Perspectives on Muscle Dysmorphia

TIMOTHY BAGHURST DANIEL B. KISSINGER
University of Arkansas

Muscle dysmorphia as a proposed psychiatric disorder has garnered attention in the general media and within the academic and scientific communities. Yet, while several models and theories have been proposed to explain its etiology, attributing muscle dysmorphia to one causative factor remains premature (Leone et al., 2005). Baghurst (2008) recently investigated traits associated with muscle dysmorphia in groups of competitive natural bodybuilders, competitive non-natural bodybuilders, weight trainers for physique development, and college football players. This article discusses the findings of this investigation and seeks to extend our understanding by illuminating the potential impact of pharmacological agents within the context of muscle dysmorphia.

Keywords: men’s health, muscle dysmorphia, body image, body satisfaction, action figures, self-esteem

The notion of an ideal human physique has featured prominently in the cultural narrative of the United States and other Western societies (Lantz, Rhea, & Mayhew, 2001). Over the last forty years, for example, the male physique has become a means of gender differentiation (Alexander, 2003; Mishkind, Rodin, Silberstein, & Striegel-Moore, 1986), with a lean, muscular physique and a mesomorphic body type increasingly portrayed as the male ideal (Petrie et al., 1996). Other studies show muscle mass as a principal characteristic used to distinguish the sexes, with males being viewed as naturally more muscular than women (Goldberg, 1997). Focus on the attainment and maintenance of such a body type, along with the perceived social rewards of having such a body, remains largely the domain of men. Consequently, there is a need to understand the role of cultural and other variables related to how the ideal male physique has come to be based largely on muscle mass (Klein, 1993; McCreary & Sasse, 2000).

The Male Body Image

Research addressing body image as it pertains to muscularity centers primarily on men. Studies indicate that men are routinely appraised by their muscularity and ability...
to portray signs of power (Dyer, 2002; Randall, Hall, & Rogers, 1992). Researchers have also linked a muscular male physique with power, dominance, strength, sexual virility, and self-esteem (Miskhkind, Rodin, Silberstein, & Striegel-Moore, 1986; Pope, Phillips, & Olivardia, 2000). In other words, the physical frailty often associated with femininity is diminished by maintaining a muscular physique (Wesely, 2001). This sense of physical adequacy or perhaps the fear of possessing perceived feminine traits may provide some men a sense of self-governance over areas where they feel a lesser degree of personal efficacy. A recent study by Mills and D’Alfonso (2007), for example, indicated that men who fail a cognitive task that a female successfully completes can feel worse about their appearance, less muscular, and less confident in their physical ability.

Several additional reasons may account for an overly developed focus on attaining and maintaining a strong physique. These include a sense of powerlessness and insecurity (Wesely, 2001), being bullied or teased as children, or trying to compensate for childhood illnesses (Heywood, 1997). Thus, these individuals may begin a quest that emphasizes self-control, ambition, desire, hard work, and self-achievement (Brownell, 1991). Overall, such findings lend credence to the notion that men are particularly affected by the fact that the ideal male physique has grown more muscular over the last fifty years (Goldberg, 1997).

Striving to attain a media- or culturally-driven ideal physique may lead some men to adopt strategies such as unhealthy diets and excessive exercise programs. In general, though, men who adhere to a strict diet, lift weights regularly, and exercise do not suffer from muscle dysmorphia (Maida & Armstrong, 2005). Most men exercising in gyms are realistic about their physique and exercise responsibly (Pope, Gruber, Choi, Olivardia, & Phillips, 1997). However, muscle tone and weight gain are noted as central tenets of men seeking a change in their body image (McCabe & Ricciardelli, 2001). Men tend to locate themselves on a body image continuum (Mishkind et al., 1986), with those susceptible to muscle dysmorphia possessing an excessive drive for musculature (Cafri, Thompson, Ricciardelli, McCabe, Smolak, & Yesalis, 2005). It seems reasonable to suggest, then, that men highly concerned with the attainment or maintenance of a leaner, more muscular body image are vulnerable to muscle dysmorphia. In particular, there remains a need to better understand how the ideal of the perfect male physique leads in certain cases to muscle dysmorphia.

Muscle Dysmorphia

Originating in bodybuilding circles, and found principally in males (Pope et al., 2000), muscle dysmorphia represents a form of body image disturbance (Cafri et al., 2005) involving a pathological concern with a perceived lack of muscular size and leanness (Olivardia, 2001), in other words, “a preoccupation with overall muscularity and drive to gain weight without gaining fat” (Morgan, 2000, p.1373). This version muscularity can lead to potentially dangerous attitudes and behaviors related to muscle development (Phillips & Diaz, 1997).
Although the etiology of muscle dysmorphia remains unclear (Leone, Sedory, & Gray, 2005), several models have been developed that attempt to better define its traits and characteristics. Some writers suggest muscle dysmorphia originates via sociocultural factors (Pope et al., 1997). Researchers have argued that muscle dysmorphia results when men encounter pressures to appear a certain way (Cohane & Pope, 2001; Olivardia, 2001; Pope et al., 2000). Others have advanced the theory that muscle dysmorphia occurs as the result of an interplay between low self-esteem and body dissatisfaction or distortion in combination with biological factors and social factors (Lantz et al., 2001). Recently, Grieve (2007) proposed that the most important variables leading to muscle dysmorphia are distortion of body self-perception, dissatisfaction with one’s body, and an internalized ideal body image. These three variables, along with perfectionism, negative affect, low self-esteem, and media pressure are thought to underlie the conditions necessary for the development of muscle dysmorphia.

Some theories explore body image in relation to social comparison theory and media influences. Social comparison theory, for example, suggests that people make comparisons with others in the social environment to obtain personal information (Hausenblas et al., 2003). Some research supports the notion that exposure to media advertising can have deleterious effects on body image in men (Leit, Gray, & Pope, 2002). It should not be surprising, then, that young men desire the mesomorphic body type that is often portrayed as the ideal physique by the media (Pope, Olivardia, Gruber, & Borowiecki, 1999; Pope et al., 2000).

An excessive desire to gain body mass can leave individuals susceptible to certain psychological, environmental and biological risks (Cafri et al., 2005; McCreary & Sasse, 2000). Studies have demonstrated associations between the drive for attaining an ideal body image and heart failure, renal failure, dehydration (Lantz et al., 2001), the use of illegal substances (Olivardia, 2001), dieting (McCreary & Sasse, 2002), overtraining, and exercise addiction or dependence (Pope et al., 2000). Psychological disturbances may also occur, including depression (Olivardia, Pope, Borowiecki, & Cohane, 2004), anxiety (about physique) (Duggan & McCreary, 2004), lower self-esteem (McCreary & Sasse, 2000), and drive for perfectionism (Davis, Karvinen, & McCreary, 2005). Although the mortality rates associated with issues surrounding muscle dysmorphia are low (Dawes & Mankin, 2004), the obsession with muscle size and definition has been a feature associated with the premature death of several bodybuilders (Heywood, 1997). The use of anabolic steroids, a common indicator of a drive for muscularity and muscle dysmorphia, may have contributed to these deaths and a variety of serious side effects of their use have been reported (Cafri et al., 2005; Evans, 1997; Friedl, 2000; Hildebrandt, Langenbucher, Carr, Sanjuan, & Park, 2006; Pope & Katz, 1994; Strauss, Wright, & Finerman, 1982).

Classifying Muscle Dysmorphia

To date muscle dysmorphia has not established as a distinct clinical entity (Chung, 2003; Maida & Armstrong, 2005). For example, while distorted perceptions of body image have drawn comparisons with eating disorders (Pope, Katz, & Hudson, 1993)
and somatoform disorders such as body dysmorphic disorder, a more precise understanding of muscle dysmorphia (Oliveira & Araújo, 2004) is needed, particularly in relation to the DSM-IV-TR (APA, 2000) categories and diagnoses that it closely resembles.

While muscle dysmorphia may exist among athletes in general (Lantz et al., 2001), bodybuilders (competitive and non-competitive) and weightlifters are arguably the most acute sufferers of muscle dysmorphia. Estimates suggest that 5-10 percent of weightlifters struggle with muscle dysmorphia (Olivardia, 2001). Previous findings concerning male body image using bodybuilders and weightlifters as participants should be treated with caution (Thompson, 1999), however, since definitions of bodybuilders, weightlifters, and control groups were vague and inconsistent. In general, men who lift weights are perhaps the most useful population to study.

Maida and Armstrong (2005) investigated the relationship between symptoms of muscle dysmorphia and other DSM-IV-TR classifications of men who lift weights. Their results found associations between symptoms of muscle dysmorphia and variables measuring depression, anxiety, perfectionism, body dissatisfaction, obsessive compulsive anxiety disorder (OCD), and body dysmorphic disorder (BDD). Overall, their results suggested that there are correlations between muscle dysmorphia and OCD, BDD, body dissatisfaction, and feelings of hostility. These findings led the researchers to conclude that muscle dysmorphia aligns more closely with disorders on the obsessive compulsive disorder continuum than with somatoform disorders, which is also the case for body dysmorphic disorder. This diverges from the view of other researchers, who consider muscle dysmorphia a form, subset or subtype of BDD (Grieve, 2007; Leone et al., 2005). Clearly, more research is needed to address both the etiology and diagnostic classification issues surrounding muscle dysmorphia.

A recent study by one of the authors (Baghurst, 2008) adds credence to the notion that weight lifters are a valuable source of data on muscle dysmorphia. In this study, the Muscle Dysmorphia Inventory (MDI; Rhea et al., 2004) was administered to samples of competitive natural bodybuilders (n = 65), competitive non-natural bodybuilders (n = 47), non-competitive weight trainers for improving physique (n = 115), and collegiate football players (n = 66). The MDI is comprised of 27 questions responded to on a Likert-type scale. It includes six subscales (size/symmetry, physique protection, exercise dependence, supplement use, dietary behavior, and drug use) that identify characteristics associated with muscle dysmorphia as defined by Lantz et al. (2001). Overall, higher subscale scores indicate a greater likelihood of exhibiting the traits associated with each subscale. Because of poor factor loading, the exercise dependence subscale was not included in the analysis.

Results of the study revealed a statistically significant difference between competitive natural and non-natural bodybuilders on the drug use subscale only, with the non-natural bodybuilders reporting greater use of laxatives, diuretics, and steroids. The use of all three has been associated with muscle dysmorphia (Lantz et al., 2001), although it is unclear whether use was due to dissatisfaction with physique or related to competition regimen. Other than drug use, the findings suggest that natural body-
builders are as concerned as non-natural bodybuilders about those traits identified as being characteristics of muscle dysmorphia. Because of the competitive nature of the sport, it is expected that both groups were heavily invested in their physique and appearance, since this is the basis on which winning a competition is judged.

In the weight training for physique group, scores were significantly lower than in the bodybuilding groups on the dietary behavior and supplement use subscales. Thus, participants in this group were less concerned or knowledgeable about their nutritional intake than the bodybuilders. No differences were found between the three groups on the physique protection and size/symmetry subscales. This may suggest that all three groups value their appearance, but individuals who weight train for physique may not possess appropriate knowledge about nutrition or fail to appreciate its importance. Weight trainers for physique enhancement may seek to attain a certain appearance, but lack the tools necessary to achieve it.

The collegiate football player group scored lowest on all subscales of the MDI except for physique protection, where their scores were the highest. This led the author to suggest that the high physique protection scores could be attributed to the team wearing uniforms, something that fosters team cohesion and identity (Carron & Spink, 1993). However, the lower scores on the other subscales appear to contradict the notion that characteristics associated with muscle dysmorphia are especially common among individuals who play contact sports. Along with the need for a much larger sample size, specific consideration should be given to the various roles within each individual sport, including power, speed, and agility.

Future Research

Several areas of future research on muscle dysmorphia may be identified. Researchers should explore whether bodybuilders begin using drugs as a means of furthering their competitive edge, or whether competing in the non-natural format gives competitors an excuse to use steroids. An additional avenue for research would lead to understanding the relationship between drug use and choice of competition format (natural vs. non-natural). Future studies should provide clear sample and subgroup definitions. For example, if a drive for muscularity in males is not necessarily dependent on one’s current state of muscularity (McCreary, Karvinen, & Davis, 2006) it is possible that sedentary males may be potentially susceptible to the development of muscle dysmorphia.

Conclusion

While the present study does not address whether muscle dysmorphia falls within the spectrum of somatozation disorders such as BDD (Pope et al., 1997) or along the OCD continuum (Maida & Armstrong, 2005), it points to the need to examine the role of drug use (steroids, laxatives, or diuretics) to build or shape muscularity among those susceptible to muscle dysmorphia. In particular, the results suggest that any assessment
of muscle dysmorphia must include a careful exploration of the use of pharmacological agents between natural and non-natural bodybuilders.

References


