazine advertisements, while they felt less pressure to be thin after viewing a larger-size model. Levine and Murnen’s (2009) study reviewed previous research related to the impact of mass media on body dissatisfaction and disordered eating among women. They found that mass media contain unhealthy messages and exposure to mass media was associated with body dissatisfaction, internalization of the thin-ideal, and disordered eating. Want (2009) conducted a meta-analysis of 47 laboratory experiments and revealed that adolescents and young women show greater dissatisfaction with their appearance after being exposed to thin media images, concluding that the media have greatly influenced women’s body dissatisfaction and eating disorders.
Social Comparison and Body Dissatisfaction

Physical appearance comparisons may play a significant role in the relationship between exposure to ideal media images and body dissatisfaction because upward comparisons to the ideal images often results in greater body dissatisfaction (Blowers, Loxton, Grady-Flesser, Occhipinti, & Dawe, 2003; Halliwell & Dittmar, 2004; Heinberg, Thompson, & Stormer, 1995; Richins, 1991). A number of studies examined the impact of women’s comparisons with thin-ideal media images on their feelings of body satisfaction. Richins (1991) and Adomaitis and Johnson (2008) conducted similar studies to examine how the comparison of one’s self with idealized advertising images affected college women’s body dissatisfaction. They found that college women showed a tendency toward social comparison with advertising images and this comparison resulted in negative feelings of attractiveness and body image. Irving (1990) examined the effect of comparison by model body types among college women. The results indicated that women who were exposed to thin fashion models showed lower self-esteem and lower body satisfaction than those who were exposed to either average or oversize models. Another study (Lau et al., 2006) examined the influence of idealized media images on Asian American college women’s body image and found a significant correlation between media influence and body image. Therefore, the beauty ideal that is disseminated through the media is indeed what many women strive to attain, regardless of how unreal or digitally manipulated the “ideal” is.

The Western value of a female beauty ideal emphasizing thinness also prevails in many Asian countries (Frith et al., 2005; Jung & Lee, 2009; Kim & Lennon, 2006;
Lennon et al., 1999a; Nelson & Paek, 2006; Watchravesringkan, 2008). For example, Kim and Lennon (2006) analyzed diet advertisements in Korean and U.S. women’s magazines and found that Korean women’s magazines contained a higher percentage of diet advertisements compared to U.S. magazines. This might indicate that Korean women are also exposed to the pressure for achieving thinness by the comparison with idealized thin images. In fact, an Asian cultural beauty ideal is hard to define because of the pervasive influence of Western culture. However, studies (Lee & Rudd, 1999; Lee et al., 2001) indicate that traditionally Asian cultural beauty has emphasized aspects of internal beauty such as character, respect for others, and patience, over external characteristics such as physical attractiveness. As the Western ideal of beauty is manufactured for mass consumption through the media and is disseminated all over the world, the Western ideal is what many women worldwide strive to attain. Because women’s fashion and beauty magazines generally portray this narrowly-defined standard of ideal beauty, comparisons with media images would affect women’s body image and self-esteem negatively in many cultures.
Self-esteem

Self-esteem represents an individual’s overall evaluation of the self (McAllister & Caltabiano, 1994). Self-esteem, as an attitude toward the self, is the concept what we have about the self and the positive or negative evaluations of the self (Smith & Mackie, 2007). Self-esteem is an important variable in relation to the social comparison process. Research has found that women with lower self-esteem are more vulnerable to negative effects of ideal media images (Martin & Kennedy, 1993; Stephens et al., 1994). Since self-esteem represents how we feel about ourselves, it is considered as an influential predictor of relevant outcomes, such as body dissatisfaction (Jones & Buckingham, 2005).

Feelings about the self often influence feelings and attitudes toward one’s body positively or negatively (McAllister & Caltabiano, 1994). In this regard, self-esteem has been examined with respect to body dissatisfaction. Studies found that women with low self-esteem showed higher body dissatisfaction compared to women with high self-esteem (Dorian & Garfinkel, 2002). Another study suggested that people who evaluate their bodies favorably have higher self-esteem than those who evaluate their bodies less favorably (Jackson, Sullivan, & Rostler, 1988). Since college women have the pressure to achieve high standards of thinness and attractiveness, they are likely to possess low self-esteem (Harris, 1995). Other research has found an association among women’s size overestimation, lower overall self-esteem (Dorian & Garfinkel, 2002) and higher level of depression (Noles et al., 1985). Therefore, as women often wish to be thinner and
attractive, greater attitudes toward being thin and attractive may lead to negative body image and lower self-esteem.

**Social Comparison, Self-Esteem, and Body Image**

Social comparison has been used to examine the association with self-esteem and body image (Irving, 1990; Morse & Gergen, 1970; Richins, 1991; Stice & Shaw, 1994). For instance, Morse and Gergen (1970) studied the relationship between social comparison and self-esteem and found that the comparison with inferior others in appearance was related to higher self-esteem, whereas the comparison with others who are superior in appearance was related to lower self-esteem. Another study found that subjects with high self-esteem reported weaker attitudes toward social comparison and less body dissatisfaction than those with low self-esteem (Lennon et al., 1999a). Therefore, lower self-esteem and negative body image may be associated with upward social comparisons due to perceived discrepancies between the cultural ideal of beauty and perceivers’ actual bodies (Posavac et al., 1998). The cultural beauty ideal can lead individuals to engage more in appearance management behaviors.

The media promote powerful messages and images about the cultural ideal of beauty for women and such messages shape viewers’ attitudes and behaviors (Richins, 1991; Stice & Shaw, 1994; Thompson & Stice, 2001). Since the current societal standards of female beauty emphasize unattainable thinness and attractiveness, comparisons with the ideal images influence women to develop negative feelings about themselves (Lau et al., 2006; Lennon & Rudd, 1994). Sociocultural beauty norms often
are internalized as individuals frequently are exposed to ideal media images and the internalization results in negative body image and lower self-esteem. Therefore, internalization of societal beauty norms plays an important role in how individuals are affected by the cultural norms (Hall, 1995). Several studies found that women with a high degree of media-ideal internalization are more likely to compare their bodies with the ideal media images as an upward comparison target and, in turn, feel body dissatisfaction (Heinberg & Thompson, 1995; Pinhas et al., 1999; Stice & Shaw). Similarly, a study by Stice and Shaw (1994) found that women who over-internalized the idealized images in the media tended to develop body dissatisfaction and lower self-esteem. Another study found that internalization was a risk factor that resulted in greater body dissatisfaction, eating disturbances, and lower self-esteem in three countries: the United States, Australia, and India (Keery, Shroff, Thompson, Wertherim, & Smolak, 2004; Stice & Shaw, 1994). Hence, exposure to unrealistic media images may harm one’s self-esteem and body image, and lead women to engage in unhealthy appearance management behaviors to attain the ideal media images.

A number of empirical studies have examined magazine advertising and its impact on self-esteem and body image, and suggested that women usually tend to have lower self-esteem and negative body image after being exposed to advertisements portrayed by attractive and thin models. (Irving, 1990; Jung et al., 2001; Lennon et al., 1999a; Lin & Kulik, 2002; Posavac et al., 1998; Richins, 1991; Stice & Shaw, 1994). Higher levels of social comparison may be linked to negative body image and lower self-esteem. However, there may be individual differences in the level of attitudes toward
comparison of oneself to others. Further, the nature of the comparison target may mitigate the degree of comparison (Lennon et al., 1999a). Such differences may make some individuals vulnerable to the pressure from idealized images in the media. Thus, the levels of attitudes toward social comparison to the ideal media images and comparison targets may affect self-esteem and body image among women. Because of this, the degree of comparison and the impact of the comparison could be different with the portrayal of Caucasian models and Korean models in advertisements among Korean and Caucasian-American women. If the comparison target is more similar to the viewer in terms of ethnicity, perhaps social comparison occurs more readily than if the comparison target is quite different. Therefore, this study focuses on examining which advertising images (Korean versus Caucasian models) as comparison references would result in greater social comparison for Korean and Caucasian-American women. Furthermore, this study aimed to find the association of attitudes toward social comparison with self-esteem, body image, and appearance management behaviors among Korean and Caucasian-American women.
Conceptual Model and Research Hypotheses

The objectives of this research study were to examine attitudes toward social comparison by model types and the association among attitudes toward social comparison, self-esteem, body image and appearance management behaviors among Korean and Caucasian-American women. A conceptual framework was formulated and seven hypotheses were proposed for this study.

Conceptual Model

The model in Figure 1 (p. 37) was constructed from the research literature and addresses the linkages of attitudes toward social comparison with self-esteem, body image, and appearance management behaviors and the association of attitudes toward a comparison target with self-esteem, body image and appearance management behaviors. In particular, Rudd and Lennon’s (1994) model explains individual response to cultural ideals of beauty based on social comparison theory (Festinger, 1954) and social identity theory (Tajfel, 1981). Rudd and Lennon’s (1994) model (see Figure 2) posits that the cultural beauty ideals are internalized by individuals and the internalized beauty standards lead them to create their appearances in reference to their cultural ideal. Then people compare their created appearances to the cultural ideals of beauty. Social comparison processes are central in the model and self-esteem is influenced by self-evaluations or evaluations from others. These evaluations also influence social and personal identity. Therefore, positive evaluations will produce high self-esteem and in turn high self-image, while negative evaluations will lead the individual to engage in
several coping strategies to create their appearance close to the cultural ideals of beauty. As a result, self-esteem may be affected by social comparison.

The concepts of Rudd and Lennon’s (1994) model were adopted to test the association among attitudes toward social comparison, self-esteem, body image, and appearance management behaviors among Korean and Caucasian-American women. The proposed model (see Figure 1) posits that sociocultural standards of beauty are internalized by women and these internalized beauty standards would lead them to compare their appearances to media images representing the beauty ideals. Attitudes toward social comparison would influence self-esteem, body image, and appearance management behaviors and attitudes toward the model type as a target reference would affect self-esteem, body image, and appearance management behaviors among Korean and Caucasian-American women.
Figure 1. Conceptual Model
Figure 2. Model of the effects of social comparison on the construction and evaluation of appearance (Rudd & Lennon, 1994, p. 165)
Research Hypotheses

The research literature shows that upward social comparison influences women’s self-esteem and body image negatively due to perceived discrepancies between the attractive and thin media images and perceivers’ actual bodies (Adomaitis & Johnson, 2008; Richins, 1991; Posavac et al., 1998; Stephens et al., 1994; Zhou et al., 2002). However, levels of attitudes toward upward comparison in which women engage would influence the outcome of the comparison. Therefore, this study proposed that both Koran and Caucasian-American women who have strong attitudes toward social comparison would show lower self-esteem and negative body satisfaction. Related to the association of attitudes toward social comparison with self-esteem and body image, the following hypotheses were developed.

**Hypothesis 1(a).** Korean women with stronger attitudes toward social comparison will score lower on self-esteem than women with weaker attitudes toward social comparison.

**Hypothesis 1(b):** Caucasian-American women with stronger attitudes toward social comparison will score lower on self-esteem than women with weaker attitudes toward social comparison.
Hypothesis 2(a): Korean women with stronger attitudes toward social comparison will score lower on body image than women with weaker attitudes toward social comparison.

Hypothesis 2(b): Caucasian-American women with stronger attitudes toward social comparison will score lower on body image than women with weaker attitudes toward social comparison.

Richins (1991) and Stephens et al. (1994) indicated that young women have the tendency to compare themselves with fashion models who are thin and attractive, and, in turn, they felt body dissatisfaction. Other studies also suggested that young women may practice appearance management behaviors (some healthy and some risky) with the desire to attain a thin beauty ideal portrayed in the media (Jung et al., 2001; Lennon & Rudd, 1994). Thus, it is predicted that both Korean and Caucasian-American women who have stronger attitudes toward social comparison will engage more in appearance management behaviors. With regards to the relationship of attitudes toward social comparison with appearance management behaviors, the following hypotheses were constructed:
Hypothesis 3(a): Korean women with stronger attitudes toward social comparison will show higher tendency to engage in appearance management behaviors (some healthy and some risky) than women with weaker attitudes toward social comparison.

Hypothesis 3(b): Caucasian-American women with stronger attitudes toward social comparison will show higher tendency to engage in appearance management behaviors (some healthy and some risky) than women with weaker attitudes toward social comparison.

Hofstede and Hofstede’s “Collectivism” dimension (2005) is very high for Korea; therefore, the very strong importance of the group could be reflected in many aspects of the society. Very strong group influence might lead Korean women to make more comparison with similar targets (i.e., Korean models) than with dissimilar targets (i.e., Caucasian models) because comparisons with similar others may lead to pressures toward uniformity in groups (Wood, 1989). Furthermore, people tend to compare themselves to relatively similar others (Festinger, 1954) and the comparison with similar others might have a greater impact on the consequence of the comparison than that with dissimilar others. A social comparison experience has been seen to have an effect among women; however, the attitudes toward social comparison with model types in terms of ethnicity (i.e. Korean versus Caucasian models) may also influence the outcome of the comparison (Frith et al., 2005; Richins, 1991). Therefore, both Korean and Caucasian-American
women may show a stronger attitude toward social comparison with a comparison target perceived as similar, in terms of ethnicity, than with a dissimilar comparison target.

Furthermore, comparison to similar body types and facial features would increase body satisfaction due to greater similarity. Therefore, the impact of the comparison with similar targets on self-esteem, body image and appearance management behaviors might be less compared to the impact of the comparison with dissimilar targets. It was expected that the relationship of attitudes toward social comparison with self-esteem, body image and appearance management behaviors would be affected by the model type as a comparison target. With these predictions, the following hypotheses were formulated:

*Hypothesis 4(a): Among Korean women, the attitudes toward social comparison with Korean models will be stronger than the attitudes toward social comparison with Caucasian models.*

*Hypothesis 4(b): Among Caucasian-American women, the attitudes toward social comparison with Caucasian models will be stronger than the attitudes toward comparison with Korean models.*
Hypothesis 5(a): Korean women with stronger attitudes toward comparison with Korean targets will have higher self-esteem compared to those with stronger attitudes toward comparison with Caucasian targets.

Hypothesis 5(b): Caucasian-American women with stronger attitudes toward comparison with Caucasian targets will have higher self-esteem compared to those with stronger attitudes toward comparison with Korean targets.

Hypothesis 6(a): Korean women with stronger attitudes toward comparison with Korean targets will have higher body image compared to those with stronger attitudes toward comparison with Caucasian targets.

Hypothesis 6(b): Caucasian-American women with stronger attitudes toward comparison with Caucasian targets will have higher body image compared to those with stronger attitudes toward comparison with Korean targets.

Hypothesis 7(a): Korean women with stronger attitudes toward comparison with Korean targets will show less tendency to engage in appearance management behaviors (some healthy and some risky) compared to those with stronger attitudes toward comparison with Caucasian targets.

Hypothesis 7(b): Caucasian-American women with stronger attitudes toward comparison with Caucasian targets will show less tendency to engage in appearance management behaviors (some healthy and some risky) compared to those with stronger attitudes toward comparison with Korean targets.
Besides these seven hypotheses, one research question was developed to identify how strongly a female body figure is valued on dimensions of thinness and attractiveness among Korean and Caucasian-American women. Since many Asian women have smaller body size and weigh less than Caucasian-American women (Lee et al., 2001), there might exist different perceptions about thinness and attractiveness valued in each culture.

Research Question: How strongly is a female body figure valued on dimensions of thinness and attractiveness among Korean and Caucasian-American women?
CHAPTER 3

METHODOLOGY

Overview

The purposes of this study were to investigate the association of attitudes toward social comparison with self-esteem, body image, and appearance management behaviors and to examine the association of attitudes toward comparison targets (Korean models versus Caucasian models) with self-esteem, body image and appearance management behaviors among Korean and Caucasian-American women. It was expected that women with stronger attitudes toward social comparison would show lower self-esteem, poorer body image, and a greater tendency to engage in appearance management behaviors. This study further examined whether comparison targets (Korean versus Caucasian models) had an impact on self-esteem, body image and appearance management behaviors among the two populations. It was hypothesized that participants would compare themselves more with similar comparison targets, thereby causing more positive impact on self-esteem, body image and appearance management behaviors.
Pre-Test of the Questionnaire

The pre-test was conducted with a convenience sample of 10 American female undergraduate students for the English version questionnaire and a sample of five Korean female graduate students for the Korean version questionnaire. The pre-test was to examine whether the wording of questions was clear and understandable to the respondents. The 10 American female students who attended a small class read the English version of the questionnaire thoroughly and wrote comments when they found questions with wording that was vague or not clear. The original questionnaire was written in English and then translated by a Korean researcher into the Korean language for Korean participants. The Korean version of the questionnaire was reviewed by five Korean graduate students to assure accuracy of meaning and wording. The five Korean students earned their undergraduate degree at Korean Universities and have attended graduate school in the United States for at least two years. Some of the Korean students had had experience in developing questionnaires in Korea. They compared the Korean version with the English version to check equivalence of the two versions of the questionnaire and the quality of translation. They reviewed the Korean translation provided for directions, questions, and response categories. Both English and Korean versions were revised based on comments from American and Korean student reviewers. For the actual study, the revised English version of the questionnaire was used for Caucasian-American participants in the United States and the revised Korean version was used for Korean participants in Korea.
Primary Study

Subjects

After the Institutional Review Board (IRB) of the Ohio State University approved the study protocol (see Appendix A), participants were recruited both in the United States and Korea for this study. A convenience sample of Korean women in Korea and Caucasian-American women in the U.S. was recruited for this study. The target sample size was a total of 300 women with an age range of 18 to 30. Self-administered questionnaires were distributed in consumer sciences classes at The Ohio State University in June 2012. Korean participants were recruited in a Korean Women’s University in Seoul in June 2012. Korean participants were also recruited by personal contacts from available subjects using the snowball sampling method in Seoul from June to August in 2012.

Instruments

The data collection instrument used in this study was a self-administered questionnaire written in both Korean and English. The survey was designed to measure the following variables as major constructs: 1) social comparison, 2) self-esteem, 3) body image, and 4) appearance management behaviors. In addition to those constructs, participants were asked to evaluate Caucasian and Korean female models and to provide demographic information about themselves.

The questionnaire consisted of four sections: (a) a set of questions related to self-esteem and body image; (b) a set of questions related to social comparison; (c) a set of
questions related to advertising stimuli; (d) a set of questions related to appearance management behaviors (both routine and risky), and (e) a set of questions related to demographic information.

**Self-Esteem**

The self-esteem scale used was the Rosenberg Self-esteem Inventory (1965) to measure subjects’ self-esteem. This scale is a widely used measure of global self-esteem with strong reliability (.86) and validity (Silberstein, Striegel-Moore, Timko, & Rodin, 1988). This measure consists of 10 statements within a 5-point Likert scale ranging from 1 (Definitely Disagree) to 5 (Definitely Agree). Some of items contain positive statements, whereas other items contain negative statements. After the negative items were reversed scored, the 10 items were summed for an overall measure of self-esteem. Higher scores reflect higher self-esteem. Scores could range from 10 to 50. A copy of this instrument can be found in Appendix B.

**Body Image Variables**

The body image scales used for this study were three subscales of the Multi-Dimensional Body Self Relations Questionnaire (MBSRQ) (Brown et al., 1990; Cash & Green, 1986; Noles et al., 1985) to measure participants’ body image in relation to appearance. As the modified version of the Body-Self Relations Questionnaire (BSRQ; Winstead & Cash, 1984), the MBSRQ contains 69 items in 10 subscales assessing appearance, fitness, and health. The MBSRQ has test-retest reliabilities ranging from .65
to .91 (Winstead & Cash, 1984) and is widely considered to possess high validity (Cash & Green, 1986). The three body image subscales selected for this study among the 10 subscales were Appearance Evaluation, Appearance Orientation, and Body Areas Satisfaction.

**Appearance Evaluation.** The Appearance Evaluation scale was comprised of 7 items measures individuals’ satisfaction with their appearance. The response format of the subscale is a 5-point Likert scale ranging from 1 (Definitely Disagree) to 5 (Definitely Agree). Some of items contain positive statements, whereas other items contain negative statements. After the negative items were reverse scored, the seven items were summed for an appearance evaluation score. Higher scores indicate greater satisfaction with one’s appearance. Scores could range from 7 to 35. A copy of this instrument can be found in Appendix C.

**Appearance Orientation.** The Appearance Orientation scale consists of 12 items to assess an individual’s investment in one’s appearance through grooming behaviors. The response format of the subscale is a 5-point Likert scale ranging from 1 (Definitely Disagree) to 5 (Definitely Agree). Some of items contain positive statements, whereas other items contain negative statements. After the negative items were reverse scored, the 12 items were summed for an appearance orientation score; higher overall scores on this subscale indicate greater attention paid to appearance and greater investment in
appearance management behaviors. Scores could range from 12 to 60. A copy of this instrument can be found in Appendix D.

**Body Areas Satisfaction.** Eight items in the Body Areas Satisfaction Scale (BASS) measure one’s satisfaction with specific areas of the body including face, hair, lower torso, mid torso, upper torso, muscle tone, weight, and height. The response format of BASS is a 5-point Likert scale ranging from 1 (Very Dissatisfied) to 5 (Very Satisfied). The scores were summed for the body areas satisfaction score. Higher overall scores indicate greater satisfaction with most areas of the body. Scores could range from 8 to 40. A copy of this instrument can be found in Appendix E.

**Social comparison**

Richins (1991) developed a 20-item measure of attitudes toward advertising for clothing and beauty products to assess attitudes toward comparison with models in advertisements, informativeness, adequacy of price information, and purchase intention. From the 20 items, the self-report measures of 4 items were chosen for this study to measure attitudes toward social comparison; 2 items to assess attitudes toward comparison with models in advertisements for clothing and beauty products and 2 items to assess attitudes toward the use of advertisements for clothing and beauty products as comparison standards for how one should look. The response format used in this study is a 5-point Likert scale ranging from 1 (Definitely Disagree) to 5 (Definitely Agree). The scores were summed for a social comparison score. Higher scores reflect stronger
attitudes toward comparison with the models in advertisements and stronger attitudes toward the use of advertisements for appearance information. While no reliability for this scale was found, it has been used in several studies (Lennon et al, 1999; Lee, 1997). Scores could range from 4 to 20. A copy of this instrument can be found in Appendix F.

**Advertising Stimuli**

This section included color photos of four female models with two variations in body size (a Korean thin model, a Korean average model, a Caucasian thin model and a Caucasian average model) selected from fashion magazine advertisements. Several Korean and Caucasian models wearing bikinis that showed their whole bodies were first selected. Then a panel of experts, representing Koreans and non-Koreans, sorted them by similar level of attractiveness and thinness. Finally, they chose one Korean and one Caucasian model that were judged as having both an attractive face and a thin body. The original images were used in the questionnaire as representing thin body size. The colors of bikinis were blacked out so as not to distract respondents’ evaluation of each model. In order to manipulate models’ body size, the original images were altered using Photoshop imaging software to represent a larger, more “average” body size in addition to the thin body size. However, models’ attractiveness was kept constant.

Participants were asked to rate each model in terms of attractiveness and thinness. Each picture was accompanied by three questions to measure attitudes toward the model. The two questions in relation to the attractiveness were presented using a 5-point Likert scale with response options ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).
One question measuring models’ thinness had a response format ranging from 1 (Above Average) to 5 (Very Thin). Higher scores for the attractiveness question reflected that the model was considered to be more attractive. Higher scores for the thinness item indicated that the model was evaluated as having a thinner body.

Participants were then asked to compare the four models. For the comparison of the four models, four pictures were presented together on the next page and were accompanied by questions related to choice of the most attractive model and the reason why they consider the model to be physically attractive. Lastly, participants were asked to choose a model considered to be the most influential to them. A copy of this instrument can be found in Appendix G.

*Appearance Management Behaviors*

This section was constructed to measure the tendency to engage in appearance management behaviors. The section included a list of appearance management behaviors related to facial and body attributes to rate respondents’ tendency to engage in each of the behaviors. Appearance management behaviors related to facial attributes included cosmetic surgery, makeup use, dermatology procedures, botox, freckle/mole removal, permanent makeup, professional skin care, and hair treatment/color. Appearance management behaviors related to body attributes included cosmetic surgery, diet, exercise, weight training, body hair removal, manicures/pedicures, tanning, and body lotion/washes. A copy of this instrument can be found in Appendix H.
**Demographic Information**

This section included questions related to socio-demographic information, such as age, gender, occupation, college rank, height, weight, and race. Self-reported weight and height were used to calculate BMI (Body Mass Index). A copy of this instrument can be found in Appendix I.

**Research Design**

This study proposed seven hypotheses to examine how women living in two different cultures (i.e., Korea versus the U.S.) differ in attitudes toward social comparison, attitudes toward social comparison with similar targets, self-esteem, body image, and appearance management behaviors. To test the hypotheses, a survey research methodology was used for data collection. Self-administered questionnaires were distributed both in the United States and Korea during summer 2012. American students completed the English version of questionnaires in classes at a Midwestern United States University. Among the completed questionnaires, only those from Caucasian-American female students were selected to use as data. The Korean version questionnaires were distributed in a Korean Women’s University located in Seoul in June 2012. The Korean version questionnaires were also distributed to Korean women using the snowball sampling method in Seoul from June to August in 2012 in a way that 10 to 20 self-administered questionnaires were distributed personally to available subjects and then the available subjects distributed the questionnaire to their friends or classmates. Subjects participated in this study if they voluntarily agreed to answer the questionnaires.
Research participants remained anonymous and their responses were kept confidential. The questionnaire included a letter explaining the study objectives, the approximately time needed to complete the questionnaire and promise of confidentiality. A copy of this letter can be found in Appendix J. Researchers provided envelopes with the survey questionnaires and asked respondents to seal the envelope after completing the survey. The initial participants collected the sealed envelopes and sent them to investigators personally or via mail within a week. The completed questionnaires were used as data for the study.

**Data Analysis**

Descriptive statistics were computed for all variables using SPSS statistical programs to summarize overall scores for each of the measures, as well as means, standard deviations, minimum and maximum. A principal components factor analysis with Varimax rotation was used as a method of data reduction for the appearance management behavior measures before using them as a key variable. Prior to analyzing the hypotheses, bivariate correlations were conducted to examine the relationship among the key variables. To test hypotheses, multivariate analysis of variance and univariate analysis of variance were used to examine the association of attitudes toward social comparison as the independent variable with self-esteem, body image subscales, and appearance management behaviors as the dependent variables. To test the differences in attitudes toward comparison with model types (Caucasian models versus Korean models), a paired sample, two-tailed t-test was conducted.
CHAPTER 4

RESULTS

Overview of Demographics

Participants in the United States

Questionnaires were distributed in several Consumer Sciences classes. Participants received extra credit for their participation. Completed questionnaires from 126 Caucasian-American female students were used as data. The average age of the participants was 21 years old, with a range of 19 to 28. Their weight ranged from 98 pounds to 200 pounds, with an average of 165 pounds. Height of the participants ranged from 4 feet 11 inches to 6 feet 2 inches, with a mean of 5 feet 5 inches. 75% of respondents (N = 95) were students and 25% of them (N = 31) had an occupation such as a sales associate. Participants’ overall scores for demographics are shown in Table 1.

Participants in Korea

Korean data were collected in two ways in Seoul, Korea: 1) Questionnaires were distributed in undergraduate classes in a Women’s University located in Seoul; and 2) Korean women were recruited using the snowball sampling technique, that is, a researcher used existing study participants (college students) to distribute questionnaires
to their acquaintances such as friends and classmates. Completed questionnaires from 148 Korean women were used as data. The average age of Korean participants was 20 years old, with a range of 18 to 30. Their weight ranged from 92 pounds to 176 pounds, with an average of 114 pounds. Height of the participants ranged from 4 feet 9 inches to 5 feet 9 inches, with a mean of 5 feet 4 inches. 97% of participants (N = 144) were students. Participants’ overall scores for demographics are shown in Table 1.

<table>
<thead>
<tr>
<th></th>
<th>Caucasian-American (N = 126)</th>
<th>Korean (N = 148)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Min.</td>
<td>Max.</td>
</tr>
<tr>
<td>Age</td>
<td>19</td>
<td>28</td>
</tr>
<tr>
<td>Weight (lbs)</td>
<td>98</td>
<td>200</td>
</tr>
<tr>
<td>Height (ft)</td>
<td>4ft 1in</td>
<td>6ft 2in</td>
</tr>
<tr>
<td>BMI (kg/m²)</td>
<td>16.4</td>
<td>34.1</td>
</tr>
</tbody>
</table>

Table 1. Overall scores of Age, Weight, Height and BMI
Body mass Index (BMI)

Participants’ self-reported weight and height were converted to kilograms and meters to compute Body Mass Index (BMI) for each participant. The following formula was used: BMI = [weight (kg)/ Height^2 (m^2)]. The BMI has been used as a reference standard to determine underweight, normal weight, overweight, and obese of individuals (Benn, 1971; Pacy, Webster, & Garrow, 1986; Strauman, Vookles, Berenstein, Chaiken, & Higgins, 1991). Underweight is defined as a BMI less than or equal to 20, normal weight as a BMI with the range of 20.1 to 25, overweight as a BMI with the range of 25.1 to 30, and obese as a BMI over 30. However, there is controversy surrounding the use of BMI as a true indicator of overall fitness. Muscle weighs more than fat, so those who are the most fit typically have higher BMI scores and are not considered overweight or obese (Strauman et al, 1991).

Among Caucasian-American women, 122 out of 126 reported their weight and height and their self-reported weight and height were used to calculate BMI. The range of BMI for Caucasian-American participants (N = 122) was 16.4 to 34.1 with a mean of 21.9 (see Table 1). Among Caucasian-American participants, 28% (N = 34) were in the “underweight” range, 58% (N = 71) were in the “normal weight” range, 12% (N = 15) were in the “overweight” range and the remaining 2% (N = 2) were in the “obese” range (see Table 2). Among 148 Korean participants, 142 reported their weight and height and these self-reported weight and height measurements were used to calculate BMI. The range of BMI for Korean participants (N = 142) was 15.7 to 29.3 with a mean of 19.8 (see Table 1). Among Korean participants, 68% (N = 96) were in the “underweight”
range, 30% (n = 43) were in the “normal weight” range, and the remaining 2% (N = 3) were in the “overweight” range (see Table 2). No Korean participants fell into the obese range.

<table>
<thead>
<tr>
<th>BMI (kg/m²)</th>
<th>Caucasian-American (N = 122)</th>
<th>Korean (N = 142)</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 20 (“underweight”)</td>
<td>28% (n = 34)</td>
<td>68% (n = 96)</td>
</tr>
<tr>
<td>20.1 – 25 (“normal weight”)</td>
<td>58% (n = 71)</td>
<td>30% (n = 43)</td>
</tr>
<tr>
<td>25.1 - 30 (“overweight”)</td>
<td>12% (n = 15)</td>
<td>2% (n = 3)</td>
</tr>
<tr>
<td>&gt; 30 (“obese”)</td>
<td>2% (n = 2)</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 2. Body Mass Index (BMI)
Overview of Overall Scores for Measures of Variables

Social Comparison

The social comparison scale (Richins, 1991) measures the degree of comparison of one’s appearance with the models in clothing and beauty advertisements and the tendency to look at advertisements of clothing and beauty products for appearance information. The four items of the social comparison scale were summed to form an index yielding a possible range of scores of 4 to 20. Higher scores indicate a higher level of social comparison; scores of this scale indicated that both Caucasian-American ($\bar{x} = 11.6$) and Korean ($\bar{x} = 10.6$) participants had almost neutral feelings comparing their looks with advertisements (see Table 3). To assess reliabilities of this variable, Cronbach’s alpha was calculated. The social comparison scale showed high reliabilities for both ethnic groups; .83 for Caucasian-American and .79 for Korean participants.

Self-Esteem

The ten items of Rosenberg Self-Esteem scale (1965) were used to measure participants’ self-esteem. Higher scores indicate a more positive sense of self (i.e., higher self-esteem). Out of a possible range of 10 to 50, scores of the summed items ranged from 18 to 50 ($\bar{x} = 40.9$) for Caucasian-American participants and 19 to 50 ($\bar{x} = 35.4$) for Korean participants (see Table 3). Thus, Caucasian-Americans had higher self-esteem than Koreans in this study ($t (272) = -7.617, p = .000$). Cronbach’s reliabilities alpha for Rosenberg’s Self-Esteem scale were .87 for Caucasian-American and .82 for Korean participants.
Body Image Subscales

To measure aspects of body image, three subscales of the MBSRQ (Brown et al., 1990) were used; Appearance Evaluation, Appearance Orientation, and Body Areas Satisfaction. Responses on the items within each subscale were summed.

Appearance Evaluation

The Appearance Evaluation scale measures one’s liking and satisfaction with one’s looks. Higher scores on this subscale indicate more positive feelings about one’s physical appearance. Out of possible range of 7 to 35, Appearance Evaluation scores range from 7 to 35 ($\bar{x} = 24.8$) for Caucasian-American participants and 11 to 35 ($\bar{x} = 22.1$) for Korean participants (see Table 3). Therefore, these scores indicate that both groups fall close to the midpoint of the scale, which is 21, but Caucasian-Americans were somewhat more positive in their feelings about their appearance than Koreans ($t(272) = -4.302, p = .000$). The Appearance Evaluation subscale showed high reliabilities; .91 for Caucasian-American and .84 for Korean participants.

Appearance Orientation

The Appearance Orientation scale measures the importance one places on one’s own appearance and the attention paid to one’s appearance. Higher scores on this subscale suggest more importance placed on physical appearance and more attention paid to appearance. Out of a possible range of 12 to 60, Appearance Orientation scores ranged from 26 to 60 ($\bar{x} = 45.2$) for Caucasian-American participants and 25 to 59 ($\bar{x} = 42.1$) for
Korean participants (see Table 3). Thus, both groups were invested in their appearance, with Caucasian-Americans slight more so \((t(272) = -3.718, p = .000)\). The Appearance Orientation subscale showed high reliabilities; .86 for Caucasian-American and .85 for Korean participants.

*Body Areas Satisfaction*

The Body Areas Satisfaction scale assesses satisfaction with face, hair, lower torso, mid torso, upper torso, muscle tone, weight, and height. Higher scores indicate more satisfaction with most areas of the body. Out of a possible range of 8 to 40, scores of this subscale ranged from 11 to 40 \((\bar{x} = 28.0)\) for Caucasian-American participants and 12 to 40 \((\bar{x} = 23.5)\) for Korean participants (see Table 3). Thus, Caucasian-Americans were more satisfied with their bodies than Koreans \((t(272) = -7.435, p = .000)\). The reliabilities of Body Areas Satisfaction subscale were .81 for Caucasian-American and .73 for Korean participants.
<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Range</th>
<th>Min.</th>
<th>Max.</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Caucasian-American</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SC(^1)</td>
<td>126</td>
<td>4-20</td>
<td>4</td>
<td>20</td>
<td>11.6</td>
<td>4.09</td>
</tr>
<tr>
<td>SE(^2)</td>
<td>126</td>
<td>10-50</td>
<td>18</td>
<td>50</td>
<td>40.8</td>
<td>6.38</td>
</tr>
<tr>
<td>AE(^3)</td>
<td>126</td>
<td>7-35</td>
<td>7</td>
<td>35</td>
<td>24.8</td>
<td>5.73</td>
</tr>
<tr>
<td>AO(^4)</td>
<td>126</td>
<td>12-60</td>
<td>26</td>
<td>60</td>
<td>45.2</td>
<td>7.45</td>
</tr>
<tr>
<td>BASS(^5)</td>
<td>126</td>
<td>8-40</td>
<td>11</td>
<td>40</td>
<td>28.0</td>
<td>5.34</td>
</tr>
<tr>
<td>FACE(^6)</td>
<td>124</td>
<td>8-40</td>
<td>9</td>
<td>35</td>
<td>23.1</td>
<td>6.14</td>
</tr>
<tr>
<td>BODY(^7)</td>
<td>122</td>
<td>8-40</td>
<td>16</td>
<td>40</td>
<td>30.3</td>
<td>4.99</td>
</tr>
<tr>
<td><strong>Korean</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SC(^1)</td>
<td>148</td>
<td>4-20</td>
<td>4</td>
<td>19</td>
<td>10.6</td>
<td>3.07</td>
</tr>
<tr>
<td>SE(^2)</td>
<td>148</td>
<td>10-50</td>
<td>19</td>
<td>50</td>
<td>35.4</td>
<td>5.42</td>
</tr>
<tr>
<td>AE(^3)</td>
<td>148</td>
<td>7-35</td>
<td>11</td>
<td>35</td>
<td>22.1</td>
<td>4.57</td>
</tr>
<tr>
<td>AO(^4)</td>
<td>148</td>
<td>12-60</td>
<td>25</td>
<td>59</td>
<td>42.1</td>
<td>6.33</td>
</tr>
<tr>
<td>BASS(^5)</td>
<td>148</td>
<td>8-40</td>
<td>12</td>
<td>40</td>
<td>23.5</td>
<td>4.68</td>
</tr>
<tr>
<td>FACE(^6)</td>
<td>137</td>
<td>8-40</td>
<td>11</td>
<td>40</td>
<td>29.3</td>
<td>4.99</td>
</tr>
<tr>
<td>BODY(^7)</td>
<td>134</td>
<td>8-40</td>
<td>17</td>
<td>40</td>
<td>30.3</td>
<td>4.21</td>
</tr>
</tbody>
</table>

\(^1\)SC: Social Comparison, \(^2\)SE: Self-Esteem, \(^3\)AE: Appearance Evaluation, \(^4\)AO: Appearance Orientation, \(^5\)BASS: Body Areas Satisfaction, \(^6\)FACE: Appearance Management Behaviors Related to Face, \(^7\)BODY: Appearance Management Behaviors Related to Body

Table 3. Overall Scores for Measures of Variables
Appearance Management Behaviors

To assess one’s tendency to engage in appearance management behaviors in order to achieve one’s ideal appearance, 8 items related to the face and 8 items related to the body were developed. The 8 items related to facial attributes included cosmetic surgery, use of makeup, dermatology procedures, Botox, freckle/mole removal, permanent makeup, professional skin care, and hair treatment/color. The 8 items related to body attributes included cosmetic surgery, diet, exercise, weight training, body hair removal, manicures/pedicures, tanning, and body lotion/washes. Items were rated on 5-point Likert scales from very unlikely (1) to very likely (5). Higher scores suggest that respondents are more likely to engage in appearance management behaviors to achieve their ideal appearance. Scores of the items related to face attributes ranged from 9 to 35 (̄x = 23.1) for Caucasian-American participants and 11 to 40 (̄x = 29.3) for Korean participants (see Table 3). Therefore, these scores indicate that Koreans were more likely to engage in face related appearance management behaviors to achieve their ideal looks than Caucasian-Americans (t (272) = 9.195, p = .000). Scores of the items related to body attributes ranged from 16 to 40 (̄x = 30.3) for Caucasian-Americans and 17 to 40 (̄x = 30.3) for Koreans (see Table 3). Thus, these scores indicate that both groups were likely to engage in body related appearance management behaviors to achieve their ideal looks (t (272) = .498, p = .619). The reliability for face related items was .81 for Caucasian-American respondents and .70 for Korean respondents. The body related items showed low reliabilities; .66 for Caucasian-American respondents and .58 for Korean respondents.
Factor Analysis

The appearance management behavior items were developed by the researchers based on the Lennon and Rudd (1994) appearance management behaviors scales. A principle components factor analysis with Varimax rotation was used as a method of data reduction. The 16 items of the appearance management behaviors related to the face and body were entered into the factor analysis. Four factors were initially retained in the analysis because they had eigenvalues greater than 1. Items in a factor were retained if they loaded above .40 on that factor without cross-loading on other factors at or above .40. Cronbach’s Alpha was used to assess reliabilities of the four factors: factor 1 (7 item, $\alpha = .89$); factor 2 (4 items, $\alpha = .62$); factor 3 (3 items, $\alpha = .69$) and factor 4 (2 items, $\alpha = .32$). The factor 4 was eliminated because of low reliability ($\alpha = .32$). The remaining items were then refactored for final analyses. Three extracted factors accounted for 55.7% of the variance in appearance management behaviors (see Table 4). Factor 1 contained 7 items and was labeled “Clinical Procedures”. This factor had an eigenvalue of 4.45 and a reliability of .85. Factor 2 contained 4 items and was labeled “Routine Behaviors”. It had an eigenvalue of 1.20 and a reliability of .62. Factor 3 contained 3 items and was labeled “Body Shaping Behaviors”. It had an eigenvalue of 1.36 and a reliability of .69 (see Table 4).
<table>
<thead>
<tr>
<th>Factor/Factor Item</th>
<th>Factor Loadings</th>
<th>Eigenvalue</th>
<th>% of Variance</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Clinical Procedures</strong></td>
<td></td>
<td>4.45</td>
<td>27.2</td>
<td>.85</td>
</tr>
<tr>
<td>Cosmetic surgery (Facial)</td>
<td>.80</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermatology procedures</td>
<td>.75</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Botox</td>
<td>.70</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freckle/mole removal</td>
<td>.75</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Permanent makeup</td>
<td>.68</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cosmetic surgery (Body)</td>
<td>.71</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body hair removal</td>
<td>.52</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Routine Behaviors</strong></td>
<td></td>
<td>2.0</td>
<td>14.6</td>
<td>.62</td>
</tr>
<tr>
<td>Skin care</td>
<td>.62</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hair treatment/color</td>
<td>.45</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manicures/Pedicures</td>
<td>.77</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body lotion/washes</td>
<td>.76</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Body Shaping Behaviors</strong></td>
<td></td>
<td>1.36</td>
<td>13.9</td>
<td>.69</td>
</tr>
<tr>
<td>Diet</td>
<td>.65</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exercise</td>
<td>.88</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight training</td>
<td>.82</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4. Factor analysis and Reliability of Appearance Management Behaviors
Correlational Analyses

Prior to analyzing the hypotheses, bivariate correlations were estimated to examine that the key variables were related each other. The key variables entered into the analyses were social comparison, self-esteem, body image subscales (appearance evaluation, appearance orientation, and body area satisfaction), and appearance management behaviors (clinical procedures, routine behaviors, and body shaping behaviors). The size of a correlation above ±0.7 is considered to be a very strong relationship, a correlation between ±0.5 to ±0.69 to be a substantial relationship, a correlation between ±0.3 to ±0.49 to be a moderate relationship, a correlation between ±.1 to ±.29 to be a small relationship, and a correlation between 0 and ±.1 to be a negligible relationship between two variables (Davis, 1971). The data showed a small negative correlation between social comparison and self-esteem ($r = -.162, p < .05$), a moderate positive correlation between social comparison and appearance orientation ($r = .372, p < .01$) and a moderate positive correlation between social comparison and clinical procedures ($r = .332, p < .01$) among Korean participants (see Table 5). Among Caucasian-American participants, social comparison was correlated with all key variables: a small negative relation with self-esteem ($r = -.263, p < .01$); a small negative relation with appearance evaluation ($r = -.223, p < .05$); a moderate positive relation with appearance orientation ($r = .384, p < .01$); a small negative relation with body areas satisfaction ($r = -.268, p < .01$); a moderate positive relation with clinical procedures ($r = .300, p < .01$); a small positive relation with routine behaviors ($r = .291, p < .01$); and a small positive relation with body shaping behaviors ($r = .206, p < .05$) (see Table 6).
Thus, this initial analysis indicated that Korean respondents with stronger attitudes toward social comparison had low self-esteem, more interest in physical appearance and higher tendency to engage in clinical procedures. Results also showed that Caucasian-American respondents with stronger attitudes toward social comparison had low self-esteem, more negative feelings about their physical appearance, more interest in physical appearance, less satisfaction with most areas of their bodies, and higher tendency to engage in clinical procedures, routine behaviors, and body shaping behaviors.

The correlation data also revealed the correlations among the key dependent variables, including self-esteem, body image (appearance evaluation, appearance orientation, and body areas satisfaction) and appearance management behaviors (clinical procedures, routine behaviors, and body shaping behaviors). There existed a substantial positive correlation between self-esteem and appearance evaluation \((r = .471, p < .01)\), a moderate positive correlation between self-esteem and body areas satisfaction \((r = .367, p < .01)\) and a small negative correlation between self-esteem and clinical procedures \((r = -.208, p < .05)\) among Korean participant. Thus, Korean participants who had high self-esteem showed more positive feelings about their physical appearance, more satisfaction with most areas of their bodies and less tendency to engage in clinical procedures. Among Caucasian-American participants, there existed a very strong positive relationship between self-esteem and appearance evaluation \((r = .752, p < .01)\), a substantial positive correlation between self-esteem and body areas satisfaction \((r = .673, p < .01)\) and a moderate negative correlation between self-esteem and clinical procedures \((r = -.208, p < .01)\). Hence, Caucasian-American participants who had high
self-esteem showed more positive feelings about their physical appearance, more satisfaction with most areas of their bodies and less tendency to engage in clinical procedures. Regarding the relationship between body image subscales and appearance management behaviors factors, there existed a small negative correlation between appearance evaluation and body shaping behaviors \((r = -.179, p < .05)\); a small positive correlation between appearance orientation and clinical behaviors \((r = .236, p < .01)\); a moderate positive correlation between appearance orientation and routine behaviors \((r = .304, p < .01)\); a small positive correlation between appearance orientation and body shaping behaviors \((r = .251, p < .01)\); a moderate negative correlation between body areas satisfaction and clinical behaviors \((r = -.351, p < .01)\); a small negative correlation between body areas satisfaction and routine behaviors \((r = -.287, p < .01)\); a moderate negative correlation between body areas satisfaction and body shaping behaviors \((r = -.311, p < .01)\) among Korean participants. Therefore, Korean participants who had more positive feelings about their physical appearance showed less tendency to engage in body shaping behaviors; those who had more interest in physical appearance showed higher tendency to engage in clinical procedures, routine behaviors and body shaping behaviors; and those who had more satisfaction with most areas of their bodies showed less tendency to engage in clinical procedures, routine behaviors and body shaping behaviors. Among Caucasian-Americans, with regard to the relationship between body image subscales and appearance management behaviors factors, there existed a moderate negative correlation between appearance evaluation and clinical behaviors \((r = -.345, p < .01)\); a small negative correlation between appearance evaluation and
routine behaviors \( (r = -0.183, p < 0.05) \); a small negative correlation between appearance evaluation and body shaping behaviors \( (r = -0.227, p < 0.05) \); a moderate positive correlation between appearance orientation and clinical behaviors \( (r = 0.472, p < 0.01) \); a substantial positive correlation between appearance orientation and routine behaviors \( (r = 0.526, p < 0.01) \); a small positive correlation between appearance orientation and body shaping behaviors \( (r = 0.180, p < 0.01) \); a moderate negative correlation between body areas satisfaction and clinical behaviors \( (r = -0.337, p < 0.01) \); a small negative correlation between body areas satisfaction and routine behaviors \( (r = -0.250, p < 0.01) \); a small negative correlation between body areas satisfaction and body shaping behaviors \( (r = -0.259, p < 0.01) \). Therefore, Caucasian-American participants who had more positive feelings about their physical appearance showed less tendency to engage in clinical procedures, routine behaviors and body shaping behaviors; those who had more interest in physical appearance showed higher tendency to engage in clinical procedures, routine behaviors and body shaping behaviors; and those who had more satisfaction with most areas of their bodies showed less tendency to engage in clinical procedures, routine behaviors and body shaping behaviors.
<table>
<thead>
<tr>
<th></th>
<th>SC(^1)</th>
<th>SE(^2)</th>
<th>AE(^3)</th>
<th>AO(^4)</th>
<th>BASS(^5)</th>
<th>Clinical(^6)</th>
<th>Routine(^7)</th>
<th>B_Shape(^8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SE</td>
<td>-.162*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AE</td>
<td>-.010</td>
<td>.471**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AO</td>
<td>.372**</td>
<td>-.005</td>
<td>.124</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BASS</td>
<td>-.018</td>
<td>.367**</td>
<td>.650**</td>
<td>.063</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical</td>
<td>.332**</td>
<td>-.208*</td>
<td>-.149</td>
<td>.236**</td>
<td>-.351**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Routine</td>
<td>.147</td>
<td>-.146</td>
<td>-.102</td>
<td>.304**</td>
<td>-.287**</td>
<td>.326**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>B_Shape</td>
<td>.041</td>
<td>.085</td>
<td>-.179*</td>
<td>.251**</td>
<td>-.311**</td>
<td>.126</td>
<td>.360**</td>
<td>1</td>
</tr>
</tbody>
</table>

\(^*p<.05, **p<.01\)

\(^1\text{SC: Social Comparison, }^2\text{SE: Self-Esteem, }^3\text{AE: Appearance Evaluation, }^4\text{AO: Appearance Orientation, }^5\text{BASS: Body Areas Satisfaction, }^6\text{Clinical: Clinical Procedures, }^7\text{Routine: Routine Behaviors, }^8\text{B_Shape: Body Shaping Behaviors}\)

Table 5. Correlations for Key Variables among Korean Participants
<table>
<thead>
<tr>
<th></th>
<th>SC 1</th>
<th>SE 2</th>
<th>AE 3</th>
<th>AO 4</th>
<th>BASS 5</th>
<th>Clinical 6</th>
<th>Routine 7</th>
<th>B_Shape 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SE</td>
<td>-.263**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AE</td>
<td>-.223*</td>
<td>.752**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AO</td>
<td>.384**</td>
<td>-.120</td>
<td>-.221*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BASS</td>
<td>-.268**</td>
<td>.673**</td>
<td>.854**</td>
<td>-.263**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical</td>
<td>.300**</td>
<td>-.350**</td>
<td>-.345**</td>
<td>.472**</td>
<td>-.337**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Routine</td>
<td>.291**</td>
<td>-.157</td>
<td>-.183*</td>
<td>.526**</td>
<td>-.250**</td>
<td>.499**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>B_Shape</td>
<td>.206*</td>
<td>-.147</td>
<td>-.227*</td>
<td>.180*</td>
<td>-.259**</td>
<td>.322**</td>
<td>.213*</td>
<td>1</td>
</tr>
</tbody>
</table>

*p < .05, **p < .01


Table 6. Correlations for Key Variables among Caucasian-American Participants
**One-Way Multivariate and Univariate Analyses of Variance for H1, H2, and H3**

To test hypotheses 1(a, b), 2(a, b), and 3(a, b), dealing with the association of attitudes toward social comparison with self-esteem, body image and appearance management behaviors, the data were analyzed using one-way between subjects multivariate analysis of variance (MANOVA). A median split was used to create stronger and weaker attitudes toward social comparison groups. Based on a median split of scores (Median = 10.5 for Korean, and Median = 12 for Caucasian-American) on social comparison, both Caucasian-American and Korean respondents were divided into two groups: (a) those who had weaker attitudes toward social comparison (N = 74 for Korean and N = 61 for Caucasian-American) and (b) those who had stronger attitudes toward social comparison (N = 74 for Korean and N = 65 for Caucasian-American). Social comparison with two levels (i.e., stronger and weaker) was used as the independent variable. self-esteem, three body image subscales (i.e., appearance evaluation, appearance orientation and body areas satisfaction), and appearance management behaviors (i.e., clinical procedures, routine behaviors, and body shaping) served as dependent variables. For both Korean participants and Caucasian-American participants, significant overall MANOVA main effects were found for attitudes toward social comparison on these dependent variables, $F(7, 128) = 4.28, p < .001$ (Korean) and $F(7, 115) = 5.80, p < .001$ (Caucasian-American) (see Table 7). Univariate analyses of variance were calculated to determine which dependent variables contributed to the multivariate effect.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Wilks’</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Korean Social Comparison</td>
<td>.835</td>
<td>7, 128</td>
<td>4.281</td>
<td>.000**</td>
</tr>
<tr>
<td>Caucasian Social Comparison</td>
<td>.764</td>
<td>7, 115</td>
<td>5.796</td>
<td>.000**</td>
</tr>
</tbody>
</table>

**p < .001

Table 7. Multivariate Effects for Social Comparison

<table>
<thead>
<tr>
<th>Variable</th>
<th>Korean</th>
<th>Caucasian-American</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>df</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>7.16</td>
<td>1, 134</td>
</tr>
<tr>
<td>Appearance Evaluation</td>
<td>.83</td>
<td>1, 134</td>
</tr>
<tr>
<td>Appearance Orientation</td>
<td>12.43</td>
<td>1, 134</td>
</tr>
<tr>
<td>Body Areas Satisfaction</td>
<td>.02</td>
<td>1, 134</td>
</tr>
<tr>
<td>Clinical Procedures</td>
<td>10.92</td>
<td>1, 134</td>
</tr>
<tr>
<td>Routine Behaviors</td>
<td>2.26</td>
<td>1, 134</td>
</tr>
<tr>
<td>Body Shaping Behaviors</td>
<td>1.53</td>
<td>1, 134</td>
</tr>
</tbody>
</table>

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

Table 8. Univariate Analyses of Variance for Attitudes toward Social Comparison on the Dependent Variables
**Hypothesis 1(a):** *Korean women with stronger attitudes toward social comparison will score lower on self-esteem than women with weaker attitudes toward social comparison.*

The main effect of attitudes toward social comparison on self-esteem was analyzed using univariate analyses of variance from the one-way MANOVA. The univariate analyses of variance revealed a significant main effect for attitudes toward social comparison on self-esteem among Korean respondents, $F(1, 134) = 7.16, p < .05, Eta^2 = 5.1\%$ (see Table 8). As expected, Korean respondents with stronger attitudes toward social comparison scored lower on self-esteem ($\bar{x} = 34.1$) than those with weaker attitudes toward social comparison ($\bar{x} = 36.6$) (see Table 9). Therefore, hypothesis 1(a) was supported. Based on the Eta squared ($Eta^2$) value, indicating the proportion of the variance in the dependent variable accounted for by an independent variable, attitudes toward social comparison accounted for a small amount (5.1%) of the variance in self-esteem.

**Hypothesis 1(b):** *Caucasian-American women with stronger attitudes toward social comparison will score lower on self-esteem than women with weaker attitudes toward social comparison.*

Results from univariate analyses of variance indicated that there was a significant main effect for attitudes toward social comparison on self-esteem among Caucasian-American respondents, $F(1, 121) = 7.89, p < .05, Eta^2 = 6.1\%$ (see Table 8). As expected, Caucasian-American respondents with stronger attitudes toward social
comparison scored lower on self-esteem (\(\bar{x} = 39.2\)) than those with weaker attitudes toward social comparison (\(\bar{x} = 42.4\)) (see Table 9). Therefore, hypothesis 1(b) was supported. Attitudes toward social comparison accounted for a small amount (6.1\%) of the variance in self-esteem.

**Hypothesis 2(a):** *Korean women with stronger attitudes toward social comparison will score lower on body image than women with weaker attitudes toward social comparison.*

To test hypothesis 2(a), social comparison with two levels (i.e., stronger and weaker) was entered as an independent variable and three body image subscales (i.e., appearance evaluation, appearance orientation, and body areas satisfaction) were entered as dependent variables into univariate analyses of variance from the one-way MANOVA. The univariate analyses of variance revealed statistically significant main effects for attitudes toward social comparison on appearance orientation, \(F(1, 134) = 12.43, p < .05, Eta^2 = 8.5\%\) (see Table 9). Thus, Korean respondents with stronger attitudes toward social comparison showed more importance placed on physical appearance (\(\bar{x} = 44.3\)) than those with weaker attitudes toward social comparison (\(\bar{x} = 40.6\)) (see Table 8). Attitudes toward social comparison accounted for a moderate amount (8.5\%) of the variance in appearance orientation. However, the effect for attitudes toward social comparison on body evaluation (\(F(1, 134) = .83, p < .30, Eta^2 = 0.6\%\)) and body areas satisfaction (\(F(1, 134) = .021, p < .90, Eta^2 = 0\%\)) did not attain significance (see Table 9). Therefore, hypothesis 2(a) was partially supported.
Hypothesis 2(b): Caucasian-American women with stronger attitudes toward social comparison will score lower on body image than women with weaker attitudes toward social comparison.

To test the main effect of attitudes toward social comparison on three body image subscales (i.e., appearance evaluation, appearance orientation, and body areas satisfaction), data were entered into univariate analyses of variance from the one-way MANOVA. There were main effects for attitudes toward social comparison on each of the three body image subscales. The univariate analyses of variance revealed statistically significant main effects for attitudes toward social comparison on appearance evaluation (\(F(1, 121) = 7.13, p < .05, \eta^2 = 5.6\%\)), appearance orientation (\(F(1, 121) = 30.51, p < .001, \eta^2 = 20.1\%\)) and body areas satisfaction (\(F(1, 121) = 11.43, p < .05, \eta^2 = 8.6\%\)) (see Table 9). As expected, Caucasian-American respondents with stronger attitudes toward social comparison showed (1) more negative feelings about their physical appearance (\(M = 23.4\)) than those with weaker attitudes toward social comparison (\(M = 26.1\)); (2) more importance placed on physical appearance (\(\bar{x} = 48.5\)) than those with weaker attitudes toward social comparison (\(\bar{x} = 41.8\)); and (3) less satisfaction with most areas of their bodies (\(\bar{x} = 26.5\)) than those with weaker attitudes toward social comparison (\(\bar{x} = 29.7\)) (see Table 7). Hence, hypothesis 2(b) was supported. Attitudes toward social comparison accounted for a large amount (20.1\%) of the variance in appearance orientation, a moderate amount (8.6\%) of the variance in body areas satisfaction, and a small amount (5.6\%) of the variance in appearance evaluation.
Hypothesis 3(a): Korean women with stronger attitudes toward social comparison will show higher tendency to engage in appearance management behaviors (some healthy and some risky) than women with weaker attitudes toward social comparison.

To test the main effect of attitudes toward social comparison on appearance management behaviors, data were entered into univariate analyses of variance from the one-way MANOVA. Social comparison was used as the independent variable and three appearance management behavior factors (i.e., clinical procedures, routine behaviors, and body shaping) served as dependent variables. The univariate analyses of variance revealed a significant main effect for attitudes toward social comparison on clinical procedures, $F (1, 134) = 10.92, p < .05, Eta^2 = 7.5\%$ (see Table 9). Thus, Korean respondents with stronger attitudes toward social comparison showed higher tendency to engage in clinical procedures ($\bar{x} = 24.8$) than those with weaker attitudes toward social comparison ($\bar{x} = 22.1$) (see Table 6). Attitudes toward social comparison accounted for a moderate amount (7.5%) of the variance in clinical procedures. However, the effect for attitudes toward social comparison on routine behaviors ($F (1, 134) = 2.26, p < .20$, $Eta^2 = 1.7\%$) and body shaping behaviors ($F (1, 134) = 1.53, p < .30$, $Eta^2 = 1.1\%$) did not attain significance (see Table 9). Therefore, hypothesis 3(a) was partially supported.
Hypothesis 3(b): Caucasian-American women with stronger attitudes toward social comparison will show higher tendency to engage in appearance management behaviors (some healthy and some risky) than women with weaker attitudes toward social comparison.

The main effect of attitudes toward social comparison on appearance management behaviors was analyzed using univariate analyses of variance from the one-way MANOVA. For Caucasian-American respondents, as expected, the univariate analyses of variance revealed statistically significant main effects for attitudes toward social comparison on all three appearance management behavior factors: clinical procedures, $F(1, 121) = 10.79, p < .05, \text{Eta}^2 = 8.2\%$; routine behaviors, $F(1, 121) = 10.56, p < .05, \text{Eta}^2 = 8.0\%$; and body shaping behaviors, $F(1, 121) = 6.06, p < .05, \text{Eta}^2 = 4.8\%$ (see Table 9). Thus, Caucasian-American respondents with stronger attitudes toward social comparison showed (1) higher tendency to engage in clinical procedures ($\bar{x} = 17.9$) than those with weaker attitudes toward social comparison ($\bar{x} = 14.2$); (2) higher tendency to engage in routine behaviors ($\bar{x} = 17.5$) than those with weaker attitudes toward social comparison ($\bar{x} = 15.9$); and (3) higher tendency to engage in body shaping behaviors ($\bar{x} = 13.1$) than those with weaker attitudes toward social comparison ($\bar{x} = 12.1$) (see Table 8). Therefore, hypothesis 3(b) was supported. Attitudes toward social comparison accounted for a moderate amount of the variance in both clinical procedures (8.2%) and routine behaviors (8%), and a small amount of variance in body shaping (4.8%).
<table>
<thead>
<tr>
<th>Variables</th>
<th>Attributions toward Social Comparison</th>
<th>Korean</th>
<th>Caucasian-American</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>N</td>
</tr>
<tr>
<td>Self-esteem</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stronger</td>
<td>34.1</td>
<td>5.25</td>
<td>69</td>
</tr>
<tr>
<td>Weaker</td>
<td>36.6</td>
<td>5.37</td>
<td>67</td>
</tr>
<tr>
<td>Appearance Evaluation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stronger</td>
<td>21.8</td>
<td>4.79</td>
<td>69</td>
</tr>
<tr>
<td>Weaker</td>
<td>22.6</td>
<td>4.33</td>
<td>67</td>
</tr>
<tr>
<td>Appearance Orientation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stronger</td>
<td>44.3</td>
<td>5.91</td>
<td>69</td>
</tr>
<tr>
<td>Weaker</td>
<td>40.6</td>
<td>6.25</td>
<td>67</td>
</tr>
<tr>
<td>Body Areas Satisfaction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stronger</td>
<td>23.5</td>
<td>5.42</td>
<td>69</td>
</tr>
<tr>
<td>Weaker</td>
<td>23.6</td>
<td>3.89</td>
<td>67</td>
</tr>
<tr>
<td>Clinical Procedures</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stronger</td>
<td>24.8</td>
<td>4.57</td>
<td>69</td>
</tr>
<tr>
<td>Weaker</td>
<td>22.1</td>
<td>4.89</td>
<td>67</td>
</tr>
<tr>
<td>Routine Behaviors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stronger</td>
<td>17.7</td>
<td>2.27</td>
<td>69</td>
</tr>
<tr>
<td>Weaker</td>
<td>17.0</td>
<td>2.66</td>
<td>67</td>
</tr>
<tr>
<td>Body Shaping</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stronger</td>
<td>12.9</td>
<td>2.51</td>
<td>69</td>
</tr>
<tr>
<td>Weaker</td>
<td>23.4</td>
<td>2.44</td>
<td>67</td>
</tr>
</tbody>
</table>

Table 9. Means and Standard Deviations (SD) for Attributions toward Social Comparison by the Dependent Variables
Paired Sample T-Test for H4

To test hypotheses 4(a) and 4(b), i.e., the differences in attitudes toward comparison with Korean models and Caucasian models among Korean and Caucasian-American participants, a paired sample, two-tailed t-test was used to compare levels of comparison toward each of the models. To analyze the degree of comparison of one’s physical appearance to each of four models (i.e., a Korean thin model, a Korean average model, a Caucasian thin model, and a Caucasian average model), one question for each model was asked of participants in the questionnaire. The question was “How much do you compare your physical appearance to any of four models?” The question was measured on a 5-point scale ranging from 1 = very little to 5 = very much. Scores for the Korean thin model and the Korean average-size model were summed for “Korean models” and scores for the Caucasian thin model and the Caucasian average-size model were summed for “Caucasian models.” The summed scores for each model type were used to measure the degree of comparison with each model.
Hypothesis 4(a): Among Korean women, the attitudes toward social comparison with Korean models will be stronger than the attitudes toward social comparison with Caucasian models.

To test hypothesis 4(a), that Korean women would have stronger attitudes toward social comparison with Korean models rather than Caucasian models, mean scores for Korean models \((\bar{x} = 2.74)\) and mean scores for Caucasian models \((\bar{x} = 2.33)\) among Korean respondents were compared using a paired sample t-test (see Table 10). Results revealed significant differences in the degree of comparison toward each model, \(t(100) = 5.28, p < .001\) (see Table 10). As expected, Korean respondents showed stronger attitudes toward comparison with Korean models than with Caucasian models. Thus, hypothesis 4(a) was supported.

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>SE of Mean</th>
<th>t</th>
<th>(P) (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Korean Models</td>
<td>101</td>
<td>2.74</td>
<td>1.057</td>
<td>.105</td>
<td>5.279</td>
<td>.000**</td>
</tr>
<tr>
<td>Caucasian Models</td>
<td></td>
<td>2.33</td>
<td>.941</td>
<td>.094</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(**p < .001\)

Table 10. Paired Sample T-test for Korean Respondents
**Hypothesis 4(b):** Among Caucasian-American women, the attitudes toward social comparison with Caucasian models will be stronger than the attitudes toward comparison with Korean models.

To test hypothesis 4(b), that Caucasian-American women would have stronger attitudes toward social comparison with Caucasian models rather than Korean models, mean scores for Korean models ($\bar{x} = 2.34$) and mean scores for Caucasian models ($\bar{x} = 2.49$) among Caucasian-American respondents were compared using a paired sample t-test (see Table 11). Results revealed no significant difference in the degree of comparison toward each model, $t(119) = -1.516, p = .132$ (see Table 11). Results indicate no significant difference within Caucasian-American respondents in the degree of comparison with models’ ethnicity (i.e., Korean versus Caucasian). Therefore, hypothesis 4(b) was not supported.

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>SE of Mean</th>
<th>t</th>
<th>$P$ (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Korean Model</td>
<td>120</td>
<td>2.34</td>
<td>1.106</td>
<td>.101</td>
<td>-1.516</td>
<td>.132</td>
</tr>
<tr>
<td>Caucasian Model</td>
<td>2.49</td>
<td>1.016</td>
<td>.093</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 11. Paired Sample T-test for Caucasian-American
One-Way Multivariate and Univariate Analyses of Variance 1 for H5, H6, and H7

To test hypotheses 5(a, b), 6(a, b), and 7(a, b) dealing with the association of a comparison target with self-esteem, body image and appearance management behaviors, both Korean and Caucasian-American respondents were divided into two groups based on their comparison target, either Korean models, or Caucasian models. If scores for Korean models were higher than for Caucasian models when respondents rated the degree of comparison with each model, they were coded as those having stronger attitudes toward social comparison with Korean models. Similarly, if scores for Caucasian models were higher than for Korean models when respondents rated the degree of comparison with each model, they are coded as those having stronger attitudes toward social comparison with Caucasian models. If the summed scores for Korean models and the summed scores for Caucasian models were the same, the case was coded as a missing case. As the result, there were 80 missing cases among Korean respondents and 45 missing cases among Caucasian-American respondents. The data were analyzed using a one-way multivariate analysis of variance (MANOVA). Respondents’ comparison target with two levels (i.e., Korean model and Caucasian model) was used as an independent variable. Self-esteem, three body image subscales (i.e., appearance evaluation, appearance orientation, and body areas satisfaction) and appearance management behaviors (i.e., clinical procedures, routine behaviors, and body shaping behaviors) served as dependent variables. There were no significant multivariate effects for the comparison target on all the dependent variables for either Korean or Caucasian respondents, $F (7, 56) = 1.25, p = .291$ (Korean) and $F (7, 70) = 1.17, p = .332$.
(Caucasian-American) (see Table 12). Each of the univariate analysis of variance revealed no significant main effects for the comparison target on each of the dependent variables. Thus, there was no statistically significant effect of comparison target (Korean models or Caucasian models) on self-esteem among either Korean or Caucasian respondents. The means and standard deviations for social comparison target on the dependent variables are displayed in Table 13.

<table>
<thead>
<tr>
<th></th>
<th>Variable</th>
<th>Wilks’</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Korean</td>
<td>Comparison Target1</td>
<td>.865</td>
<td>7, 56</td>
<td>1.251</td>
<td>.291</td>
</tr>
<tr>
<td>Caucasian</td>
<td>Comparison Target1</td>
<td>.895</td>
<td>7, 70</td>
<td>1.168</td>
<td>.332</td>
</tr>
</tbody>
</table>

Table 12. Multivariate Effects for the Comparison Target
<table>
<thead>
<tr>
<th>Variables</th>
<th>Korean (N = 64)</th>
<th>Caucasian-American (N = 78)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Self-esteem</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Korean Model</td>
<td>Mean 34.9</td>
<td>Mean 40.5</td>
</tr>
<tr>
<td></td>
<td>SD 5.15</td>
<td>SD 6.84</td>
</tr>
<tr>
<td></td>
<td>N 51</td>
<td>N 31</td>
</tr>
<tr>
<td>Caucasian Model</td>
<td>Mean 32.1</td>
<td>Mean 39.7</td>
</tr>
<tr>
<td></td>
<td>SD 5.16</td>
<td>SD 6.51</td>
</tr>
<tr>
<td></td>
<td>N 13</td>
<td>N 47</td>
</tr>
<tr>
<td><strong>Appearance Evaluation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Korean Model</td>
<td>Mean 22.3</td>
<td>Mean 26.0</td>
</tr>
<tr>
<td></td>
<td>SD 4.72</td>
<td>SD 6.16</td>
</tr>
<tr>
<td></td>
<td>N 51</td>
<td>N 31</td>
</tr>
<tr>
<td>Caucasian Model</td>
<td>Mean 20.1</td>
<td>Mean 23.6</td>
</tr>
<tr>
<td></td>
<td>SD 4.30</td>
<td>SD 5.63</td>
</tr>
<tr>
<td></td>
<td>N 13</td>
<td>N 47</td>
</tr>
<tr>
<td><strong>Appearance Orientation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Korean Model</td>
<td>Mean 43.3</td>
<td>Mean 46.9</td>
</tr>
<tr>
<td></td>
<td>SD 6.65</td>
<td>SD 8.39</td>
</tr>
<tr>
<td></td>
<td>N 51</td>
<td>N 31</td>
</tr>
<tr>
<td>Caucasian Model</td>
<td>Mean 43.0</td>
<td>Mean 45.3</td>
</tr>
<tr>
<td></td>
<td>SD 6.38</td>
<td>SD 7.29</td>
</tr>
<tr>
<td></td>
<td>N 13</td>
<td>N 47</td>
</tr>
<tr>
<td><strong>Body Areas Satisfaction</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Korean Model</td>
<td>Mean 23.7</td>
<td>Mean 29.0</td>
</tr>
<tr>
<td></td>
<td>SD 4.47</td>
<td>SD 5.28</td>
</tr>
<tr>
<td></td>
<td>N 51</td>
<td>N 31</td>
</tr>
<tr>
<td>Caucasian Model</td>
<td>Mean 23.2</td>
<td>Mean 27.4</td>
</tr>
<tr>
<td></td>
<td>SD 6.26</td>
<td>SD 5.74</td>
</tr>
<tr>
<td></td>
<td>N 13</td>
<td>N 47</td>
</tr>
<tr>
<td><strong>Clinical Procedures</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Korean Model</td>
<td>Mean 23.3</td>
<td>Mean 16.8</td>
</tr>
<tr>
<td></td>
<td>SD 5.16</td>
<td>SD 6.85</td>
</tr>
<tr>
<td></td>
<td>N 51</td>
<td>N 31</td>
</tr>
<tr>
<td>Caucasian Model</td>
<td>Mean 25.5</td>
<td>Mean 17.1</td>
</tr>
<tr>
<td></td>
<td>SD 6.92</td>
<td>SD 6.31</td>
</tr>
<tr>
<td></td>
<td>N 13</td>
<td>N 47</td>
</tr>
<tr>
<td><strong>Routine Behaviors</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Korean Model</td>
<td>Mean 17.7</td>
<td>Mean 17.3</td>
</tr>
<tr>
<td></td>
<td>SD 2.54</td>
<td>SD 2.15</td>
</tr>
<tr>
<td></td>
<td>N 51</td>
<td>N 31</td>
</tr>
<tr>
<td>Caucasian Model</td>
<td>Mean 16.8</td>
<td>Mean 16.9</td>
</tr>
<tr>
<td></td>
<td>SD 2.92</td>
<td>SD 3.00</td>
</tr>
<tr>
<td></td>
<td>N 13</td>
<td>N 47</td>
</tr>
<tr>
<td><strong>Body Shaping Behaviors</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Korean Model</td>
<td>Mean 12.5</td>
<td>Mean 12.3</td>
</tr>
<tr>
<td></td>
<td>SD 2.61</td>
<td>SD 2.54</td>
</tr>
<tr>
<td></td>
<td>N 51</td>
<td>N 31</td>
</tr>
<tr>
<td>Caucasian Model</td>
<td>Mean 12.6</td>
<td>Mean 12.6</td>
</tr>
<tr>
<td></td>
<td>SD 3.53</td>
<td>SD 2.33</td>
</tr>
<tr>
<td></td>
<td>N 13</td>
<td>N 47</td>
</tr>
</tbody>
</table>

Table 13. Means and Standard Deviations (SD) for Comparison Target on the Dependent Variables
One-Way Multivariate and Univariate Analyses of Variance 2 for H5, H6, and H7

Since the one-way MANOVA using the scores, in which respondents rated the degree of comparison with each model, revealed no significant results, another one-way MANOVA was conducted to examine the effect of model choice based on the models’ attractiveness on self-esteem, three body image subscales (i.e., appearance evaluation, appearance orientation, and body areas satisfaction), and appearance management behaviors (i.e., clinical procedures, routine behaviors, and body shaping behaviors). Respondents were asked to choose the one most attractive model among four models (i.e., a Korean thin model, a Korean average model, a Caucasian thin model, and a Caucasian average model) in the questionnaire. Based on their responses, respondents were divided into two groups. If respondents chose either the Korean thin model or the Korean average model as the most attractive model for them, they were coded as those having stronger attitudes toward social comparison with the Korean models. If respondents chose either the Caucasian thin model or the Caucasian average model as the most attractive model for them, they were coded as those having stronger attitudes toward social comparison with Caucasian models. This grouping based on the attractiveness of models was used as an independent variable to test the effects on dependent variables in the one-way MANOVA. There were no overall significant multivariate effects for the comparison target on the dependent variables for either Korean or Caucasian-American respondents, $F (7, 128) = .89, p = .519$ (Korean) and $F (7, 115) = .98, p = .449$ (Caucasian-American) (see Table 14). However, the univariate analyses of variance showed significant effects for the social comparison target on some dependent variables.
Hence, the analyses were used to test hypotheses 5(a, b), 6(a, b) and 7(a, b). The means and standard deviations for social comparison targets on the dependent variables are displayed in Table 15.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Wilks’</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Korean</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comparison Target2</td>
<td>.954</td>
<td>7, 128</td>
<td>.887</td>
<td>.519</td>
</tr>
<tr>
<td>Caucasian</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comparison Target2</td>
<td>.944</td>
<td>7, 115</td>
<td>.980</td>
<td>.449</td>
</tr>
</tbody>
</table>

Table 14. Multivariate Effects for Social Comparison Target
<table>
<thead>
<tr>
<th>Variables</th>
<th>Korean (N = 136)</th>
<th>Caucasian-American (N = 123)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Self-esteem</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Korean Model</td>
<td>35.5</td>
<td>5.49</td>
</tr>
<tr>
<td>Caucasian Model</td>
<td>34.0</td>
<td>4.85</td>
</tr>
<tr>
<td>Appearance Evaluation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Korean Model</td>
<td>22.4</td>
<td>4.55</td>
</tr>
<tr>
<td>Caucasian Model</td>
<td>19.6</td>
<td>4.19</td>
</tr>
<tr>
<td>Appearance Orientation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Korean Model</td>
<td>42.0</td>
<td>6.38</td>
</tr>
<tr>
<td>Caucasian Model</td>
<td>42.8</td>
<td>6.07</td>
</tr>
<tr>
<td>Body Areas Satisfaction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Korean Model</td>
<td>23.8</td>
<td>4.66</td>
</tr>
<tr>
<td>Caucasian Model</td>
<td>20.8</td>
<td>4.18</td>
</tr>
<tr>
<td>Clinical Procedures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Korean Model</td>
<td>23.3</td>
<td>4.96</td>
</tr>
<tr>
<td>Caucasian Model</td>
<td>25.0</td>
<td>4.08</td>
</tr>
<tr>
<td>Routine Behaviors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Korean Model</td>
<td>17.3</td>
<td>2.47</td>
</tr>
<tr>
<td>Caucasian Model</td>
<td>18.1</td>
<td>2.60</td>
</tr>
<tr>
<td>Body Shaping Behaviors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Korean Model</td>
<td>12.6</td>
<td>2.48</td>
</tr>
<tr>
<td>Caucasian Model</td>
<td>13.2</td>
<td>2.52</td>
</tr>
</tbody>
</table>

Table 15. Means and Standard Deviations (SD) for Comparison Target on the Dependent Variables
Hypothesis 5(a):  *Korean women with stronger attitudes toward comparison with Korean targets will have higher self-esteem compared to those with stronger attitudes toward comparison with Caucasian targets.*

The univariate analyses of variance revealed no significant main effects for the social comparison target on self-esteem among Korean respondents, $F (1, 134) = .844, p < .40, \text{Eta}^2 = 0.6\%$ (see Table 16). Attitudes toward social comparison either with the Korean models or the Caucasian models did not have an effect on the self-esteem of Korean respondents. Thus, hypothesis 5(a) was not supported.

Hypothesis 5(b):  *Caucasian-American women with stronger attitudes toward comparison with Caucasian targets will have higher self-esteem compared to those with stronger attitudes toward comparison with Korean targets.*

The univariate analyses of variance revealed no significant main effects for the social comparison target on self-esteem among Caucasian-American respondents, $F (1, 121) = .950, p < .40, \text{Eta}^2 = 0.8\%$ (see Table 16). Attitudes toward social comparison either with the Korean models or the Caucasian models did not have an effect on the self-esteem of Caucasian-American respondents. Thus, hypothesis 5(b) was not supported.
Hypothesis 6(a): **Korean women with stronger attitudes toward comparison with Korean targets will have higher body image compared to those with stronger attitudes toward comparison with Caucasian targets.**

The main effect of the social comparison target on body image measures was analyzed using the univariate analyses of variance. The univariate analyses of variance revealed significant main effects for the social comparison target on appearance evaluation ($F(1, 134) = 4.70, p < .05, \text{Eta}^2 = 3.4\%$) and body areas satisfaction ($F(1, 134) = 4.77, p < .05, \text{Eta}^2 = 3.4\%$) among Korean respondents (see Table 16). However, there was no significant main effect for the social comparison target on appearance orientation, $F(1, 134) = .02, p < .90, \text{Eta}^2 = 0.0\%$ (see Table 16). As expected, Korean respondents having stronger attitudes toward social comparison with Korean models showed more positive feelings about their physical appearance ($\bar{x} = 22.4$) than those having stronger attitudes toward social comparison with Caucasian models ($\bar{x} = 19.6$). They also showed higher satisfaction with most areas of their bodies ($\bar{x} = 23.8$) than those having stronger attitudes toward social comparison with Caucasian models ($\bar{x} = 20.8$) (see Table 15). Thus, hypothesis 6(a) was partially supported. Social comparison target, whether Korean models or Caucasian models, accounted for a small amount (3.2%) of the variance in appearance evaluation and a small amount (3.1%) of the variance in body areas satisfaction among Korean participants.
Hypothesis 6(b): Caucasian-American women with stronger attitudes toward comparison with Caucasian targets will have higher body image compared to those with stronger attitudes toward comparison with Korean targets.

The univariate analyses of variance revealed a significant main effect for the social comparison target2 on appearance evaluation among Caucasian-American respondents, $F(1, 121) = 4.53, p < .05, \text{Eta}^2 = 3.6\%$ (see Table 16). However, there were no significant effects for the social comparison target2 on appearance orientation ($F(1, 121) = .11, p < .80, \text{Eta}^2 = 0.1\%$) or body areas satisfaction ($F(1, 121) = 1.55, p < .30, \text{Eta}^2 = 1.3\%$) (see Table 16). As expected, Caucasian-American respondents who had stronger attitudes toward social comparison with Caucasian models showed more positive feelings about their physical appearance ($\bar{x} = 25.9$) than those who had stronger attitudes toward social comparison with Korean models ($\bar{x} = 23.7$). Thus, hypothesis 6(b) was partially supported. The type of social comparison target2, whether Korean models or Caucasian models, accounted for a small amount (3.6\%) of the variance in appearance evaluation among Caucasian-American participants.
<table>
<thead>
<tr>
<th></th>
<th>Korean</th>
<th>Caucasian-American</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$F$</td>
<td>df</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>.844</td>
<td>1, 134</td>
</tr>
<tr>
<td>Appearance Evaluation</td>
<td>4.702</td>
<td>1, 134</td>
</tr>
<tr>
<td>Appearance Orientation</td>
<td>.024</td>
<td>1, 134</td>
</tr>
<tr>
<td>Body Areas Satisfaction</td>
<td>4.767</td>
<td>1, 134</td>
</tr>
<tr>
<td>Clinical Procedures</td>
<td>1.421</td>
<td>1, 134</td>
</tr>
<tr>
<td>Routine Behaviors</td>
<td>1.226</td>
<td>1, 134</td>
</tr>
<tr>
<td>Body Shaping Behaviors</td>
<td>.773</td>
<td>1, 134</td>
</tr>
</tbody>
</table>

* $p < .05$

Table 16. Univariate Analyses of Variance for Social Comparison Target on the Dependent Variables
Hypothesis 7(a): *Korean women with stronger attitudes toward comparison with Korean targets will show higher tendency to engage in appearance management behaviors (some healthy and some risky) compared to those with stronger attitudes toward comparison with Caucasian targets.*

The univariate analyses of variance revealed no significant main effects for the social comparison target on each of the three appearance management behaviors among Korean respondents: $F (1, 134) = 1.42, p < .30$, $Eta^2 = 1.0\%$ (clinical procedures); $F (1, 134) = 1.23, p < .30$, $Eta^2 = 0.9\%$ (routine behaviors); $F (1, 134) = .77, p < .40$, $Eta^2 = 0.6\%$ (body shaping behaviors) (see Table 16). Attitudes toward comparison target either with the Korean models or the Caucasian models did not have an association with appearance management behaviors among Korean respondents. Thus, hypothesis 7 (a) was not supported.
Hypothesis 7(b): Caucasian-American women with stronger attitudes toward comparison with Caucasian targets will show higher tendency to engage in appearance management behaviors (some healthy and some risky) compared to those with stronger attitudes toward comparison with Korean targets.

The univariate analyses of variance revealed no significant main effects for the social comparison target on each of the three appearance management behaviors among Caucasian-American respondents: $F$ (1, 121) = .963, $p < .40$, $Eta^2 = 0.8\%$ (clinical procedures); $F$ (1, 121) = .016, $p < .90$, $Eta^2 = 0.0\%$ (routine behaviors); $F$ (1, 121) = .24, $p < .70$, $Eta^2 = 0.2\%$ (body shaping behaviors) (see Table 16). Attitudes toward a comparison target either with the Korean models or the Caucasian models did not have an association with appearance management behaviors among Caucasian-American respondents. Thus, hypothesis 7 (b) was not supported.
Evaluations of Four Models

This study developed one research question to find how strongly a female body figure is valued on dimensions of thinness and attractiveness among Korean and Caucasian-American women. For this research question, participants first evaluated each of four models and then they rated the most attractive model and the most influential model to them among the four models.

Evaluation of Each Model

To evaluate each of the four models (i.e., a Korean thin model, a Korean average model, a Caucasian thin model, and a Caucasian average model), participants answered three questions for each of the four models related to their attractiveness and thinness. The first question was “Do you think this model is physically attractive?” This question was measured on a 5-point scale ranging from 1 = Strongly disagree to 5 = Strongly agree. The second question was “How do you evaluate this model’s thinness? This question was measured on a 5-point scale ranging from 1 = Above average to 5 = Very thin. The last question was “Do you think this model has an attractive face?” and measured on a 5-point scale ranging from 1 = Strongly disagree to 5 = Strongly agree.

Results revealed that Korean respondents rated the Korean thin model (\(\bar{x} = 3.97\)) the highest for physical attractiveness, followed by the Korean average-size model (\(\bar{x} = 3.89\)), the Caucasian thin model (\(\bar{x} = 2.99\)) and the Caucasian average-size model (\(\bar{x} = 2.70\)) (see Table 17). However, Caucasian-American respondents rated the Korean average-size model (\(\bar{x} = 3.95\)) the highest for physical attractiveness, followed by the
Korean thin model (\( \bar{x} = 3.79 \)), the Caucasian average-size model (\( \bar{x} = 3.54 \)) and the Caucasian thin model (\( \bar{x} = 3.20 \)). Therefore, both Korean and Caucasian-American respondents tended to consider Korean models more attractive than Caucasian models. However, while Koreans seemed to consider thin models more attractive than average-size models, Caucasian-Americans seemed to consider average-size models more attractive than thin models.

Regarding each model’s thinness, both Korean and Caucasian-American respondents rated the Caucasian thin model the highest, followed by the Korean thin model, Korean average-size model and Caucasian average-size model. Thus, both respondent groups tended to consider the thin models as “thinner” compared to the average-size models (see Table 17). With regard to facial attractiveness, Korean respondents gave the top scores to the Korean average-size model (\( \bar{x} = 3.43 \)), followed by the Korean thin model (\( \bar{x} = 3.32 \)), the Caucasian thin model (\( \bar{x} = 2.94 \)) and the Caucasian average-size model (\( \bar{x} = 2.91 \)). On the contrary, Caucasian-American respondents gave the top scores to the Caucasian thin model (\( \bar{x} = 3.42 \)), followed by the Korean average-size model (\( \bar{x} = 3.40 \)), the Caucasian average-size model (\( \bar{x} = 3.33 \)) and the Korean thin model (\( \bar{x} = 3.27 \)) (see Table 17). Thus, Korean respondents tended to consider that Korean models have more attractive faces compared to Caucasian models; however, Caucasian-American respondents did not differ much in rating facial attractiveness for each of the four models.
<table>
<thead>
<tr>
<th></th>
<th>Korean Thin Model</th>
<th>Korean Ave. Model</th>
<th>Caucasian Thin Model</th>
<th>Caucasian Average Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Attractiveness</td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Korean</td>
<td>3.97</td>
<td>.81</td>
<td>3.89</td>
<td>.80</td>
</tr>
<tr>
<td>Caucasian</td>
<td>3.79</td>
<td>.83</td>
<td>3.95</td>
<td>.66</td>
</tr>
<tr>
<td>Thinness</td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Korean</td>
<td>4.19</td>
<td>.55</td>
<td>3.35</td>
<td>.76</td>
</tr>
<tr>
<td>Caucasian</td>
<td>4.40</td>
<td>.67</td>
<td>3.45</td>
<td>.57</td>
</tr>
<tr>
<td>Facial Attractiveness</td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Korean</td>
<td>3.32</td>
<td>.91</td>
<td>3.43</td>
<td>.87</td>
</tr>
<tr>
<td>Caucasian</td>
<td>3.27</td>
<td>.92</td>
<td>3.40</td>
<td>.94</td>
</tr>
</tbody>
</table>

Table 17. Evaluations of Four Models
Comparison of the Four Models

After respondents evaluated each of the four models, they were asked to choose the one most attractive model among the four models (i.e., a Korean thin model, a Korean average model, a Caucasian thin model, and a Caucasian average model). Then, they were asked to choose the reason why they considered the model to be physically attractive. The answer choices for the second question were “facial features,” “body type,” or “both.” Lastly, they were asked to choose the one closest model to how they wish to look among the four models. Results revealed that 76% of Korean respondents (N = 112) chose the Korean average-size model as the most attractive one, followed by the Korean thin model (16%, N = 23), Caucasian average-size model (5%, N = 7), and Caucasian thin model (4%, N = 6) (see Table 18). Thus, most of Korean respondents (over 90%) deemed the Korean models to be more attractive compared to Caucasian models.

On the other hand, Caucasian-American respondents considered both the Korean average-size model (37%, N = 46) and the Caucasian average-size model (37%, N = 46) as the most attractive models, followed by Caucasian thin model (17%, N = 21), and Korean thin model (10%, N = 13) (see Table 18). Therefore, Caucasian-Americans did not differ in rating the most attractive model between Korean and Caucasian models. Interestingly, both Koreans and Caucasian-Americans consider the average-size models to be more attractive to them compared to the thin models. Regarding the reason why they chose a model as the most attractive, 52% of Korean respondents (N = 77) rated “body type” as the top reason, followed by “both” (46%, N = 68) and “facial features”
(2%, N = 3). However, 82% of Caucasian-American respondents (N = 82) chose “both” as the top reason, followed by “body type” (33%, N = 41) and “facial features” (2%, N = 3). Thus, results revealed that facial features alone were not considered as the criterion to be physically attractive for both respondent groups. However, the body type alone or the body type along with facial features was an important feature to be considered as physically attractive.

Regarding the last question about the model closest to what respondents wished to look, results were similar to the results related to the choice of the most attractive model. Results revealed that 74% of Korean respondents (N = 109) chose the Korean average-size model as the model closest to how they wished to look, followed by the Korean thin model (16%, N = 24), the Caucasian thin model (5%, N = 8) and the Caucasian average-size model (5%, N = 7). On the other hand, Caucasian-American respondents considered both the Caucasian average-size model (34%, N = 43) and the Korean average-size model (33%, N = 41) as the model closest to how they wished to look, followed by the Caucasian thin model (21%, N = 26) and the Korean thin model (13%, N = 16) (see Table 20). Thus, while most of Korean respondents (90%) had a desire to look more like the Korean models, both the Caucasian and Korean average-size models were the model closest to how they wished to look among Caucasian-American respondents.
<table>
<thead>
<tr>
<th></th>
<th>Korean Thin Model</th>
<th>Korean Ave. Model</th>
<th>Caucasian Thin Model</th>
<th>Caucasian Average Model</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Korean (N = 148)</td>
<td>23</td>
<td>15.5</td>
<td>112</td>
<td>75.7</td>
</tr>
<tr>
<td>Caucasian (N = 126)</td>
<td>13</td>
<td>10.3</td>
<td>46</td>
<td>36.5</td>
</tr>
</tbody>
</table>

Table 18. Which model is the most attractive to you?

<table>
<thead>
<tr>
<th></th>
<th>Facial Features</th>
<th>Body type</th>
<th>Both</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Korean (N = 148)</td>
<td>3</td>
<td>2.0</td>
<td>77</td>
</tr>
<tr>
<td>Caucasian (N = 126)</td>
<td>3</td>
<td>2.4</td>
<td>41</td>
</tr>
</tbody>
</table>

Table 19. Why do you choose one most attractive model to be physically attractive?
<table>
<thead>
<tr>
<th></th>
<th>Korean Thin Model</th>
<th>Korean Ave. Model</th>
<th>Caucasian Thin Model</th>
<th>Caucasian Average Model</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Korean (N = 148)</td>
<td>24</td>
<td>16.2</td>
<td>109</td>
<td>73.6</td>
</tr>
<tr>
<td>Caucasian (N = 126)</td>
<td>16</td>
<td>12.7</td>
<td>41</td>
<td>32.5</td>
</tr>
</tbody>
</table>

Table 20. Which model is the closest to how you wish to look?
CHAPTER 5

DISCUSSION

Overview

The purpose of this study was to examine the effects of attitudes toward social comparison on self-esteem, body image, and appearance management behaviors among Korean and Caucasian-American women. In addition, this study investigated the association of attitudes toward comparison targets (Korean models versus Caucasian models) with self-esteem, body image and appearance management behaviors among Korean and Caucasian-American women. It was hypothesized that women with stronger attitudes toward social comparison would show lower self-esteem, poorer body image, and a greater tendency to engage in appearance management behaviors. It was also hypothesized that women would compare themselves more with similar comparison targets, thereby causing more impact on self-esteem, body image, and appearance management behaviors.

Self-administered questionnaires were distributed both in the United States and Korea between June and August 2012. The completed questionnaires from 126 Caucasian-American women and 148 Korean women with an age range of 18 to 30 were used as data. The data were analyzed by one-way between-subjects multivariate analyses
of variance (MANOVA) and univariate analyses of variance to examine the effects of attitudes toward social comparison and attitudes toward similar comparison targets on self-esteem, body image, and appearance management behaviors among the two groups. A paired sample, two-tailed t-test was conducted to examine the differences in attitudes toward comparison with Caucasian models and Korean models among Caucasian-American and Korean women.

The results of this study showed that Korean participants with stronger attitudes toward social comparison had lower self-esteem and showed more importance placed on physical appearance, but they did not differ in feelings about their appearance and satisfaction with most areas of their bodies compared to those with weaker attitudes toward social comparison. Caucasian-American with stronger attitudes toward social comparison had lower self-esteem and showed more negative feelings about their physical appearance, more importance placed on physical appearance, and less satisfaction with most areas of their bodies compared to those with weaker attitudes toward social comparison. In relation to appearance management behaviors, Korean participants with stronger attitudes toward social comparison showed a higher tendency to engage in clinical procedures including cosmetic surgery for both face and body, dermatology procedures, botox, freckle/mole removal, permanent makeup, and body hair removal compared to those with weaker attitudes toward social comparison. On the other hand, Caucasian-American participants with stronger attitudes toward social comparison showed higher tendency to engage in clinical procedures, higher tendency to engage in routine behaviors including skin care, hair treatment/color, manicures/pedicures, and
body lotion/washes, and higher tendency to engage in body shaping behaviors including diet, exercise, and weight training compared to those with weaker attitudes toward social comparison.

Regarding the association of attitudes toward comparison with similar targets, either Korean or Caucasian models, with self-esteem, body image and appearance management behaviors, Korean respondents showed stronger attitudes toward comparison with Korean models than with Caucasian models as hypothesized; however, there was no significant difference among Caucasian-American respondents in their attitudes toward comparison with models’ ethnicity. Contrary to expectations, attitudes toward comparison with either the Korean or the Caucasian models did not have an effect on the self-esteem of either ethnic group. However, as expected, Korean respondents who had stronger attitudes toward comparison with Korean models showed more positive feelings about their physical appearance and higher satisfaction with most areas of their bodies compared to those having stronger attitudes toward social comparison with Caucasian models. Caucasian-American respondents who had stronger attitudes toward social comparison with Caucasian models also showed more positive feelings about their physical appearance than those who had stronger attitudes toward social comparison with Korean models.

This study also examined one research question to find out how strongly thinness and attractiveness are valued in a female body by Caucasian-American and Korean women. The results of the study revealed that both Korean and Caucasian-American respondents tended to consider Korean models more attractive than Caucasian models.
However, while Koreans seemed to consider thin models more attractive than average-size models, Caucasian-Americans seemed to consider average-size models more attractive than thin models. Korean respondents also showed the tendency to consider that Korean models have more attractive faces compared to Caucasian models; however, Caucasian-American respondents did not differ much in rating facial attractiveness for each of the four models (i.e., a Korean thin model, a Korean average model, a Caucasian thin model, and a Caucasian average model). Regarding the perception of “thinness,” both respondent groups tended to consider the thin models as “thinner” compared to the average-size models.

Discussion of Findings

Thinness and attractive face are perceived as cultural standards of beauty in Western countries and this narrow concept of feminine beauty has been promoted through mass media (Heinberg & Thompson, 1995; Lennon et al, 1999a; Stice et al., 1998). Since people have a drive to evaluate themselves by comparison with others (Festinger, 1954), it is known that advertising generates social comparison (Freeman, 1984; Evans & McConnell, 2003; Richins, 1991; Thompson & Stice, 2001). Exposure to thin media images increases viewers’ tendency to make upward comparison; however, not all viewers make upward comparison to the media images. Since attitudes toward social comparison may differ by individual, the level of attitudes toward social comparison would affect self-esteem, body image, and appearance management behaviors. Thus, hypotheses 1, 2 and 3 suggested that there is an association of attitudes
toward social comparison with self-esteem, body image, and appearance management behaviors among Korean and Caucasian-American women.

**Hypothesis 1(a):** *Korean women with stronger attitudes toward social comparison will score lower on self-esteem than women with weaker attitudes toward social comparison.*

**Hypothesis 1(b):** *Caucasian-American women with stronger attitudes toward social comparison will score lower on self-esteem than women with weaker attitudes toward social comparison.*

The hypotheses 1(a) and 1(b) were supported; thus, both Korean and Caucasian-American participants with stronger attitudes toward social comparison showed lower self-esteem than those with weaker attitudes toward social comparison. Therefore, both Korean and Caucasian-American participants who had stronger tendency to compare their looks with the advertising models for fashion and beauty products and stronger tendency to look at advertisements of fashion and beauty products for appearance information, had lower self-esteem compared to those with weaker attitudes toward comparison with advertising models and advertisements. This finding confirmed the notion that social comparison can affect one’s self-feeling (Wood, 1989). Many studies investigated the effects of exposure to highly attractive models in advertisements on viewers’ feelings about themselves. For example, research found that the exposure to the thin ideal leads women to experience psychological problems, such as anger, depression,
body dissatisfaction, low self-esteem and unhealthy eating behaviors, such as eating disorders and excessive dieting (Ahem et al., 2008; Heinberg & Thompson, 1995; Heinberg et al., 1995; Irving, 1990; Pinhas et al., 1998; Stice & Shaw, 1994; Posavac et al., 1998). Findings from hypothesis 1 are therefore consistent with those studies and support influence of media on self-evaluation due to upward comparison, and the fact that women who have stronger attitudes toward social comparison are likely to have lower self-esteem.

**Hypothesis 2(a):** *Korean women with stronger attitudes toward social comparison will score lower on body image than women with weaker attitudes toward social comparison.*

**Hypothesis 2(b):** *Caucasian-American women with stronger attitudes toward social comparison will score lower on body image than women with weaker attitudes toward social comparison.*

Female models in fashion and beauty advertisements targeted at young women are uncommonly attractive and thin. Therefore, stronger attitudes toward comparison with models in fashion and beauty advertisements may create a greater negative discrepancy between the idealized model’s image and viewers’ perceived actual looks. The negative discrepancy, in turn, leads the viewers to have feelings of dissatisfaction with their appearance and to engage in more appearance management behaviors (some healthy and some risky) to achieve the ideal looks. Many studies examined the effects of
exposure to highly attractive advertising models on viewers’ body satisfaction and found that body satisfaction was lower after subjects were exposed to attractive advertising images (Evans & McConnell, 2003; Han, 2003; Heinberg & Thompson, 1995; Heinberg et al., 1995; Keery et al., 2004; Kim & Lennon, 2007; Posavac et al., 1998; Richins, 1991).

Hypothesis 2 proposed that both Korean and Caucasian-American women with stronger attitudes toward social comparison would have poorer body image compared to those with weaker attitudes toward social comparison. Hypothesis 2(a) was partially supported and hypothesis 2(b) was supported. Both Korean and Caucasian-American participants with stronger attitudes toward comparison with models in fashion and beauty advertisements placed more importance on physical appearance compared to those with weaker attitudes toward comparison with advertising models. Furthermore, Caucasian-American participants with stronger attitudes toward comparison with models in fashion and beauty advertisements showed more negative feelings about their physical appearance and less satisfaction with most areas of their bodies compared to those with weaker attitudes toward comparison with advertising models. Hence, findings from hypothesis 2 support that unattainable media images affected body satisfaction among women as they compare themselves to the ideal images.

Particularly, Korean participants in the present study, who had stronger attitudes toward social comparison, placed more importance on their own appearance and paid more attention to their looks than those who had weaker attitudes toward social comparison. However, Korean participants, regardless of levels of attitudes toward social
comparison, did not differ in levels of satisfaction with their appearance and satisfaction with body areas. Thus, the findings support that Asian women place great importance on physical appearance (Jung & Lee, 2006; Lee et al., 2001; Lennon et al., 1999b); however, the findings were not consistent with Han’s study (2003) which found that the greater tendency Korean college women had to make upward comparison to ideal media images, the more they experienced body dissatisfaction. The findings may be explained by BMI data among the Korean participants. The average BMI score for Korean participants was 19.8, which is classified as “underweight” and 68% of Koreans fell in the “underweight” category. Since Koran participants already have a thin body, they may not feel a great discrepancy between their actual bodies and ideal media images. Thus, levels of attitudes toward social comparison might not affect levels of satisfaction with their appearance or with most areas of their body among Korean women.

On the contrary, Caucasian-American participants who had stronger attitudes toward social comparison had more negative feelings about their appearance, placed more importance on appearance, paid more attention to their appearance, and felt less satisfaction with most areas of their body compared to those who had weaker attitudes toward social comparison. These findings are consistent with what other studies that found that as women make frequent comparisons to ideal media images, they experienced body dissatisfaction (Botta, 1999; Heinberg & Thompson, 1995; Lennon et al., 1999a; Richins, 1991). This finding suggests that Caucasian-American participants who have stronger attitudes toward social comparison to ideal media images may have a higher desire to look like the attractive models and, as a result, they experience body
dissatisfaction; this body dissatisfaction may lead them to engage more in appearance management behaviors, including some risky behaviors.

**Hypothesis 3(a):** Korean women with stronger attitudes toward social comparison will show higher tendency to engage in appearance management behaviors (some healthy and some risky) than women with weaker attitudes toward social comparison.

**Hypothesis 3(b):** Caucasian-American women with stronger attitudes toward social comparison will show higher tendency to engage in appearance management behaviors (some healthy and some risky) than women with weaker attitudes toward social comparison.

Hypothesis 3(a) was partially supported, while hypothesis 3(b) was supported. Korean respondents with stronger attitudes toward social comparison showed higher tendency to engage in clinical procedures, including cosmetic surgery, dermatology procedures, botox, freckle/mole removal, permanent makeup, and body hair removal, than those with weaker attitudes toward social comparison. However, they did not differ in routine behaviors (e.g., skin care, hair treatment/color, manicures/pedicures, and body lotion/washes) and body shaping behaviors (e.g., diet, exercise and weight training). Findings from hypothesis 3(a) support that Asian women place great importance on
physical appearance and actively engage in appearance management behaviors to improve their appearance (Jung & Lee, 2006; Lee & Rudd, 1999; Lee et al., 2001; Lennon et al., 1999b). As Lee and Rudd (1999) suggested, Korean women are likely to engage in appearance management behaviors, such as cosmetic surgery, to attain a Westernized beauty ideal. Other studies found that Korean women have showed a tendency to adopt Westernized looks (Han, 2003; Lee & Rudd, 1999) and this desire has led to the increase in cosmetic surgery procedures in Korea (Korea Times, 2011). For example, one out of five Korean women aged between 19 and 49 years had a cosmetic surgery in 2009 (Korea Times, 2011). Korea became the world’s largest market for cosmetic surgery procedures at a rate 1.8 times higher than people in the United States (Asian Plastic Surgery, 2010). Not surprisingly, Korean participants in the present study who had stronger attitudes toward social comparison were also likely to engage in cosmetic surgeries for both face and body to achieve their ideal appearance. They also tended to engage in clinical procedures rather than routine or body shaping behaviors. This suggests that Koreans may tend to seek professional help for enhancing the face and body to fulfill or fit an ideal image.

On the other hand, Caucasian-American respondents who had stronger attitudes toward social comparison had higher tendencies to engage in all types of appearance management behaviors (clinical procedures, routine behaviors and body shaping behaviors) than those with weaker attitudes toward social comparison. The results suggest that Caucasian-Americans tended to engage in more appearance management behaviors than Koreans. It is not surprising because Caucasian-Americans who have
stronger attitudes toward social comparison tended to be dissatisfied with their bodies and place more importance on physical appearance compared to those with weaker attitudes toward social comparison (Hypothesis 2b). As a result, they were more likely to engage in appearance management behaviors to achieve an ideal body image that is portrayed in the advertisements. Findings of hypothesis 3(b) are consistent with studies that found that media exposure causes body dissatisfaction, leading to an increase in appearance management behaviors, such as dieting, eating disorder tendencies, and cosmetic surgeries among women (Fallon, 1990; Kim & Lennon, 2006; Lennon & Rudd, 1994; Stice et al., 1998; Rudd & Lennon, 2000). For example, Rudd and Lennon (2000) found that American college women reported that comparison with others or to media images influenced them to engage in some risky appearance management behaviors, such as eating disorders, drinking, smoking, use of laxatives, and excessive exercise. Another research study found that exposure to fashion or beauty magazines increased the risk of eating disorder tendencies among American college women (Kim & Lennon, 2006). Hence, women who have stronger attitudes toward social comparison may be likely to engage in more appearance management behaviors to attain an ideal body as seen in media images.
When people engage in social comparison, they are likely to compare themselves with others who are similar to them on some characteristics that are perceived as socially important (Festinger, 1954). For example, women are likely to compare themselves with women, while men are likely to compare themselves with men. With this view, Asians would have a tendency to compare themselves with Asians, while Caucasian-Americans would like to compare themselves with Caucasian-Americans. Hypotheses 4(a) and 4(b) examined the differences in attitudes toward comparison with Korean models and Caucasian models among Korean and Caucasian-American participants.

**Hypothesis 4(a):** Among Korean women, the attitudes toward social comparison with Korean models will be stronger than the attitudes toward social comparison with Caucasian models.

**Hypothesis 4(b):** Among Caucasian-American women, the attitudes toward social comparison with Caucasian models will be stronger than the attitudes toward comparison with Korean models.

Hypothesis 4(a) was supported; thus Korean participants had stronger attitudes toward comparison with Korean models than with Caucasian models. Women tend to compare their appearance to ideal media images and such comparisons result in body dissatisfaction (Fallon, 1990; Kim & Lennon, 2006; Lennon & Rudd, 1994; Stice et al., 1998; Rudd & Lennon, 2000). However, as Wood (1989) suggested, the similarity of the comparison target to the person making the comparison moderated the social
comparison effect, the effects of comparisons with a similar comparison target would be less negative than the effects of comparisons with dissimilar targets because comparison with similar others who are better off would most likely to create less discrepancy than with dissimilar others. Findings from hypothesis 4(a) imply that, with respect to beauty standards, since Korean women are likely to compare themselves mostly with similar others (i.e., Korean models) rather than dissimilar others (i.e., Caucasian models), they might have less negative impact on the outcome of the comparison (Lockwood & Kunda, 1997).

However, Caucasian-American participants unexpectedly did not differ in the degree of their comparison with either Korean or Caucasian models. Thus, hypothesis 4(b) was not supported. In the present study, both Korean and Caucasian models were evaluated as attractive by Caucasian-American participants. Therefore, with regard to social comparison to attractive media models, Caucasian-American participants seemed likely to view media models representing ideal beauty standards equally attractive regardless of the models’ ethnicity.
Comparisons to ideal media images have been seen to have an effect among women (Frith et al., 2005; Richins, 1991); however, the effect of comparisons may be moderated by the comparison target (i.e. similar versus dissimilar targets). Hypotheses 5(a, b), 6(a, b) and 7(a, b) examined the impact of the comparison targets (i.e., Korean models versus Caucasian models) on self-esteem, body image, and appearance management behaviors.

**Hypothesis 5(a):** Korean women with stronger attitudes toward comparison with Korean targets will have higher self-esteem compared to those with stronger attitudes toward comparison with Caucasian targets.

**Hypothesis 5(b):** Caucasian-American women with stronger attitudes toward comparison with Caucasian targets will have higher self-esteem compared to those with stronger attitudes toward comparison with Korean targets.

A comparison target perceived as similar might have more of a positive impact on the outcome of the comparison than a dissimilar target because comparisons with a similar target would create less discrepancy than with a dissimilar target (Lockwood & Kunda, 1997). Contrary to expectations, attitudes toward social comparison either with the Korean models or the Caucasian models did not have an effect on the self-esteem of both Korean and Caucasian-American respondents. Thus, both hypothesis 5(a) and 5(b)
were not supported. These findings suggest that the model’s ethnicity as a target reference seems unlikely to affect viewers’ self-esteem. Hence, the findings from hypothesis 5 imply that thin and attractive models, regardless of ethnicity, may provide active comparison targets for viewers.

**Hypothesis 6(a):** *Korean women with stronger attitudes toward comparison with Korean targets will have higher body image compared to those with stronger attitudes toward comparison with Caucasian targets.*

**Hypothesis 6(b):** *Caucasian-American women with stronger attitudes toward comparison with Caucasian targets will have higher body image compared to those with stronger attitudes toward comparison with Korean targets.*

Hypothesis 6(a) was partially supported; thus, Korean participants who had stronger attitudes toward comparison with Korean models showed more positive feelings about their physical appearance and higher satisfaction with most areas of their bodies than those who had stronger attitudes toward comparison with Caucasian models. Similarly, hypothesis 6(b) was also partially supported; thus Caucasian-American participants who had stronger attitudes toward comparison with Caucasian models showed more positive feelings about their physical appearance than those who had stronger attitudes toward comparison with Korean models. These findings support that
similarity of the comparison target to the viewer making the comparison may moderate the effects of social comparison (Wood, 1989) and comparison with a similar target would have more positive effects on the outcome of the comparison than would a dissimilar target (Lockwood & Kunda, 1997). In the present study, both Korean and Caucasian-American participants who had stronger attitudes toward comparison with similar targets who were more attractive than themselves, perceived more positive feelings about their physical appearance. However, only Korean participants who had stronger attitudes toward comparison with similar targets showed higher satisfaction with most areas of their bodies as well as more positive feelings about their appearance. Koreans may see Korean models as more realistic and attractive than Caucasian models because adopting Westernized standards of physical beauty may be considered difficult to attain for Asians. Therefore, the impact of the comparison with similar targets rather than with dissimilar targets would be more positive to Koreans than to Caucasians.
Hypothesis 7(a): Korean women with stronger attitudes toward comparison with Korean targets will show higher tendency to engage in appearance management behaviors (some healthy and some risky) compared to those with stronger attitudes toward comparison with Caucasian targets.

Contrary to expectations, attitudes toward a comparison target either with the Korean models or the Caucasian models did not have an association with appearance management behaviors among Korean respondents. Thus, hypothesis 7(a) was not supported. Thus, these findings suggest that the model’s ethnicity as a target reference seems unlikely to affect viewers’ appearance management behaviors.

Hypothesis 7(b): Caucasian-American women with stronger attitudes toward comparison with Caucasian targets will show higher tendency to engage in appearance management behaviors (some healthy and some risky) compared to those with stronger attitudes toward comparison with Korean targets.

Contrary to expectations, attitudes toward a comparison target either with the Korean models or the Caucasian models did not have an association with appearance management behaviors among Caucasian-American respondents. Thus, hypothesis 7(b) was not supported. Thus, these findings suggest that attitudes toward a comparison target in terms of model’s ethnicity seem unlikely to affect viewers’ appearance management behaviors.
**Research Question:** How strongly is a female body figure valued on dimensions of thinness and attractiveness among Korean and Caucasian-American women?

In the present study, one research question was proposed to examine how strongly a female body figure is valued on dimensions of thinness and attractiveness among Korean and Caucasian-American women. When Korean and Caucasian-American participants evaluated each of four models (i.e., a Korean thin model, a Korean average model, a Caucasian thin model, and a Caucasian average model), surprisingly, both Koreans and Caucasian-Americans evaluated Korean models as being more attractive than Caucasian models. However, Caucasian-Americans perceived average-size models as more attractive than thin models, while Koreans perceived thin models as more attractive than average-size models. The findings imply that the emphasis of thinness prevails in Korea and thin cultural beauty norms may be even more valued in Korea than in the United States. Thus, the findings support that the standards of female beauty today do not differ in Asian cultures from those in the United States (Bisell & Chung, 2009; Han, 2003).

Regarding each model’s thinness and facial attractiveness, both groups of participants perceived thin models as “thinner” than the average-size models. Korean participants rated Korean models as having more attractive faces than Caucasian models, while Caucasian-American participants did not differ much in rating facial attractiveness for Korean and Caucasian models. American college students are easily exposed to Asian
students at school because of diversity on American college campuses. However, Koreans are not exposed to Caucasians as much as Americans are exposed to Asians. From this perspective, it is not surprising that Caucasian-American students did not differ much in rating facial attractiveness among Korean and Caucasian models, while Korean participants rated Korean models higher in facial attractiveness than Caucasian models. As discussed for hypothesis 3, Korean women have admired westernized looks and this admiration has led to increased cosmetic surgery among Korean women (Glain, 1993; Han, 2003; Lee & Rudd, 1999). Korean female models in advertisements may already have westernized facial features such as big eyes, a high nose, prominent cheekbones, and a small face, achieved with cosmetic surgeries. Thus, Korean participants may view Korean models as having more attractive faces due to the similarity of ethnicity with participants compared to Caucasian models. These findings are not consistent with Bissell and Chung’s study (2009), which found that a thin Caucasian model among other models of different ethnicities received the highest facial attractiveness scores from both Koreans and Americans. On the other hand, the finding of the present study supports a study which found that both Asian and Caucasian-American women perceived Asian female targets to be equally attractive as Caucasian-American targets (Evans & McConnell, 2003). Therefore, there is a need for further cross-cultural studies leading to better understanding of the perception of female attractiveness valued by different cultures.

In this present study, both Koreans and Caucasian-Americans rated the average-size models to be more attractive to them than the thin models due to both body type and
facial features of the model. Furthermore, most of the Korean participants wished to look more like the Korean average-size model, while Caucasian-Americans wished to look like both the Caucasian and Korean average-size models. The finding supports the results of Halliwell and Dittmar’s study (2004) in the way that thin models were perceived as less attractive than average-size models by both Korean and American women. It suggests that the use of thin models in advertisements would not be the only effective way to capture attention of viewers. Similarly, Lennon et al. (1999a) conducted a focus group discussion regarding fashion advertisements for clothing and beauty products and found that the participating college students did not like the unrealistically attractive female models and felt that the models in the advertisements set unattainable beauty standards. This may support findings of the present study. Since most participants were already aware that female beauty standards are set by models in advertisements and are unattainable, they may not like the unrealistic media images, but rather tend to view average-size models as more attractive than thin models. Hence, this finding may imply a positive signal to our society because the tendency to evaluate average-size models as more attractive than thin models would provide women less pressure to be thin and, in turn, would decrease body dissatisfaction and other related problems.
Conclusions and Implications of the Study

A thin body and an exceptionally beautiful face are considered to define the desirable feminine beauty ideal in American culture. This emphasis of body thinness and facial attractiveness prevails in Korea as well as in the United States since thin and attractive cultural norms are more global in nature today (Bissell & Chung, 2007; Jung & Lee, 2006). Our current sociocultural environment, in which the thin body and attractive face are highly valued and rewarded, has contributed to body dissatisfaction among women and pressure to be thin and attractive (Thompson & Stice, 2001). We often compare ourselves with the idealized images in mass media and such comparisons may create dissatisfaction with ourselves. The level of attitudes toward social comparison an individual holds may be an important predictor of the negative effects of media (Tiggemann & McGill, 2004). Thus, the present study examined the association of attitudes toward social comparison to ideal media images with self-esteem, body image, and appearance management behaviors among Korean and Caucasian-American women.

The impact of exposure to ideal media images may differ by similarity or dissimilarity of a comparison target to whom individuals compare themselves. Therefore, the present study also investigated the effects of similarity of a comparison target in terms of models’ ethnicity on women’s self-esteem, body image and appearance management behaviors. Furthermore, this study examined how strongly a female body figure is valued on dimensions of thinness and attractiveness among Korean and Caucasian-American women.
Results revealed:

1) The negative association of attitudes toward social comparison with self-esteem and body image among both Korean and Caucasian-American participants;

2) The positive association of attitudes toward social comparison with appearance management behaviors among both Korean and Caucasian-American participants;

3) Stronger attitudes toward comparison with a similar comparison target among Korean participants;

4) No differences in attitudes toward social comparison with a similar or a dissimilar comparison target among Caucasian-American participants;

5) No impact of attitudes toward social comparison either with a similar comparison target or a dissimilar comparison target on self-esteem among both Korean and Caucasian-American participants;

6) The positive impact of attitudes toward social comparison with a similar target on body image among both Korean and Caucasian-American participants;

7) No impact of attitudes toward social comparison either with a similar comparison target or a dissimilar comparison target on appearance management behaviors among both Korean and Caucasian-American participants;
8) The choice of Korean models as more attractive than Caucasian models among both Korean and Caucasian-American participants;
9) The choice of average-size models as more attractive than thin models among both Korean and Caucasian-American participants;
10) The choice of Korean models as having more attractive faces than Caucasian models among Korean participants;
11) No differences in rating facial attractiveness of Korean and Caucasian models among Caucasian-American participants; and
12) The greater tendency to wish to look like average-size models than thin models among both Korean and Caucasian-American participants.

The findings of this study provide support for the idea that social comparison with models in advertisements would cause less body satisfaction, lower self-esteem, and more appearance management behavior tendencies. These findings are reasonable in the way that women who have stronger attitudes toward social comparison would have a stronger drive to be thin and attractive. Thus, social comparison plays a significant role in how attitudes toward social comparison to ideal media images affect women’s body image and related attitudes and behaviors in this study. The present study supports both the sociocultural theory that current societal standards emphasizing thinness and attractiveness cause psychological problems to those who do not have the ideal images (Lau et al., 2006; Posavac et al., 1998), and the social comparison theory that explains
individuals’ tendency to compare themselves to others and such comparison can affect their self-evaluation (Adomaitis & Johnson, 2008; Hogg et al., 1999; Richins, 1991).

The conceptual model proposed in Chapter 2 examined the linkages of attitudes toward social comparison with self-esteem, body image, and appearance management behaviors. Sociocultural theory of body image has been used to explain the development of psychological problems, such as body dissatisfaction and eating disorders as negative effects of exposure to ideal media images (Posavac, et al., 1998) and the social comparison theory has often been used to explain how women who are exposed to ideal media images may experience negative feelings about the self and their bodies (Richins, 1991). Findings of this study revealed that both Korean and Caucasian-American participants who had a higher degree of comparison of their appearance to the models in clothing and beauty advertisements showed lower self-esteem, poorer body image, and more tendency to engage in appearance management behaviors. These findings provided support for both sociocultural theory of body image and social comparison theory in these ways: (1) Korean and Caucasian-American women were likely to compare themselves to idealized media images, (2) appearance comparisons were related to negative feelings about themselves and their bodies, and (3) appearance comparisons were related to a higher tendency to engage in appearance management behaviors. The conceptual model also described the association of attitudes toward a comparison target with self-esteem, body image and appearance management behaviors. This study found a positive association of attitudes toward a similar comparison target only with body image among both Korean and Caucasian-American participants. Thus, both Korean and
Caucasian-American participants who had stronger attitudes toward comparison with similar targets showed a higher body image compared to those who had stronger attitudes toward comparison with dissimilar targets. However, no association of attitudes toward comparison with a similar or dissimilar target was found with either self-esteem or appearance management behaviors. Thus, there is a need for further studies leading to a better understanding of the impact of attitudes toward comparison with a similar or dissimilar comparison target on self-esteem, body image and appearance management behaviors.

The effect of media images on body image and other psychological variables has been investigated mostly among women in Western countries; however, since thin beauty standards prevail in Asian countries (Bissell & Chung, 2007; Chen, 1993; Frith et al., 2005; Jung & Lee, 2006), it was necessary to examine the effect of media images among women in Asian countries. In this light, this study has important implications in the area of effects of attitudes toward social comparison on self-esteem, body image, and appearance management behaviors among Korean as well as Caucasian-American women.

One of the major contributions of this study is to demonstrate that Korean women, who have a greater desire for conformity with thin and attractive media images, are also more likely to compare themselves to the media images and experience more body dissatisfaction and lower self-esteem than those with less desire to conform the ideal images. Some cross-cultural studies have identified the globalization of thin and attractive beauty norms across Asian countries (Jung & Lee, 2006; Jung & Lee, 2009).
Thus, our society’s obsession with thinness is not limited to Western countries. As a result, the incidences of body image disturbances, such as eating disorders, have increased among Asian women (Lee, 1993). In addition, Lee and Rudd (1999) suggested that Korean women are likely to engage in appearance management behaviors, such as exercise, dieting, or cosmetic surgery to attain a Westernized beauty ideal. As discussed in hypothesis 3, Korean women have a tendency to adopt Westernized looks (Han, 2003; Lee & Rudd, 1999) and this desire has led to an increase in cosmetic surgery among Korean young women (Korea Times, 2011). Asian populations in the United States may experience difficulty in maintaining positive self-esteem and body image due to comparisons of their looks to thin and attractive beauty standards. For example, Chen (1993) stated that Asians in the United States were more likely to have cosmetic surgery, such as eyelid surgery, nasal implants, or nasal tip refinements than other ethnic groups. Women, regardless of ethnic background, tend to be dissatisfied with their bodies. For example, a meta-analysis of body dissatisfaction among women in the United States found that women from all ethnic groups, including Caucasian-American, Asian-American, Hispanic, and African-American showed similar body dissatisfaction levels (Grabe & Hyde, 2006). Therefore, as trends indicate increased body dissatisfaction and cosmetic surgery among women, further studies should expand on the current findings to other ethnic minority groups, such as Hispanics, Chinese, and Indians, for a better understanding of the impact of media images on women in different cultures.

Another contribution of this study is to demonstrate that Korean women are likely to compare themselves with a similar target (i.e., Korean models), and both Korean and
Caucasian-American women who have stronger attitudes toward comparison with similar targets in terms of models’ ethnicity, showed more positive feelings about their physical appearance. Furthermore, both Korean and Caucasian-American women were likely to view average-size models as being more attractive than thin models, and thus they were more likely to look like average-size models rather than thin models. These findings have an implication that the use of thin models in advertisements would not be the only way to increase the effectiveness of advertising. A thin body is indeed valued in our society; however, it is not clear whether women view unrealistically thin models as attractive. Halliwell and Dittmar (2004) argued that the use of ultra-thin models in advertisements was not an effective way to capture viewers’ attention or increase purchase intentions because it increased viewers’ negative feelings about themselves. Thus, the use of average-size models in the media could reduce the cultural pressure to be thin and may help women develop positive feelings about themselves. For example, Irving (1990) found that women who were exposed to images of larger models showed less body image disturbance than women who were exposed to thin models. There has been extensive criticism of the use of ultra-thin models in advertisements because they lead to body dissatisfaction and eating disorders (Adomaitis & Johnson, 2008; Hogg et al., 1999; Richins, 1991; Stephens et al., 1994; Tiggemann & Polivy, 2010). Therefore, marketers or advertisers need to change their beliefs that the use of ultra-thin models increases the effectiveness of their advertising. Instead, they should be aware of potential negative outcomes to viewers of unrealistic media images and should work for more socially responsible advertising by selecting models that reflect an attainable body size to most
women in the population. In addition, the scarcity of Asian models in the media may influence Asian women more negatively about themselves because they would perceive a greater discrepancy between their actual bodies and Caucasian models in the media. Therefore, marketers should try to use diverse models in terms of ethnicity in the media for various viewers from different ethnic backgrounds. The use of attractive average-size models and diverse models of different ethnic backgrounds in advertisements will lead marketers to a more socially responsible practice because the practice could avoid increasing body dissatisfaction and risky behaviors, such as eating disorders, among women.

The cultural standard of feminine beauty portrayed in the media is an unattainable thin body and a flawless attractive face. Photo manipulation to create unattainable thin attractive images has harmful effects on girls and young women as they compare themselves to those images. Sociocultural factors have often targeted media influences to mass audience. Thus, women of all ages are under pressure to achieve the societal standards of beauty and have engaged in appearance management behaviors (some healthy or some risky) to improve or alter their appearance to match the current societal beauty norms (Fallon, 1990; Lennon & Rudd, 1994). Eating disorders are often considered as a product of the sociocultural pressures for women to have a thin body (Hall, 1995; Hsu & Sobiewicz, 1991; Kashubeck-West & Mintz, 2001; Levine & Mumen, 2009; Stice & Shaw, 1994). For example, exposure to unrealistic media images results in body dissatisfaction by internalization of the thin and attractive beauty ideals. Body dissatisfaction has increased among girls (Blowers et al., 2003; Keery et al., 2004;
Martin & Kennedy, 1993; Morrison et al., 2004). Research shows that girls are more affected by ideal media images than college women and older women and thus they tend to experience body dissatisfaction and eating disorder tendencies as they perceived pressure to be thin (Blowers et al., 2003; Botta, 1999; Collins, 1991; Freeman, 1984; Martin & Kennedy, 1993). For example, over one-half of teenage girls have unhealthy weight control behaviors, such as skipping meals, fasting, smoking cigarettes, and vomiting (Blowers et al., 2003; Freeman, 1984). In addition, Collins (1991) found that 42% of 1st to 3rd grade girls wanted to be thinner. Adolescents are heavily influenced by the mass media in a way that they develop opinions and information to share with peers (Krayer, Inglede, & Iphofen, 2008). Keery et al. (2004) found that a high level of internalization of societal beauty norms was associated with greater body dissatisfaction, eating disturbances, and lower self-esteem among female adolescents. Therefore, it is important to study body image and self-esteem among girls as well as young women extensively since they are more likely to be exposed to mass media.

Findings of the present study suggest the need of education to increase young women’s awareness of the negative effect of unattainable media images and to help them to have healthy body image and sound self-worth. Halliwell and Dittmar (2004) stated that internalization of sociocultural beauty norms is an important moderator of the impact of ideal media images on women’s body image. Therefore, intervention programs should develop strategies to protect young women from the potential negative impact of ideal media images, and reduce their levels of internalization. A study indicated that an educational intervention was useful to help women reduce the impact of ideal media
images and decrease body dissatisfaction (Ogden & Sherwood, 2008). For example, class activities using Photoshop or other software programs to alter digital images to look perfect and unrealistic would help women understand the fact that the perfect looks and the perfect body shapes portrayed in the media are not real. As a growing number of young Koran women are suffering from eating disturbances, such as eating disorders and excessive dieting (Han, 2003), media intervention programs should also be developed to help the young Korean population to evaluate media images critically and to develop a positive body image.

Furthermore, since the ideal body image perception may start to develop at an early age, prevention programs are also needed to educate adolescent girls to resist negative messages to be thin and attractive, to think critically about ideal media images, and to accept a wide range of healthy body sizes. As young girls grow older and are exposed to unrealistic media images, they may be likely to engage in upward comparisons to media models. Thus, prevention programs should help them critically process idealized media images and discourage upward comparisons with the media images. In particular, media literacy programs developed for adolescent girls might help them to develop critical thinking and media literacy, to establish strong self-esteem, and to reduce the possibility of body image disturbances and tendencies toward eating disorders or other risky appearance management behaviors.
**Limitations of the Study**

One main limitation of this study was the use of a convenience sample and a small sample size; thus results of the study cannot be generalized to all Korean and Caucasian-American women. Therefore, to increase the validity of these study findings, it is important to replicate the study with a larger random sample of diverse ethnic groups. In addition, to collect American data, the questionnaire was distributed in consumer sciences classes. Thus, the majority of Caucasian-American participants may have learned about the impact of idealized media images on body image in their core courses. The awareness of the possible negative effects of media images on self-esteem, body image and appearance management behaviors may have protected them from comparisons to idealized media images. This may be the reason why Caucasian-American participants had almost neutral feelings comparing themselves to models in advertisements. Participants who have apparel-related majors may place more importance on physical appearance than those who have other majors. Hence, if the questionnaire was distributed in other classes, such as engineering classes, the findings of the present study may be different and enhance the generalizability of findings.

The use of only one stimulus picture in each ethnicity condition limits the generalizability of findings of this study. In particular, participants’ evaluations could be biased because the Korean model and the Caucasian model used in this study were wearing a different style of bikini and showed different facial expressions. Therefore, varying the pictures would be helpful for the generalizability of the results. As an
example, if researchers provide a number of pictures for participants to choose as one ideal image for them, their evaluation toward the model would be more accurate.

Another possible limitation was that participants’ responses to the questionnaire used in this study, might not reflect their actual feelings correctly. Since most people are already aware of the impact of media images on body image, participants may have completed the questionnaire in a way that they believed that was the expected outcome. Thus, there is a need to develop better measures to assess individuals’ sincere views accurately. For example, the questionnaire may include open-ended questions along with closed questions because open-ended questions may give increased richness to respondents’ answers and provide more accurate views of their thinking. As another example, researchers may use the “social desirability and infrequency scales” to measure whether respondents answer questions in a socially desirable rather than a truthful manner (Jackson, 1984).

With regard to a measure of attitudes toward social comparison, this study used Richins’ (1991) social comparison scale including only four items. However, the four items might not be sufficient enough to assess individuals’ attitudes toward social comparison accurately. In particular, questionnaires applied to the study of social comparison may not be appropriate to assess attitudes toward social comparison. However, there may not exist other research methods except the use of questionnaires to measure attitudes toward social comparison; thus researchers may consider including more than one measure in the questionnaire for the measure of attitudes toward social
comparison and compare results of the measures to make sure that they measure the property it is supposed to measure.

**Suggestions for Future Research**

The present study investigated attitudes toward social comparison as a significant predictor influencing body image, self-esteem and appearance management behaviors. However, internalization of the ideal media images may be a stronger predictor of developing body dissatisfaction, eating disturbances, and lower self-esteem in order to attain often unrealistic beauty ideals (Heinberg et al., 1995; Keery et al., 2004) because internalization of societal beauty norms plays an important role in how individuals are affected by the cultural norms (Hall, 1995). Therefore, it would be important to continue their line of inquiry to examine the association of social attitudes toward physical appearance with body image and other related variables. Furthermore, levels of attitudes toward physical appearance may be moderated by age, gender and ethnicity; thus, further studies should examine age, gender and ethnicity as moderating factors on the impact of media exposure.

The majority of women value thinness and attractiveness as ideal beauty standards, but not all women are susceptible to the effects of media exposure. For example, many women enjoy reading fashion magazines for entertainment or seeking new products without experiencing negative effects, such as body dissatisfaction and lower self-esteem. This implies that people may have different tendencies to make upward comparisons and they may produce different effects on body image and self-
esteem. Thus, there is a need for further studies to examine what preventative factors in individuals cause different responses in comparisons to ideal media images. For example, age and ethnicity may be considered for factors influencing the process of social comparison differently.

Women are likely to evaluate their bodies more negatively than men. As women’s ideal body shape has been thinner over time, ideal male body has been more muscular over time (Baghurst, Hollander, Nardella, & Haff, 2006; Frederick, Fessler, & Haselton, 2005). Both ideal body shapes for men and women portrayed in the media are unrealistic; therefore, the discrepancy between ideal body images portrayed in the media and actual body shapes would likely increase among both men and women. In this view, both men and women would suffer from body dissatisfaction as one serious negative effect of comparisons to media images. However, little research has examined the effects of ideal male media images on men’s body image, while women’s body dissatisfaction as a negative effect of exposure to ideal female images in the media has been studied extensively. Therefore, it is strongly suggested that future research investigate the effects of ideal male media images on men’s body image, self-esteem, and appearance management behaviors.

The present study found that both Korean and Caucasian-American participants tended to perceive average-size models as being more attractive than thin models. But in reality, marketers have used unrealistically thin and attractive female models to draw viewers’ attention to advertised products and to increase their purchase intentions. Lennon et al.’s (1999a) study found that compared to advertisements with idealized
models, advertisements with average-size models would be more influential on product purchase and getting more attention by viewers. Similarly, another study found that the use of ultra-thin models was not an effective way to capture viewers’ attention or increase purchase intentions (Halliwell & Dittmar, 2004). Therefore, it is unclear whether the use of ultra-thin models would be more effective than the use of average-size models or even a range of model sizes to increase purchase intentions and purchase behaviors. Thus, future research is suggested to explore the effects of exposure to unrealistic media images on purchase intentions and purchase behaviors.

This study focused primarily on models in advertisements as targets for appearance comparisons among Korean and Caucasian-American women. However, comparison targets can be selected not only from the media, but also from peers and friends. For example, Jones (2001) stated that both friends and media played an important role in communicating the messages and images for physical attractiveness among adolescents. Another study (Lee & Johnson, 2009) found that college women who frequently had conversations with friends about their appearance tended to engage in risky appearance management behaviors, such as the use of diet pills and purging. Thus, friends and peers may be targets of appearance comparisons among college women and their physical comparisons with friends and peers may result in increased body dissatisfaction and appearance management behavior tendency. However, research has focused on the impact of idealized media images on the development of psychological risks, such as body dissatisfaction, lower self-esteem and eating disorders. Hence, investigation is recommended on the impact of friends and peers as targets of social
comparison on body image and related variables among young women compared to models in the media.


146


APPENDIX A

HUMAN SUBJECTS LETTER OF APPROVAL
Protocol Title: EFFECTS OF FEMALE MODELS' ETHNICITY IN WOMEN'S MAGAZINE ADVERTISEMENTS: ASSOCIATION AMONG SOCIAL COMPARISON, SELF-ESTEEM, AND BODY IMAGE
Protocol Number: 2012E0309
Principal Investigator: Nancy Rudd
Date of Determination: 05/21/2012
Qualifying Category: 02
Attachments: None

Dear Investigators,
The Office of Responsible Research Practices has determined the above referenced project exempt from IRB review.
Please note the following:

- Retain a copy of this correspondence for your records.
- Only the OSU staff and students named on the application are approved as OSU investigators and/or key personnel for this study.
- No changes may be made to exempt research (e.g., personnel, recruitment procedures, advertisements, instruments, etc.). If changes are needed, a new application for exemption must be submitted for review and approval prior to implementing the changes.
- Per university requirements, all research-related records (e.g., application materials, letters of support, signed consent forms, etc.) must be retained and available for audit for a period of at least three years after the research has ended.
- It is the responsibility of the investigators to promptly report events that may represent unanticipated problems involving risks to subjects or others.

This determination is issued under The Ohio State University's OHRP Federalwide Assurance #00006378. All forms and procedures can be found on the ORRP website: www.orrp.osu.edu.
Please feel free to contact the Office of Responsible Research Practices with any questions or concerns.

Thanks,
Cheri

Cheri Petrey
Sr. Protocol Analyst | Office of Responsible Research Practices | The Ohio State University
T: 614.688.0389 F: 614.688.0366 E: petrey.6@osu.edu W: www.orrp.osu.edu
APPENDIX B – I

INSTRUMENT PACKET
APPENDIX B

Self-Esteem Scale

INSTRUCTIONS:
Using the scale below, please indicate how much you agree or disagree with each of the following statements by circling the number that best represents your agreement:

<table>
<thead>
<tr>
<th>Definitely Disagree</th>
<th>Mostly Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Mostly Agree</th>
<th>Definitely Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

QUESTIONS:

1. On the whole, I am satisfied with myself.
2. I feel I do not have much to be proud of.
3. At times I think I am no good at all.
4. I certainly feel useless at times.
5. I feel that I have a number of good qualities.
6. I am able to do things as well as most other people.
7. All in all, I am inclined to feel that I am a failure.
8. I feel that I’m a person of worth, at least on an equal plane with others.
9. I wish I could have more respect for myself.
10. I take a positive attitude toward myself.
APPENDIX C

Appearance Evaluation Scale

INSTRUCTIONS:
Using the scale below, please indicate how much you agree or disagree with each of the following statements by circling the number that best represents your agreement:

<table>
<thead>
<tr>
<th>Definitely Disagree</th>
<th>Mostly Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Mostly Agree</th>
<th>Definitely Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

QUESTIONS:

11. My body is sexually appealing.  
   1 2 3 4 5

12. I like my looks just the way they are.  
   1 2 3 4 5

13. Most people would consider me good-looking.  
   1 2 3 4 5

   1 2 3 4 5

15. I like the way my clothes fit me.  
   1 2 3 4 5

16. I dislike my physique.  
   1 2 3 4 5

17. I am physically unattractive.  
   1 2 3 4 5
APPENDIX D

Appearance Orientation Scale

INSTRUCTIONS:
Using the scale below, please indicate how much you agree or disagree with each of the following statements by circling the number that best represents your agreement:

<table>
<thead>
<tr>
<th>Definitely Disagree</th>
<th>Mostly Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Mostly Agree</th>
<th>Definitely Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

QUESTIONS:

    1  2  3  4  5

19. I am careful to buy clothes that will make me look my best.
    1  2  3  4  5

20. I check my appearance in a mirror whenever I can.
    1  2  3  4  5

    1  2  3  4  5

22. It is important that I always look good.
    1  2  3  4  5

23. I use very few grooming products.
    1  2  3  4  5

24. I am self-conscious if my grooming isn’t right.
    1  2  3  4  5

25. I usually wear whatever is handy without caring how it looks.
    1  2  3  4  5

26. I don’t care what other people think about my appearance.
    1  2  3  4  5

27. I take special care with my hair grooming.
    1  2  3  4  5

28. I never think about my appearance.
    1  2  3  4  5

29. I am always trying to improve my physical appearance.
    1  2  3  4  5
APPENDIX E

Body Areas Satisfaction Scale

INSTRUCTIONS:
Using the scale below, please indicate how satisfied you are with each of the following area of your body by circling the number that best represents your agreement:

<table>
<thead>
<tr>
<th>Very Dissatisfied</th>
<th>Mostly Dissatisfied</th>
<th>Neither Satisfied nor Dissatisfied</th>
<th>Mostly Satisfied</th>
<th>Very Satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

QUESTIONS:

31. Face (facial features, complexion) 1 2 3 4 5
32. Hair (color, thickness, texture) 1 2 3 4 5
33. Lower torso (buttocks, hips, thighs, legs) 1 2 3 4 5
34. Mid torso (waist, stomach) 1 2 3 4 5
35. Upper torso (chest or breasts, shoulders, arms) 1 2 3 4 5
36. Muscle tone 1 2 3 4 5
37. Weight 1 2 3 4 5
38. Height 1 2 3 4 5
APPENDIX F

Social Comparison Scale

INSTRUCTIONS:
Using the scale below, please indicate how much you agree or disagree with each of the following statements by circling the number which best describes your feelings:

<table>
<thead>
<tr>
<th>Definitely Disagree</th>
<th>Mostly Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Mostly Agree</th>
<th>Definitely Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

QUESTIONS:

40. When I see models in clothing ads, I think about how well or how badly I look compared to the models.

41. When I see ads for personal care/cosmetics items, I think about how well or how badly I look compared to the models.

42. When dressing for a special occasion or buying clothes, I look at ads to give me ideas about how I should look.

43. When dressing for a special occasion or buying personal care/cosmetics items, I look at ads to give me ideas about how I should look.
APPENDIX G

Advertising Stimuli Photos and Questions

INSTRUCTIONS:
Please evaluate the model below by circling the number that best represents your agreement:

44. Do you think this model is physically attractive?

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

45. How do you evaluate this model’s thinness?

<table>
<thead>
<tr>
<th>Above Average</th>
<th>Slightly Above Average</th>
<th>Average</th>
<th>Thin</th>
<th>Very Thin</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

46. Do you think this model has an attractive face?

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
**INSTRUCTIONS:**
Please evaluate the model below by circling the number that best represents your agreement:

47. Do you think this model is physically attractive?

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

48. How do you evaluate this model’s thinness?

<table>
<thead>
<tr>
<th>Above Average</th>
<th>Slightly Above Average</th>
<th>Average</th>
<th>Thin</th>
<th>Very Thin</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

49. Do you think this model has an attractive face?

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
INSTRUCTIONS:
Please evaluate the model below by circling the number that best represents your agreement:

50. Do you think this model is physically attractive?

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

51. How do you evaluate this model’s thinness?

<table>
<thead>
<tr>
<th>Above Average</th>
<th>Slightly Above Average</th>
<th>Average</th>
<th>Thin</th>
<th>Very Thin</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

52. Do you think this model has an attractive face?

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
INSTRUCTIONS:
Please evaluate the model below by circling the number that best represents your agreement:

53. Do you think this model is physically attractive?

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

54. How do you evaluate this model’s thinness?

<table>
<thead>
<tr>
<th>Above Average</th>
<th>Slightly Above Average</th>
<th>Average</th>
<th>Thin</th>
<th>Very Thin</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

55. Do you think this model has an attractive face?

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
INSTRUCTIONS:
Please indicate your overall evaluation about the four models on the left page by circling the number that best represents your feeling:

56. Among the four models, which model is the most attractive to you?

   Model 1  Model 2  Model 3  Model 4
   1        2        3        4

57. Why do you consider the model you chose from Question # 56 to be physically attractive?

   Facial Features  Body Type  Both
   1            2        3

58. Among the four models, which model is the closest to how you wish to look?

   Model 1  Model 2  Model 3  Model 4
   1        2        3        4
59. How much do you compare your physical appearance to any of four models?

<table>
<thead>
<tr>
<th>Model 1</th>
<th>Very little</th>
<th>A little bit</th>
<th>Somewhat</th>
<th>Quite a bit</th>
<th>Very much</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>n/a</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model 2</th>
<th>Very little</th>
<th>A little bit</th>
<th>Somewhat</th>
<th>Quite a bit</th>
<th>Very much</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>n/a</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model 3</th>
<th>Very little</th>
<th>A little bit</th>
<th>Somewhat</th>
<th>Quite a bit</th>
<th>Very much</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>n/a</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model 4</th>
<th>Very little</th>
<th>A little bit</th>
<th>Somewhat</th>
<th>Quite a bit</th>
<th>Very much</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>n/a</td>
<td></td>
</tr>
</tbody>
</table>
### APPENDIX H

**Appearance Management Behaviors**

60. How likely are you to engage in these behaviors to achieve your ideal appearance?

<table>
<thead>
<tr>
<th>FACIAL Attributes</th>
<th>Very Unlikely</th>
<th>Unlikely</th>
<th>Neutral</th>
<th>Likely</th>
<th>Very Likely</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cosmetic surgery</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>n/a</td>
</tr>
<tr>
<td>Use makeup</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>n/a</td>
</tr>
<tr>
<td>Dermatology procedures (laser peel, etc.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>n/a</td>
</tr>
<tr>
<td>Botox</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>n/a</td>
</tr>
<tr>
<td>Freckle/mole removal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>n/a</td>
</tr>
<tr>
<td>Permanent makeup</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>n/a</td>
</tr>
<tr>
<td>Professional skin care (facial, skin massage)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>n/a</td>
</tr>
<tr>
<td>Hair treatment/color</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>n/a</td>
</tr>
</tbody>
</table>
61. How likely are you to engage in these behaviors to achieve your ideal appearance?

<table>
<thead>
<tr>
<th>BODY Attributes</th>
<th>Very Unlikely</th>
<th>Unlikely</th>
<th>Neutral</th>
<th>Likely</th>
<th>Very Likely</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cosmetic surgery</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>n/a</td>
</tr>
<tr>
<td>Diet</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>n/a</td>
</tr>
<tr>
<td>Exercise</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>n/a</td>
</tr>
<tr>
<td>Weight Training</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>n/a</td>
</tr>
<tr>
<td>Body hair removal</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>n/a</td>
</tr>
<tr>
<td>Manicures, pedicures</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>n/a</td>
</tr>
<tr>
<td>Tanning</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>n/a</td>
</tr>
<tr>
<td>Body lotion, washes</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>n/a</td>
</tr>
</tbody>
</table>
# APPENDIX I

Demographic Information

**DEMOGRAPHIC INFORMATION:**
Please fill the following information:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>62.</strong> Age:</td>
<td></td>
</tr>
<tr>
<td><strong>63.</strong> Occupation:</td>
<td></td>
</tr>
<tr>
<td><strong>64.</strong> Gender (Please place an “X” in the appropriate box):</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td><strong>65.</strong> Marital Status (Please place an “X” in the appropriate box):</td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>Married</td>
</tr>
<tr>
<td><strong>66.</strong> College rank (Please place an “X” in the appropriate box):</td>
<td></td>
</tr>
<tr>
<td>Undergraduate</td>
<td>Graduate</td>
</tr>
<tr>
<td><strong>67.</strong> Height</td>
<td></td>
</tr>
<tr>
<td><strong>68.</strong> Weight</td>
<td></td>
</tr>
<tr>
<td>Please specify your race (Please place an “X” in the appropriate box):</td>
<td></td>
</tr>
<tr>
<td>Caucasian-American</td>
<td></td>
</tr>
<tr>
<td>African-American</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td></td>
</tr>
<tr>
<td>Asian (Korean)</td>
<td></td>
</tr>
<tr>
<td>Asian (Others)</td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX J

COVER LETTER
Dear Respondent,

We invite you to participate in a research project to study the association among attitudes toward social comparison, self-esteem, body image and appearance management behaviors among women. The results of this project will provide insight to understand the impact of comparisons with advertising images on self-esteem and body satisfaction.

We would appreciate it if you would complete the questionnaire and return it. Please be assured that all information you provide will be kept strictly confidential. The survey should take you about 15 minutes to complete. Your answers are very important for this study. We hope you will take the time to complete this questionnaire and return it.

Participation in this study is voluntary. You can choose not to take part and you can also choose not to finish the questionnaire or omit any question you prefer not to answer.

If you have any questions or concerns about completing the questionnaire or about being in this study, please contact Miran Yang at yang.1222@osu.edu.

If you have any questions about your rights as a participant in this study or to discuss other study related concerns or complaints with someone who is not part of the research team, you may contact Ms. Sandra Meadows in the Office of Responsible Research Practices at 1-800-678-6251.

Thank you for your cooperation.

Sincerely,

Miran Yang  
Ph.D. Candidate  
Consumer Sciences  
The Ohio State University

Dr. Nancy A. Rudd  
Associate Professor  
Consumer Sciences  
The Ohio State University