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An Examination of Factors that Affect Male Body Image in College Students

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AN EXAMINATION OF FACTORS THAT AFFECT MALE BODY IMAGE IN COLLEGE STUDENTS

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The purpose of this study is to determine whether viewing photos of muscular men or viewing photos of toned men produces greater body dissatisfaction scores for male college students. Prior to receiving the intervention, participants completed a pre-test measuring their body satisfaction. The intervention was administered in a group setting and took approximately 30 minutes to administer. After receiving the intervention, participants completed the same assessment measures as the pre-test, but in a post-test form. Results indicate that there was a significant difference between pre-test and post-test body satisfaction ratings for men who viewed muscle photos and mend who viewed toned photos. This study contributes to a growing area of body image and Body Dysmorphic Disorder research in men. It also provides evidence for the benefits of addressing body satisfaction during the treatment of Body Dysmorphic Disorder.

Introduction

Body satisfaction studies have primarily been conducted on women, because women are traditionally thought to be more affected by the pressure to look a certain way than men (Grieve, 2007). Much of the research that has been done on body image includes either all female participants, or both male and female participants (Labre, 2002). Researchers have less frequently conducted studies with men only. However, body image research that include male-only participants has increased over the last 20 years. The number of research projects with male-only participants has continued to grow because it is becoming more evident that men are greatly affected by body image and its related factors (Grieve, 2007). Specifically, researchers have looked to determine whether age is predictive of the level of influence that body image has on men (Lynch & Zellner, 1999), which body type produces the lowest level of body satisfaction in men (Suffolk, 2013), and the differences in male body image between men's and women's magazines (Frederick, Fssler, & Hasselton, 2004; Grieve & Bonneau-Kaya, 2007). Before diving deeper into the topic of male body image, it is necessary to develop an understanding of the definition of body image.

Body Image

Schlundt and Johnson (1990) defined body image as a mental representation of how individuals perceive their bodies. An individual's mental representation can differ from how others view the individual's body because body image is subjective. Body image is individuals' own perception of how they view their physical appearances. The ideal body image, on the other hand, is that which is considered the most attractive body type, and it differs according to gender

and social constructs (Javaid & Ahmad, 2014). The ideal body image for women is to be thin, with little to no body fat (Javaid & Ahmad, 2014). The ideal body image for men is to be muscular (Grieve, Newton, Kelley, Miller, & Kerr, 2005). The desire to attain the ideal body image develops in early adolescence, as individuals are exposed to media pressure to look a certain way. Additionally, the desire to attain the ideal body image is also linked to puberty, as puberty is when the body starts to mature (Ferron, 1997). Puberty brings about physical changes that, for some adolescents, brings them closer to the ideal body image, and takes others farther away from the ideal. Some adolescent boys grow taller and gain muscle mass, which brings them closer to the ideal body image. Some adolescent girls develop breasts, which brings them closer to the ideal body image. Adolescents who do not experience those changes sometimes experience a decrease in self-esteem (Ferron, 1997).

Self-esteem is only one of many correlates of body image. Body image is also associated with many different mental disorders (Altabe & Thompson, 1996). Disturbed body image ideas are central to Anorexia Nervosa, Bulimia Nervosa, Body Dysmorphic Disorder, and Major Depressive Disorder (Altabe & Thompson, 1996; American Psychiatric Association, 2013; Vitousek & Hollon, 1990). In eating disorders, individuals are dissatisfied with their bodies, so they engage in unhealthy behaviors to change their bodies (American Psychiatric Association, 2013). For example, individuals with Anorexia Nervosa perceive their bodies as overweight and adopt strict dietary regiments to lose weight (Neimeijer, Roefs, & de Jong, 2017).

Body image has also been found to be related to depression (Altabe & Thompson, 1996). Body image disturbance alone certainly is not enough to account for the cause of

depression, but it can contribute to its development. Negative thoughts about the body can contribute to self-deprecating thoughts often associated with depression (Altabe & Thompson, 1996). Body image is linked to body satisfaction because body satisfaction is how content individuals are with their bodies (Altabe & Thompson, 1996).

Body Satisfaction

Body satisfaction describes the way individuals feel about their bodies, as compared to the ideal body image (Daniali, Azadbakht, & Mostafavi, 2013). Body dissatisfaction is the result of creating a mental perception of a body that compares unfavorably to the ideal body image (Daniali et al., 2013). In other words, the body is perceived to be different from the ideal body image; therefore, the individual is dissatisfied with the body. If an individual's body closely resembles that of the ideal body image, then that individual is likely to have high body satisfaction (Daniali et al., 2013). If an individual's body does not resemble that of the ideal body image, then that individual is likely to have low body satisfaction (Daniali et al., 2013). That individual is instead likely to have high body dissatisfaction.

The ideal body image differs according to gender, environment, geographical location, and historical setting; therefore, there is no globally agreed upon standard for the ideal body image (Higgins, Strauman, Klein, 1986). The ideal body image differs from decade to decade and country to country. For women in the United States today, the ideal body image tends to be thin (Grieve, 2007). For men in the United States today, the ideal body image tends to be muscular (Grieve, 2007). Drewnowski and Yee (1987) conducted a study in which they concluded that some men chose images of an ideal body that was thinner than their own. Other men chose images of an ideal body that was

heavier than their own (Drewnowski et al., 1987). Men who are larger than the ideal body image desire to lose weight and men who are thinner than the ideal body image desire to gain weight (Frederick et al., 2007). One study conducted on adults concluded that men desire to gain 28 pounds of muscle to look more like the ideal body image (Pope et al., 2001). In addition to muscularity, Grieve and colleagues (2005) state that the ideal body image for men includes being tall and mesomorphic. The mesomorphic body type is husky and muscular. It is one of three body types. The second is the endomorphic body type, which is characterized by high levels of body fat. The third is ectomorphic body type, which is a body that is lean and toned. The mesomorphic body type is preferable to the endomorphic and ectomorphic, because the mesomorphic body type allows for developing more muscle mass than the other two body types develop (Drywien et al., 2016).

It has been established that the ideal body image for men differs from that for women. Additionally, the body parts that men feel dissatisfied with differ from that with women. Women tend to focus on individual body parts that do not resemble the ideal body image (Lantz., Rhea, & Mayhew, 2001). Women commonly focus on fat located on the thighs and stomach. Men, on the other hand, focus on the whole body (Lantz et al., 2001). They compare their bodies' shapes and sizes to that of the ideal body image, instead of looking at individual body parts. However, some men still report being dissatisfied with individual body parts. Results of a study conducted by Ridgeway and Tylka (2005) concluded that men were most dissatisfied with arms, chests, and stomachs. Men primarily desire to gain muscle mass from the waist up (Andersen, Cohn, &

Holbrook, 2000). This is opposed to women, who primarily desire to lose weight from the waist down (Andersen et al., 2000).

Men who report high levels of body dissatisfaction are likely to adopt exercise and diet plans that will bring them closer to the ideal body image (Grieve, 2007). The desire to obtain the ideal body image can become obsessive and unhealthy (American Psychiatric Association, 2013). In this way, body satisfaction can be problematic. Some men with high levels of body dissatisfaction also suffer from Body Dysmorphic Disorder (Grieve, 2007). Body Dysmorphic Disorder will be discussed in the following section. Apart from Body Dysmorphic Disorder, body dissatisfaction is also correlated with emotional distress (Hoffman & Brownell, 1997) and depression (McCreary & Sasse, 2000). Body dissatisfaction is pervasive and affects multiple areas of functioning. It makes both men and women more likely to develop psychological disorders, such as eating disorders (Presnell, Bearman, Stice, 2003). Due to body dissatisfaction's link to negative outcomes, it should be a topic of concern in research.

Body Dysmorphic Disorder

Body image satisfaction has been thoroughly studied because it is a relevant factor in many debilitating psychological conditions. Among those conditions is Body Dysmorphic Disorder (BDD). BDD is a mental disorder in which individuals are preoccupied with excessive concerns related to perceived physicals flaws (American Psychiatric Association, 2013). Individuals experience intrusive thoughts related to physical flaws. The *Diagnostic and Statistical Manual of Mental Disorders*, Fifth Edition (DSM-5) states that fixations with the nose, skin, and hair are the most commonly perceived physical flaws by those with BDD (American Psychiatric Association, 2013).

Imperfections are not observed by others outside of the individual with the concern (Varma & Rastogi, 2015). This is because the physical flaw likely does not exist, or only exists on a small scale. Individuals diagnosed with BDD experience pervasive and inhibiting thoughts related to perceived physical flaws (Varma & Rastogi, 2015). They spend excessive time in front of mirrors observing their flaws. Some individuals become so preoccupied with their perceived physical flaws that they ignore responsibilities related to work and daily life (Varma & Rastogi, 2015). They often ask friends and family members whether they appear ugly (Varma & Rastogi, 2015). They refer to themselves using negative words such as "ugly" and "unattractive" (Varma et al., 2015).

The DSM-5 lists diagnostic criteria for BDD. Individuals diagnosed with the disorder must exhibit a preoccupation with a perceived face or body flaw. The flaw must not be noticeable or only slightly noticeable by others (American Psychiatric Association, 2013). Additionally, the DSM-5 states that an individual must engage in repetitive behaviors, such as obsessively checking his or her appearance (American Psychiatric Association, 2013). Individuals might also engage in compulsive mental acts, such as comparing their appearances to the appearances of others (American Psychiatric Association, 2013). To differentiate this disorder from normal body and face concerns, the preoccupation with flaws must cause clinically significant distress (American Psychiatric Association, 2013). Distress causes impairment in one or more aspects of life, such as work or social life (American Psychiatric Association, 2013). BDD is sometimes misdiagnosed as an eating disorders, because both disorders can include weight concerns as a symptom (American Psychiatric Association, 2013). Clinicians must consider

whether symptoms better describe BDD or eating disorders. Additionally, BDD and eating disorders can be comorbid (American Psychiatric Association, 2013).

BDD can often go unrecognized because it is common for individuals between the ages of 15 and 30 to be preoccupied with their appearances (Varma & Rastogi, 2015). Adolescents and young adults often spend time each day observing their faces and bodies. As a result, parents and caregivers do not suspect that there is a problem. The disorder often goes unnoticed until individuals present in dermatology and plastic surgery clinics seeking treatment for their perceived physical flaws (Varma & Rastogi, 2015). The DSM-5 (American Psychiatric Association, 2013) states that between 5% and 7% of plastic surgery patients have BDD. Seeking cosmetic procedures is only one way that individuals with BDD attempt to fix or cover their physical flaws. In addition, individuals with BDD wear excessive makeup and frequent tanning beds to cover perceived skin flaws (American Psychiatric Association, 2013). They buy clothing in larger sizes than they normally wear to cover their bodies (American Psychiatric Association, 2013). Behaviors that are intended to cover up physical flaws are often time consuming. Individuals with BDD spend three to eight hours daily engaging in these behaviors (American Psychiatric Association, 2013).

Muscle Dysmorphic Disorder

The DSM-5 lists Muscle Dysmorphic Disorder (MDD) as a subtype of BDD (American Psychiatric Association, 2013). Instead of concerns about the body or face, individuals are concerned about overall muscle mass. These individuals think that they are not lean or muscular enough. They also think that their bodies are too small. Due to this, they have a preoccupation with gaining muscle mass to attain a lean or muscular

physique (Grieve, 2007). The DSM-5 (American Psychiatric Association, 2013) states that MDD is more prevalent among male populations than it is among female populations. This subtype of BDD may be diagnosed even if individuals are also concerned about other areas of their body, apart from muscle mass, such as hair (American Psychiatric Association, 2013). As with BDD, to merit a diagnosis of MDD, individuals must spend excessive amounts of time being preoccupied with bodily concerns. It has been found that individuals with MDD spend around 325 minutes a day thinking about being too small (Olivardia, 2001). This is as opposed to weightlifters who spend around 40 minutes a day thinking about being too small (Olivardia, 2001). Individuals with MDD must engage in activities to increase muscle mass. Preoccupation with gaining muscle must be significant enough to interfere with proper functioning in areas of life, such as social functioning and occupational functioning (American Psychiatric Association, 2013).

To acquire a muscular physique, individuals with MDD engage in obsessive and excessive weight-lifting and other forms of exercising (Olivardia, 2001). Men diagnosed with MDD have been found to spend from three to four hours a day at gyms, where they engage in exercises like lifting weights (Olivardia, 2001). They eat foods that are high in protein to sustain this lifestyle (Grieve, 2007; Olivardia, 2001). Additionally, they sometimes take steroids and other supplements to increase muscle mass (Grieve, 2007; Leit, Gray, & Pope, 2001). Exercise, strict diet, and steroids are only part of the lifestyle that characterizes individuals with MDD. These individuals alter their daily life functioning to enhance the likelihood of gaining muscles (Grieve, 2007). Individuals with this disorder spend so much time attempting to increase muscle mass that they

compromise their social, work, and personal lives (American Psychiatric Association, 2013). Olivardia (2001) reported that one man missed the birth of his child because he was exercising. Another man was fired from his job for taking excessive lunch breaks, during which he was exercising (Olivardia, 2001). Individuals with MDD are insecure about their bodies to the extent that they hide their bodies when out in public (American Psychiatric Association, 2013). This can restrict the sorts of activities individuals with MDD engage in while they are in public. It can, for example, lower the likelihood of engaging in recreational activities that take place in or around water.

As with BDD, MDD can be confused with eating disorders, such as Anorexia Nervosa and Bulimia Nervosa. MDD and eating disorders are both characterized by a strong desire to have the ideal body type (Grieve, 2007). For men, the ideal body type is muscular, with little to no body fat (Grieve et al., 2005). Men with BDD strive to attain the muscular body type (Grieve, 2007). Since muscularity is the ideal body type for men, MDD is more prevalent among men (American Psychiatric Association, 2013). For women, the ideal body image is slender, with little to no body fat (Javaid & Ahmad, 2014). Women with eating disorders often go to extreme lengths to lose weight (Javaid & Ahmad, 2014).

Media Influence on MDD

The development of the ideal body image in mass media is thought to play a large part in the growing prevalence rates of MDD (Grieve, 2007). The mass media have increased pressure on men and women by displaying the ideal body image in television shows and movies. The media portrays underweight female models and actresses as having the ideal body image, thus influencing women to look that way as well (Coolican,

2000). The media sends the message that being thin is a good thing (Coolican, 2000). For many years, body image research focused on women because men were not thought to be as pressured as women are by ideal body images. However, in the last 30 years, the mass media has portrayed men as more and more muscular (Grieve, 2007; Leit et al., 2001). The media's portrayal of men as more muscular is positively correlated to steroid use (Leit et al., 2001). It has also influenced the development of MDD because men are pressured to attain a more muscular body image. Men who are influenced to look more like the ideal body image engage in increasing amounts of weight lifting to gain muscle mass (Grieve, 2007).

Mass media is effective at influencing the ideal body image because it sets the ideal body image as the standard for physical attractiveness (Grieve, 2007). Muscular models and actors shown on television have the ideal body image, and thus that body type becomes the standard for what is considered attractive. Adolescent boys and girls are not merely trying to gain the physique shown in media. They are trying to attain the standard of physical attractiveness (Grieve, 2007). This is precisely why the desire to attain the ideal body image is so powerful.

Populations Affected by MDD

Body satisfaction is a particularly relevant topic to adolescent boys because the beginning of puberty affects how boys view their bodies. Studies show that adolescent males have higher levels of body satisfaction after they hit puberty because puberty brings them closer to the ideal male image (Labre, 2002). During puberty, boys grow taller, their shoulders become broader, and they develop greater muscular strength (Labre, 2002). However, for adolescent boys who do not see these changes after puberty,

body satisfaction levels decrease. These boys will sometimes begin to engage in extensive exercise and eating routines in order to achieve the desired body type (Labre, 2002).

Furthermore, adolescent boys have been studied in relation to body image because they are frequently exposed to pressure from the media to achieve a certain body image. Toys marketed to adolescent boys, such as action figures and superheroes, are portrayed as muscular (Labre, 2002). In recent years, toy manufacturers began producing more and more muscular action figures that align with the ideal male body image (Brennan, Lalonde, & Bain, 2010). Older action figures are not as muscular as the current ones (Brennan et al., 2010). As young boys idolize action figures, it effectively influences them to strive for a muscular body (Brennan et al., 2010). Unfortunately, the body types of superhero action figures are entirely unrealistic (Brennan et al., 2010). Brennan and colleagues (2012) found that, if popular action figures are converted into real-life sizes, the resulting body shapes are nearly unattainable for men. Adolescent boys' desire to look like action figures makes them a target for high body dissatisfaction.

In addition to adolescent boys, college men are also highly susceptible to high levels of body dissatisfaction, if they do not have the ideal body type. Grieve and colleagues (2005) concluded that men thought women would prefer a more muscular body type than what women reported. This perception leads college men to be highly susceptible to body dissatisfaction. Additionally, the results concluded that men thought that the ideal body type was more muscular than their current body type (Grieve et al., 2005).

Pope, Phillips, and Olivardia (2000) concluded that college men have high levels of body dissatisfaction because they are exposed to college athletic teams, such as football teams. College students are also exposed to hyper-muscular bodies through photos of men in sport magazines (Pope et al., 2000). However, the hyper-muscular physique sometimes seen in athletes and sports magazines is only achievable through strict dietary and exercise regiments (Pope et al., 2000). These strict regiments are not always feasible for average college students.

Additional studies have targeted college students to determine whether they are particularly susceptible to high levels of body dissatisfaction. Hildebrandt, Lagenbucher, & Schlundt (2004) concluded that, on average, undergraduate men desire to be thinner than what they are, in order to look more like the ideal body image. A different study found that only 44% of older people thought that their bodies were less muscular than the ideal body image (Lynch & Zellner, 1999). On the other hand, 84% of college men thought that their bodies were less muscular than the ideal body image (Lynch & Zellner, 1999). College men are dissatisfied with their bodies twice as often as adult men (Lynch & Zellner, 1999). This indicates that research pertaining to body dissatisfaction should target college men instead of older men.

Comparing Body Types: Muscular and Average

Many studies have aimed to determine whether viewing images or videos of certain body types has a larger impact on body image dissatisfaction than do other body types. Lorenzen, Grieve, and Thomas (2004) designed a study in which they exposed men to either advertisements of muscular male models or advertisements of average male models. Participants were asked to complete the Body Assessment Scale both before and

after viewing the photos. The results of the study showed that viewing photos of muscular male models resulted in lower self-ratings of body satisfaction than did viewing photos of average male models (Lorenzen et al., 2004).

Baird and Grieve (2006) expanded on this topic by conducting a study in which male participants were exposed to advertisements depicting either muscular male models with products or advertisements depicting only products. The muscular body type was compared to photos with no model at all, as opposed to the previous study which compared the muscular body type to the average body type. This study concluded that advertisements with muscular models resulted in lower self-ratings of body satisfaction than did viewing photos of only products (Baird & Grieve, 2006).

The two previous studies have used the Body Assessment Scale to measure body satisfaction ratings. Leit and colleagues (2001) used the Somatomorphic Matrix, a computerized test of body image perception, to measure body satisfaction levels. Some participants were assigned to a control group, in which they viewed magazine advertisements depicting only products and no people. The remaining participants were assigned to an experimental group, in which they viewed magazine advertisements depicting muscular male models. After viewing the photos, participants from both groups completed the Somatomorphic Matrix. Results showed that the discrepancy between the ideal body image and participants' own body image was greater in the experimental group than it was in the control group. The authors concluded that exposure to muscular male models resulted in increased body dissatisfaction, as compared to viewing photos with only products (Leit et al., 2001).

Limitations of the Existing Literature

Studies examining male body satisfaction have primarily focused on whether muscular body types increase body dissatisfaction, as compared to average body types (Baird & Grieve, 2006; Lorenzen et al., 2004). Currently, a major deficiency in body image literature pertains to whether viewing other types of body images leads to increases in body dissatisfaction. Few studies in body image literature include body types other than muscular, despite research suggesting to include other body types. Suffolk (2013) posited that muscular body types do not produce the highest levels of body dissatisfaction because men view that body type as being so unattainable that it is not useful to contemplate. Being hyper-muscular is vastly unattainable for the average male. Due to the unattainability of this body type, exposure to extremely muscular men does not result in high levels of body dissatisfaction (Suffolk, 2013). On the other hand, exposure to different body types might result in higher levels of body dissatisfaction because the other types are viewed as more attainable.

Thus far, it has only been stated generally that other body types, separate from muscular, might produce high levels of body dissatisfaction. No explanation of what this body type could be has been proposed. One such possibility is the toned body type (Suffolk, 2013). This body type does not have high levels of muscle mass, but it does not have high levels of body fat either. It is much more attainable for the average man than is a hyper-muscular body. It is likely that exposure to the toned body type could lead to high levels of body dissatisfaction. The current purpose of this study is to compare the effects of the muscular body type to the toned body type on body dissatisfaction levels.

The Present Study

Currently, much of the body image literature includes only two body types, muscular and average. This study contributes to the literature on body dissatisfaction by including an additional body type—toned bodies. The purpose of this experiment is to determine whether viewing photos of muscular men or viewing photos of toned men produces greater body dissatisfaction scores for male college students.

It is hypothesized that men who view photos of toned men will have lower body satisfaction than will men who view photos of muscular men and average men. It is also hypothesized that men who view photos of toned men and men who view photos of muscular men will have lower post-assessment body satisfaction than pre-assessment body satisfaction. Lastly, it is hypothesized that men who view photos of average men will have higher, or unchanged, body satisfaction.

Method

Participants

Participants for this study will consisted of 90 college men from a medium-sized, mid-south university. Conducting the study on only college men may seem restrictive, but previous research shows that college men are susceptible to body dissatisfaction resulting from the desire to be muscular (Grieve, 2007; Leit et al., 2001). The age of participants ranged from 18 to 27 (M = 20.26, SD = 1.91). The Body Mass Index (BMI) of participants ranged from 17.07 to 40.25 (M = 25.96, SD = 3.79). There were 60 (66.7%) Caucasians, 21 (23.3%) African Americans, 4 (4.4%) Asians, 2 (2.2%) Hispanics, 1 (1.1%) Native American, and 1 (1.1%) Other. Furthermore, there were 27 (30%) Freshmen, 32 (35.6%) Sophomores, 15 (16.7%) Juniors, and 16 (17.8) Seniors. There were 12 (13.3%) undecided majors, 6 (6.7%) Psychology majors, 5 (5.6%) Exercise Science majors, 5 (5.6%) History majors, 4 (4.4%) Biology majors, 4 (4.4%) English majors, and 54 (60%) Other. Table 1 displays the mean number of hours and days that participants reported engaging in moderate exercise, vigorous exercise, and strengthening activities.

Table 1

Number of Participants Who Reported Engaging in Moderate, Vigorous, and Strengthening Activities

	Moderate	Vigorous	Strength
0	1	25	44
1	38	34	14
2	50	28	13
3	1	3	19

Note: Moderate = moderate aerobic activities, such as badminton, golf, housework, walking to class (3-4 mph); Vigorous = vigorous aerobic activities, such as soccer, swimming, singles tennis, jogging (5-6mph), running (7mph); Strength = strengthening activities, such as free weights, weight machines, and body weight exercise; 0 (moderate) = no mins/week of moderate activity; 1 (moderate) = less than 150mins/week of moderate activities; 2 (moderate) = 150mins/week of moderate activities; 3 (moderate) = more than 150mins/week of moderate activities; 0 (vigorous) = no mins/week of vigorous activities; 1 (vigorous) = less than 75mins/week of vigorous activities ; 2 (vigorous) = 75mins/week of vigorous activities; 3 (vigorous) = more than 75mins/week of vigorous activities; 0 (strength) = 0day/week of strengthening activities; 1 (strength) = 1day/week of strengthening; 2 (strength) = 2days/week of strengthening activities; 3 (strengthening) = more than 2days/week of strengthening activities

Design

The design of this study is a between-subject, independent measures with pre and post assessments, given before and after the invention. The independent variable is the photos of body types. There are three levels of the independent variable, those being average, toned, and muscular. The dependent variable body satisfaction ratings.

Materials

Demographics (see Appendix A): Participants were asked to report age, current educational level, race, ethnicity, involvement in sports, socioeconomic status, and sexuality.

Body Assessment Scale (Lorenzen et al., 2004; see Appendix B): The Body Assessment scale (BAS) is a 25-item survey that assesses participants' body satisfaction levels of different body parts. The BAS does not measure satisfaction related to muscularity. Instead, it measures satisfaction related to the overall body. The BAS allowed participants to rate their level of satisfaction with different body parts. Body satisfaction is rated on a five-point Likert scale that ranges from 1 (*strongly negative*) to 5 (*strongly positive*). The scale asked participants to rate body components such as weight, face, body strength, and agility. Higher scores indicate greater self-rated body satisfaction. The Cronbach's Alpha, an internal consistency reliability coefficient, on the pre-exposure assessment of the BAS scale was calculated to be $\alpha = .94$ (Lorenzen et al., 2004). The Cronbach's Alpha on the post-exposure assessment of the BAS scale was calculated to be $\alpha = .95$ (Lorenzen et al., 2004). The scale asked participants to rate behaviors such as frequently changing jobs and buying things on impulse.

Personality and Behavior Scale (see Appendix C): The Personality and Behavior Scale (PBS) is a 40-item survey that consists of heterogeneous and nonspecific items related to personality and behaviors. The PBS does not measure anything specific. Instead, it includes a variety of topics, designed to distract participants from the true purpose of the study. PBS is rated on a seven-point Likert scale that ranges from 1 (*strongly disagree*) to 7 (*strongly agree*). The scale asked participants to rate topics such as personality, academic behaviors, and eating habits.

Stimulus Material: The stimulus materials were 24 photos of men with different body types. The images were obtained from internet websites. The control condition consisted of 10 photos of average men (see Appendix D), while the first experimental

condition consisted of 10 photos of muscular men (see Appendix E), and the second experimental condition consisted of 10 photos of toned men (see Appendix F). The men in the photos were shirtless, and all photos included the faces of the men. The photos that comprised each of the three conditions were chosen through a pilot study. The pilot study began with 60 total photos. The photos were rated on a 10-point Likert scale that ranged from 1 (*not muscular at all*) to 10 (*extremely muscular*). Men were considered muscular if they had high levels of muscle mass. Men were considered toned if they had medium levels of muscle mass. Men were considered average if they had low levels of muscle mass. Body shapes of average men ranged from slightly overweight, to normal weight, to underweight. The 30 photos that were rated as most precisely characterizing the three body types were chosen to be used in this experiment.

Procedure

Participants in the study were recruited through the Department of Psychology Study Board and through campus clubs and organizations. Students were offered extra credit in Psychology classes for participation in the study, as per Study Board guidelines. The study took place during one session. Participants were notified of the potential dates and times of the study. They then signed up for the date of their choice. The study took place in a classroom in Gary Ransdell Hall. Upon arrival at the testing site at the start of the session, participants were told a cover story to explain the purpose of the study. The cover story was designed to distract participants from the real purpose of the study. For the cover story, participants were told that that the study examined attentiveness of college students. They were told that their attentiveness was measured by asking them to view photos of men and determining what is wrong with the photos. Additionally,

participants were told that they will complete two surveys to determine if there are connections between different personality traits and attentiveness. Deception was deemed necessary because the true purpose of the study was easily identified if deception was not used. Without deception, participants would only view photos of men and rate how satisfied they are with their body parts. It is easily identifiable that the purpose of that study would be to measure body satisfaction. If participants could identify the purpose, then results would likely be biased. Deception prevented participants from determining the purpose of the study because participants responded to a long survey that asked about many different subjects.

After the cover story was explained, participants were briefed on Informed Consent (see Appendix G). They were reminded that participation was voluntary. They were also told that they could still discontinue participation even after the study started. The researchers collected signed Informed Consent documents from each participant. Before each scale was given, participants were asked to write their names on the top, right-hand corner of the paper. This was to keep track of each participants' scales. Without writing names, it would have been difficult to keep track of which scale belonged to which participant. Next, participants were asked to complete a demographics survey. Upon completion of the demographics survey, a Personality and Behavior Scale (PBS) was administered. The PBS was comprised of heterogeneous and nonspecific items. They were included to distract participants from discovering the true purpose of the experiment. After completing the PBS, participants completed a pre-exposure Body Assessment Scale (BAS).

Prior to data collection, participants were randomly assigned to conditions so that participants viewed only one set of pictures, either men with average bodies, men with toned bodies, or men with hypermuscular bodies. While viewing the photographs, participants were asked to determine what is wrong with each photo. They were given an answer sheet in which to record their answers to the photos (see Appendix H). This exercise was to ensure that participants were attentive to the study. Without having them complete a worksheet, it was likely that some participants would not remain attentive to the photos. That would compromise the results. The photos that were viewed by the participants were shown via a PowerPoint slideshow. Participants were exposed to each individual photo for approximately 30 seconds. After exposure to the photos, answer sheets were collected. Participants then completed a post-exposure BAS. Upon turning in their BAS, participants were given a Debriefing Document (see Appendix I). The Debriefing Document explained the true purpose of the study, and clarified the reason for using deception. The session, in total, took approximately 45 to 60 minutes.

Results

Preliminary Analysis

The Pre-BAS scores were summed to determine the total body image score before viewing the photos. The Post-BAS scores were summed to determine the total body image score after viewing the photos. Condition A on the Pre-BAS had a mean of 92.17 (*SD* = 17.84). Condition B on the Pre-BAS had a mean of 95.45 (*SD* = 13.92). Condition C on the Pre-BAS had a mean of 91.47 (*SD* = 16.26). Condition A on the Post-BAS had a mean of 94.90 (*SD* = 18.12). Condition B on the Post-BAS had a mean of 91.72 (*SD* = 15.75). Condition C on the Post-BAS had a mean of 90.73 (*SD* = 16.32). Cronbach's alpha was used to test reliability of both measures used in the study. The Pre-BAS had Cronbach's alpha of .94, indicating excellent internal consistency. The Post-BAS had Cronbach's alpha of .95, indicating excellent internal consistency. See Table 2 for the means and standard deviations of body satisfaction ratings on the Pre-BAS and Post-BAS.

Table 2

Mean (SD) of Pre and Post BAS Scores

	Average	Toned	Muscular
Pre BAS	92.17	95.45	91.47
	(17.84)	(13.92)	(16.26)
Post BAS	94.90	91.72	90.73
	(18.12)	(15.75)	(16.32)

Note: Pre BAS= Body Assessment Scale pretest; Post BAS= Body Assessment Scale posttest

Hypothesis Testing

Hypothesis one stated that men who view photos of toned men will have lower body satisfaction (as represented by a low BAS score) than will men who view photos of muscular men and average men. Hypothesis two stated that men who view photos of toned men and men who view photos of muscular men will have lower post-assessment body satisfaction than pre-assessment body satisfaction. Hypothesis three stated that men who view photos of average men will have higher, or unchanged, body satisfaction.

Overall, the univariate ANOVA for condition was significant (F [2, 86] = 9.0, $p <$ .001; *partial-eta squared* = .174) and had a large effect (Cohen, 1988). Specifically, it was hypothesized that individuals who viewed the toned photos would have significantly different BAS scores than individuals who viewed the average or muscular photos. A pairwise comparison using Bonferonni correction found that individuals who viewed the toned photos rated their BAS scores significantly different than those who viewed the average photos ($p <$ .001) However, the scores of those that viewed the toned photos were not significantly different from those who viewed the muscular photos (p = .163). These results are displayed in Figure 1.

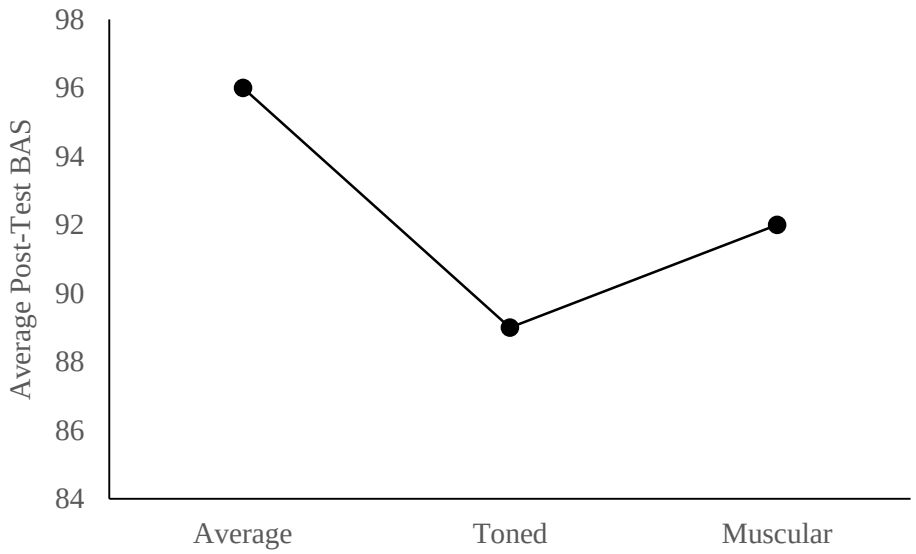

Figure 1.

Post-BAS scores by Condition (Average, Toned, Muscular) with Pre-BAS Covariate from Univariate ANOVA

To address the second hypothesis, a repeated measures ANOVA with 3 conditions (Average, Toned, Muscular) and two BAS time-points (pre-test and post-test) was ran. Overall, the repeated measures ANOVA was significant and indicated that time by condition had a large effect on BAS, F (2, 87) = 9.36, $p < .001$; *partia-eta squared* = .177. As shown in Figure 2, men who viewed photos of toned men and men who viewed photos of muscular men had lower post-assessment body satisfaction than pre-assessment body satisfaction. Those in the toned condition saw a significant, large negative effect (t [87] = 3.57, $p = .009$, $d = .651$) while those in the muscular condition saw a non-significant, small negative effect (t [87] = .686, $p = 1.000$, $d = .125$).

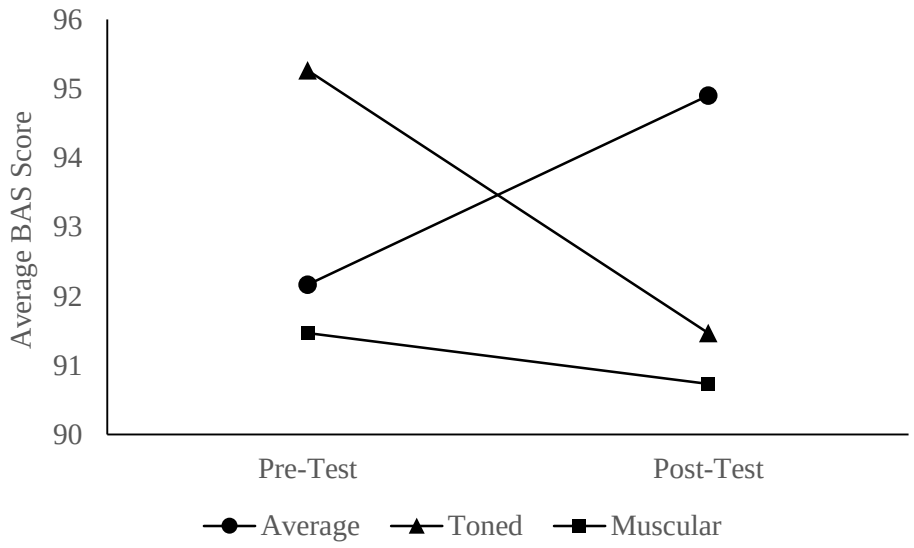

Figure 2.

Mean BAS Score by Time and Condition (Average, Toned, Muscular) from Repeated Measures ANOVA

To address the third hypothesis, a paired samples *t*-test was conducted to compare Pre-BAS scores among men who viewed photos of the average body type to Post-BAS scores among men who also viewed photos of the average body type. There was a significant difference in the body satisfaction ratings among men on the Pre-BAS (M = 92.17, SD = 17.84) and ratings among men on the Post-BAS (M = 94.90, SD = 18.12); t (29) = -2.59, p = .008. Additionally, condition had a small to medium effect on Post-BAS scores, Cohen's d = -0.47. Hypothesis 3 was supported, as reported body satisfaction ratings for participants among the average condition on the Pre-BAS were lower than ratings for participants among the average condition on the Post-BAS.

Discussion

Due to a lack of awareness related to body dissatisfaction and its related factors, furthering information about the cause, maintenance, and treatment of body dissatisfaction among men is a growing area of research interest. Much existing research in the area of body dissatisfaction has been conducted on male-only populations (Grieve, 2007; Labre, 2002). Much of the research concludes that women suffer from body dissatisfaction more than men (Presnell, Bearman, & Stice, 2003). Research has also found that body dissatisfaction is a risk factor for developing eating disorders in women (Presnell, Bearman, Stice, 2003). Body dissatisfaction, and its relation to eating disorders, among males has not been frequently researched. The purpose of the current study was to determine possible causes for men developing body dissatisfaction. The study considers whether viewing different body types—average, toned, or muscular—is a possible cause. Specifically, the current study aimed to determine whether viewing photos of muscular men or viewing photos of toned men produces greater body dissatisfaction ratings for male college students.

One hypothesis examined in the study is that men who view photos of toned men will have lower body satisfaction than will men who view photos of muscular men and average men. Secondly, it was hypothesized that men who view photos of toned men and men who view photos of muscular men will have lower post-assessment body satisfaction than pre-assessment body satisfaction. Finally, it was hypothesized that men who view photos of average men will have higher, or unchanged, body satisfaction.

The first hypothesis was supported. This indicates that the participants who viewed photos of toned bodies had higher body dissatisfaction ratings than those who

viewed photos of muscular and average bodies, as measured by the Post-BAS. It is possible that viewing photos of toned bodies might lead to higher body dissatisfaction ratings than do muscular bodies due to the prevalence of shame and guilt. Previous literature in the field of body image research linked shame and guilt to body dissatisfaction and Body Dysmorphic Disorder (Fuchs, 2003). Fuchs (2003) stated that individuals are ashamed of their bodies when they believe that their bodies do not reflect that of the "ideal" body type. Individuals feel guilty when they believe that they are not doing as much as they could to achieve the "ideal" body type (Fuchs, 2003). Linking this to the present research, it is possible that viewing the muscular body type likely does not produce much shame or guilt, and thus does not negatively affect body satisfaction ratings. The muscular body type does not produce much guilt or shame, due to the extreme lengths that one must go to in order to achieve muscularity. On the other hand, achieving a toned body type does not require as much effort and time, and thus is more achievable. Due to being more achievable, not achieving a toned body produces high levels of guilt and shame, and it is possibly the guilt and shame that negatively impacts body satisfaction.

Hypothesis two was supported. Participants who viewed photos of toned bodies and muscular bodies had lower post-assessment body satisfaction than pre-assessment body satisfaction. Viewing photos of toned bodies and muscular bodies produces high body dissatisfaction ratings. These findings are in agreement with the results of a study done by Baird and Grieve (2006). Baird and Grieve also found that participants who viewed photos of muscular bodies had lower post-assessment body satisfaction than pre-assessment body satisfaction.

Additionally, participants who viewed photos of toned bodies had lower body satisfaction than those who viewed photos of muscular bodies. These findings are in accordance with what Suffolk (2013) predicted in regards to which body type would most negatively impact body satisfaction ratings. Suffolk (2013) hypothesized that viewing toned bodies would more negatively affect body dissatisfaction ratings than would viewing muscular bodies, because having a toned body is perceived as more attainable for the average male than is having a muscular body. Having a muscular body is perceived as highly unachievable because it is only reached through excessive hours of weekly weight lifting (Olivardia, 2001) or using steroids (Grieve, 2007).

Hypothesis three was supported. This indicates that participants who viewed photos of average bodies had higher post-assessment body satisfaction ratings than pre-assessment body satisfaction ratings. In other words, viewing average bodies led to an increase in body satisfaction. This is contrary to the results of another similar study in body image research. Lorenzen and colleagues (2004) compared body satisfaction ratings after viewing photos of muscular bodies and photos of average bodies. The body satisfaction ratings of the participants who viewed photos of average bodies stayed the same from the pre-assessment to the post-assessment (Lorenzen et al., 2004). Viewing photos of average bodies did not have an impact on body satisfaction ratings (Lorenzen et al., 2004). This difference in findings is perhaps due to the difference in makeup of participants between the two studies.

In general, the results of the present study indicate that body dissatisfaction is affected by external stimuli in the environment. Viewing photos of shirtless men impacts body dissatisfaction, depending upon the body type displayed in the photos. When these

findings are generalized to the larger population, it can be inferred that body dissatisfaction is affected by seeing body types in daily life and in the media. This claim is largely accepted when it is applied to women, in that viewing thin women in the media affects body dissatisfaction in women (Coolican, 2000). This claim is less so accepted when it is applied to men, because it is not generally thought that men are affected by the pressure to look a certain way (Grieve, 2007). The present study, combined with current and future studies, provides support for the hypothesis that men are affected by the pressure to have the ideal body shape.

Body satisfaction is implicated in the development of many different mental disorders. Stice and Shaw (2002) concluded that the pressure to be thin, exerted by the media, leads to body dissatisfaction. Body dissatisfaction, in turn, was found to be a risk factor for developing Anorexia Nervosa and Bulimia Nervosa (Stice & Shaw, 2002). They further concluded that treatment interventions for the aforementioned disorders should include body image and body dissatisfaction components. In addition to Anorexia Nervosa and Bulimia Nervosa, body dissatisfaction has also been implicated in the development of BDD and its subtype, MDD (Grieve, 2005). Individuals with BDD are excessively concerned with perceived physical flaws (American Psychiatric Association, 2013). Individuals with MDD are excessively concerned with developing larger and larger amounts of muscle mass (American Psychiatric Association, 2013). People diagnosed with either BDD or MDD are excessively concerned about their bodies because they believe that some part of their bodies do not meet their expectation for an ideal body (Grieve, 2007). They become dissatisfied with their current bodies, and they engage in excessive amounts of activities to “fix” their perceived physical flaws (Grieve,

2007). To summarize, individuals are unhappy with a specific part of their bodies, they become dissatisfied with their bodies, and, when clinical levels of symptoms are reached, they are diagnosed with MDD or BDD.

One limitation of the present study is practice effects. They likely impacted participants' scores from the pretest to posttest of the BAS. Practice effects are exhibited when performance on a test improves after repeated administrations of the same test to the same participant (Falleti, Maruff, Collie, & Darby, 2006). In the present study, practice effects could cause participants to rate their body parts higher than they rated them the first time they took the assessment. This could create inaccurate results. Furthermore, the test-retest interval in the present study was about 20 minutes. It is likely that participants remember what they wrote on the BAS the first time they took it, and then wrote those same answers the second time that they took the BAS. This would create inaccurate results because the body satisfaction ratings from the pre-BAS to the post-BAS would not be truly representative of the effects of viewing photos of body types on subsequent body satisfaction ratings.

Finally, the present study did not account for possible variables that might affect body satisfaction ratings, such as pre-existing issues with low body image satisfaction or Gender Dysphoric Disorder. It is likely that, if participants have low preexisting body image satisfaction, then viewing images of toned or muscular body types would lower their body satisfaction ratings more than it would for individuals with high preexisting body image satisfaction. Furthermore, Gender Dysphoria Disorder is characterized by a strong desire to be rid of one's body parts (American Psychiatric Association, 2013). If a participant with female sex characteristics who identifies as male took the BAS, then

their body satisfactions ratings are likely to decrease after seeing any male body. This could create abnormally low body satisfaction ratings from the pretest to the posttest.

Future research should compare body satisfaction ratings of people who self-reported to have low body satisfaction to those who self-reported to have high body satisfaction. The purpose of this study would be to determine whether viewing photos of muscular, toned, or average men has a larger effect on individuals with low or high body satisfaction. Additionally, future research should screen, in a demographics survey, for individuals with Gender Dysphoria Disorder. Researchers could likely broaden the scope to any participants with dissatisfaction with their gender and not just those who meet full criteria for Gender Dysphoria Disorder. The purpose of this study would be to determine whether viewing photos of muscular, toned, or average men has a larger effect on individuals with Gender Dysphoria Disorder or within the disorder. Additionally, future research should include a study that has a lengthy test-retest interval. The test-retest interval could be one week, meaning that participants would wait one week in between taking the pre-BAS and taking the post-BAS. This would ensure that participants do not remember they scores that they recorded for each of the body parts on the scale. The results would be more due to the effects of viewing the photos rather than test-retest bias or practice effects. Finally, future studies should include a larger number of participants than what the present study included. This would likely increase the effect of the three conditions on body satisfaction ratings.

In conclusion, the results show that viewing photos of toned bodies lowers body satisfaction ratings more so than does viewing photos of average bodies. Furthermore, viewing photos of average bodies raises body satisfaction ratings. Implications for the

current research are seen when determining causes of eating disorders, such as Body Dysmorphic Disorder, in men. Body dissatisfaction should also be addressed when creating treatment strategies for eating disorders.

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Appendix A: Demographics

1. What is your age?

   _____

2. What is your gender?

   Male

   Other

3. What is your education level?

   Freshmen

   Sophomore

   Junior

   Senior

☐ Other:_____

4. What is your race/ethnicity?
   ☐ Caucasian/White
   ☐ Asian or Pacific Islander
   ☐ Hispanic/Latino
   ☐ African American/Black
   ☐ Native American/American Indian
   ☐ Other

5. What is your current height (in feet and inches) and weight (in pounds)?

   Height: _____

   Weight:_____

6. Check all sports that you have been involved in during college:
   ☐ Basketball
   ☐ Football
   ☐ Soccer
   ☐ Baseball
   ☐ Other:_____
7. What is your major?

   _____

8. Indicate below which of the following best represents your aerobic and strengthening activities.

<u>Moderate</u> intensity aerobic activity

- Some examples of moderate aerobic activity include: Badminton, golf, housework, walking to class (3-4 mph)

☐ Less than 150 mins/week (2.5hours/week)

☐ At least 150 mins/week or more (2.5 hours/week)

- If more than 150 mins/week, how many mins/week? _____

<u>Vigorous</u> intensity aerobic activity

- Some examples of vigorous aerobic activity include: Soccer, swimming, singles tennis, jogging (5-6 mph), running (7 mph)

☐ Less than 75mins/week (1.25 hours/week)

☐ At least 75 mins/week (1.25 hours/week)

- If more than 75mins/week, how many mins/week? _____

Strengthening activities

- Some examples of strengthening activities include: free weights, weight machines, and body weight exercise

☐ 1 day/week

☐ At least 2 days/week

- If more than 2 days/week, how many days/week? _____

Appendix B: Body Assessment Scale

Rate the following areas on a scale of 1 to 5. Please remember that there are no right or wrong answers.

Circle the # that best represents your own feelings about your body	strongly negative	negative	neutral	positive	strongly positive
Weight	**1**	**2**	**3**	**4**	**5**
Face	**1**	**2**	**3**	**4**	**5**
Body shape	**1**	**2**	**3**	**4**	**5**
Thighs	**1**	**2**	**3**	**4**	**5**
Upper Body Strength	**1**	**2**	**3**	**4**	**5**
Waist	**1**	**2**	**3**	**4**	**5**
Reflexes	**1**	**2**	**3**	**4**	**5**
Health	**1**	**2**	**3**	**4**	**5**

Shoulder	**1**	**2**	**3**	**4**	**5**
Physical stamina	**1**	**2**	**3**	**4**	**5**
Agility	**1**	**2**	**3**	**4**	**5**
Biceps	**1**	**2**	**3**	**4**	**5**
Lower Body Strength	**1**	**2**	**3**	**4**	**5**
Chest	**1**	**2**	**3**	**4**	**5**
Chin	**1**	**2**	**3**	**4**	**5**
Energy Level	**1**	**2**	**3**	**4**	**5**
Body build	**1**	**2**	**3**	**4**	**5**
Physical coordination	**1**	**2**	**3**	**4**	**5**
Buttocks	**1**	**2**	**3**	**4**	**5**
Calves	**1**	**2**	**3**	**4**	**5**
Stomach	**1**	**2**	**3**	**4**	**5**
Physical condition	**1**	**2**	**3**	**4**	**5**
Triceps	**1**	**2**	**3**	**4**	**5**
Abdominal muscles	**1**	**2**	**3**	**4**	**5**
Legs	**1**	**2**	**3**	**4**	**5**

Appendix C: Personality and Behaviors Scale

Please circle that answer that best reflects the extent to which you agree or disagree with each statement in relation to your own personality and behaviors.

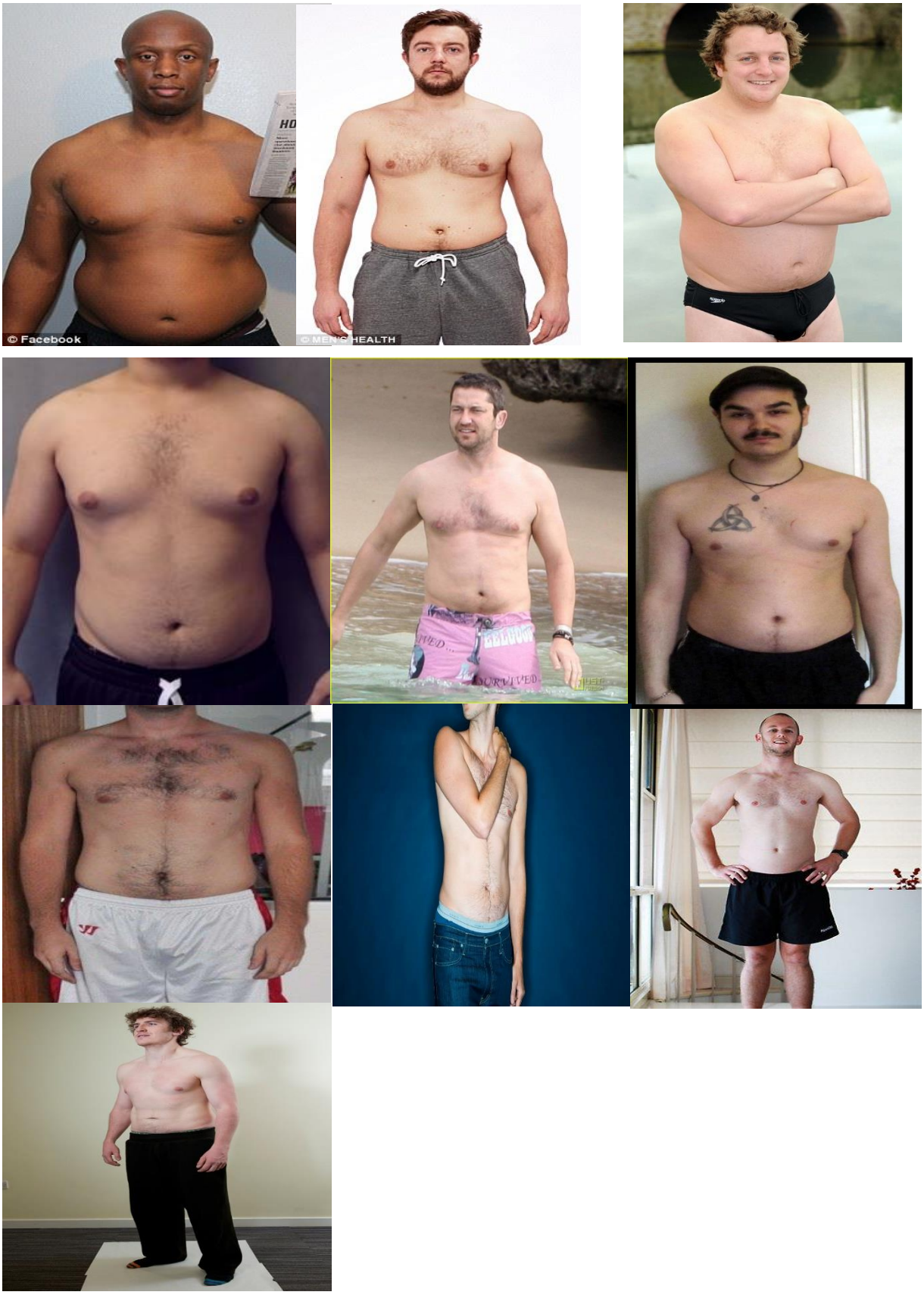
Circle your answer	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
1. I consider myself an extrovert.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
2. I have good stress management skills.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
3. I have healthy relationships with family members.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
4. I have good self-esteem.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
5. I feel badly about myself when I perform poorly.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
6. I believe that what happens in my life is outside of my control.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
7. I am a generally happy person.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
8. I feel good about what I have accomplished.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
9. I get excited when I learn new information.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
10. I am the	**1**	**2**	**3**	**4**	**5**	**6**	**7**

leader in group projects.							
11. I am mindful.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
12. I have a visual learning style.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
13. I avoid things that make me feel uncomfortable.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
14. I have so much in my life to be thankful for.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
15. I pay attention to the ingredients in the food that I eat.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
16. I often feel anxiety, even about small things.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
17. I am open to meeting new people.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
18. I strive to do my best in everything that I do.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
19. I consider myself an introvert.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
20. I confront things that make me feel uncomfortable.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
21. I often get so lost in my thoughts that I ignore my surroundings.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
22. I am a	**1**	**2**	**3**	**4**	**5**	**6**	**7**

follower in group projects.							
23. I believe that what happens in my life is in my control.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
24. I have an auditory learning style.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
25. I do not believe that what happens in my life is in my control.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
26. I see things that are not actually there.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
27. I cannot stand a messy room.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
28. I value eating healthy.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
29. I can quickly adapt to new surroundings.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
30. I am a creative person.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
31. My mood can change quickly.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
32. I am often envious of others.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
33. I get carried away by fantasies or ideas.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
34. I am a practical person.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
35. I would rather be smart than kind.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
36. I am grateful	**1**	**2**	**3**	**4**	**5**	**6**	**7**

to a wide variety of people.							
37. I often feel inspiration to do things.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
38. I know where I am headed in life.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
39. I could be experiencing some emotion and not be conscious of it until sometime later.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
40. I change my mind on a whim.	**1**	**2**	**3**	**4**	**5**	**6**	**7**

Appendix D: Photos of Average Men

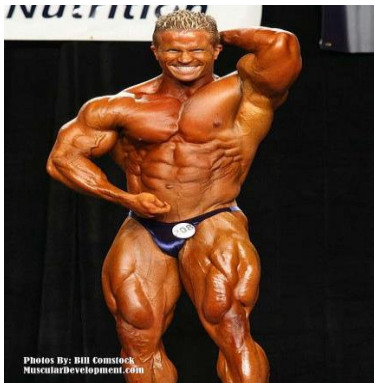


Appendix E: Photos of Muscular Men

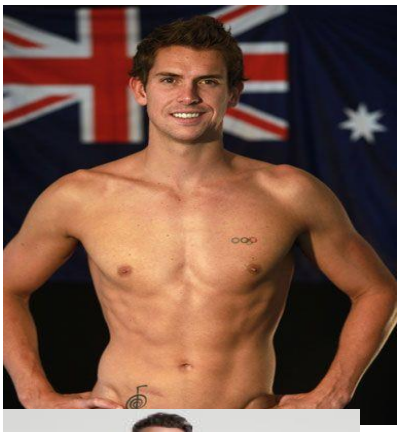


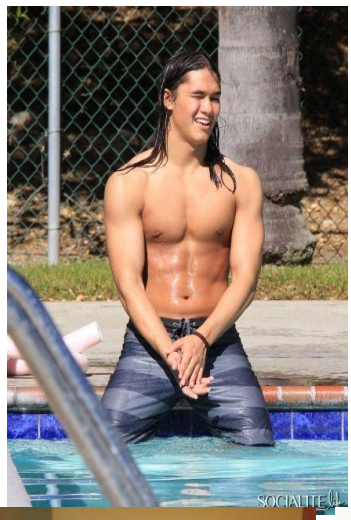


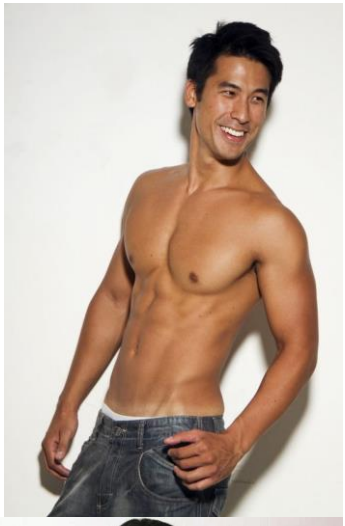


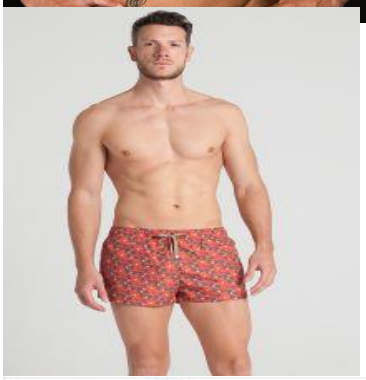


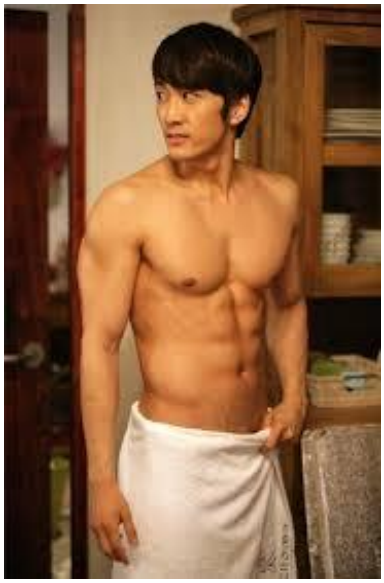
Appendix F: Photos of Toned Men











Appendix G: Informed Consent

INFORMED CONSENT DOCUMENT

Project Title: Examining Factors that Affect Male Attentiveness in College Students
Investigator: Elise Van Meter, Clinical Psychology, elise.vanmeter214@topper.wku.edu

You are being asked to participate in a project conducted through Western Kentucky University. The University requires that you give your signed agreement to participate in this project.

You must be 18 years old or older to participate in this research study.

The investigator will explain to you in detail the purpose of the project, the procedures to be used, and the potential benefits and possible risks of participation. You may ask any questions you have to help you understand the project. A basic explanation of the project is written below. Please read this explanation and discuss with the researcher any questions you may have.

If you then decide to participate in the project, please sign this form in the presence of the person who explained the project to you. You should be given a copy of this form to keep.

1. **Nature and Purpose of the Project:** The purpose of this study is to examine the attentiveness of male college students. Additionally, factors such as personality traits and behaviors will be studied to determine links to attentiveness.

2. **Explanation of Procedures:** Participants will be asked to attend one session. The session is estimated to last 1 hour. During the session, participants will be asked to view photos of men and complete questionnaires related to personality and behaviors.

3. **Discomfort and Risks:** The risks involved in participating in this study is minimal; however, they are possible. Participants will be asked to view photos of shirtless muscular men. It is possible that viewing photos of shirtless muscular men will produce feelings of self-consciousness. Participants may view the photos and become unhappy if they decide that they are not as muscular as the men in the photos. If this happens to you, please let the examiner know.

4. **Benefits:** Benefits include potentially receiving extra credit if your professor agrees.

5. **Confidentiality:** Participation in the current study will be entirely confidential and names and identifying information will not be associated with data resulting from participation in this study.

6. **Refusal/Withdrawal:** Refusal to participate in this study will have no effect on any future services you may be entitled to from the University. Anyone who agrees to participate in this study is free to withdraw from the study at any time with no penalty.

You understand also that it is not possible to identify all potential risks in an experimental procedure, and you believe that reasonable safeguards have been taken to minimize both the known and potential but unknown risks.

_____ _____
Signature of Participant Date

_____ _____
Witness Date

- I agree to the audio/video recording of the research. ***(Initial here)*** _____

THE DATED APPROVAL ON THIS CONSENT FORM INDICATES THAT
THIS PROJECT HAS BEEN REVIEWED AND APPROVED BY
THE WESTERN KENTUCKY UNIVERSITY INSTITUTIONAL REVIEW BOARD
Paul Mooney, Human Protections Administrator
TELEPHONE: (270) 745-2129

WKU IRB# 18-181
Approval - 11/30/2017
End Date - 5/30/2018
Expedited
Original - 11/15/2017

Appendix H: Find What is Wrong

Directions: you will be asked to view ten photos of men. As you view the photos, please determine what is wrong with each photo. In the blanks provided, write your answer for each photo. If you cannot determine what is wrong with the each, you may write "I don't know".

1. Photo 1:

2. Photo 2:

3. Photo 3:

4. Photo 4:

5. Photo 5:

6. Photo 6:

7. Photo 7:

8. Photo 8:

9. Photo 9:

10. Photo 10:

Appendix I: Debriefing Document

Thank you for participating in this research study. All the information from this study will be kept confidential. We told you that the purpose of this study is to examine the attentiveness of male college students. Additionally, we told you that factors such as personality traits and behaviors will be studied to determine links to attentiveness. The true purpose of this study was to determine whether viewing photos of muscular men or viewing photos of toned men produces greater body dissatisfaction scores for male college students. This study aimed to help determine the cause of body dissatisfaction in male college students. We did not tell you the full nature of this study because we wanted to gauge your honest reaction to viewing photos of male body types. Your honest reactions allow researchers to accurately determine the effects of the photos on your body satisfaction rates. Please do not tell other students about the true purpose of this study.

If you have questions about this study, please contact Elise Van Meter at elise.vanmeter214@topper.wku.edu. Additionally, if you have questions you may contact her advisor Rick Grieve at rick.grieve@wku.edu.