

THE EFFECTS OF EXPOSURE TO SLENDER AND MUSCULAR IMAGES ON
MALE BODY DISSATISFACTION

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by

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CHAPTER I

INTRODUCTION

Body image is a subjective construct that refers to one's perceptions and attitudes about their physical attributes. Thompson, Heinberg, Altabe and Tantleff-Dunn (1999) define body image as "the internal representation of your own outer appearance" (p. 4). Body image is multidimensional and includes perceptual, cognitive/affective, and, most recently, behavioral components. The cognitive/affective component, called body dissatisfaction, exists on a continuum ranging from satisfaction to dissatisfaction (Thompson et al., 1999). Body dissatisfaction includes negative and dysfunctional feelings and cognitions regarding one's body (Garner, 2002). Body dissatisfaction has been linked to numerous negative outcomes including steroid use, disordered eating, muscle dysmorphia, depression and low self esteem (e.g. Grieve, 2007; Olivardia, Pope, Borowiecki, & Cohane, 2004; Blashill, 2010).

Historically, body image disturbance has been viewed as a predominantly female phenomenon. However, body image concerns have become an increasing problem for males in Western society. This increase may be partially explained by the rising prevalence and objectification of the male body in the media (Ricciardelli, Clow & White, 2010). In response, greater attention has been given to the study of male body image. The Tripartite Influence model (Thompson et al., 1999), which was originally

developed to explain the development of body dissatisfaction and bulimic symptomatology in females, has been used to examine body image disturbances and muscle-building strategies in males (Karazsia & Crowther, 2009; Smolak, Murnen, & Thompson, 2005). Results suggest that this model may be useful to help identify variables that explain how the media exerts its influence.

Using the framework of the Tripartite Influence Model, the present study seeks to investigate factors that may help to understand the effects of the media on body dissatisfaction. Specifically, the present study examined the impact of exposure to muscular and slender idealized media images on body dissatisfaction in men. The remainder of this introduction will (1) provide a review of current literature on body image ideals and dissatisfaction among males, (2) examine the Tripartite Influence Model and its relation to male body dissatisfaction, and (3) highlight potential moderators that may help to enhance our understanding of male vulnerability to the effects of media portrayals of appearance ideals.

Male Body Image

Research on male body image has found that dissatisfaction with one's body has become a pervasive problem for men, with the majority of men reporting body dissatisfaction (i.e. Lorenzen, Grieve & Thomas, 2004; Ridgeway & Tylka, 2005; Tiggemann, Martins & Kirkbride, 2007; Morgan & Arcelus, 2009). However, in contrast to females, male body dissatisfaction is multifaceted. Whereas most females report a desire to be thinner, males report dissatisfaction along two dimensions: muscularity and low body fat (Neighbors, 2007; Ridgeway & Tylka, 2005; Bottamini & Ste-Marie, 2006).

Research has suggested that between 68% and 95% of adult males in the United States report dissatisfaction with either muscularity, body fat or both (Neighbors, & Sobal, 2007; Jung, Forbes & Chan, 2010; Mishkind, Rodin, Silberstein, & Striegel-Moore, 1986). A large percentage of adolescent males also endorse body dissatisfaction. Jones, Bain and King (2008) found that 66% of the adolescent male participants endorsed body dissatisfaction, including 38% that wanted to lose weight and 28% that wanted to gain weight.

Arguably, the primary body concern for males is with their muscularity. Research has found that the majority of males are dissatisfied with their muscle size. In a qualitative study, Ridgeway and Tylka (2005) found that most participants reported a desire to increase muscularity. Frederick, Buchanan, Sadeghi-Azar, Peplau, Haselton and Berezovskaya (2007) found that up to 90% of male undergraduates reported a desire to be more muscular. Tiggemann, Martins and Churchett (2008) found that 83% of the men in their study desired to be more muscular. Such a large percentage of men report dissatisfaction with muscularity that it has been proposed that muscle dissatisfaction among men has become normative (Tiggemann, Martins, & Kirkbride, 2007). The desire to become more muscular has come to be called the drive for muscularity (McCreary & Sasse, 2000).

In addition to a drive for muscularity, research indicates that males face a pressure to be very lean, which leads to concerns about body weight. In two different qualitative studies, Ridgeway & Tylka (2005) and Bottamini & Ste-Marie (2006) found that an important component of the desired ideal body image was leanness. Tiggemann et al.

(2008) also found that men worried about body weight more than any other dimension of body image including muscularity. In a study of adult males, Philips and de Man (2010) found that more than half of the participants reported being heavier than their endorsed ideal. Tiggemann et al. (2008) found that 50% of the men in their study desired to be thinner. Neighbors and Sobal (2007) found that almost half (48%) of the men in their sample desired to lose weight. Taken together, it is apparent that males experience significant body dissatisfaction and have a desire to obtain a muscular and lean body.

Media Influence and Sociocultural Theories of Body Image

The increasing prevalence of male body dissatisfaction may be influenced by media portrayal of ideal male bodies. Hargreaves and Tiggemann (2004) propose that the media influences body dissatisfaction through its portrayal of the unrealistic societal ideals of beauty and attractiveness. For men, the current media standard for male attractiveness is tall, muscular and lean (e.g. Tiggemann, Martins, & Kirkbride, 2007). This ideal has become increasingly dramatic as evidenced by the increases in muscularity in *Playgirl* centerfolds and male action figures (Leit, Pope, & Gray, 1999; Baghurst, Hollander, Nardella, & Haff, 2005). Parallel to the trend toward increasing muscularity, another relatively new trend has developed. In the past decade, the fashion industry has come to favor much slimmer fitting clothing styles (Jones, 2004). This look is preferred by such designers as Dolce & Gabana and other high end clothing lines. This look has resulted in the slimming down of many male models (Trebay, 2008). This body type has been portrayed mostly in magazines such as *Details* and *GQ* (Riccardelli, Clow & White,

2010, pg. 73). Similarly, Ricciardelli et al. (2010) found that men's lifestyle magazines are beginning to favor fashionable and toned, rather than very muscular bodies.

Research has shown a positive association between media consumption and body dissatisfaction in men (Jonason, Krmar, & Sohn, 2009). Morry and Staska (2001) found that increased exposure to male fitness magazines was related to a greater concern with physical appearance. However, exposure to the media alone is not sufficient to fully explain male body image dissatisfaction; the ideal presented by the media must be valued by the viewer (Cahill & Mussap, 2007). The Tripartite Influence Model may be useful to help explain media influence on body dissatisfaction in men.

The Tripartite Influence Model (Thompson et al., 1999) suggests that familial, peer and media influences, such as the portrayal of ideal body types, affect body dissatisfaction through the mediating pathways of internalization of ideals and social comparison. Internalization refers to adopting the ideal social body figure as a personal goal and standard (Jones, 2004). Social comparison refers to comparing one's standing on a dimension to that of another (Festinger, 1954). Tests of this model in women have supported the proposed effects of peer, familial and media influences on body dissatisfaction through the mediating pathways of internalization and social comparison (e.g. van den Berg, Thompson, Obremski & Covert, 2002; Coomber & King, 2008; Yamamiya, Shroff & Thompson, 2008). However, this model has been less widely studied in men. Smolak, Murnen, and Thompson (2005) proposed an adapted version of the Tripartite Influence Model to investigate media, peer and familial influences on muscle-building techniques, and found that each of the influences was independently

associated with muscle-building techniques. This relationship was partially mediated by social comparison. In another study examining the Tripartite Influence Model among undergraduate males, Karaszia and Crowther (2009, 2010) found that social comparison and internalization (athletic and general) each uniquely accounted for a significant amount of variance in body dissatisfaction. Further, the relationship between social influences (peer and family) and body dissatisfaction was mediated by internalization and social comparison. However, media influence was not examined.

Research has repeatedly found that internalization is associated with increased body dissatisfaction in males. Grammas and Schwartz (2009) found that internalization of media ideals significantly predicted both muscle and body fat dissatisfaction. Daniel and Bridges (2010) found that one of the strongest predictors of the drive for muscularity was the internalization of media ideals. Karaszia and Crowther (2010) found that internalization of media ideals predicted muscularity oriented body dissatisfaction. In this study, social comparison influenced body dissatisfaction through the mediational pathway of internalization, and no direct link was found between social body comparisons and body dissatisfaction. Knauss, Paxton and Alsaker (2007) found adolescent boys had significantly lower scores on measures of internalization than adolescent girls, though internalization did predict body dissatisfaction in adolescent boys. This study suggests that males may not internalize media ideals to the same extent as females, but when they do, they may experience body dissatisfaction. Another finding in this study was that perceived pressure from the media was a strong predictor of body

dissatisfaction. The authors suggest that over time, this perceived pressure may lead to internalization of the media ideal in males.

Social comparison theory (Festinger, 1954) hypothesizes that when people need information on some aspect of their own performance, they compare themselves to others. The theory makes three important assumptions: (1) people compare themselves to relevant others (such as peers) to gauge their standing on some dimension, (2) comparison to one who is superior, called an upward comparison, on a given dimension tends to lower self esteem, while comparison to someone inferior on that dimension, called a downward comparison, improves self-esteem and (3) people tend to compare themselves to others who are inferior to themselves because of its self-enhancing or self-protective function. More recent research has suggested that the results of upward social comparison can be both positive and negative. The result of upward social comparisons depends on the relevance of the comparison target, or perceived similarity, to the individual. When individual compares him/herself to a similar target, and the comparison is upward in nature, he/she will likely feel motivated for self-improvement because the target is perceived to be attainable. When an upward comparison is made to a target that is perceived as dissimilar, negative outcomes are found as the individual does not believe that the target is attainable (Collins, 1996). Karazsia and Crowther (2009) found that men make body comparisons to similar targets, such as peers, and targets that have desirable physical qualities, such as athletes, more frequently than other targets, such as siblings, fathers and men in the media.

In relation to the tendency to make self-protective or enhancing comparisons, Strahan et al. (2006) found that when referencing appearance, men made more downward than upward comparisons and compared themselves to relevant others more than to professional models. However, when cultural norms about appearance were made salient, professional models were judged to be as relevant as peers and social comparisons were elicited. These upward appearance based comparisons left participants feeling more negatively about their appearance. In situations where the targets seem unattainable, or unrealistic, social comparisons have been found to have no effect. For example, when participants were exposed to hypermuscular images, no change in body dissatisfaction was found (Arbour & Ginnis, 2006). This suggests that men may not make comparisons when they judge the target to be unattainable.

Experimental Research

Multiple experimental studies have investigated the direct effects of media exposure to ideal male body images on body dissatisfaction, but their findings have been inconsistent. Some studies have found a positive relationship between exposure to idealized images and body dissatisfaction, in which body dissatisfaction increased following exposure (Arbour & Ginnis, 2006; Agliata & Tantleff-Dunn, 2004; Baird & Grieve, 2006; Hargreaves & Tiggemann, 2002), while others have found either no association or a negative association between media exposure and body dissatisfaction, in which body dissatisfaction remained the same following exposure to these images (Johnson, McCreary & Mills, 2007; Hobza et al, 2007). For example, Johnson, McCreary and Mills (2007) found that exposure to ideal male images resulted in an increase in

anger and hostility among the male participants, but did not affect self-attractiveness ratings. Hobza et al. (2007) similarly found that exposure to ideal male images did not affect state self-esteem; however it did result in lowered self-ratings of physical condition and attractiveness.

Conversely, Grogan, Williams and Conner (1996) found that men showed a significant decrease in body esteem after viewing images of ideal male bodies. This study concluded that exposure led to upward comparison which led to decreases in body esteem. In a later study, Lorenzen, Grieve, and Thomas (2004) found that exposure to muscular ideal images, but not average male images was significantly associated with increased body dissatisfaction.

To my knowledge, only one study has examined the effects of exposure to thin male models on body dissatisfaction. Ogden and Munday (1996) found that exposure to thin male models, defined as images that represent male beauty standards, did decrease a male's perceptions of his own attractiveness.

In the previous studies, social comparison was inferred rather than measured. Using the only two studies that have directly measured social comparison, the relationship between media exposure, social comparison and body dissatisfaction can be more clearly explained. In a study investigating the effects of social comparison to media images on body dissatisfaction by Hargreaves and Tiggemann (2004), the frequency of social comparison to male models representing the male muscular ideal in commercials did not have a significant impact on body dissatisfaction. However, those participants who made more upward social comparison did experience greater body dissatisfaction.

Similarly, Hargreaves and Tiggemann (2009) measured both frequency and direction of social comparison, and found that men who viewed muscular male images in commercials reported more social comparison than men who were exposed to product-only images. However, it was not the frequency of comparison but the direction of the comparison that affected body dissatisfaction. In other words, those who made more upward social comparisons, rather than social comparisons in general, felt more negatively about their bodies.

Individual Factors that Influence Body Dissatisfaction

Due to the fact that the relationship between media exposure and body dissatisfaction has produced complicated results, an examination of individual factors that may influence this relationship is necessary. One important variable to consider regarding weight and muscularity concerns is body mass index (BMI). In females, the relationship between BMI and body dissatisfaction is linear, indicating those with higher BMI's are more dissatisfied. This is congruent with the female ideal of thinness. In males, this relationship is much more complex. Both overweight and underweight males experience increased levels of body dissatisfaction. In adolescent males, those who were heavier expressed more weight concern, and reported more dieting behaviors and body dissatisfaction, while those who were underweight expressed more body dissatisfaction related to muscularity (Jones & Crawford, 2005). Watkins, Christie and Chally (2008) found that both overweight/obese and underweight adult males experience significantly more negative body image and weight/shape concerns than normal weight males. This

suggests that male body dissatisfaction occurs at both ends of the body weight/size continuum.

Another individual difference variable that may be important to examine is the body ideal that men aim to achieve, in other words, which drive or drives they possess. Males strive to achieve a muscular and/or lean body (Ridgeway & Tylka, 2005). Therefore, there are two drives that males may possess: the drive for muscularity and the drive for leanness. The drive for muscularity refers to the motivation to become more muscular (McCreary & Sasse, 2000). In general, men are more invested in their muscularity and techniques that are used to build muscles (Smolak & Murnen, 2008). However, research has also found that in addition to a drive for muscularity, males have a drive for leanness. The drive for leanness refers to the motivation to have a body that is toned, with low body fat and physically fit muscles. This is not synonymous with wanting to be thin, and may be related to an interest in having a “healthy body that functions well in sports and other physical activities.” (Smolak & Murnen, 2008 p.1) The drive for leanness has been found to be a distinct element of body image. However, although each drive may be a distinct component of body image in males, they may not operate in isolation. Research has suggested that these drives may also be highly related to one another (Smolak & Murnen, 2008). Therefore, men may possess both the drive for muscularity and the drive for leanness. The relative salience of each of these drives for an individual may be an important determinant of the effects of exposure to slender and muscular media images.

The Present Study

The present study had two major aims: the first was to examine the impact of exposure to idealized male images, both muscular and slender, on body dissatisfaction. As an adaptation of these previous studies (e.g. Arbour & Ginnis, 2006), the present study re-examined the effects of appearance-based comparisons to muscular images. In addition, this study examined the effects of appearance-based comparisons to images of slender idealized male bodies as presented in the media. Thus, this study examined the effects of media exposure on body dissatisfaction using three conditions: (1) Exposure to slender idealized media images in advertisements, (2) Exposure to muscular idealized images in advertisements and (3) Exposure to product-only advertisements, which served as a control condition. The second aim was to identify variables that influence the relationship between media exposure and body dissatisfaction. For the present study, these variables included state and trait social comparison, athletic and general internalization, the drive for muscularity and the drive for leanness.

The present study extends previous research on the consequences of media exposure in several ways. Primarily, although one previous study found that images of thin males were associated with decreased body satisfaction among males (Ogden & Munday, 1996), the authors did not discuss the selection of these images. It is possible that their images that “represent the cultural ideal” may have actually been those which represent the muscular ideal. Furthermore, the males presented in these thin images were presented with “varying degrees of exposed body.” The present study used pilot testing to identify images perceived as very muscular and very slender for the two conditions,

respectively. To my knowledge, no previous study has investigated the impact of slender male models, presented shirtless, as objectified images, on male body dissatisfaction. Finally, the previous study was conducted over 15 years ago; as it has been suggested that a new trend in male body images is emerging (Jones, 2004; Trebay 2008), the present study sought to re-examine this relationship.

To my knowledge, no study has examined the impact of muscular and slender images in the same study. The present study included both conditions in order to compare the relative effects of each type of image. There are also several methodological limitations of prior research. The first major issue with much of the prior research on male body image is that many studies did not use instruments that were developed for use with men. This study used instruments that have been developed specifically for use with male participants. In addition, drawing on research by Hargreaves and Tiggemann (2004; 2008), this study measured state social comparison, rather than inferring it.

This study investigated the factors that influence the relationship between exposure to idealized media images and body image dissatisfaction. Drawing on research examining the Tripartite Influence Model (Thompson et al., 1999), state and trait social comparison and athletic and general internalization were examined as predictors of a change in body dissatisfaction. The drive for muscularity and the drive for leanness were also examined as potential moderators of the relationship between exposure to idealized images and body dissatisfaction.

Hypotheses:

1. As documented by previous experimental research (Arbour & Ginnis, 2006; Agliata & Tantleff-Dunn, 2004; Baird & Grieve, 2006; Hargreaves & Tiggeman, 2002), it was hypothesized that exposure to images of muscular and slender images would elicit an increase in body dissatisfaction.
2. Given that exposure to muscular images is more common (e.g. Baghurst et al., 2005), it was hypothesized that exposure to the muscular images would elicit a significantly greater change in body dissatisfaction than exposure to slender images.
3. Consistent with previous research which demonstrated that internalization of media ideals was related to increased body dissatisfaction (e.g. Karaszia & Crowther, 2009), it was hypothesized that internalization (both general and athletic) would predict an increase in body dissatisfaction following exposure to media images.
4. As documented by Hargreaves and Tiggemann (2009), it was hypothesized that greater upward social comparisons to the presented images would predict an increase in body dissatisfaction following exposure to media images in both conditions.
5. Finally, it was hypothesized that the impact of media exposure on body dissatisfaction would be moderated by drive for muscularity and the drive for leanness. Given that there are two body ideals for men, it seems likely that those men who value muscularity would be more negatively affected by viewing

images of muscular males and less negatively impacted by viewing images of slender males. Similarly, those men who value a more slender and toned image would be more negatively affected by viewing images of slender males and less negatively impacted by viewing images of muscular males.

CHAPTER II

METHODS

Participants

Participants were 95 undergraduate males enrolled as undergraduate students at Kent State University. Participants were recruited from the General Psychology Online Subject Pool and received 4 points toward their course research requirement in exchange for their participations. Three participants were excluded from the analyses for the following reasons: (1) insight into the true meaning of the experiment ($n = 2$) and (2) difficulty reading English ($n = 1$). Therefore, all results presented in the present study are based on the subsample of 92 participants retained for analyses.

The mean age of the participants was 20.04 years ($SD = 3.51$). Of these participants, 72.8% endorsed being non-Hispanic white, 12% endorsed being African American, 8.7% endorsed being Asian American, 3.3% endorsed being Hispanic and 3.3% endorsed being of other ethnicities. The majority of the participants were first year college students (57.6%), with 13% in their second year, 12% in their third year and 17.3% in their fourth year or beyond. BMI for the sample ranged from 17.15 to 39.35 with an average of 25.18 ($SD = 4.54$).

Experimental Stimuli

Thirty-six advertisements drawn from model websites such as Models.com and from ad campaigns on designer's websites were used in a pilot study. All advertisements

depicted shirtless, male models, and contained no other people in the ads. In order to select the media images for this study, a pilot study was conducted. Participants were 62 undergraduate students (10 male, 52 female) enrolled in a Body Image course. Using a Likert scale (1- strongly disagree to 5-strongly agree), participants were asked to rate image on 15 different dimensions. Of particular interest among these dimensions was whether the images were perceived as slender, muscular and attractive. The average score for muscularity and slenderness for each image was calculated using the ratings from both male and female participants. Images for the muscular condition were initially chosen using cutoffs of an average score above 4 on muscularity and below 3 on slenderness. Images for the slender condition were chosen if they received an average score of above 4 on slenderness and below 3 on muscularity. This resulted in nine images per condition. All of the images in the ads were Caucasian, except for two in the muscular condition. The non-Caucasian images were removed from the study because all of the resulting images in the slender set were Caucasian. To ensure that there were comparable numbers of images, two images were removed from the slender set. The rationale for the selection of the two advertisements that were removed was that the advertisements were not explicit in indicating the product that they were advertising.

The final sets of images each contained seven advertisements. The average attractiveness rating for each of these images was calculated. A paired samples t-test comparing the average attractiveness ratings for males and females combined was significant ($t(60) = -8.22, p < .001$), with the muscular images ($M = 3.98, SD = 1.05$) rated as significantly more attractive than the slender images ($M = 2.83, SD = 0.90$).

However, when using only male ratings of attractiveness, a paired samples t-test comparing the attractiveness ratings for the muscular ($M = 3.11$, $SD = 1.54$) and slender ($M = 2.62$, $SD = 3.11$) images was not significant ($t(8) = -1.805$, $p > .05$). Therefore, while there may have been differences in the rated attractiveness of the images for females, there were no differences in attractiveness ratings between the two image conditions among males. Advertisements for the product only condition consisted of advertisements for shoes, cell phones, cologne and beverages.

Measures

Demographic data. Participants were asked to provide their age, race/ethnicity, and year in school. At the end of the experimental session, weight and height were measured by the researcher in order to compute the participant's BMI.

Body dissatisfaction. Body dissatisfaction was measured using the State Self-Esteem Scale (SSES; Heatherton & Polivy, 1991), which is a 20-item self-report questionnaire designed to measure state self-esteem. There are three factor analytically derived subscales: performance, social, and appearance esteem. For the present study, the appearance esteem subscale was used as a measure of state body dissatisfaction. The appearance subscale is a 6-item measure. Participants rate their agreement with items using a 5-point Likert scale, ranging from 1 (not at all) to 5 (extremely). Higher scores indicate greater body satisfaction. Scores were reversed so that higher scores indicated greater body dissatisfaction. The SSES has demonstrated good discriminant and construct validity (Heatherton & Polivy, 1991). For this sample, Cronbach's alphas were .78 for the pretest measure and .87 for the posttest measure.

Drives.

Drive for Muscularity Scale (DMS; McCreary & Sasse, 2000). The DMS is a 15-item scale which is used to assess attitudes and behaviors related to the drive for muscularity. Respondents rate items on a 6-point Likert scale ranging from 1(always) to 6(never). Scores are then reversed such that higher scores represent a higher drive for muscularity. There are two subscales of the DMS: one representing muscularity-oriented body dissatisfaction and one representing behaviors aimed at increasing muscularity. Each subscale has demonstrated internal consistency and construct validity in a sample of undergraduate males (McCreary, Sasse, Saucier, & Dorsch, 2004). For the present study, the 7-item body dissatisfaction subscale was used to assess attitudes related to the drive for muscularity. Scores ranged from 7 to 35. The Cronbach's alpha for the body dissatisfaction subscale in this sample was .87.

Drive for Leanness Scale (DLS; Smolak & Murnen, 2008). The DLS is a 6-item self-report measure that assesses one's preference for lean, well-toned bodies. Respondents rate each item using a 6-point Likert scale ranging from 1(never) to 6(always), with higher scores indicating a greater drive for leanness. Cronbach's alpha for males was reported as .83, and test-retest reliability was reported as $r = .69$ (Smolak & Murnen, 2008). The Cronbach's alpha for this sample was .86.

Internalization. Internalization was measured using the Sociocultural Attitudes Toward Appearance Questionnaire-3(SATAQ-3; Thompson, van den Berg, Roehrig, Guarda, & Heinberg, 2004). The SATAQ-3 is a 30-item self-report questionnaire that is used to assess one's internalization of media ideals. There are four factor-analytically

derived subscales: Information, Pressures, Internalization-General and Internalization-Athlete. Reported Cronbach's alphas for the subscales ranged from .95-.96 and the overall alpha was .96 in a sample of female undergraduates. The revised version of the SATAQ-3 (Karazsia & Crowther, 2008) is an adaptation of the SATAQ-3 for use with in men. In this adaptation, the original items which focused on "thinness," looking "pretty," and "thin" were reworded to reflect and emphasis on muscularity (looking "muscular"). Items are rated using a 5-point Likert scale (1 = definitely disagree; 5 = definitely agree), with higher scores reflecting greater self reported internalization. Reported Cronbach's alphas for the subscales ranged from .85 to .95. All four subscales have demonstrated excellent concurrent, incremental and discriminant validity for a sample of undergraduate males (Karazsia & Crowther, 2008). For the present study, the 7-item Internalization-General and the 6-item Internalization-Athlete subscales were used. The Cronbach's alpha for this sample was .91 for the Internalization-General subscale and .85 for Internalization-Athletic subscale.

Social comparison.

Physical Appearance Comparison Scale (PACS; Thompson, Heinberg & Tantleff, 1991). The PACS is a 5-item measure that assesses the comparison of one's appearance to the physical appearance of others. It was used in the present study as a measure of trait social comparison. Participants respond to the items using a 5-point Likert scale (1- never, 5-always) regarding how much they engage in described behaviors. Higher scores indicate a greater tendency to engage in physical comparisons.

The scale has demonstrated validity (Thompson et al., 1991). In this sample, Cronbach's alpha was .70.

Actual upward social comparison. Actual upward state social comparison was measured at the end of the experiment. Participants were asked to rate how attractive they were compared to the model in the advertisement. Responses were rated on a 5-point Likert scale (1- much less attractive, 3- about equally attractive, 5- much more attractive). These responses were then reverse coded such that a higher score reflected a greater upward comparison. An actual upward social comparison variable was created by summing responses for each of the seven advertisements. Responses ranged from 7 to 35, with higher scores indicated more upward comparisons.

Procedure

Participants were recruited to participate in two studies. The first study was a study supposedly aimed at investigating a new male body image measure and its relationship to other measures. The second was a study ostensibly investigating the "effectiveness of advertising aimed at men" (Hargreaves & Tiggemann, 2009). After giving informed consent, participants were randomly assigned to one of three conditions: muscular, slender, and product only. Participants then completed measures supposedly for the psychometric study. These measures included demographic information, SSES, PACS, DLS and DMS. Other measures that were not included in analyses were the Male Body Attitudes Scale (Tylka, Bergeron, & Schwartz, 2005), the Positive and Negative Affect Schedule (Watson, Clark, & Tellegen, 1988).

Following completion of the psychometric study, participants began the advertising study. To support the credibility of the cover story, participants were given a questionnaire of media preferences and consumption (Karazsia & Crowther, 2008). Then, participants completed the SATAQ-3 and the Multidimensional Body Self Relations Questionnaire (Cash, 2000), of which the latter was not used in the present study. Participants were then exposed to the seven advertisements according to the condition to which they had been assigned. In order to counterbalance the order of the presentation of images, three different combinations of the order of presentation of images were presented for each condition. Between each advertisement and following the final advertisement, participants completed a distracter task in which they were asked to make logical five-word sentences from a jumble of six words.

While viewing the ads, participants completed a series of ratings (Hargreaves & Tiggemann, 2009). In the muscular and slender image conditions, the ratings were aimed at eliciting social comparison to the models in the ads. In the image conditions, the participants were asked to rate each ad based on the questions: “How physically attractive are you, compared to the model in the advertisement?” (1 – Much less attractive, 3 – about the same attractiveness, 5 – much more attractive); “How effective is the ad in promoting its product?” Responses were rated on a 5 point Likert scale (1- Not at all effective, 3 – Moderately effective, 5 – extremely effective). Participants in the product only condition were asked “How visually attractive is the advertisement?” Responses are rated on a five point Likert scale (1 – Not at all attractive, 3 – Moderately attractive, 5-

Extremely attractive). Finally, participants were asked to indicate whether or not they (1) currently use or (2) have ever used the product that is being advertised.

Participants were given one minute per advertisement to complete the rating sheet. Post-exposure state body dissatisfaction (SSES) and state mood (PANAS) were measured following the completion of the final word jumble task. At the end of the study, participants were asked if, after participating in the two studies, they had any concerns about the aim of the studies. If they had any concerns, they were asked to write their specific concerns. Finally participants were shown the slides on one 8 1/2" x 11" piece of paper and asked the extent to which they compared themselves to each of the images and how they compared to their attractiveness. Height and weight were measured by the researcher for the calculation of BMI.

At the conclusion of each semester, all participants were debriefed by email about the true meaning of the study. This was to ensure minimal communication about the purpose of the study between participants. This research was reviewed and approved by the Kent State University Institutional Review Board.

CHAPTER III

RESULTS

The skewness (≤ 2) and kurtosis (≥ 7) values for all continuous study variables indicated that these variables were normally distributed. There were also no outliers ($SD > 3.29$) on any study variable. Absence of multicollinearity ($r < .90$) was confirmed through inspection of bivariate correlations (Tabachnik & Fidel, 2007).

Characteristics of the Sample

Participants were randomly assigned to one of three exposure conditions: slender ($n = 30$), muscular ($n = 33$) and control ($n = 29$). The three groups of participants did not differ significantly on BMI, $F(2,89) = 0.12, p > .05$, age, $F(2,89) = 0.28, p > .05$, or year in school, $\chi^2(6) = 9.49, p > .05$. Separate one-way analyses of variance (ANOVA) were used to examine differences between groups on important study variables. Results were nonsignificant for all variables, including pre-exposure body dissatisfaction, $F(2,89) = 1.30, p > .05$, athletic internalization, $F(2,89) = 1.70, p > .05$, general internalization, $F(2,89) = 1.74, p > .05$, drive for leanness, $F(2,89) = 0.50, p > .05$, drive for muscularity, $F(2,89) = 0.12, p > .05$, and trait social comparison, $F(2,89) = 1.11, p > .05$. Full results of these analyses are presented in Table 1.

Table 1

Characteristics of Study Variables Among Groups

	Muscular (<i>n</i> = 33)	Slender (<i>n</i> = 30)	Control (<i>n</i> = 29)	$F(\chi^2)$	<i>p</i>
Age	19.73 (2.21)	20.40(4.54)	20.03(3.59)	0.28	0.75
BMI	25.41(4.99)	25.22(4.22)	24.86(4.46)	0.12	0.89
Year in School				8.31	0.22
Freshman	<i>n</i> = 20	<i>n</i> = 16	<i>n</i> = 17		
Sophomore	<i>n</i> = 2	<i>n</i> = 5	<i>n</i> = 5		
Junior	<i>n</i> = 6	<i>n</i> = 5	<i>n</i> = 0		
Senior +	<i>n</i> = 5	<i>n</i> = 4	<i>n</i> = 7		
Pre-BD	13.73 (4.76)	13.53(4.11)	15.21(4.14)	1.30	0.28
Intern-Athletic	17.15(6.07)	18.33(4.41)	19.55(4.60)	1.70	0.19
Intern -	17.45(7.65)	19.97(5.94)	20.24(5.74)	1.74	0.18
General					
DLS	20.27(4.95)	21.30(4.48)	21.28(4.53)	0.50	0.61
DMS	21.89(6.79)	22.10(6.28)	23.17(6.46)	0.12	0.89
PACS	15.03(3.11)	15.13(2.64)	15.10(3.54)	1.11	0.33

Note: Pre-BD – Pre-exposure body dissatisfaction; Post-BD – post-exposure body

dissatisfaction; DMS – drive for muscularity; DLS- drive for leanness; Intern-Athletic –

athletic internalization; Intern-General – general internalization; PACS – Trait social

comparison; Values presented are mean (SD)

Relationships Among Variables.

Bivariate correlations were conducted to examine the relationships among all variables that were used in the analyses (see Table 2). Pre-body dissatisfaction was not significantly associated with the drive for leanness ($r = 0.14, p > .05$), however it was significantly associated with the drive for muscularity, trait social comparison, general internalization, and athletic internalization (r 's ranging from 0.24 to 0.46, $p < .05$). The drive for muscularity was significantly associated with the drive for leanness ($r = 0.67, p < .001$). General internalization was significantly correlated with athletic internalization ($r = 0.82, p < .001$). Interestingly, trait social comparison was not significantly associated with actual upward comparison ($r = 0.24, p > .05$). BMI was significantly positively associated with pre- ($r = .23, p < .05$) and post- ($r = .28, p < .05$) exposure body dissatisfaction, and significantly inversely related to drive for leanness ($r = -.25, p < .05$). Due to the significant associations between BMI and several important study variables, BMI was entered as a covariate in all subsequent analyses.

Table 2

Intercorrelations among Study Variables

	1	2	3	4	5	6	7	8	9
1. BMI	—	0.23*	0.28**	-0.18	-0.25*	-0.01	-0.06	0.08	-0.03
2. Pre BD	—	—	0.82**	0.24*	0.14	0.26*	0.30**	0.36**	0.46*
3. Post BD	—	—	—	0.27*	0.18	0.29**	0.26*	0.37**	0.38*
4. DMS	—	—	—	—	0.60**	0.45**	0.37**	0.38**	0.25
5. DLS	—	—	—	—	—	0.49**	0.49**	0.50**	0.16
6. Intern-A	—	—	—	—	—	—	0.82**	0.51**	0.09
7. Intern-G	—	—	—	—	—	—	—	0.47**	0.26
8. PACS	—	—	—	—	—	—	—	—	0.13
9. Upward	—	—	—	—	—	—	—	—	—
Mean	25.18	14.13	14.86	22.36	20.92	18.29	19.15	14.01	24.53
<i>SD</i>	4.54	4.38	4.84	6.47	4.64	5.16	6.60	3.87	5.96

Note: Bivariate correlations for upward social comparisons was based on a subsample ($n = 63$) of participants in the two image exposure conditions; * $p < .05$; ** $p < .01$; BMI – Body Mass Index; Pre-BD – Pre-exposure body dissatisfaction; Post-BD – post-exposure body dissatisfaction; DMS – drive for muscularity; DLS- drive for leanness; Intern-A– athletic internalization; Intern-G – general internalization; PACS – physical appearance comparison scale; Upward – Upward social comparison

Exposure to Images and Body Dissatisfaction

A 3 (Group) by 2 (Time) mixed design analysis of covariance (ANCOVA), controlling for BMI, was conducted to examine whether males exposed to slender and muscular media images experienced a greater change in body dissatisfaction after exposure than males exposed to control images. Results yielded a significant Group X Time interaction, $F(2,89) = 4.12, p < .05$. However, there was no significant main effects for time, $F(1,89) = 0.16, p > .05$, or group, $F(2,88) = 0.85, p > .05$. Given the significant interaction, three post-hoc dependent samples t-tests comparing pre- and post-exposure body dissatisfaction scores within each condition were conducted.

Results were significant for the slender condition, ($t(29) = -3.20, p < .01$; Cohen's $d = 0.27$), indicating that males who viewed slender media images experienced a significant increase in body dissatisfaction from pre- to post-exposure. Results were also significant for the muscular condition, ($t(32) = -2.18, p < .05$; Cohen's $d = 0.26$), indicating that males who viewed muscular media images experienced a significant increase in body dissatisfaction from pre- to post- exposure. Results were nonsignificant for the control group ($t(28) = -.76, p > .40$; Cohen's $d = 0.08$).

In order to examine which group experienced the greatest increase in body dissatisfaction, a one-way ANCOVA, comparing the slender and muscular conditions, and controlling for pre-exposure body dissatisfaction and BMI was conducted. Results were nonsignificant, $F(1,59) = 0.06, p > .05$, suggesting that there were no significant differences between the slender and muscular image conditions on the change in body dissatisfaction.

Table 3

Pre and Post Exposure Body Dissatisfaction

	Slender	Muscular	Control
Pre BD	13.53(4.11)	13.73(4.76)	15.21(4.14)
Post BD	14.67(4.25)	15.03(5.38)	14.86(4.95)

Note: Pre-BD – Pre-exposure body dissatisfaction; Post-BD – post-exposure body dissatisfaction; Values presented are mean (*SD*)

Internalization as a predictor of an increase in body dissatisfaction

Four hierarchical linear regressions were conducted to examine whether internalization (general or athletic) significantly predicted an increase in body dissatisfaction for the two image exposure conditions (slender and muscular) after controlling for BMI. For each analysis, BMI and pre-exposure body dissatisfaction were entered in the first block. The internalization variable (general or athletic) was entered into the second block. These regressions were conducted separately for the slender and muscular condition.

The first model containing only pre-exposure body dissatisfaction and BMI was significant for both the slender, $F(2,27) = 54.51, p < .001$, and muscular, $F(2,30) = 27.82, p < .001$ conditions. For the slender condition, when general internalization was added to the model, the overall model remained significant, $F(3,26) = 35.06, p < .001$. However, the addition of general internalization was not significant, $\Delta F(1,26) = 0.04, p > .05$, and the addition did not account for any demonstrable additional variance, $\Delta R^2 < 0.001$. In

the final model, the only significant predictor of post-exposure body dissatisfaction was pre-exposure body dissatisfaction ($\beta = 0.901, p < .001$). For the muscular image condition, when general internalization was added to the model, the overall model remained significant, $F(3,29) = 19.42, p < .001$. However, the addition of general internalization was not significant, $\Delta F(1,29) = 1.54, p > .05$, and only accounted for an additional 1.8% of variance, $\Delta R^2 = 0.018$. In the final model, the only significant predictor of post-exposure body dissatisfaction was pre-exposure body dissatisfaction ($\beta = 0.681, p < .001$).

Table 4

Internalization as a Predictor of a Change in Body Dissatisfaction

	Slender						Muscular					
	Model 1			Model 2			Model 1			Model 2		
	B	SE B	B	B	SE B	β	B	SE B	β	B	SE B	β
BMI	-0.07	0.09	-0.074	-0.07	0.10	-0.068	0.24	0.12	0.22*	0.21	0.12	0.19
PRE-BD	0.94	0.09	0.906**	0.93	0.10	0.901**	0.81	0.13	0.72**	0.76	0.13	0.68**
Intern-G	—	—	—	0.01	0.07	0.019	—	—	—	0.17	0.10	0.19
R^2	0.80			0.80			0.65			0.67		
ΔR^2	0.80			< .001			0.65			0.02		
F for Δ	54.51**			1.909			27.86**			1.54		
R^2												

Note: ** $p < .001$; * $p < .05$; BMI – body mass index; Pre-BD – Pre-exposure body dissatisfaction; Intern-G – general internalization

For the slender image exposure group, when athletic internalization was added to the model, the overall model remained significant, $F(3,26) = 38.20, p < .001$. However, the addition of athletic internalization was not significant, $\Delta F(1,26) = 2.84, p > .05$, and only accounted for an additional 1.4% of the variance $\Delta R^2 = 0.014$. In the final model, the only significant predictor of post-exposure body dissatisfaction was pre-exposure body dissatisfaction ($\beta = .863, p < .001$). For the muscular image condition, when athletic internalization was added to the model, the overall model remained significant, $F(3,29) = 20.66, p < .001$. However, the addition of athletic internalization was not significant, $\Delta F(1,29) = 2.84, p > .05$, and it only accounted for an additional 3.1% of variance, $\Delta R^2 = 0.031$. In the final model, the only significant predictor of post-exposure body dissatisfaction was pre-exposure body dissatisfaction ($\beta = .676, p < .001$).

Table 5

Athletic Internalization as a Predictor of a Change in Body Dissatisfaction

	Slender						Muscular					
	Model 1			Model 2			Model 1			Model 2		
	B	SE B	B	B	SE B	β	B	SE B	β	B	SE B	β
BMI	-0.07	0.09	-0.07	-0.03	0.09	-0.27	0.24	0.12	0.222	0.21	0.12	0.191
PRE- BD	0.94	0.09	0.91**	0.89	0.09	0.863**	0.81	0.13	0.719**	0.76	0.13	0.676**
Intern- A	—	—	—	0.13	0.09	0.130	—	—	—	0.17	0.10	0.186
R ²	0.801			0.815			0.650			0.681		
ΔR^2	0.801			0.014			0.650			0.031		
F for ΔR^2	54.507**			1.91			27.862**			2.84		

** p < .001; BMI – body mass index; Pre-BD – Pre-exposure body dissatisfaction; Intern-A – athletic internalization

Social comparison as a predictor of a change in body dissatisfaction

Overall, participants endorsed low levels of trait social comparison ($M = 15.09$, $SD = 3.08$), but reported higher levels of upward social comparison ($M = 26.16$, $SD = 6.32$). (See Table 6). Two independent samples t-tests were used to examine whether there were differences in trait social comparison and the frequency of actual upward social comparisons made by the participants to the images presented in the slender and muscular image exposure conditions. Results of these analyses showed that there were no significant differences in trait social comparison ($t(60) = .77$, $p > .05$) or in the frequency of upward social comparisons ($t(61) = -1.81$, $p > .05$) between participants in the two conditions.

Table 6

Trait and Actual Upward Social Comparison by Group

	Slender($n = 30$)	Muscular($n = 33$)	t	p
PACS	15.133(2.64)	15.03(3.11)	0.77	.44
Upward	24.53(5.96)	27.36(6.42)	-1.81	.076

Note: PACS – Trait Social Comparison; Upward- Upward social comparison; Values presented are Mean (SD)

Four hierarchical multiple linear regression analyses were conducted (two for each group) to examine whether trait social comparison or the frequency of actual upward social predicted an increase in body dissatisfaction above and beyond pre-exposure body dissatisfaction. Pre-exposure body dissatisfaction and BMI were entered as covariate in the first block and the social comparison variable of interest was entered

into the second block. Results for the first block including BMI and pre-exposure body dissatisfaction are presented below.

Trait social comparison. For the slender condition, when the trait social comparison variable was added to the model, the overall model remained significant, $F(3,26) = 38.32, p < .001$); however the addition of trait social comparison was not significant, $\Delta F(1,26) = 1.98, p > .05$, and only accounted for an additional 1.4% of the variance. In the final model, the only significant predictor was pre-exposure body dissatisfaction ($\beta = .851, t = 9.02, p < .001$). For the muscular condition, when trait social comparison was added to the model, the overall model was significant, $F(3,28) = 21.98, p < .001$, and the addition of trait social comparison explained an additional 4.9% of variance in the outcome, ($\Delta F(1,28) = 4.65, p < .05; f^2 = 0.17$). In the final model, pre-exposure body dissatisfaction ($\beta = .608, t = 5.17, p < .001$), BMI ($\beta = .258, t = 2.39, p < .05$), and trait social comparison ($\beta = .244, t = 2.16, p < .05$), were predictors of an increase in body dissatisfaction.

Table 7

Trait Social Comparison as a Predictor of Change in Body Dissatisfaction

	Slender						Muscular					
	Model 1			Model 2			Model 1			Model 2		
	B	SE B	B	B	SE B	β	B	SE B	β	B	SE B	β
BMI	-0.07	0.09	-0.074	-0.07	0.09	-0.074	0.25	0.12	0.234*	0.28	0.12	0.26*
PRE-BD	0.94	0.09	0.906**	0.88	0.10	0.851**	0.80	0.13	0.710**	0.68	0.13	0.61**
PACS	—	—	—	0.21	0.15	0.131	—	—	—	0.43	0.20	0.24*
R ²	0.80			0.82			0.65			0.70		
ΔR^2	0.80			0.01			0.65			0.05		
F for ΔR^2	54.51**			1.98			27.22			4.65*		

Note: * $p < .05$; ** $p < .001$; BMI – body mass index; Pre-BD – pre-exposure body dissatisfaction; PACS – Trait social comparison

Actual upward social comparison. For the slender exposure group, when actual upward social comparison was entered into the model, the overall model remained significant, $F(3,26) = 35.41, p < .001$, however, the addition of the upward social comparison variable to the model only accounted for an additional 0.2% of the variance in the outcome, $\Delta F(1,26) = .25, p > .05$. The only significant predictor in the final model was pre-exposure body dissatisfaction ($\beta = .930, t = 9.25, p < .001$). For the muscular condition, when actual upward social comparison was added to the model, the overall model remained significant, $F(3,29) = 21.51, p < .001$; the addition of upward social comparison explained an additional 4.0% of the variance in the outcome. This change neared significance, $\Delta F(1,29) = 3.74, p = .063, f^2 = 0.13$. The only significant predictor in the final model was pre-exposure body dissatisfaction ($\beta = .626, t = 5.32, p < .001$) and BMI ($\beta = .244, t = 2.27, p < .05$). Upward comparisons neared significance ($\beta = .219, t = 1.93, p = .063$).

Table 8

Actual Upward Social Comparison as a Predictor of Change in Body Dissatisfaction

	Lean						Muscular					
	Model 1			Model 2			Model 1			Model 2		
	B	SE B	B	B	SE B	β	B	SE B	B	B	SE B	B
BMI	-0.07	0.09	-0.09	-0.08	0.09	-0.079	0.24	0.12	0.222*	0.26	0.12	0.244*
PRE-BD	0.94	0.09	0.91**	0.96	0.10	0.930**	0.81	0.13	0.719**	0.71	0.13	0.626**
Upward	—	—	—	-0.04	0.07	-0.049	—	—	—	0.18	0.10	0.219
R^2	0.80			0.80			0.65			0.69		
ΔR^2	0.80			<.001			0.65			0.04		
F for ΔR^2	54.51**			0.25			27.86**			3.74		

Note: * $p < .05$; ** $p < .001$; BMI – body mass index; Pre-BD – Pre-exposure body dissatisfaction; Upward –upward social comparison

Drives as Moderators

Four hierarchical linear regressions were used to examine whether the drive for leanness or the drive for muscularity moderated the association between exposure and an increase in body dissatisfaction. First, two variables were created to represent the slender and muscular condition. The slender dummy variable was coded such that 1 represented being in the slender condition and a 0 represented being in the control condition. The muscular dummy variable was coded such that 1 represented being in the muscular condition and 0 represented being in the control condition. Second, four interaction terms were created by multiplying each dummy coded condition variable (slender dummy, muscular dummy) by each drive (drive for leanness, drive for muscularity). For the four regressions, pre-exposure body dissatisfaction and BMI were entered as covariates in the first block. The second block contained the condition dummy variable and the drive variable. The third block contained the appropriate interaction term.

The drive for muscularity. For the slender condition, the first block was significant, $F(2,56) = 82.90$, $p < .001$. The model including slender dummy and drive for muscularity variables remained significant, $F(4,54) = 50.20$, $p < .001$, and the addition of these variables increased the variance explained by 4.1%, $\Delta F(2,54) = 5.17$, $p < .01$. Pre-exposure body dissatisfaction ($\beta = .823$, $t = 10.90$, $p < .001$), exposure condition ($\beta = .156$, $t = 2.42$, $p < .05$) and the drive for muscularity ($\beta = .155$, $t = 2.02$, $p < .05$) were significant predictors of post-exposure body dissatisfaction. The final model remained significant, $F(5,53) = 40.29$, $p < .001$; however the addition of the interaction term was not significant, $\Delta F(1,53) = .93$, $p > .05$, and only accounted for an additional 0.4% of

variance. In the final model, pre-exposure body dissatisfaction ($\beta = .835, t = 10.91, p < .001$) and the drive for muscularity ($\beta = .210, t = 2.20, p < .05$) were significant predictors of post-exposure body dissatisfaction.

Table 9

Drive for Muscularity as a Moderator in the Lean Image Condition

	Model 1		Model 2				Model 3		
	B	SE B	B	B	SE B	β	B	SE B	β
BMI	< .01	0.07	0.004	0.06	0.08	0.057	0.05	0.08	0.051
Pre-BD	0.94	0.08	0.864***	0.90	0.08	0.823***	0.91	0.08	0.835***
SDummy	—	—	—	1.41	0.58	0.156*	3.43	2.17	0.379
DMS	—	—	—	0.11	0.06	0.155*	0.15	0.07	0.210*
DMS*SDummy	—	—	—	—	—	—	-0.09	0.09	-0.233
R^2	0.75		0.79				0.79		
ΔR^2	0.75		0.04				<.001		
F for ΔR^2	82.90		5.17**				0.93		

Note: $p < .05$; ** $p < .01$; *** $p < .001$; BMI- body mass index; Pre-BD – Pre-exposure body dissatisfaction; SDummy – Dummy coded slender condition; DMS – drive for muscularity; DMS*SDummy – interaction term

For the muscular condition, the first block was significant, $F(2,59) = 58.97, p < .001$. The model including muscular dummy and drive for muscularity variables was also significant, $F(4,57) = 38.27, p < .001$, and explained an additional 6.2% of the variance, $\Delta F(2,57) = 6.53, p < .001, f^2 = 0.19$. In this model, pre exposure body dissatisfaction ($\beta = .725, t = 9.63, p < .001$), BMI ($\beta = .184, t = 2.53, p < .05$) and the drive for muscularity ($\beta = 0.147, t = 2.09, p < .05$) were significant predictors of post-exposure body dissatisfaction. The final model also was significant, $F(5,56) = 30.21, p < .001$, however the addition of the interaction term was not significant, $\Delta F(1,56) = .181, p > .05$, and accounted for only 0.1% of additional variance in the final model. Pre-exposure body dissatisfaction ($\beta = 0.723, t = 9.51, p < .001$), BMI ($\beta = 0.190, t = 2.55, p < .05$) and drive for muscularity ($\beta = 0.255, t = 2.32, p < .05$) were the only significant predictors in the final model.

Table 10

The Drive for Muscularity as a Moderator in the Muscular Image Condition

	Model 1			Model 2			Model 3		
	B	SE B	β	B	SE B	B	B	SE B	β
BMI	0.17	0.08	0.160*	0.20	0.08	0.184*	0.21	0.08	0.190*
Pre BD	0.87	0.09	0.762***	0.83	0.09	0.725***	0.82	0.09	0.723***
MDummy	—	—	—	1.50	0.72	0.147*	2.56	2.60	0.251
DMS	—	—	—	0.17	0.06	0.220**	0.20	0.09	0.255*
DMS*MDummy	—	—	—	—	—	—	-0.05	0.11	-0.111
R^2	0.67			0.73			0.73		
ΔR^2	0.67			0.06			<.01		
F for ΔR^2	58.97***			6.527**			0.18		

Note: $p < .05$; ** $p < .01$; *** $p < .001$; BMI – body mass index; Pre-BD – Pre-exposure body dissatisfaction; MDummy –

dummy coded; DMS – drive for muscularity; DMS*MDummy – interaction term

The drive for leanness. For the slender condition, the first block was significant, $F(2,56) = 82.90, p < .001$. The model including the slender dummy and drive for leanness variables remained significant, $F(4,56) = 47.81, p < .001$, and the addition of these variables increased the variance explained by 3.2%, $\Delta F(2,54) = 3.96, p < .05$. Pre exposure body dissatisfaction ($\beta = .877, t = 12.77, p < .001$) and exposure condition ($\beta = .155, t = 2.36, p < .05$) were significant predictors of post-exposure body dissatisfaction. The final model remained significant, $F(5,53) = 39.39, p < .001$; however, the addition of the interaction term was not significant, $\Delta F(1,53) = 2.04, p > .05$, and only accounted for an additional 0.8% of variance in the final model. The only significant predictor in the final model was pre-exposure body dissatisfaction ($\beta = .887, t = 12.97, p < .001$).

Table 11

The Drive for Leanness as a Moderator in the Slender Image Condition

	Model 1			Model 2			Model 3		
	B	SE B	β	B	SE B	β	B	SE B	β
BMI	< .001	0.07	0.004	0.02	0.07	0.02	0.01	0.07	.006
PreBD	0.94	0.08	0.864***	0.96	0.08	0.88***	0.97	0.08	.887***
SDummy	—	—	—	1.40	0.59	.16*	-2.54	2.82	-.280
DLS	—	—	—	0.10	0.07	.09	< .001	0.10	-.002
DLS*SDummy	—	—	—	—	—	—	0.19	0.13	.456
R^2	0.748			0.780			0.788		
ΔR^2	0.748			0.032			0.008		
F for ΔR^2	82.90***			3.960*			2.042		

Note: $p < .05$; ** $p < .01$; *** $p < .001$; BMI – body mass index; PreBD – Pre-exposure body dissatisfaction; SDummy – Dummy coded variable with slender condition; DLS – drive for leanness; DLS*SDummy – interaction term

Finally, for the muscular condition, the first block was significant, $F(2,59) = 58.97, p < .001$. The model including the slender dummy and drive for leanness variables was also significant, $F(4,57) = 31.71, p < .001$; however, the addition of these variables only increased the variance explained by 2.3%, which was not significant, $\Delta F(2,57) = 2.15, p > .05$. Pre-exposure body dissatisfaction ($\beta = .770, t = 9.64, p < .001$) and BMI ($\beta = .173, t = 2.12, p < .05$) were significant predictors of post-exposure body dissatisfaction. The final model remained significant, $F(5,56) = 24.94, p < .001$; however, the addition of the interaction term was not significant, $\Delta F(1,56) = .03, p > .05$, and did not account for a significant amount of variance in the final model. Pre-exposure body dissatisfaction ($\beta = .771, t = 9.54, p < .001$) and BMI ($\beta = .173, t = 2.10, p < .05$) were significant predictors in the final model.

Table 12

The Drive for Leanness as a Moderator in the Muscular Image Condition

	Model 1			Model 2			Model 3		
	B	SE B	β	B	SE B	β	B	SE B	β
BMI	0.17	0.08	0.160*	0.19	0.09	0.173*	.019	0.09	0.173*
PreBD	0.87	0.09	0.762***	0.88	0.09	0.770***	0.88	0.09	0.771***
MDummy	—	—	—	1.44	0.77	0.141	0.91	3.50	0.089
DLS	—	—	—	0.08	0.09	0.077	0.07	0.13	0.063
DLS*MDummy	—	—	—	—	—	—	0.03	0.16	0.055
R^2	0.67			0.69			0.69		
ΔR^2	0.67			0.02			< .001		
F for ΔR^2	58.97***			2.15			0.03		

Note: $p < .05$; ** $p < .01$; *** $p < .001$; BMI – body mass index; PreBD – Pre-exposure body dissatisfaction; MDummy – dummy coded muscular condition variable; DLS – drive for leanness; DLS*Muscular Dummy – interaction term

Post-hoc analyses of ethnicity

For this study, all of the images presented were of Caucasian men. For this reason, one might expect that the effects of exposure may differ for Caucasian men than for men of other ethnicities. Four categories of ethnicity were represented, Caucasian ($n = 57$), African American ($n = 11$), Asian American ($n = 8$) and Other ($n = 6$) were created. Thus, several post-hoc analyses were conducted. Six ANOVAs were used to examine differences by ethnicity on major study variables. Results were nonsignificant for general internalization, $F(3, 88) = 2.24, p > .05$, pre-exposure body dissatisfaction, $F(3,88) = 1.67, p > .05$, trait social comparison, $F(3,87) = 0.35, p > .05$, and the drive for muscularity, $F(3,88) = 0.71, p > .05$. However, the drive for leanness, $F(3,88) = 2.56, p = 0.06$, and athletic internalization, $F(3,88) = 0.053$, neared significance. Post-hoc analyses yielded a significant difference between African Americans and Asian Americans on the drive for leanness ($p < .05$) and athletic internalization ($p < .05$) and between African Americans and other ethnicities on drive for leanness ($p < .05$) and athletic internalization ($p < .05$), with African Americans having significantly lower scores on the drive for leanness and athletic internalization than both of these groups. Because of these findings, ethnicity was entered into the regressions as a covariate. The 4 ethnicities were dummy coded into three variables with Caucasian as the reference category. Dummy coded variables were created such that a score of 1 indicated a given ethnicity and 0 represented all other ethnicities.

Hierarchical linear regressions were conducted separately for each exposure condition on the two variables with differences among ethnicities: drive for leanness and athletic internalization. Analyses investigating the drive for leanness as a moderator were nonsignificant. For athletic internalization, BMI and pre-exposure body dissatisfaction were entered as covariates in the first block, the three dummy coded ethnicity variables were entered in the second block, and athletic internalization was entered in the third block. For the slender condition, the addition of the ethnicity variables was not significant, $F(3,24) = 1.30, p > .05, \Delta R^2 = 0.028, f^2 = 0.17$. Pre-exposure body dissatisfaction remained the only significant predictor in the final model ($\beta = 0.950, t = 9.05, p < .001$). For the muscular condition, there were no Asian Americans, so the only variables entered were other ethnicities and African American. For this regression, the addition of the ethnicity variables was also not significant, $F(2,28) = 0.39, p > .05$; however, in the final model, athletic internalization was significant ($\beta = 0.26, t = 2.22, p < .05$).

Table 13

Athletic Internalization Controlling for Ethnicity in the Muscular Condition

	Model 1			Model 2			Model 3		
	B	SE B	β	B	SE B	β	B	SE B	B
BMI	0.24	0.12	0.222	0.25	0.13	0.229	0.21	0.12	0.192
PRE-BD	0.81	0.13	0.719**	0.85	0.14	0.752**	0.82	0.13	0.723**
AfAmer	—	—	—	1.29	1.89	0.080	2.58	1.86	0.159
Other	—	—	—	-1.06	2.11	-0.058	-1.96	2.02	-0.106
Intern-A	—	—	—	—	—	—	0.23	0.10	0.260*
R^2	0.65			0.66			0.71		
ΔR^2	0.65			0.01			0.39		
F for ΔR^2	27.86**			0.05			4.91*		

Note: ** $p < .001$; * $p < .05$; Pre-BD – Pre-exposure body dissatisfaction; AfAmer – African American dummy variable; Other – Other ethnicities dummy variable; Intern- A- Athletic Internalization

CHAPTER IV

DISCUSSION

The present study examined the effects of a brief exposure to media presentations (advertisements) of slender and muscular men on male's body dissatisfaction. There are several major findings of the present study. First, exposure to both muscular and slender media images was associated with an increase in body dissatisfaction. Second, there were no significant differences in the change in body dissatisfaction for the two image conditions. Third, an increase in body dissatisfaction was differentially predicted for each of the image conditions. Fourth, males with a higher drive for muscularity experienced a greater increase in body dissatisfaction in both image conditions. Finally, higher levels of pre-exposure body dissatisfaction were associated with a higher frequency of upward social comparisons in the image conditions. Several aspects of these findings warrant further examination.

First, exposure to images of idealized male bodies (slender and muscular) was related to an increase in body dissatisfaction, thus supporting the first hypothesis. These results parallel those found among women exposed to images of thin female models and add to the growing literature that exposure to images of muscular male models elicits an increase in body dissatisfaction (Lorenzen, Grieve, & Thomas, 2004; Arbour & Ginnis, 2006; Agliata & Tantleff-Dunn, 2004; Baird & Grieve, 2006; Hargreaves & Tiggemann, 2002). Additionally, these results also demonstrated that exposure to images of slender

males in advertisements elicited an increase in body dissatisfaction. To my knowledge, no previous research has included conditions that examined the effects of exposure to slender and muscular images. The present study extends previous knowledge by allowing for comparison of the effects of exposure to slender and muscular images. These findings are consistent with the one previous research study which examined the effects of exposure to thin media images (Ogden & Munday, 1996). However, in the previous study, the authors did discuss the selection of the thin images that they used.

Furthermore, the males presented in these thin images were presented with “varying degrees of exposed body.” Therefore, the present study extends previous knowledge by presenting images that were rated in a pilot study as very high on slenderness and very low on muscularity, thus presenting an operational definition of “slender” images.

Furthermore, all of these images were of men with no shirts on, thus focusing the participants’ attention on the images’ bodies. The present study used images of shirtless slender models whose bodies were presented in an objectified way.

The current findings demonstrated that even a very brief exposure to media images may impact a man’s body dissatisfaction. Therefore, these findings have implications for understanding and preventing male body dissatisfaction. As the presentation of male models presented in objectified ways (e.g. without their shirts on) is becoming increasingly prevalent (Pope, Olivardia, Borowiecki, & Cohane, 2001; Ricciardelli, Clow & White, 2010), men may begin to experience greater levels of body dissatisfaction. The results of the present study suggest that a male’s body dissatisfaction

may be affected by images presented in the media. Furthermore, the images which elicit this body dissatisfaction are not limited to those high in muscularity.

An interesting finding is that males in the muscular condition did not experience a significantly greater change in body dissatisfaction than the males who viewed lean images. These results are surprising as muscularity is considered the major body concern for males (Ridgeway & Tylka, 2005). These results demonstrate that viewing images of objectified male bodies, slender or muscular, is related to an increase in body dissatisfaction. One possible explanation for this finding is that all of the males presented were considered attractive (as rated in the pilot study) and were models. It may be that participants were considering the status and attractiveness of the model while making their comparisons.

Of interest is the finding that an increase in body dissatisfaction was differentially predicted for males viewing muscular images compared to males viewing slender images. In the muscular image condition, a higher drive for muscularity and greater frequency of social comparison (trait and actual upward comparisons) were salient predictors of an increase in body dissatisfaction. In contrast, the only predictor of an increase in body dissatisfaction for the slender condition was the drive for muscularity. Therefore, while both types of body types presented as ideal in the media may be associated with male body dissatisfaction, it is a man's drive for muscularity that predicts who will be affected by these media images. This finding seems to be counterintuitive in

that those who have a strong drive to be more muscular, should not be affected by images of slender males.

Examination of the bivariate correlations shows that pre-exposure body dissatisfaction is associated with a higher drive for muscularity. Thus one explanation for the finding that a higher drive for muscularity is associated with an increase in body dissatisfaction in both conditions is that a high drive for muscularity may be associated with body dissatisfaction in general and may represent vulnerability for experiencing greater body dissatisfaction if individuals feel that their body is inadequate. Thus, for those men who are already dissatisfied with their bodies, viewing images of idealized and objectified male bodies increased body dissatisfaction. In other words, a man's drive for muscularity may represent an underlying dissatisfaction with his own body, and while his goal may not be to achieve a slender body such as the models presented, viewing images of objectified male bodies may trigger his vulnerability to experiencing an increase in body dissatisfaction.

An increase in body dissatisfaction for the muscular image exposure group was predicted by social comparison (both state and trait). Specifically, the frequency of upward social comparisons was associated with a greater increase in body dissatisfaction which is consistent with previous research which exposed men to images of muscular males (Hargreaves & Tiggemann, 2009). Higher scores on trait social comparison were also associated with a greater increase in body dissatisfaction in the muscular condition. Interestingly, bivariate correlations showed that pre-exposure body dissatisfaction was

associated with higher scores on a measure of trait social comparison and a higher frequency of upward social comparisons actually made while viewing the images. In other words, those participants who were more dissatisfied with their body prior to exposure not only tend to compare themselves to others more but also engaged in more upward social comparisons.

Interestingly, trait social comparison was not significantly associated with the frequency of actual upward social comparisons. This suggests that while trait social comparison did predict a change in body dissatisfaction post-exposure, it did not predict the frequency of upward social comparisons. This may be due to the perceived similarity and/or attainability of the models in the advertisements. It has been documented that males are much less likely than females to compare themselves to models (Franzoi & Klaiber, 2007). However, when cultural norms are made salient, men are more likely to view models as relevant comparison targets and then make social comparisons to them, leading to more negative feelings about their own bodies (Strahan et al., 2006; Arbour & Ginnis, 2006). In the present study, those who made upward social comparisons may have viewed the images as more relevant comparison targets than those who did not make upward comparisons. Thus, those who scored high on trait social comparisons may not have engaged in upward comparisons in the image conditions if they did not view the image as relevant. Another factor that may account for the lack of association between trait comparison tendency and the frequency of upward comparisons actually made is the attainability of the images. Arbour and Ginnis (2006) found that when men were exposed

to unattainable targets, social comparison had no effect on body dissatisfaction, suggesting that participants did not engage in an upward social comparison. It is likely that even those who tend to make social comparisons may not have always made an upward comparison if they viewed the image as unattainable. Future research should include measures of perceived relevance and attainability of the images when examining the impact of media images on male body dissatisfaction.

Several hypotheses were not supported. Previous research has suggested that internalization of media ideas is associated with an increase in body dissatisfaction (Karaszia & Crowther, 2009, 2010); however, in the present study it was not. The association between athletic and general internalization was highly significant, suggesting that the males in this study were not discriminating between the two factors. Furthermore, when dummy coded ethnicity variables were entered into the regression, athletic internalization neared significance. This suggests that internalization of cultural ideals may be different for men of different ethnicities. Third, the drive for muscularity and the drive for leanness did not emerge as moderators of the relationship between exposure to media images and an increase in body dissatisfaction. Furthermore, no association was found between the drive for leanness and an increase in body dissatisfaction. Examination of bivariate correlations revealed that drive for leanness is significantly positively associated with general and athletic internalization, state social comparison and the drive for muscularity and is negatively associated with BMI. Therefore, one may question what the drive for leanness is measuring in this sample.

One potential explanation for the nonsignificant findings is that pre- and post-exposure body dissatisfaction were very highly associated. Several of our nonsignificant findings may have resulted from the high correlation, which limits the amount of variance remaining to be explained in the model. The highly significant relationship between pre and post-exposure body dissatisfaction may be the result of several methodological issues. First, the time between measurements was relatively short. Although pre- and post-exposure body dissatisfaction was measured at the beginning and close to the end of the experimental session respectively, the time between these two assessments ranged from 60 and 90 minutes, depending on how quickly the participants responded to the questionnaires. Second, the number of images used in each condition was only seven, due to the results of the pilot test. Other studies examining the impact of media images on body dissatisfaction have used a greater number of advertisements, including 16 in a study by Grogan, Williams, and Connor (2002) and 15 in a study by Hargreaves and Tiggemann (2009). It is possible that such a brief exposure did not produce as great of a change in body dissatisfaction as an experimental design using a greater number of images. However, Ogden and Munday (1996) used only five magazine ads in their study which yielded results that supported an association between exposure to media images and a change in body dissatisfaction. Another factor which may have attenuated the change in body dissatisfaction was the distractor task. Observation of the participants during the session showed that several participants were unable to do the task and became frustrated

with it. This frustration may have caused the participants to focus their attention more on their frustration with the task than on the ads, thus reducing their impact.

One important consideration of the present study involves the racial/ethnic composition of the participants as well as the men in the images. A small body of research has demonstrated that men of different racial/ethnic backgrounds experience body image dissatisfaction differently. For example, African American men experience less body dissatisfaction than Caucasian men (e.g. Miller, Gleaves, Hirsch, Green, Snow, & Corbett, 2000), while Asian men may experience greater body dissatisfaction than Caucasian males (Barnett, Keel, & Conoscenti, 2001). However research in this area is mixed. For example, Grammas and Schwartz (2009) found that there were no differences by ethnicity on muscularity or body fat dissatisfaction. In the present study, African American men reported a significantly lower drive for leanness and less athletic internalization than Asian American men suggesting that race/ethnicity may be an important consideration when investigating male body image. Another consideration is that all of the media images were of Caucasian males. There are two primary reasons for this methodological limitation. First, images of Caucasian males were much more widely available in magazines and on websites to be used in the pilot study. Second, several images of African American men were used in the pilot study. However, even those images identified by the researchers as low in muscularity were identified by the participants as being more muscular than the images that qualified for the muscular condition. Therefore, to avoid confounding, since all images identified as low in

muscularity were Caucasian, all non-Caucasian images were removed from the muscular condition.

The present study must be viewed in light of several limitations. First, the sample was composed solely of undergraduate men, thus limiting the generalizability of these findings to this group of men. Second, this study relied solely on self-report questionnaires, which rely on accurate reporting from the participants. Of note is that several of the participants expressed to the researcher discomfort with viewing and rating shirtless male models which may have affected their responding. Third, the exposure to the images was brief, and body dissatisfaction was measured shortly after. It is unknown how long these effects last, and if increased and prolonged exposure in daily life has a longer lasting or more dramatic effect on body dissatisfaction.

Despite its limitations, the present study adds to the growing body of literature suggesting that exposure to media images of idealized male bodies increases a male's body dissatisfaction. The present study furthers prior research by identifying the negative effects of slender images on male body dissatisfaction.

REFERENCES

- Agliata, D., & Tantleff-Dunn, S. (2004). The impact of media exposure on males' body image. *Journal of Social and Clinical Psychology, 23*, 7–22.
- Arbour, K. P., & Ginnis, K. A. M. (2006). Effects of exposure to muscular and hypermuscular media images on young men's muscularity dissatisfaction and body dissatisfaction. *Body Image, 3*, 153–161. doi: 10.1016/j.bodyim.2007.04.006,
- Baghurst, T., Hollander, D. B., Nardella, B., & Haff, G. G. (2006). Change in sociocultural ideal male physique: An examination of past and present action figures. *Body Image, 3*, 87-91. doi:10.1016/j.bodyim.2005.11.001
- Baird, A. L., & Grieve, F. G. (2006). Exposure to male models in advertisements leads to a decrease in men's body dissatisfaction. *North American Journal of Psychology, 8*, 115–122.
- Barnett, H. L., Keel, P. K., & Conoscenti, L. M. (2001). Body type preferences in Asian and Caucasian college students. *Sex Roles, 45*, 867-878. doi:10.1023/A:1015600705749
- Blashill, A. J. (2010). Elements of male body image: Prediction of depression, eating pathology and social sensitivity among gay men. *Body Image, 7*, 310-316. doi: 10.1016/j.bodyim.2010.07.006

- Bottamini, G., & Ste-Marie, D. M. (2006). Male Voices on Body Image. *International Journal of Men's Health*, 5, 109-132. doi:10.3149/jmh.0502.109
- Cahill, S., & Mussap, A. J. (2007). Emotional reactions following exposure to idealized bodies predict unhealthy body change attitudes and behaviors in women and men. *Journal of Psychosomatic Research*, 62, 631-639.
- Cash, T. F. (2000). The Multidimensional Body-Self Relations Questionnaire Users' Manual. Available from the author at www.body-images.com.
- Collins, R. L. (1996). For better or worse: The impact of upward social comparison on self-evaluations. *Psychological Bulletin*, 119, 51-69. doi:10.1037/0033-2909.119.1.51
- Coomber, K., & King, R. M. (2008). The role of sisters in body image dissatisfaction and disordered eating. *Sex Roles*, 59, 81-93. doi:10.1007/s11199-008-9413-7
- Daniel, S., & Bridges, S. K. (2010). The drive for muscularity in men: Media influences and objectification theory. *Body Image*, 7, 32-38. doi:10.1016/j.bodyim.2009.08.003
- Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, 7, 117-140.
- Franzoi, S. L., & Klaiber, J. R. (2007). Body use and reference group impact: With whom do we compare our bodies? *Sex Roles*, 56, 205-214. doi:10.1007/s11199-006-9162-4

Frederick, D. A., Buchanan, G. M., Sadehgi-Azar, L., Peplau, L. A., Haselton, M.

G., Berezovskaya, A., Lipinski, R.E. (2007). Desiring the muscular ideal: Men's body satisfaction in the United States, Ukraine, and Ghana. *Psychology of Men & Masculinity*, 8, 103–117. doi:10.1037/1524-9220.8.2.103

Galli, N., & Reel, J. J. (2009). Adonis or Hephaestus? Exploring body image in male athletes. *Psychology of Men & Masculinity*, 10, 95-108. doi:10.1037/a0014005

Garner, D.M. (2002). Body image and anorexia nervosa. In T. F. Cash & T.Pruzinsky (Eds.), *Body Image: A handbook of theory, research, and clinical practice* (pp. 295-303). New York: Guilford Press.

Grammas, D. L., & Schwartz, J. P. (2009). Internalization of messages from society and perfectionism as predictors of male body image. *Body Image*, 6, 31-35. doi:10.1016/j.bodyim.2008.10.002

Grieve, F. G. (2007). A conceptual model of factors contributing to the development of muscle dysmorphia. *Eating Disorders: The Journal of Treatment & Prevention*, 15, 63-80. doi: 10.1080/10640260601044535

Grogan, S., Williams, Z., & Conner, M. (1996). The effects of viewing same-gender photographic models on body-esteem? *Psychology of Women Quarterly*, 20, 569-575. doi:10.1111/j.1471-6402.1996.tb00322.x

Hargreaves, D. A., & Tiggemann, M. (2002). The effect of television commercials on mood and body dissatisfaction: The role of appearance schema activation. *Journal*

of Social and Clinical Psychology, 21, 287– 308.

doi:10.1521/jscp.21.3.287.22532

Hargreaves, D. A., & Tiggemann, M. (2004). Idealized media images and adolescent body image: "Comparing" boys and girls. *Body Image, 1, 351– 361.*

doi:10.1016/j.bodyim.2004.10.002

Hargreaves, D. A., & Tiggemann, M. (2009). Muscular ideal media images and men's body image: Social comparison processing and individual vulnerability.

Psychology of Men & Masculinity, 10, 109-119.

Heatherton, T. F., & Polivy, J. (1991). Development and validation of a scale for measuring state self-esteem. *Journal of Personality and Social Psychology, 60,*

895-910. doi: 10.1037/0022-3514.60.6.895

Hobza, C. L., Walker, K. E., Yakushko, O., & Peugh, J. L. (2007). What about men? Social comparison and the effects of media images on body and self-esteem. *Psychology of Men & Masculinity, 8, 161–172.*

doi:10.1037/1524-9220.8.3.161

Johnson, P. J., McCreary, D. R., & Mills, J. S. (2007). Effects of exposure to objectified male and female media images on men's psychological well-being. *Psychology of Men & Masculinity, 8, 95–102.* doi: 10.1037/1524-

9220.8.2.95

Jonason, P. K., Krcmar, M., & Sohn, S. (2009). Male body image: The role of muscle magazine exposure, body mass index, and social comparison in men's body

satisfaction. *Social Behavior and Personality*, 37, 627-630.

doi:10.2224/sbp.2009.37.5.627

Jones, D.C. (2004). Body image among adolescent girls and boys: A longitudinal study. *Developmental Psychology*, 40, 823-835. doi:10.1037/0012-1649.40.5.823

Jones, D. C., Bain, N., & King, S. (2008). Weight and muscularity concerns as longitudinal predictors of body image among early adolescent boys: A test of the dual pathways model. *Body Image*, 5, 195-204.

Jones, D. C., & Crawford, J. K. (2005). Adolescent boys and body image: Weight and muscularity concerns as dual pathways to body dissatisfaction. *Journal of Youth and Adolescence*, 3, 629-636. doi:10.1007/s10964-005-8951-3

Jung, J., Forbes, G. B., & Chan, P. (2010). Global body and muscle satisfaction among college men in the United States and Hong Kong-China. *Sex Roles*, 63, 104-117.

Karazsia, B., & Crowther, J. H. (2008). Psychological and behavioral correlates of the SATAQ-3 with males. *Body Image: An International Journal of Research*, 5, 109-115.

Karazsia, B. T., & Crowther, J. H. (2009). Social body comparison and internalization: Mediators of social influences on men's drive for muscularity. *Body Image: An International Journal of Research*, 6, 105-112.

Karazsia, B. T., & Crowther, J. H. (2010). Sociocultural and psychological links to men's engagement in risky body change behaviors. *Sex Roles*, 63, 747-756.

Knauss, C., Paxton, S. J., & Alsaker, F. D. (2007). Relationships amongst body

dissatisfaction, internalisation of the media body ideal and perceived pressure from media in adolescent girls and boys. *Body Image*, 4, 353-360.

- Leit, R. A., Pope, H. G., & Gray, J. J. (2001). Cultural expectations of muscularity in men: The evolution of Playgirl centerfolds. *International Journal of Eating Disorders*, 29, 90-93. doi:10.1002/1098-108X(200101)29:1<90::AID-EAT15>3.0.CO;2-F
- Lorenzen, L. A., Grieve, F. G., & Thomas, A. (2004). Exposure to muscular male models decreases men's body satisfaction. *Sex Roles*, 51, 743-748. doi:10.1007/s11199-004-0723-0
- McCreary, D. R., & Sasse, D. K. (2000). An exploration of the drive for muscularity in adolescent boys and girls. *Journal of American College Health*, 48, 297-304.
- McCreary, D. R., Sasse, D. K., Saucier, D. M., & Dorsch, K. D. (2004). Measuring the drive for muscularity: Factorial validity of the Drive for Muscularity Scale in men and women. *Psychology of Men and Masculinity*, 5, 49-58.
- Miller, K. J., Gleaves, D. H., Hirsch, T. G., Green, B. A., Snow, A. C., & Corbett, C. C. (2000). Comparisons of body image dimensions by race/ethnicity and gender in a university population. *International Journal of Eating Disorders*, 27, 310-316. doi:10.1002/(SICI)1098-108X(200004)27:3<310::AID-EAT8>3.0.CO;2-Q
- Mishkind, M. E., Rodin, J., Silberstein, L. R., & Striegel-Moore, R. H. (1986). The embodiment of masculinity: Cultural, psychological, and behavioral dimensions. *American Behavioral Scientist*, 29, 545-562.

- Morgan, J. F., & Arcelus, J. (2009). Body image in gay and straight men: A qualitative study. *European Eating Disorders Review, 17*, 435-443.
doi:10.1002/erv.955
- Morrison, T. G., Kalin, R., & Morrison, M. A. (2004). Body-image evaluation and body-image investment among adolescents: A test of sociocultural and social comparison theories. *Adolescence, 39*, 571-572.
- Morry, M. M., & Staska, S. L. (2001). Magazine exposure: Internalization, self-objectification, eating attitudes, and body satisfaction in male and female university students. *Canadian Journal of Behavioural Science/Revue canadienne des sciences du comportement, 33*, 269-279. doi:10.1037/h0087148
- Neighbors, L. A., & Sobal, J. (2007). Prevalence and magnitude of body weight and shape dissatisfaction among university students. *Eating Behaviors, 8*, 429-439.
- Ogden, J., & Munday, K. (1996). The effect of the media on body satisfaction: The role of gender and size. *European Eating Disorders Review, 4*, 171-182.
doi:10.1002/(SICI)1099-0968(199609)4:3<171::AID-ERV132>3.0.CO;2-U
- Pope, H. G., Olivardia, R., Borowiecki, J. J., & Cohane, G. H. (2001). The growing commercial value of the male body: A longitudinal survey of advertising in women's magazines. *Psychotherapy and Psychosomatics, 70*, 189-192.
doi:10.1159/000056252
- Phillips, N., & de Man, A. F. (2010). Weight status and body image satisfaction in adult men and women. *North American Journal of Psychology, 12*, 171-184.

- Ricciardelli, R., Clow, K. A., & White, P. (2010). Investigating hegemonic masculinity: Portrayals of masculinity in men's lifestyle magazines. *Sex Roles, 63*, 64-78.
doi:10.1007/s11199-010-9764-8
- Ridgeway, R. T., & Tylka, T. L. (2005). College men's perceptions of ideal body composition and shape. *Psychology of Men & Masculinity, 6*, 209-220.
- Smolak, L., & Murnen, S. K. (2008). Drive for leanness: Assessment and relationship to gender, gender role and objectification. *Body Image, 5*, 251-260.
doi:10.1016/j.bodyim.2008.03.004
- Smolak, L., Murnen, S. K., & Thompson, J. K. (2005). Sociocultural influences and muscle building in adolescent boys. *Psychology of Men & Masculinity, 6*, 227-239.
- Strahan, E. J., Wilson, A. E., Cressman, K. E., & Buote, V. M. (2006). Comparing to perfection: How cultural norms for appearance affect social comparisons and self-image. *Body Image, 3*, 211-227. doi:10.1016/j.bodyim.2006.07.004
- Tabachnick, B.G., & Fidell, L.S. (2007). *Using multivariate statistics, 5th Edition*.
Boston: Pearson Assessments.
- Thompson, J. K., Heinberg, L. J., Altabe, M., & Tantleff-Dunn, S. (1999). *Exacting beauty: Theory, assessment, and treatment of body image disturbance*. Washington, DC: American Psychological Association.
- Thompson, J. K., Heinberg, L., & Tantleff, S. (1991). The Physical Comparison Scale (PACS). *The Behavior Therapist, 14*, 174. doi:10.1037/1524-9220.6.4.227

- Thompson, J. K., van den Berg, P., Roehrig, M., Guarda, A. S., & Heinberg, L. J. (2004). The Sociocultural Attitudes Towards Appearance Scale-3 (SATAQ-3): Development and validation. *International Journal of Eating Disorders, 35*, 293-304. doi:10.1002/eat.10257
- Tiggemann, M., Martins, Y., & Kirkbride, A. (2007). Oh to be lean and muscular: Body image ideals in gay and heterosexual men. *Psychology of Men & Masculinity, 8*, 15-24. doi:10.1037/1524-9220.8.1.15
- Tiggemann, M., Polivy, J., & Hargreaves, D. (2009). The processing of thin ideals in fashion magazines: A source of social comparison or fantasy? *Journal of Social & Clinical Psychology, 28*, 73-93.
- Tiggemann, M., Martins, Y., & Churchett, L. (2008). Beyond muscles: Unexplored parts of men's body image. *Journal of Health Psychology, 13*, 1163-1172.
- Trebay, G. (2008, February 7). The vanishing point. *New York Times*. Retrieved August 11, 2010 from <http://www.nytimes.com>.
- Tylka, T.L. Bergeron, D., Schwartz, J.P. (2005). Development and psychometric evaluation of the Male Body Attitudes Scale (MBAS). *Body Image, 2*, 161-175.
- van den Berg, P., Thompson, J. K., Obremski-Brandon, K., , & Coovert, M. (2002). The tripartite influence model of body image and eating disturbance: A covariance structure modeling investigation testing the mediational role of appearance comparison. *Journal of Psychosomatic Research, 53*, 1007-1020. doi:10.1016/S0022-3999(02)00499-3
- Watkins, J. A., Christie, C., & Chally, P. (2008). Relationship between body image and

body mass index in college men. *Journal of American College Health*, 57, 95-99.

doi:10.3200/JACH.57.1.95-100

Watson, D., Clark, L.A., & Tellegen. (1988). Development and validation of brief measures of positive and negative affect: The PANAS Scales. *Journal of Personality and Social Psychology*, 47, 1063 – 1070.

Yamamiya, Y., Shroff, H., & Thompson, J. K. (2008). The tripartite influence model of body image and eating disturbance: A replication with a Japanese sample. *International Journal of Eating Disorders*, 41, 88-91.

doi:10.1002/eat.20444

APPENDICES

APPENDIX A

CONSENT FORM

CONSENT FORM

IRB LOG #: 11-196

The Effectiveness of Advertisement Directed Toward Men

You are being invited to participate in a research study. This consent form will provide you with information on the research project, what you will need to do, and the associated risks and benefits of the research. Your participation is voluntary. Please read this form carefully. It is important that you ask questions and fully understand the research in order to make an informed decision. You will receive a copy of this document to take with you.

The purpose of this study is to examine the effectiveness of advertisements that are directed toward men. There may be no direct benefits of participation in this study. However, participating in this study will be beneficial for future research. Compensation for your participation in this study will be in the form of two extra credit points toward your research requirement for your psychology research requirement. We do not anticipate any risks or discomforts that are greater than those experienced in everyday life. Responses for this study are completely confidential. Taking part in this research study is entirely up to you. You may choose not to participate or you may discontinue your participation at any time without penalty or loss of benefits to which you are otherwise entitled.

If you want to know more about this research project, please call Dr. Janis H. Crowther (Tel. x22090; jcrowthe@kent.edu) or Rachel Galioto (rgalioto@kent.edu). The project has been approved by Kent State University. If you have questions about Kent State University's rules for research, please call Dr. Sonia Alemangne, Vice President of Research, Division of Research and Graduate Studies (Tel. 330.672.2704).

I have read this consent form and have had the opportunity to have my questions answered to my satisfaction. I voluntarily agree to participate in this study. I understand that a copy of this consent will be provided to me for future reference. You will get a copy of this consent form.

Sincerely,
Rachel Galioto
Project Director

Janis H. Crowther, Ph.D.
Professor

B. CONSENT STATEMENT(S)

1. I agree to take part in this project. I know what I will have to do and that I can stop at any time.

Signature

Date

Psychometric Study

You are being invited to participate in a research study. This consent form will provide you with information on the research project, what you will need to do, and the associated risks and benefits of the research. Your participation is voluntary. Please read this form carefully. It is important that you ask questions and fully understand the research in order to make an informed decision. You will receive a copy of this document to take with you.

The purpose of this study is to examine the psychometric properties of a new measure by comparing it to other existing measures. There may be no direct benefits of participation in this study. However, participating in this study will be beneficial for future research. Compensation for your participation in this study will be in the form of two extra credit points toward your research requirement for your psychology research requirement. We do not anticipate any risks or discomforts that are greater than those experienced in everyday life. Responses for this study are completely confidential. Taking part in this research study is entirely up to you. You may choose not to participate or you may discontinue your participation at any time without penalty or loss of benefits to which you are otherwise entitled. If you want to know more about this research project, please call Dr. Janis H. Crowther (Tel. x22090; jcrowthe@kent.edu) or Rachel Galioto (rgalioto@kent.edu). The project has been approved by Kent State University. If you have questions about Kent State University's rules for research, please call Dr. Sonia Alemangne, Vice President of Research, Division of Research and Graduate Studies (Tel. 330.672.2704).

I have read this consent form and have had the opportunity to have my questions answered to my satisfaction. I voluntarily agree to participate in this study. I understand that a copy of this consent will be provided to me for future reference. You will get a copy of this consent form.

Sincerely,

Rachel Galioto
Project Director

Janis H. Crowther, Ph.D.
Professor

1. I agree to take part in this project. I know what I will have to do and that I can stop at anytime.

 Signature

Date

APPENDIX B

MEASURES

PILOT STUDY QUESTIONNAIRE

Rate the extent to which you each image reflects the characteristic in each statement

- 1-not at all
- 2-a little
- 3-moderately
- 4-quite a bit
- 5-extremely

1. The person in this image is confident
1 2 3 4 5
2. This person in this image is slender
1 2 3 4 5
3. This person in this image is masculine
1 2 3 4 5
4. This person in this image is successful
1 2 3 4 5
5. This person in this image is popular
1 2 3 4 5
6. This person in this image is arrogant
1 2 3 4 5
7. This person in this image is manipulative
1 2 3 4 5
8. The person in this image has muscle definition
1 2 2 3 4 5
9. The person in this image has well developed upper arms
1 2 3 4 5
10. The person in this image is distant
1 2 3 4 5
11. The person in this image is muscular
1 2 3 4 5
12. The person in this image is physically attractive
1 2 3 4 5
13. The person in this image is strong
1 2 3 4 5
14. The person in this image is powerful
1 2 3 4 5
15. The person in this image has a well developed chest
1 2 3 4 5

DEMOGRAPHIC INFORMATION

1. Age
2. Ethnicity
 - a. African American
 - b. Hispanic
 - c. Asian American
 - d. Non-Hispanic White/ Caucasian
 - e. Biracial
 - f. Other
3. What year in school are you?
 - a. Freshman
 - b. Sophomore
 - c. Junior
 - d. Senior
 - e. Post-Undergraduate
4. Please answer the following questions regarding your participation in sports
 - a) Did you compete in varsity athletics when you were in high school? YES / NO

If YES, what sport(s)? _____
 - b) Are you currently involved in varsity athletics? YES / NO

If YES, what sport(s)? _____
 - c) Are you currently in a sport or activity where it's important to stay a certain weight (wrestling, gymnastics, ballet, etc.)? YES / NO

If NO, have you EVER participated in such an activity?
YES / NO

PHYSICAL APPEARANCE COMPARISON SCALE

The following items ask about your physical appearance. Using the following scale please select a number that comes closest to how you feel:

1	2	3	4	5
Never	Seldom	Sometimes	Often	Always

1. At parties or other social events, I compare my physical appearance to the physical appearance of others.
2. The best way for a person to know if they are overweight or underweight is to compare their figure to the figure of others.
3. At parties or other social events, I compare how I am dressed to how other people are dressed.
4. Comparing your "looks" to the "looks" of others is a bad way to determine if you are attractive or unattractive.
5. In social situations, I sometimes compare my figure to the figures of other people.

POSITIVE AND NEGATIVE AFFECT SCHEDULE

The following items consist of a number of words that describe different feelings and emotions. Read each item and then mark your appropriate answer on the answer sheet. Indicate to what extent you feel this way right now. Use the following scale to record your answers.

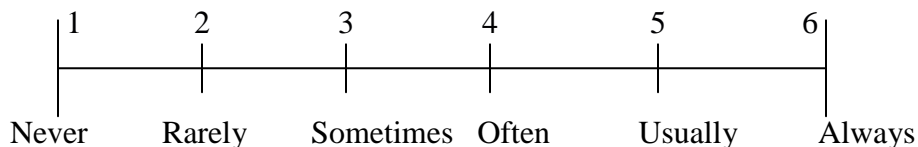
1	2	3	4	5
Very Slightly or Not at All	A Little	Moderately	Quite a Bit	Extremely

1. Interested
2. Irritable
3. Distressed
4. Alert
5. Excited
6. Ashamed
7. Upset

8. Inspired
9. Strong
10. Nervous
11. Guilty
12. Determined
13. Scared
14. Attentive
15. Hostile
16. Jittery
17. Enthusiastic
18. Active
19. Proud
20. Afraid

MALE BODY ATTITUDES SCALE

The following items include statements that may or may not pertain to you and the way you feel about your body. Please rate how often you think or feel each statement using this scale:



1. I think I have too little muscle on my body.
2. I think my body should be leaner.
3. I wish my arms were stronger.
4. I feel satisfied with the definition in my abs (i.e., stomach muscles).
5. I think my legs are not muscular enough.
6. I think my chest should be broader.
7. I think my shoulders are too narrow.
8. I am concerned that my stomach is too flabby.
9. I think my arms should be larger (i.e., more muscular).
10. I feel dissatisfied with my overall body build.
11. I think my calves should be larger (i.e., more muscular).
12. I wish I were taller.
13. I think I have too much fat on my body.

14. I think my abs are not thin enough.
15. I think my back should be larger and more defined.
16. I think my chest should be larger and more defined.
17. I feel satisfied with the definition in my arms.
18. I feel satisfied with the size and shape of my body.
19. I am satisfied with my height.
20. Have you felt that your own body size or shape compared unfavorably to other men?
21. Has eating sweets, cakes, or other high calorie food made you feel fat or weak?
22. Have you felt like your muscle tone was way too low?
23. Have you felt excessively large and rounded (i.e., fat)?
24. Have you felt ashamed of your body size or shape?
25. Has seeing your reflection (e.g., in a mirror or window) made you feel badly about your size or shape?
26. Has seeing muscular men made you feel badly about your own body size or shape?
27. Have you been so worried about your body size or shape that you have been feeling that you ought to diet?
28. Have you ever felt that you were way too focused on your body size or shape?
29. Have you been particularly self-conscious about your body size or shape when in the company of other people?

STATE SELF-ESTEEM SCALE

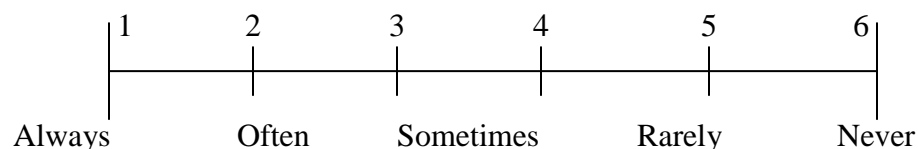
Please use the scale below to rate the extent to which you agree with the following statements right now:

1	2	3	4	5
Not at all	Slightly	Moderately	Quite a bit	Extremely

1. I feel satisfied with the way my body looks right now
2. I feel that others respect and admire me
3. I am dissatisfied with my weight
4. I feel good about myself
5. I am pleased with my appearance right now
6. I feel unattractive

DRIVE FOR MUSCULARITY SCALE

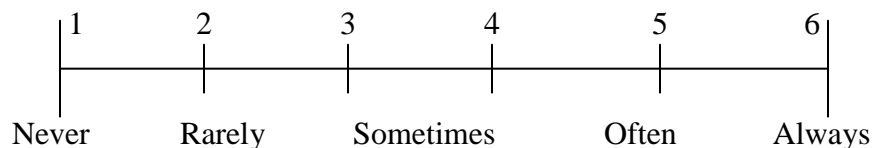
The following items include statements that may or may not pertain to you and the way you feel about your body. Please rate how often you think or feel each statement using this scale:



1. I wish I were more muscular.
2. I lift weights to build more muscle.
3. I use protein or energy supplements.
4. I drink weight gain or protein shakes.
5. I try to consume as many calories as I can in a day.
6. I feel guilty if I miss a weight-training session.
7. I think I would feel more confident if I had more muscle mass.
8. Other people think I work out with weights too often.
9. I think I would look better if I gained 10 pounds in bulk.
10. I think about taking anabolic steroids.
11. I think I would feel stronger if I gained a little more muscle mass.
12. I think that my weight-training schedule interferes with other aspects of my life.
13. I think that my arms are not muscular enough.
14. I think that my chest is not muscular enough.
15. I think that my legs are not muscular enough.

DRIVE FOR LEANNESS SCALE

The following items include statements that may or may not pertain to you and the way you feel about your body. Please rate how often you think or feel each statement using this scale:



1. I think the best looking bodies are well-toned.
2. When a person's body is hard and firm, it says they are well-disciplined.
3. My goal is to have well-toned muscles.
4. Athletic looking people are the most attractive people.
5. It is important to have well-defined abs.
6. People with well-toned muscles look good in clothes

MEDIA PREFERENCES QUESTIONNAIRE

1. Please estimate the total amount of time (Hours and Minutes) you were exposed to (reading, skimming, watching) the following forms of media over the past two (2) weeks:

A. Newspapers	_____	Example: <u>2 hours and 30 minutes</u>
B. Magazines	_____	
C. Movies	_____	
D. TV	_____	

2. Please rank your preferences for categories of magazines (examples of each type are given in parentheses). Place a 1 next to your favorite category, a 2 to your next favorite, and so (Please rank numbers 1 to 6):

A. Entertainment/Gossip (People, TV Guide)	_____
B. Sports (Sports Illustrated, ESPN the Magazine)	_____
C. Health and Fitness (Men's Health, Flex)	_____
D. Fashion (GQ)	_____
E. Special Interest (hunting, biking, music, etc)	_____
F. News & Current Events (Time, Newsweek)	_____

3. Please rank your preferences for types of television shows (examples of each type are given in parentheses). Place a 1 next to your favorite category, a 2 to your next favorite, and so on.(please rank numbers 1 to 6):

A. Sports (ESPN Sportscenter)	_____
B. Sitcoms (Two and a Half Men, Rules of Engagement)	_____
C. Reality TV (Jersey Shore, Real World)	_____
D. News (CNN, MSNBC)	_____
E. Educational (Discovery Channel, History Channel)	_____
F. Drama Shows (CSI, Law & Order)	_____

SOCIOCULTURAL ATTITUDES TOWARD APPEARANCE QUESTIONNAIRE

Some people feel pressures from media images, actors, or professional athletes to look a certain way. Please read each of the following statements (Items 8-) and use the following scale to indicate your response:

1	2	3	4	5
Completely Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

1. TV programs are an important source of information about fashion and “being attractive”.
2. I’ve felt pressure from TV or magazines to lose weight.
3. I would like my body to look like the people who are on TV.
4. I compare my body to the bodies of TV and movie stars.
5. TV commercials are an important source of information about fashion and “being attractive”.
6. I’ve felt pressure from TV or magazines to look muscular.
7. I would like my body to look like the models who appear in magazines.
8. I compare my appearance to the appearance of TV and movie stars.
9. Music videos on TV are an important source of information about fashion and “being attractive”.
10. I’ve felt pressure from TV and magazines to be muscular.
11. I would like my body to look like the people who are in the movies.
12. I compare my body to the bodies of people who appear in magazines.
13. Magazine articles are an important source of information about fashion and “being attractive”.
14. I’ve felt pressure from TV or magazines to work out.
15. I wish I looked as athletic as the people in magazines.
16. I compare my appearance to the appearance of people in magazines.
17. Magazine advertisements are an important source of information about fashion and “being attractive”.
18. I’ve felt pressure from TV or magazines to diet.
19. I wish I looked as athletic as people in magazines.
20. I compare my body to that of people in “good shape”.
21. Pictures in magazines are an important source of information about fashion and “being attractive”.
22. I’ve felt pressure from TV or magazines to change my appearance.

23. I wish I looked as athletic as sports stars.
24. I compare my body to that of people who are athletic.
25. Movies are an important source of information about fashion and “being attractive”.
26. I’ve felt pressure from TV or magazines to change my appearance.
27. I try to look like the people on TV.
28. Movie stars are an important source of information about fashion and “being attractive.”
29. Famous people are an important source of information about fashion and “being attractive”
30. I try to look like sports athletes.

IMAGE CONDITION RATING SHEET

Effectiveness of Advertisement Directed Toward Men: Advertisement Rating Sheet

Please answer the following questions (using the scales provided) in reference to the ad that you are viewing. You will have one minute to view each ad and complete each rating sheet. The advertisement number is the black number on each slide. Please record this number in the space provided.

Advertisement # _____

1. How physically attractive is the model in the advertisement compared to yourself?

i.	2	3	4	5
Much Less attractive than me		About the same attractiveness as me		Much more attractive than me

2. How effective is the ad in promoting its product?

1	2	3	4	5
Not at all effective		Moderately effective		Extremely effective

For questions 3 and 4 , respond 1(no) and 2 (yes)

1. I currently use this product
2. I have used this product in the past

3. PRODUCT-ONLY RATING SHEET

Effectiveness of Advertisement Directed Toward Men: Advertisement Rating Sheet

Please answer the following questions (using the scales provided) in reference to the ad that you are viewing. You will have one minute to view each ad and complete each rating sheet. The advertisement number is the black number on each slide. Please record this number in the space provided.

Advertisement # _____

1. How visually attractive is overall advertisement?

1	2	3	4	5
Not at all attractive		Moderately attractive		Extremely attractive

3. How effective is the ad in promoting its product?

2	2	3	4	5
Not at all effective		Moderately effective		Extremely effective

For questions 3 and 4, respond 1(no) and 2 (yes)

4. I currently use this product

5. I have used this product in the past

PRODUCT ONLY POST RATING SHEET

After participating in these two studies, do you have any concerns about the purpose of the study? If so, what are they?

Thank you for your participation!

POST- EXPOSURE IMAGE CONDITION RATING SHEET

After participating in these two studies, do you have any concerns about the purpose of the study? If so, what are they?

Please respond to the following questions regarding the advertisements you viewed using the scale below:

How much did you compare yourself to the person in the advertisement? (Please respond for each ad)

1	2	3	4	5
Not at all		Somewhat		Very Much
Advertisement 1: _____				
Advertisement 2: _____				
Advertisement 3: _____				
Advertisement 4: _____				
Advertisement 5: _____				
Advertisement 6: _____				
Advertisement 7: _____				

How attractive do you think you are compared to the person in the advertisement? (please respond for each ad)

1	2	3	4	5
Much Less Attractive		About the Same attractiveness		Much More attractive
Advertisement 1: _____				
Advertisement 2: _____				
Advertisement 3: _____				
Advertisement 4: _____				
Advertisement 5: _____				
Advertisement 6: _____				
Advertisement 7: _____				

Thank you for your participation!