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ATHLETES

Differences in Body Dissatisfaction in Male Collegiate Athletes

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Bridgewater State University

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Abstract

While research has examined the relationship between society's ideal male body and body dissatisfaction in the general male population, less is known regarding the relationship between male body image ideals and body dissatisfaction in male athletes. However, research has suggested that male athletes are at greater risk for body dissatisfaction because they are exposed to two ideal bodies: that of society and their sport. The purpose of this study was to examine differences in body dissatisfaction for collegiate male athletes participating in various sports and to determine whether society's or the sport's ideal body has a greater influence on male athletes' body dissatisfaction levels. Eighty-two Division III male athletes, ranging in age from 18 to 22, completed an online survey which asked them to identify the ideal body of their sport and their current body using a modified version of the Somatomorphic Matrix and complete scales to measure body dissatisfaction. Differences in both body and muscle dissatisfaction were found among sports, with cross country runners reporting the most positive attitudes about their body and the highest muscle satisfaction and football players and wrestlers reporting the most negative attitudes about their body and the lowest muscle satisfaction. It was also found that the societal ideal body had a greater influence on body dissatisfaction, compared to the sport ideal body. The findings of this study will provide clinicians and college athletic departments with additional information on the influences of body dissatisfaction in male athletes, allowing for improved prevention and intervention efforts.

Differences in Body Dissatisfaction in Male Collegiate Athletes

Body image is defined as, “the internal representation of your own outer appearance – your own unique perception of your body” (Thompson, Heinberg, Atlabe, & Tantleff-Dunn, 1999, p. 4). Research on body image has been primarily focused on females, rather than males. However, with research on male body image increasing in the past 20 years, researchers and clinicians have begun to realize the multitude of body image disturbances experienced by males (Ricciardelli & McCabe, 2011). Body dissatisfaction, in particular, has warranted additional research, with high percentages of American college males reporting body dissatisfaction (Olivardia, Pope, Borowiecki, & Cohane, 2004), usually as a result of not obtaining society’s ideal body (Tiggemann, 2011). Body dissatisfaction has been defined as, “any displeasure with one or more aspects of one’s body or one’s overall physical attractiveness” (Cash, Morrow, Hrabosky, & Perry, 2004, p.1081). While there is research documenting the prevalence of male body dissatisfaction in the general population, little is known regarding body dissatisfaction in male athletes, specifically at the college level (Petrie & Greenleaf, 2011). This population is important to consider as athletes are under pressure to obtain both the ideal body set by society and their sport (Galli & Reel, 2009). The following literature review summarizes research on the influences on male body image in both athletes and non-athletes and the body dissatisfaction experienced by each group. The current research examines body dissatisfaction in athletes of different sports (football, soccer, baseball, etc.) and seeks to determine which ideal body has the greater influence on body dissatisfaction in male athletes: the ideal body set by society or the sport.

Body Dissatisfaction in Males

Initially, researchers and clinicians assumed that males did not experience body image problems. This was due mostly to the lack of knowledge regarding male body image in the 1980s and 1990s (Ricciardelli & McCabe, 2011), a period in which body image research was primarily concentrated on females due to the increased prevalence of eating disorders in this population (Thompson et al., 1999). It was also due to males' reluctance to talk about their body concerns (Pope, Phillips, & Olivardia, 2000b). Body image disturbances are stereotypically thought to be a female problem, causing many males to deny any body image problems out of fear they will be seen as feminine. Researchers commonly use the concept of an "Adonis Complex" to explain the wide array of secret body image concerns experienced by males. These concerns include everything from body dissatisfaction to muscle dysmorphia (MD), a subtype of body dysmorphic disorder (BDD) found mostly in males, that causes males with either normal or muscular physiques to believe their body is too small or inadequately muscular (Pope et al., 2000b; Phillips, 2011).

Body dissatisfaction has received a lot of attention in male body image research, partly due to its prevalence in Western society. Pope et al. (2000b) estimated there to be over 50 million males in the United States who were dissatisfied with their muscularity at the beginning of the 21st century. This number has most likely risen with various media outlets creating even more unrealistic images of the ideal male body, including the modern and hypermuscular G.I. Joe (Baghurst, Hollander, Nardella, & Haff, 2006; Pope, Olivardia, Gruber, & Borowiecki, 1999) and the lean and buff Playgirl centerfold model (Leit, Pope, & Gray, 2001). While females report more body dissatisfaction than males, males' levels of body dissatisfaction are still a serious concern (Muth & Cash, 1997). Body dissatisfaction has been associated with numerous

psychological and behavioral problems, including low self-esteem, depression, eating pathology, excessive exercising, and use of appearance- and performance-enhancing drugs (hereafter, abbreviated as “APED drugs”), substances used to alter one’s performance where physical appearance or strength is advantageous (Olivardia et al., 2004; Pope et al., 2000b). These behaviors can vary depending on whether the male is concerned with his weight/body fat or muscularity.

Males who are dissatisfied with their weight and wish to be leaner typically engage in disordered eating behaviors, which can range from dietary obsessions to full-blown eating disorders (Pope et al., 2000b). The desire to be lean and its associated behaviors, such as the use of laxatives, extreme dieting strategies, and purging have all been found to be correlated with body dissatisfaction (Ricciardelli & McCabe, 2011). Males with extreme forms of eating disorders are also at risk for becoming clinically depressed (Pope et al., 2000b). Although dieting is usually seen as a means to lose weight, it is primarily used by males to gain weight or muscle mass (McCreary, Hildebrandt, Heinberg, Boroughs, & Thompson, 2007). While 12.5% to 26% of adolescent and adult males report dieting to lose weight, additional studies have found 21% to 47% of males diet as a means to increase weight and muscularity. Either way, the ultimate goal is to attain an overall lean and muscular body composition. This goal can be accomplished through various dieting techniques, such as restrictive eating, diet cycling, nutritional supplement use, and APED use (Cafri et al., 2005; McCreary et al., 2007).

Although important, the desire to be lean is not as significant to males as the desire to be muscular (Olivardia et al., 2004). Muscle dissatisfaction is associated with numerous psychological problems, including depression symptomatology, low self-esteem, and overall low life satisfaction (Cafri, Strauss, & Thompson, 2002). The desire for a muscular body is also

associated with behavioral problems, such as disordered eating, illegal anabolic-androgenic steroid use, and the use of prohormones (legal steroid hormones) and ephedrine (stimulants) (Brower, Blow, & Hill, 1994; Cafri et al., 2005; Olivardia et al., 2004). In their examination of male weightlifters, Brower and colleagues (1994) found that 75% of those who thought about using steroids, also known as “high-risk” users, considered themselves to be “not big enough,” suggesting that dissatisfaction with one’s muscularity is a prominent risk factor for steroid use. These researchers also found that high-risk users reported feeling less satisfied with their body size and physical appearance than both low-risk users and steroid users, with steroid users feeling the most satisfied. This was most likely due to the fact that the steroid users were substantially larger than the other two groups.

Steroid use is another problematic behavior that is highly correlated with body and muscle dissatisfaction in both adolescent and adult males (Hildebrandt & Lai, 2011). Steroids can have a wide array of psychological, medical, and social consequences (Pope et al., 2000b). Pope and Katz (1994) found that athletes who used steroids experienced numerous medical changes, including decreased testicular length, higher ratios of total cholesterol to high-density lipoprotein cholesterol (HDL-C), and gynecomastia, “a growth of subareolar, button-like plaque of tissue in males” (Pope & Katz, 1994, p. 217). Although the psychological effects of steroid use are rare, they can be extremely dangerous. These effects include extreme rage, grossly impaired judgments, grandiose beliefs, psychotic delusions, and bursts of aggressiveness (Pope et al., 2000b). When asked about steroid use, 23% of athletes reported also experiencing major mood changes, including mania, hypomania, major depression, and paranoia (Pope & Katz, 1994).

In its most extreme case, muscularity concerns can lead to Muscle Dysmorphia (Cafri et al., 2005; McCreary et al., 2007), which is commonly viewed as the equivalent of anorexia nervosa in females. While females with anorexia perceive themselves to be too big, males with MD perceive themselves to be too small (Olivardia, Pope, & Hudson, 2000; Pope et al., 2000b). Ironically, many males with MD are more muscular than their normal counterparts (Olivardia et al., 2000; Ricciardelli & McCabe, 2011). Males with MD are ashamed and embarrassed of their perceived inadequate muscularity and think about it constantly (Olivardia et al., 2000). Many males with MD also report mood disorders, anxiety disorders, and substance abuse (Olivardia et al., 2000; Phillips & Diaz, 1997).

Due to the extensive list of harmful effects body dissatisfaction has on individuals' psychological and physical health, researchers have proposed numerous models to explain how body dissatisfaction develops. Although there are a variety of models that could explain the development of body dissatisfaction in males, only the most relevant to the purpose of this study will be reviewed here: the sociocultural model of body image and the self ideal discrepancy model.

The Sociocultural Model of Body Image

According to the sociocultural model of body image, each society has its own set of beauty ideals for males and females. These ideals are spread through sociocultural influences, including the media, family, and peers and are usually extremely difficult, if not impossible, to attain (Murnen, 2011; Pope et al., 2000b; Tiggemann, 2011). Nevertheless, a portion of males and females internalize these ideals, making them the reference points by which they judge themselves. Internalization of cultural ideals is commonly associated with body shame, as it causes individuals to equate attaining their ideal of beauty with their self-worth (McKinley,

2011). When individuals cannot attain their own ideal of beauty, they become upset, resulting in body and appearance dissatisfaction. This dissatisfaction may then lead the person to change his/or her appearance through drastic behaviors, such as disordered eating and excessive exercising (Tiggemann, 2011).

The ideal male body set by Western society is hypermuscular, lean, tall (Levine & Chapman, 2011; Ridgeway & Tylka, 2005), and has the perfect combination of both low body fat and high muscularity to create a “V-shape” figure. This figure consists of an excessively muscular and broad upper body and a relatively thin waist and defined abdomen, creating what is known as “six-pack abs” (Murnen, 2011; Tiggemann, 2011). It is almost impossible to achieve this figure and can usually only be attained by the use of steroids (Pope et al., 1999; Pope et al., 2000b). The ideal male body is also associated with stereotypical masculine traits, such as competition and dominance, commonly seen as positive by males (Murnen, 2011; Wykes & Gunter, 2005).

The ideal male body image is continuously transmitted in Western society through numerous sociocultural influences, especially the media (Murnen, 2011; Tiggemann, 2011). Males of all ages have been continuously exposed to “supermale” images of the extremely muscular and lean male body in media outlets, including action figures, video game avatars, movie characters, WWE athletes, Playgirl models, and fitness magazine models (Leit et al., 2001; Levine & Chapman, 2011; Murnen, 2011; Pope et al., 2000b). Male action figures, in particular, have drastically increased in both muscularity and leanness, with many action figures portraying figures larger than advanced competitive bodybuilders (Baghurst et al., 2006; Pope et al., 1999). In addition, these “supermale” images are usually glorified and used to convince the viewer that the ideal body will lead to social, sexual, and financial success (Pope et al., 2000b).

Despite the pervasiveness of media images of the ideal male body, researchers still debate whether or not these images have an effect on male self-image. To explore this debate, Barlett and colleagues (2008) conducted two meta-analyses on the correlational and experimental studies conducted between 1806 and 2005 that examined the relationship between mass media pressure to obtain the ideal male body and self-image. Their results suggest that exposure to this ideal body in the mass media is strongly associated with a negative self-image, including decreased body-esteem, self-esteem, and body satisfaction, with the largest effects occurring in college-aged males. They also found an association between media exposure to muscular images and psychological and behavioral outcomes, such as depression, excessive exercising, and steroid use. Blond (2008) found similar results in her review of the relationship between exposure to the ideal male body and body dissatisfaction, with exposure to the ideal having a statistically significant effect on body dissatisfaction in males ranging from 13 to 28 years old. Exposure to the ideal male body in other media outlets, including television and advertisements, have also found to be related to higher body dissatisfaction and muscle dissatisfaction (Agliata & Tantleff-Dunn, 2004; Leit, Gray, & Pope, 2002).

Another prominent factor in male body image development is that of peer influences, which have been shown to provide both positive and negative influences on male body image (Brower et al., 1994; Galli & Reel, 2009; Galli, Reel, Petrie, Greenleaf, & Carter, 2011; Petrie & Greenleaf, 2011; Tiggemann, 2011). Peers' influences on body image can be manifested in several ways including, "comments from peers about weight and shape (teasing is an extreme form of this), the modeling of weight concerns and weight control techniques, perceived peer norms, conversations among peers about weight or appearance, and the belief that popularity is dependent on conforming to the ... muscular ideal" (Tiggemann, 2011, p. 16).

Despite the pervasiveness of sociocultural influences, not everyone in Western society whose body differs from the ideal is experiencing body dissatisfaction (Thompson et al., 1999). The sociocultural model acknowledges this and therefore, incorporates the mediating process of internalization to explain how a society's beauty ideals lead to individuals developing body dissatisfaction (Tiggemann, 2011). Whether an individual internalizes a society's ideal body is affected by numerous factors, including self-esteem (Tiggemann, 2011), orientation to fitness or appearance, and degree of neuroticism, perfectionism, and masculinity (McCreary, 2011). Tiggemann (2011) notes that those who have high self-esteem are less likely to be pressured by or internalize sociocultural ideals. Also, those who reject or devalue society's beauty ideals are less likely to internalize them (Galli & Reel, 2009; Smolak, 2011).

While females are most likely to internalize the thin ideal body, males are most likely to internalize the muscular ideal body (Murnen, 2011). The internalization of the muscular ideal is also known as the drive for muscularity (McCreary, 2011). The drive for muscularity has been seen among college-aged males, athletes and non-athletes, alike (Cafri et al., 2002; Galli & Reel, 2009; McCreary & Sasse, 2000; Olivardia et al., 2004; Raudenbush & Meyer, 2003). A high drive for muscularity is associated with numerous psychological issues, including poor self-esteem, depression (McCreary, 2000), negative affect, social physique anxiety, poor sexual efficacy, and body dissatisfaction (McCreary, 2011). Blond (2008) even suggested that the internalization of the muscular ideal increases the negative effects that exposure of the ideal male body has on male body dissatisfaction. A high drive for muscularity is also associated with dangerous health behaviors, such as extreme dieting, steroid abuse, weightlifting, and the use of muscle-enhancing drugs (e.g., protein powder and prohormones) (Cafri et al., 2005; McCreary, 2011; Murnen, 2011).

The existence of the drive for muscularity is evident, with many males desiring a more muscular figure than their own. On average, young adult and adult males consider a body with low body weight and high muscularity as the most physically attractive body type (Tiggemann, Martins, & Churchett, 2008). This ideal body is so important that many experience a boost in their self-esteem when they obtain it and feelings of body dissatisfaction when they do not obtain it (Galli & Reel, 2009). Specific body areas where males wish to be more muscular include the stomach area, arms, chest, shoulders, back, upper legs, and calves (Ridgeway & Tylka, 2005). Although males are also concerned with other body areas, including body hair and penis size, muscularity is usually listed as the main concern (Tiggemann et al., 2008).

Along with the internalization of the ideal body, the sociocultural model also uses social comparison and perceived pressures from the media as other possible mediating factors that link sociocultural transmission of beauty ideals and body dissatisfaction (Tiggemann, 2011). Social comparison is the process in which one compares himself or herself with others and like internalization, can explain how individuals exposed to the same sociocultural influences can have differing levels of body satisfaction (Thompson et al., 1999). Specifically, it has been suggested that those who engage in upward comparison, comparison with others superior to themselves in the feature being compared, and those who use inappropriate targets to compare themselves to are more likely to experience body dissatisfaction (Thompson et al., 1999). Jonason, Krcmar, and Sohn (2009) also found that social comparison, in conjunction with exposure to cultural ideals, works as a moderating variable between a male's body size, as measured by BMI, and body dissatisfaction in young adult males. Males with a high drive for muscularity are also more likely to engage in social comparison, by comparing both their appearance and muscularity to other males (McCreary, 2011).

Self Ideal Discrepancy Model

According to the self ideal discrepancy model, male body dissatisfaction is usually a result of discrepancies in their ideal and current body (Tiggemann et al., 2008; Wykes & Gunter, 2005). The model proposes that individuals make comparisons between their own body and their ideal body, which is developed by various sources in the individual's life, such as sociocultural influences. A larger discrepancy between the two is associated with greater body dissatisfaction (Wykes & Gunter, 2005). This model also proposes that individuals whose own body and ideal body differ and are invested in their appearance may experience emotional distress and anxiety as a result (Cash & Szymanski, 1995). It is for this reason that many researchers measure body dissatisfaction among males by finding the difference between a participant's self-reported current body and ideal body (Cafri & Thompson, 2004).

This discrepancy between a male's current body and ideal body is common in college males. Past research has found that, on average, males desire 15-27 pounds of additional muscle mass (Cafri, Strauss, & Thompson, 2002). This desire for a more muscular physique has been found in other Western societies as well, including France and Austria (Pope et al., 2000a). This discrepancy between a man's own muscularity and his ideal muscularity is even common among bodybuilders and weight lifters, whose muscularity is already greater than the average man (Gruber et al., 1999). In their study examining the body image perceptions of male bodybuilders, Gruber et al. (1999) found that the athletes wanted to be 15 pounds more muscular than they already were.

Males also desire a body that has 3-4% less body fat than their own (Cafri, Strauss, & Thompson, 2002). Discrepancies in body size, as measured by BMI, have been found to be related to body dissatisfaction in both adolescents (Jones & Crawford, 2005) and young adults

(Jonason, Krcmar, & Sohn, 2009). Jones and Crawford (2005) also found that male adolescents with higher BMIs had more weight concerns, while adolescents with lower BMIs had more muscularity concerns.

Body Dissatisfaction in Male Athletes

There are mixed results on whether or not athletes have better body image attitudes than non-athletes. Some studies have found that athletes are more likely to report a positive body image, have higher self-esteem, be less likely to diet, and report clinical and subclinical eating behaviors (Sanford-Martens et al., 2005; Wilkins, Boland, & Albinson, 1991). Other studies have concluded that male athletes are more likely to engage in disordered eating (Sherman & Thompson, 2009), with body dissatisfaction likely being the primary risk factor (Petrie & Greenleaf, 2011). To further explain, Hausenblas and Carron (1999) conducted a meta-analysis on eating disorder indices in athletes and found that overall, male athletes report more eating disorder symptomology than non-athletes.

Regardless of whether or not athletes engage in more disordered eating than non-athletes, it is important to consider the disordered eating behaviors among male athletes, as body dissatisfaction has suggested to play a significant role (Sanford-Martens et al., 2005). Petrie et al. (2008) found that 19.2% of college athletes display a significant number of eating disordered symptoms, with every type of sport (endurance, aesthetic, weight dependent, ball game, technical, and power sports) containing at least one symptomatic player. Male athletes have reported engaging in binge eating, purging, restrictive eating, and the use of laxatives and diuretics (Engel et al., 2003; Johnson, Powers, & Dick, 1999; Petrie et al., 2008). Although disordered eating can be found in any sport (Petrie et al., 2008), studies have found higher rates among wrestlers and runners (Engel et al., 2003; Johnson et al., 1999). Although disordered

eating in male athletes is relatively low in comparison to female athletes, it is hypothesized that male athletes engage in excessive exercising to control for potential eating disturbances (Sanford-Martens et al., 2005).

Male athletes report exercising as their number one means for controlling body weight and fat (Petrie et al., 2008). This can be problematic when athletes exercise compulsively despite injuries (Sanford-Martens et al., 2005). The most common reasons for exercising among athletes are weight control, fitness, mood, health, attractiveness, tone, and enjoyment (Parks & Read, 1997). Weight lifting is the most common exercise strategy among athletes, with 63% of weightlifters lifting weights in order to improve athletic performance and 96% lifting weights in order to improve physical appearance (Brower et al., 1994). Despite the potential risks associated with excessive and compulsive exercising, the most dangerous behavior used by male athletes associated with feelings of body dissatisfaction is steroid use.

Male athletes report using steroids primarily to improve their muscularity and strength for aesthetic and performance purposes (Cafri et al., 2005). These substances are advertised as the easiest and quickest way to gain muscle (Hildebrandt & Lai, 2011). Pope and colleagues (2000b) state, "A mediocre athlete, with modest motivation, who sleeps badly, eats junk food, and even misses an occasional workout- but who takes anabolic steroids- can easily grow more muscular than a gifted, dedicated, and hardworking athlete who does not (p. 105)." The benefits of steroid use continue after an athlete stops using the drug, with many maintaining the muscle they have gained (Pope et al., 2000b). However, some remain dependent on steroids (Pope & Katz, 1994), experiencing uncomfortable withdrawal symptoms, such as feelings of lethargy, depression, and anxiety (Pope et al., 2000b). Despite the numerous dangers associated with steroid use, males

still use steroids. Brower and colleagues (1994) found that male weightlifters at high-risk for using steroids were well aware that steroids caused numerous problems, including death.

The Influences on Male Body Image in Athletes

In accordance with the sociocultural model of body image, athletes are exposed to the same beauty ideals through the same sociocultural influences as the general male population (Murnen, 2011; Tiggemann, 2011). However, there are additional factors within the model that affect male athletes exclusively due to their subculture (Petrie & Rogers, 2001). For one, along with the beauty ideals set by society, male athletes are also exposed to the beauty ideals set by their sport (Galli et al., 2011; Petrie & Greenleaf, 2011). Secondly, male athletes are affected by additional sociocultural influences, including coaches, teammates, judges, and certain media outlets, such as fitness magazines (Galli & Reel, 2009; Galli et al., 2011). With these additional factors, it is possible that the influences of body dissatisfaction in athletes differ from those in the general male population.

In addition to society's ideal male body, male athletes are also pressured by the media, coaches, parents, and teammates to obtain an ideal sport body, a physique best suited for success in a particular sport (Galli et al., 2011; Petrie & Greenleaf, 2011). The sport ideal varies depending on the sport, as different sports require different activities, talents, and skills (Petrie & Greenleaf, 2011). These sport ideals are considered to be beneficial and advantageous for the athlete to increase their performance, and therefore, their success (Petrie & Greenleaf, 2011). The two most researched ideal sport bodies are that of a football player and a cross country runner as those are considered to be the two ends of the spectrum for athletic body size (Parks & Read, 1997; Raudenbush & Meyer, 2003). The sport ideal for a football player, in particular a lineman, is massive, strong, and muscular. Whereas, a cross-country runner is typically very lean

and sleek (Petrie & Greenleaf, 2011; Raudenbush & Meyer, 2003). Sport ideals for other sports, such as soccer and basketball, are usually expected to be somewhere in the middle, ranging in muscularity and leanness (Raudenbush & Meyer, 2003). However, there is limited research on the sport ideals of many of these “in between” sports with sports such as basketball, soccer, and wrestling being excluded or under-represented in most body image studies (Galli & Reel, 2008; Galli et al., 2011; Petrie et al., 2008).

The ideal body set for athletes is transmitted through Western media, with fitness magazines, using elite-level athletes’ bodies as the ultimate goal in various diets and exercising strategies. Male athletes tend to be looked up to by the public as being physically fit and ultimately attractive, a pressure of which many athletes are completely aware. In in-depth interviews with current and past male athletes, Galli and Reel (2009) found that 50 % of athletes believed the media had a substantial impact on their perceptions of an ideal body. One athlete stated in his interview, “Watching sports, watching Major League Baseball. Seeing those guys, those bodies, that always makes you reflect back to your own body... does my body compare to that? Do I have that? Do I have this?” (Galli & Reel, 2009, p. 100). The media has also portrayed athletes in a stereotypical manner, assigning ideal bodies to athletes of specific sports. These sport ideals put pressure on male athletes who do not fit their sport’s ideal body to change their appearance in hopes of conforming (Petrie & Rogers, 2001).

As with non-athletes, male athletes are also positively and negatively influenced by their peers (Galli & Reel, 2009; Galli et al., 2011). For athletes, teammates are usually considered a positive influence, in that they act as motivators to improve each others’ appearance and/or athletic performance. This is done through verbal reinforcement or working together to attain the same goal (Galli & Reel, 2009). However, athletes also feel pressure to fulfill the expectations of

their teammates by obtaining a body they feel will impress their teammates (Galli et al., 2011). This pressure by others to obtain a certain physique can be in the form of positive or negative messages about the athlete's weight or body appearance, and are usually from the athlete's coaches, teammates, and parents. However, it is the negative messages, especially by coaches, that result in dangerous health behaviors, such as extreme dieting and exercising (Petrie & Greenleaf, 2011).

The influence of coaches alone seems to play a huge role in male athletes' body image, in that coaches usually have the most input on how an athlete diets and exercises. In their study examining the impact of the sport environment on athletes' body image, Galli and Reel (2009) found that 70% of athletes felt pressure by their coaches to attain the ideal body for their sport. These pressures included everything from jokes or comments about an athlete's body weight to strict team weight policies. These pressures are associated with drive for muscularity, disordered eating behaviors, and the use of body change strategies (Galli et al., 2011). Coaches also increase athletes' awareness of their own bodies as the body is considered to be an important tool in increasing athletic success (Petrie & Greenleaf, 2011). While this increased awareness can be helpful in preparing athletes for success, it can also be disadvantageous for athletes whose bodies are constantly being evaluated and scrutinized by coaches and teammates.

Although many athletes' bodies are portrayed by fitness magazines as ultimately attractive (Galli & Reel, 2009) and each sport ideal is considered beneficial for athletic performance and success (Petrie & Greenleaf, 2011), many athletes still report experiencing body dissatisfaction. A possible explanation for this is based on the self ideal discrepancy model that states that body dissatisfaction results in discrepancies between an individual's current body and ideal body. However, what is not clear is whether this ideal body for athletes is based on

society's ideal male body and/or the ideal body for their sport. Some studies have suggested that both ideals are significant for males. Galli and Reel (2009) found that a majority of the male athletes in their study attributed their body dissatisfaction to failing to obtain either the ideal body set by society or their sport. A majority of other studies, however, have found that athletes whose bodies closely resemble the societal ideal male body (e.g., football players) experience less body dissatisfaction than those athletes whose body differs from this ideal, but resembles their sport ideal (e.g., cross country runners) (Parks & Read, 1997).

The current study examines the body dissatisfaction of college male athletes participating in a variety of sports, varying in sport ideals. It is expected that athletes participating in sports where the sport ideal is most discrepant from the societal ideal will report the most negative attitudes about their body, the highest drive for muscularity, and the least body-esteem. It is also expected that the societal ideal will have a greater influence on body dissatisfaction than the sport ideals, with athletes whose bodies differ more from the societal ideal experiencing greater body dissatisfaction.

Methods

Participants

Of the 186 participants that were contacted to participate, 83 actually completed the survey, and 82 were included in the analysis. One participant was removed due to the ambiguity of his answers, as he actively participated in more than one varsity sport. Participants consisted of 82 Division III male athletes from Bridgewater State University with a mean age of 19.64 ± 1.36 years (range 18 to 22). Seventy-seven (94%) were Caucasian, 3 (4%) were African American, and 2 (2%) were of Hispanic origin. Twenty-four (29%) of the sample were freshmen, 31 (38%) were sophomores, 11 (13%) were juniors, and 16 (20%) were seniors. The entire

sample was heterosexual. The mean BMI was 25.30 ± 3.86 (range 19.11 to 36.49). Participants were members of the following collegiate sports: baseball (n=28), basketball (n=7), cross country (n=5), football (n=21), soccer (n=8), and wrestling (n=13). Male athletes involved in intramural sports were not included in this study.

Measures

Participants were asked to complete an online survey which included demographic information, a modified version of the Somatomorphic Matrix, and several questionnaires, including the Body Esteem Scale, the Male Body Attitudes Scale, and the Drive for Muscularity Scale. Although the survey was administered online, select participants were also able to complete a paper-and-pencil copy.

The Body Esteem Scale (BES; Franzoi & Shields, 1984) is a 35-item survey that measures both males' and females' body esteem as a multidimensional construct composed of factors specific to each gender. Items include a wide array of body parts and functions categorized under subscales that identify primary body esteem factors specific to each gender. For males, these primary factors include physical attractiveness, upper body strength, and physical condition. Participants were asked to rate each item on a 5-point Likert scale ranging from *Have strong negative feelings* (1) to *Have strong positive feelings* (5). Higher scores on each of the subscales indicate higher body esteem. Sample items include "physical stamina," "muscular strength," "waist," and "appearance of stomach." The BES and its subscales have demonstrated adequate convergent validity and discriminant validity, specifically in young adult populations. In the current study, the Cronbach's alpha reliability of the overall scale was 0.945. For the subscales, physical condition had an alpha of .910, upper body strength had an alpha of .882, and physical attractiveness had an alpha of .898.

The Male Body Attitudes Scale (MBAS; Tylka, Bergeron, & Schwartz, 2005) is a 24-item survey that measures men's attitudes toward their body, with subscales specifically measuring attitudes about muscularity, body fat, and height. Each item is intended to measure both body satisfaction and body preoccupation. Participants were asked to rate the frequency of each item on a 6-point Likert scale ranging from *never* (1) to *always* (6), with higher scores indicating more negative body attitudes. Sample items include "I think I have too little muscle on my body," "I am concerned that my stomach is too flabby," and "I wish I were taller." Both the full MBAS scale and its subscales demonstrate high construct validity, including convergent, concurrent, and discriminant validity, especially in populations of young adult males. In the present study, the Cronbach's alpha reliability of the MBAS overall was 0.915. For the subscales, muscularity had an alpha of .901, body fat had an alpha of .879, and height had an alpha of .786.

The Drive for Muscularity Scale (DMS; McCreary & Sasse, 2000) is a 15-item survey that measures individuals' attitudes and behaviors related to preoccupations with a muscular appearance. The scale contains two subscales measuring muscularity-oriented body image and muscularity-oriented behaviors (McCreary, Sasse, Saucier, & Dorsh, 2004). Participants were asked to rate the frequency of each item on a 6-point Likert scale ranging from *always* (1) to *never* (6). The scale uses reverse-direction scoring, with higher scores indicating a greater preoccupation with a muscular appearance and a greater drive to increase muscularity. Sample items include "I think that my arms are not muscular enough," "I feel guilty if I miss a weight-training session," and "I lift weights to build more muscle." McCreary and Sasse (2000) found the DMS to demonstrate good face validity, convergent validity, and discriminant validity. The DMS has consistently shown these psychometric properties in young adult populations, suggesting its appropriate use in measuring muscularity satisfaction in high school and college-

aged students (McCreary & Sasse, 2000; McCreary et al., 2004; Wojtowicz & von Ranson, 2006). The DMS was included as muscularity concerns have been strongly correlated with general body dissatisfaction in males (Jones & Crawford, 2004). In the present study, the Cronbach's alpha reliability of the DMS was 0.884.

The Somatomorphic Matrix modification, created by Cafri and Thompson (2004), is a revision of the Somatomorphic Matrix (Gruber, Pope, Borowiecki, & Cohane, 1999), a computerized bi-axial body image test that consists of 100 images of men, ranging in degrees of both body fat and muscularity. When using the Somatomorphic Matrix, the participant is shown only one image at a time, with the median image as a starting point, and asked to look through the library of images to find the image that best represents his own body by increasing or decreasing the image's body fat and fat-free mass index (FFMI), a measure of muscularity. The Somatomorphic Matrix can also be used for participants to identify their ideal body. The Somatomorphic Matrix has demonstrated good construct validity with each image accurately representing a live male body with a specific percentage of body fat and FFMI, as created by graphic artists and confirmed by experienced kinanthropists (as cited in Cafri & Thompson, 2004). The Somatomorphic Matrix modification (Cafri & Thompson, 2004) uses only 34 of the original 100 images, which were selected by choosing every third image from the original matrix, starting with the image with the least percentage of body fat and highest FFMI (see Figure 1). This reduction was used to improve the test-retest reliability of the measure. These images were reduced in size and presented on a 10 x 10 matrix, which did not affect the detailing of the individual images. The modification presents the entire matrix of images to the participants so that they can view all of the images at once.

The use of the modification in this study was for participants to choose the image that best represented their own body and best represented the ideal body for their sport by selecting the corresponding numbers on each axis. This allowed researchers to calculate differences in the body fat and muscularity of a participant's current body and the ideal body for their sport. For those participants who reported participating in more than one sport, a question was added that asked the participant to state which sport their selection of the ideal was based on. The researcher also used the matrix to calculate differences in the body fat and muscularity of a participant's current body and society's ideal male body. However, the image on the matrix that represented the societal ideal was chosen by the researchers, based on past research that asked participants to identify what they believed society's ideal male body to be (Gruber et al., 1999; Olivardia, Pope, Borowiecki, & Cohane, 2004; Pope et al., 2000a). Lastly, the matrix was used to calculate the differences in the body fat and muscularity of the societal ideal and the sport ideal for each sport.

Procedures

All of the procedures used in this study were reviewed and accepted as ethical by the Institutional Review Board at Bridgewater State University. Participants were recruited with the assistance of the Bridgewater State University Athletics and Recreation Department. After receiving approval from the Director to contact all male athletes, the researcher met with the Associate Director to obtain email addresses of all male athletes participating in a varsity sport team. After receiving a complete list of email addresses of a particular sport team, the researcher contacted the head coach to set up a time to speak directly with the team's players. Waiting for a complete list was done to ensure that all participants were currently playing on a sport team and were not cut from the team before the season began.

Meetings with athletes and their coaches were usually conducted before or after practice or during an informational meeting. At the meeting, the researcher gave a brief introduction, provided the athletes with a short description of the survey, and answered any questions the coaches or athletes had about the survey. Immediately after the meeting, the athletes received an email from the researcher with detailed instructions on how to access the online survey. In some cases, the head coach allowed the researcher to pass out paper-and-pencil copies of the survey for those athletes who wished to complete a hard copy of the survey. The first page of both the online and hard copy survey was an informed consent letter. By turning the page or clicking *Continue*, the participant consented to participating.

Results

Are There Differences in Body Dissatisfaction Among Sports?

It was expected that there would be differences in the Body-Esteem Scale, Drive for Muscularity Scale, and Male Body Attitudes Scale scores among the sport groups. The mean scores and standard deviations of sport groups on each of the measures can be seen in Table 1. The three measures were examined in separate statistical analyses. A multivariate analysis of variance (MANOVA) was used to examine the effect of sport group (baseball, basketball, cross country, football, soccer, and wrestling) on body esteem. Inconsistent with the study's hypothesis, the test revealed there were no significant group differences for the BES overall, [Wilks' $\Lambda = .772$, $F(15, 191) = 1.25$, $p > .05$, partial $\eta^2 = .083$], nor for its individual subscales, suggesting that levels of body esteem were similar for all of the participating athletes. Unexpectedly, all of the sport groups scored relatively high on this measure, indicating that all of the athletes reported high levels of body esteem.

To determine if there were any differences in body attitudes among the sport groups, a one-way analysis of variance (ANOVA) was conducted to compare the total MBAS scores. As expected, a significant difference was found, [$F(5,74) = 4.08, p = .003, \text{partial } \eta^2 = .216$]. To determine the nature of these differences, a Tukey's HSD was conducted. It was shown that wrestlers ($m = 3.32, sd = .93$) scored significantly higher than baseball players ($m = 2.54, sd = .67$) and cross country runners ($m = 1.98, sd = .59$), indicating that wrestlers reported more negative body attitudes than baseball players and cross country runners. Also, football players ($m = 3.04, sd = .71$) scored significantly higher than cross country runners, suggesting that football players reported more negative body attitudes than cross country runners.

To see if there was an effect of sport group on body fat attitudes, muscularity attitudes, and/or height attitudes, multiple one-way MANOVAs were conducted to examine the effect of sport group on each of the individual MBAS subscales. As anticipated, significant effects were found for the muscularity subscale, [$F(5,76) = 3.60, p = .006, \text{partial } \eta^2 = .191$], and body fat subscale, [$F(5,75) = 2.738, p = .025, \text{partial } \eta^2 = .154$]. However, there was no significant effect for the height subscale, [$F(5,76) = 1.301, p = .273, \text{partial } \eta^2 = .079$]. A Tukey's HSD was then conducted to determine the nature of these differences. It was found that wrestlers ($m = 3.72, sd = 1.18$) again scored significantly higher than baseball players ($m = 2.74, sd = .93$) and cross country runners ($m = 2.00, sd = .88$) on the muscularity subscale, suggesting that wrestlers reported more negative attitudes about their current muscularity than baseball players and cross country runners. The post hoc also revealed that none of the sports were significantly different from each other on the body fat or height subscales. The mean scores of sport groups on each of the subscales can be seen in Table 2.

Lastly, a one-way ANOVA was conducted to compare the drive for muscularity scores among the sport groups. Consistent with the hypothesis, a significant difference was found, [$F(5,72) = 4.51, p = .001, \text{partial } \eta^2 = .238$]. Tukey's *HSD* was used to determine the nature of these differences and it was found that cross country runners ($m = 1.99, sd = .34$) scored significantly lower than football players ($m = 3.53, sd = .73$) and wrestlers ($m = 3.75, sd = .75$), indicating that cross country runners reported a lower drive for muscularity than both football players and wrestlers.

Is the Discrepancy Between Sport Ideal and Societal Ideal Related to Body Dissatisfaction?

It was hypothesized that a higher discrepancy between a sport group's sport ideal and the societal ideal would be significantly positively correlated with higher levels of body dissatisfaction, as demonstrated by lower scores on the BES and higher scores on the DMS and MBAS. The discrepancy between each sport groups' sport ideal and societal ideal was found by calculating the absolute differences in the muscularity and body fat of the sport ideal and the societal ideal and then adding the two differences together for a total discrepancy score. These total discrepancy scores were then used to rank the sports from 1 to 6, with the sport with the smallest discrepancy being 1 and the sport with the largest discrepancy being 6. From 1 to 6, the ranking was as follows: baseball, basketball, soccer, wrestling, football, and cross country. Pearson correlation coefficients were calculated to determine the relationship between the total ranking and scores on each of the measures. Inconsistent with the hypothesis, none of the correlations were significant, suggesting that the discrepancy between sport ideal and societal ideal was not related to body dissatisfaction. However, the direction of most of the correlations was as expected, with higher discrepancies associated with higher scores on both the DMS and MBAS and lower scores on two of the BES subscales, physical condition and physical

attractiveness. However, contrary to the hypothesis, high discrepancies were also associated with higher scores on the BES overall and the upper body strength subscale.

Does the Societal Ideal or the Sport Ideal have a Greater Influence on Body Dissatisfaction?

To answer this question, two discrepancy scores were calculated for each participant: the societal ideal discrepancy score and the sport ideal discrepancy score. The societal ideal discrepancy score was found by calculating the absolute differences in the muscularity and body fat of the participant's current body and the societal ideal and adding the two differences together. Those who reported their current bodies as being at or higher than 60 on the muscularity axis and at or lower than 30 on the body fat axis were given a score of zero to indicate their current bodies were already at or above the societal ideal. This was done to account for those participants who rated their current bodies as more "ideal" than the societal ideal, as a male body with high muscularity and low body fat is optimal. For the societal ideal discrepancy score, 20.7% of the sample was given a score of zero. The sport ideal discrepancy score was found by calculating the absolute differences in the muscularity and body fat of the participant's current body and their sport ideal and adding the two differences together. Again, those whose current bodies were at or above their sport ideal were given a score of zero, which was 14.6 % of the sample. It was hypothesized that the societal ideal discrepancy, as opposed to the sport ideal discrepancy, would have a stronger influence on body image and thus would be more strongly associated with body image, that is significantly higher negative correlations with the BES and positive correlations with the DMS and MBAS.

To determine if either discrepancy score was related to any of the measures, Pearson correlation coefficients were calculated between both discrepancy scores and the BES, DMS, and

MBAS. The correlation coefficients between each discrepancy score and the measures can be found in Table 3.

As expected, the societal ideal discrepancy was significantly negatively correlated with scores on the BES and its subscales, indicating that higher societal ideal discrepancy scores were associated with lower body esteem. However, these scores were also significantly negatively correlated with scores on the DMS, indicating a lower drive for muscularity, which was not expected. However, it is important to note that the DMS specifically measures muscle dissatisfaction and a desire for a muscular body, not body dissatisfaction in general. The societal ideal discrepancy was also significantly positively correlated with scores on the MBAS, as expected. This suggests that higher societal ideal discrepancy scores were associated with more negative body attitudes.

The sport ideal discrepancy, however, was only significantly negatively correlated with scores on the BES overall and the physical condition subscale, suggesting that higher sport ideal discrepancy scores were associated with lower feelings of body esteem, especially in regards to physical condition, but not necessarily upper body strength and physical attractiveness. The other correlations were not significant for the sport ideal discrepancy, but were all in the expected direction.

To determine if the societal ideal discrepancy correlations were larger than the sport ideal, a test was conducted to determine the statistical significance of the difference between each set of correlations (Preacher, 2002). This test revealed that the set of correlation coefficients for the DMS were significantly different from each other--sport ideal discrepancy, $r(76) = .107$, $p = .356$, and societal ideal discrepancy, $r(77) = -.266$, $p = .019$. As predicted the societal ideal discrepancy was more predictive of DMS than the sport ideal discrepancy.

Discussion

As expected, there were differences in body image attitudes among the groups of athletes participating in collegiate sports. There were differences in scores on the Drive for Muscularity Scale and Male Body Attitudes Scale, but not the Body Esteem Scale, indicating differences in muscle dissatisfaction, but not necessarily body dissatisfaction. This can be explained as the DMS is one of the most accurate measures of male body image (Cafri & Thompson, 2004). It is important to note that the MBAS may be a better measure of body dissatisfaction than the BES, as the MBAS is used exclusively in males and addresses dissatisfaction with a muscular appearance, which is highly recommended in measuring male body image (Cafri & Thompson, 2004).

Cross country runners indicated the lowest drive for muscularity and the highest muscle and body satisfaction. This is inconsistent with past research that has found cross country runners to experience significant appearance pressures (Galli et al., 2011), desire a more muscular appearance (Raudenbush & Meyer, 2003), and experience body dissatisfaction (Parks & Read, 1997). However, some of this research is older and could be based off past body ideals. Also, this research is based on Division I and II athletes, while this study sampled only Division III athletes. Baseball players also reported higher body satisfaction, which is consistent with past research that has found baseball players to report the least amount of appearance and weight pressures from coaches and teammates (Galli et al., 2011) and positive feelings towards their bodies (Galli & Reel, 2009).

Football players and wrestlers reported the highest levels of muscle and body dissatisfaction. There has been very limited research on wrestlers in comparison with other sports, as the sample sizes are usually too small to include in data analysis (Galli et al., 2011;

Petrie et al., 2008). However, research has suggested weight dependent athletes are at higher risk for body image disturbances due to the fact that they are required to remain in a specific weight class in order to compete (Sherman & Thompson, 2009). Past research on body image in football players has been mixed with some research indicating that football players report high levels of body satisfaction, especially in regards to physical attraction and upper body size, and more positive attitudes towards weight control (Parks & Read, 1997). However, more recent research has found football players to report less positive feelings about their body (Galli & Reel, 2009) and experience more appearance and weight pressures (Galli et al., 2011), indicating a possible change in body image ideals for football players, with many having BMIs at or close to obesity (Keith, 2008).

It was hypothesized that those athletes whose ideal sport bodies were most discrepant from society's ideal male body would experience greater body dissatisfaction due to the greater possibility of having two self ideal discrepancies: discrepancy between the athlete's current body and the societal ideal and the discrepancy between the athlete's current body and the sport ideal. This hypothesis was based on the assumption that both the sport ideal and societal ideal were important to athletes and strongly influenced their choice of an ideal body. However, no significant correlations were found between this discrepancy and any of the body image measures. Because each athlete's sport ideal was calculated as an average of all the participants' responses, it did not take into account each participant's perception of what they believed their sport ideal to be. This could have affected the results of those athletes whose personal view of what the sport ideal was differed from the average of their peers. Galli and Reel (2009) also note that male athletes commonly attribute body dissatisfaction to failing to obtain either the ideal body set by society or their sport. However, a possible explanation is that it does not matter how

different the ideals are, as long as the athlete obtains at least one of them or the one that is most important to them.

It was also found that the discrepancy between a male's current body and the societal ideal was significantly correlated to more body image measures, and was a more powerful predictor, than the discrepancy between a male's current body and the sport ideal. The correlations indicated that the closer a participant's body was to the societal ideal, the higher they scored on body satisfaction and drive for muscularity, indicating that it is possible for an athlete to be satisfied with their body in general, but not necessarily their muscularity. Although the discrepancy between a male's current body and the sport ideal was not significantly correlated with all of the measures, the correlations were as expected, with those athletes reporting a current body closest to their sport ideal scoring higher on body satisfaction and lower on drive for muscularity. These results support both the sociocultural model of body image and the self ideal discrepancy model that state body dissatisfaction is a result of not obtaining an ideal body. These findings also suggest that the ideal body for male athletes may be more strongly influenced by the societal ideal, rather than the sport ideal.

A limitation of this study was that participants were not asked to choose the societal ideal. Rather, the researchers chose the societal ideal based on past research. The societal ideal could have possibly changed or this sample population could have chosen a different societal ideal. If this study is to be repeated, it is recommended that participants choose the societal ideal themselves. Also, a larger sample size is recommended, especially for those participating in sports that routinely recruit a small number of participants, such as wrestling and cross country. Lastly, future research should investigate if levels of body dissatisfaction differ for athletes

during the off-season, as some athletes may not be as motivated to train during the off-season as they are during the sport season (Galli & Reel, 2009).

Although it is unclear whether or not athletes have better body image than non-athletes, athletic departments and coaches should be aware of the risk factors for body image disturbances in male athletes, as athletes of various sports do experience some degree of both body and muscle dissatisfaction. Coaches, in particular, should take into consideration the body ideals their athletes may be under pressure to obtain when working with their athletes, as coaches seem to have the strongest influence on athletes' body image (Galli & Reel, 2009). Petrie and Greenleaf (2011) encourage coaches to improve the sport environment by encouraging their athletes to be more focused on their performance, rather than their body. However, because this can be difficult for athletes to not focus on their body, it should also be advised that athletes pursue a more realistic body size than that portrayed by the media (Raudenbush & Meyer, 2003). Galli and Reel (2009) also suggest that the NCAA should assist coaches with these issues by providing them with sensitivity training regarding body image topics.

Male athletes themselves should also be educated in body image topics. Despite the higher incidence of negative body image in women, there has been great improvement in the overall body image evaluations of women (Cash et al., 2004), possibly due to the heightened attention surrounding body image problems in women and the increase in educational programs for this population (Pope et al., 2000b). This heightened awareness could be beneficial for male athletes as well, teaching them to be more aware of unrealistic body ideals in both society and their sport and encouraging them to talk about their body image concerns (Pope et al., 2000b). While this study did find higher levels of body and muscle dissatisfaction among football players

and wrestlers, these educational programs should be implemented for all sport groups for preventive purposes.

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Table 1

Means and Standard Deviations for Scores on the BES, MBAS, and DMS

Sport Group	Body Esteem Scale		Male Body Attitudes Scale		Drive for Muscularity Scale	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Baseball	3.88	.64	2.54	.67	3.10	.94
Basketball	3.69	.51	2.88	.54	3.23	.85
Cross Country	3.69	.24	1.98	.59	1.99	.34
Football	3.99	.44	3.04	.71	3.53	.73
Soccer	4.20	.58	2.43	.78	2.80	.84
Wrestling	3.75	.57	3.32	.93	3.75	.75

Table 2

Means and Standard Deviations for Scores on the MBAS subscales

Sport Group	Muscularity		Body Fat		Height	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Baseball	2.74	.93	2.30	.82	3.09	1.29
Basketball	3.40	.99	2.36	.61	3.57	1.21
Cross Country	2.00	.88	1.93	.58	2.70	1.60
Football	3.20	.85	2.99	1.04	3.55	1.56
Soccer	2.83	.57	2.11	1.23	2.50	.53
Wrestling	3.72	1.18	3.00	1.01	3.81	1.83

Table 3

Correlation Coefficients between Discrepancy Scores and BES, DMS, and MBAS

	2	3	4	5	6	7	8
1. Sport Ideal Discrepancy	.399**	-.235*	-.244*	-.202	-.152	.107	.163
2. Societal Ideal Discrepancy		-.418**	-.366**	-.389**	-.253*	-.266*	.242*
3. BES Overall			.906**	.872**	.849**	.132	-.425**
4. Physical Condition				.758**	.608**	.041	-.506**
5. Upper Body Strength					.603**	.088	-.411**
6. Physical Attractiveness						.116	-.198
7. DMS							.512**
8. MBAS							

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

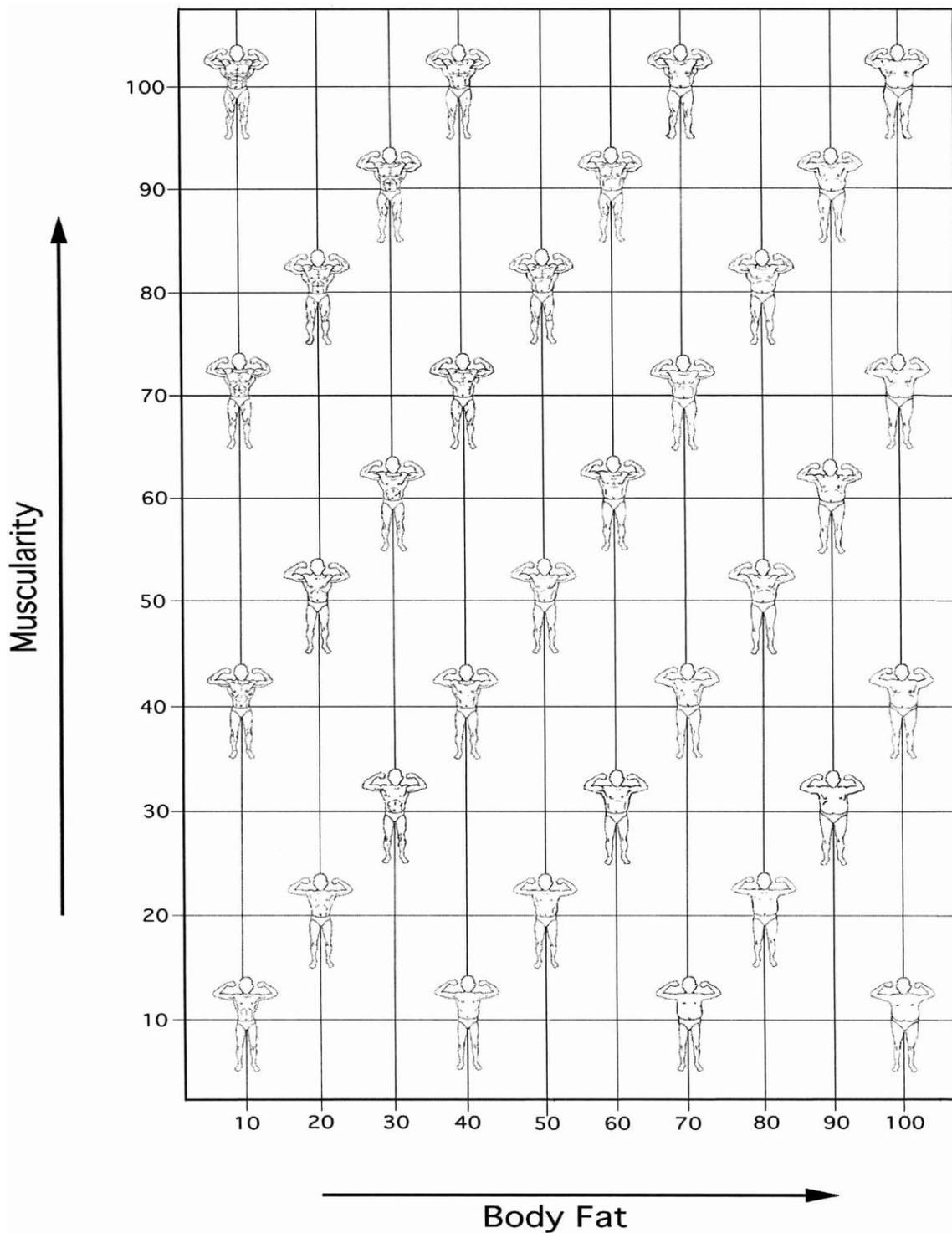


Figure 1. The Somatomorphic Matrix modification (Cafri & Thompson, 2004).