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BODY IMAGE IN MALES AS RELATED TO FRATERNITY MEMBERSHIP AND
LEVELS OF EXERCISE

by

Melanie Kelly

A Master's Thesis
Submitted to the Faculty of Graduate Studies and Research
through Psychology
in Partial Fulfillment of the Requirements for
the Degree of Master of Arts at the
University of Windsor

Windsor, Ontario, Canada
2000
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ABSTRACT

Previous body image research has typically included females, while comparatively fewer studies focus solely on males. These studies have variously concluded that males are satisfied and dissatisfied with their bodies, with many suggesting that the desire for muscularity is related to their dissatisfaction without assessing muscularity levels. Exercise involvement has been linked to body image ratings, with regular exercisers reporting more satisfaction. The present study attempted to clarify the nature and extent of body dissatisfaction in males using 202 undergraduate males recruited from three Michigan-area universities. Males were grouped according to fraternity membership ($n = 81$), and football participation ($n = 61$), and participation in neither group ($n = 60$). Analyses focused on the effects of group membership and exercise levels on body image ratings, which was assessed using the Figure Rating Scale, the Body Esteem Scale, and several muscularity-related questions. No significant differences were found between the satisfaction levels of fraternity members and non-fraternity, non-football males, or between football players and non-fraternity, non-football males. Findings indicated widespread dissatisfaction with current appearance, with most males desiring a more muscular upper body and, to a lesser extent, a more muscular lower body. The desire to be leaner in addition to more muscular was commonly reported. Several reasons for this dissatisfaction were identified, and were found to be similar in content among the groups but varied in terms of importance. A majority of the males reported at least some degree of satisfaction with their physical conditioning, physical attractiveness, and upper body strength. Low exercisers were more dissatisfied than regular exercisers on all body image variables except muscularity levels. These findings are discussed in the context of previous findings, and directions for future research are suggested.

ACKNOWLEDGMENTS

I would like to thank my thesis advisor, Dr. Cheryl Thomas, for her support and guidance throughout this project. I would also like to thank Dr. Ken Cramer and Dr. Dick Moriarty for their helpful comments and encouragement from the outset of their involvement.

I would also like to acknowledge the unwavering support of my family and friends, who never stopped listening to my “thesis woes” with a sympathetic and understanding ear. In particular, the emotional and instrumental support of my husband Aaron truly made this project possible. Without him this thesis would never have been completed so successfully. I thank him for making this process as painless as he possibly could. I would also like to thank my close friends Mark Langewisch, Gav Gellar, and Jeremy Frank for their invaluable advice and support, and for getting me away from it all when I needed it most. A debt of gratitude is also owed to the graduate students who participate in Dr. Thomas’ eating disorder research group, who never ceased to be helpful with ideas and comments. I am very fortunate to have met such great people.

Finally, I would like to thank my parents and also my in-laws for their constant love and encouragement that extends beyond the boundaries of this project. Their support and pride in my accomplishments makes it easier and more worthwhile to continue pursuing my goals, and for that I will always be grateful.

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INTRODUCTION

Overview

Interest and research in the area of body image has been steadily increasing over recent decades (Cash & Pruzinsky, 1990; Thompson, 1990). This is due in part to the alarming increase in the prevalence of eating disorders, especially among women. The relationships between body image disturbance, negative affect, and eating pathology among women have been well established. The hope is that a greater understanding of body image disturbance will help curb the increase in eating problems, and aid in treatment planning for eating disorder sufferers (McDonald & Thompson, 1992).

Since eating disorders mostly affect women, body image research with males has been comparatively lacking. A majority of studies that involve males assess gender differences rather than utilizing all-male samples. Although there has been a proliferation of measures designed to assess body image, a majority of them have not been validated for use with male populations (Thompson, 1990). Many studies with male samples utilize measures that have been created and normed for women. These studies have typically concluded that males are satisfied with their bodies.

More recently, studies have reported that males are as dissatisfied with their body size and shape as females (Raudenbush & Zellner, 1997; Lamb, Jackson, Cassiday, & Priest, 1993). It seems as though males are equally divided in their weight goals, with half desiring weight gain and half desiring weight loss. Current weight status appears to play a role, with overweight males wishing to lose weight and normal or underweight males wishing to gain. This is consistent with cultural standards of attractiveness for males which emphasize muscularity and bulk over thinness and fatness. Although this notion is intuitively appealing, these findings have not been consistently reported in the research literature.

Another variable of interest in body image research is exercise. It appears that males who exercise more frequently feel better about their bodies, although this is not

true for all types of exercise (for example, see McKay-Parks & Read, 1997). These relationships require further exploration in order to understand the apparent moderating effects of exercise on body image.

The present study explored these issues using fraternity members, football players, and males who were neither fraternity members or football players. It is hoped that this research will clarify the extent and nature of body image disturbance in different groups of males, and delineate the effects of exercise on their feelings of body satisfaction.

Body Image

The most commonly studied aspect of body image involves physical appearance. In this regard, body image is one's subjective evaluation of their size, weight, or any other aspect of the body that determines physical appearance (Thompson, 1990). The physical appearance construct is typically divided into three separate areas. The perceptual component of body image refers to the estimation of body size, and the accuracy of those estimates. This component is typically assessed through the use of light beams, which are moved by the person to match the perceived width of their body parts (Barrios, Ruff, & York, 1989; Thompson & Spana, 1988). The subjective component of body image has been the most widely studied. It refers to how one feels about their body size and shape, and includes such areas as body satisfaction, concern, cognitive evaluation, and anxiety. Paper-and-pencil measures which are scored on a Likert scale are used most often to tap into this construct. Silhouette rating scales which instruct participants to choose their current and ideal figures from an array of body sizes also fall into the subjective component category. The final aspect of body image is the behavioural component. Any actions that one takes to avoid or decrease physical appearance-related discomfort, such as wearing a sweatshirt to the beach to decrease

feelings of self-consciousness, are considered within this category. Very little research has been done in this area, particularly with male populations.

A major difficulty with assessing these constructs in males is the paucity of research tools which are suitable for this group. Much of the research in the area has used measures that were created for females, and designed to assess symptoms of eating disorders (Thompson, 1990). This has created some conflicting findings concerning the nature and extent of body image disturbance in males.

Body Image in Males

Strong links have been found between body image disturbances and the incidence of eating disorders (Rosen, 1990). Since the prevalence rates of eating disorders among females have been steadily increasing, while the rates for males have remained fairly stable, researchers have tended to focus their efforts on the study of body image disturbances among females (Cash & Pruzinsky, 1990; Thompson, 1990). Much of the research involving males has focused on comparisons between the two genders on indices of body satisfaction. Although many differences have been noted in the ratings of males and females, the nature and extent of body image disturbance among males remains less conclusive due to conflicting reports.

Fallon and Rozin (1985) conducted one of the first studies which compared the body image ratings of males and females. Females were found to be significantly more dissatisfied with their figure than males. While females chose an ideal figure which was much smaller than their current size, males showed no difference between their current and ideal figures. These findings were replicated and extended by Zellner, Harner, and Adler (1989), who found that males did not evidence body dissatisfaction or eating-related pathology, while women were significantly dissatisfied and reported varying levels of eating disturbances. This trend has been noted within adolescent groups as well, with figural rating discrepancies correlating highly with measures of drive for

thinness and body dissatisfaction for females, but not for males. Males showed a slight but insignificant desire for weight gain. (Phelps, Johnston, Jimenez, Wilczenski, Andrea, & Healy, 1993).

Significant differences have been noted between the genders on attitudinal measures of body image. Muth and Cash (1997) found that relative to males, females evaluated their bodies more harshly, had more dysphoric feelings related to their bodies, and had more cognitive and behavioural investments in their appearance. Average-weight males were significantly more satisfied with their appearance than males who were lighter or heavier than the norm. Twenty-two percent of males and 40% of females were unhappy with their bodies as a whole.

A recent meta-analytic report which reviewed studies on attractiveness and body image over the past 50 years concluded that males' self-ratings of attractiveness are higher than those of females, and that males are more satisfied with their bodies than are females (Feingold & Mazzella, 1998). Although this analysis confirms previously reported findings, other researchers have concluded that body dissatisfaction in males exists. For example, Cash, Winstead, and Janda (1986) surveyed 30,000 Americans on their body image attitudes, affects, and practices. Although females reported more body dissatisfaction than males, both groups were significantly more dissatisfied than respondents from a similar survey conducted over a decade earlier. While 47% of males agreed with the statement, "I like my looks just the way they are", 34% disagreed. Similarly, 41% of males were unhappy with their weight, with most of their dissatisfaction centering on their mid-torso region. While 44% of male respondents were afraid of becoming fat, 55% of overweight males and 77% of underweight males were satisfied with their looks. Similar to previous findings (Muth & Cash, 1997), males who saw their weight as normal felt good about their appearance.

Some researchers have concluded that males and females are equally dissatisfied with their bodies. Differences in the nature of their dissatisfaction exist, with females

desiring weight loss and males desiring to gain and lose weight in equal proportions (Cohn & Adler, 1992; Drewnowski & Yee, 1987; Silberstein, Streigel-Moore, Timko, & Rodin, 1988). These findings surfaced by calculating body dissatisfaction indices based on the absolute values of males' current figure minus ideal figure preferences on a silhouette rating scale. This was suggested as a reason why previous research failed to report the existence of body dissatisfaction in males; they were taking the average of two opposing yet equally dissatisfied groups.

More recently, researchers have studied which males wish to be larger and which wish to be smaller in size (Lamb, Jackson, Cassiday, & Priest, 1993; Raudenbush & Zellner, 1997). Males over the age of 50 were larger and desired weight loss, while college-aged males were average and desired weight gain. Although the younger males weighed significantly less than the older males, there were no differences in their chosen ideal figures (Lamb et al., 1993). These findings have been replicated using a university population (Raudenbush & Zellner, 1997), suggesting that males who are average wish to gain weight, while those who are overweight wish to lose in order to achieve the same ideal as average-weight males.

The notion that males uniformly wish to achieve a larger, more muscular figure is not a recent one. Tucker (1982) is one of the few researchers to utilize a muscular figure for assessments of current and ideal body sizes. Most of his sample identified themselves as being thinner than their ideal. The mesomorphic body figure was chosen as an ideal by a significant majority of participants. This finding was replicated by Butler and Ryckman (1993), who found that males identified the mesomorphic body build as their ideal figure. Brodie, Slade, and Riley (1991) found that males wished to broaden their upper bodies. In addition, a majority of body-related anxiety in males has been related to a small upper body (Davis, Brewer, & Weinstein, 1993). When asked about their preferred level of upper-body definition, 91% of males wished to be more muscular, while no males wished to be less muscular (Jacobi & Cash, 1994). These results support

the notion that young males are dissatisfied with their weight and shape, and most frequently desire to become more muscular.

Body Image and Self-Esteem

A related difficulty of body dissatisfaction in males is that it may engender feelings of low self-esteem, a notion that has been consistently reported in the research literature (Boldrick, 1983; Franzoi & Herzog, 1986; Silberstein et al., 1988; Stowers & Durm, 1996, Wilcox, 1997). No significant differences have been found in the relationship between body image and self-esteem for males and females, although some have observed a slight trend toward a closer relationship among males. Boldrick (1983) reported that satisfaction with various physical attributes and self-esteem were significantly related for both males and females, regardless of the importance given to the attributes by respondents. Stowers and Durm (1996) reported similar findings, with a measure of total self-concept correlating highly with body image ratings for both women ($r=0.75$, $p<.01$) and men ($r=0.70$, $p<.01$). Although Franzoi and Herzog (1986) found significant correlations between subscales of the Body Esteem Scale (BES; Franzoi and Shields, 1984) and the Rosenberg Self-Esteem Scale (Rosenberg, 1965) for both genders, stronger correlations were reported for males. Silberstein et al. (1988) reported that males' self-esteem was related to weight concern and discrepancies between current and desired figures, while these relationships were not found among women. It was concluded that perhaps weight dissatisfaction is normative among women, and therefore does not impinge on a woman's feelings about herself. The authors implied that such dissatisfaction is not as normative among men.

Based on these findings it appears as though males who are dissatisfied with their bodies may also have difficulties with low self-esteem. Since self-esteem is a construct that affects many areas of a person's life, it is an important factor to consider when conducting body image research.

Body Image and Exercise

Research documenting the relationship between exercise involvement and body image in males has generally focused on two separate yet related areas. The first major set of studies compare exercising males and females on indices of body image, while the second compare males who are involved in different athletic pursuits.

Consistent with previous findings from nonexercising groups, it has been reported that exercising females have more body dissatisfaction than their male counterparts (Davis & Cowles, 1991; Hallinan, Pierce, Evans, DeGrenier, & Andres, 1991; Salusso-Deonier & Schwarzkopf, 1991; McDonald & Thompson, 1992; Rawlings, 1990). Rawlings (1989) found that male members of the Ontario Fitness Council were significantly more satisfied with their bodies than female members, as evidenced by body dissatisfaction and drive for thinness scores from the Eating Disorder Inventory. In their analysis of gender differences in satisfaction with overall body shape and size, Hallinan et al. (1991) found that athletic and nonathletic females perceived their current figures to be significantly larger than their ideal figures. Both male groups perceived their current and ideal figures to be closely related. An analysis of satisfaction with specific body areas has found that exercising males are more satisfied with their weight and hips than exercising women (Salusso-Deonier & Schwarzkopf, 1991). Comparisons between pre-exercising and post-exercising males showed significant increases in satisfaction with all body areas except weight. It appears that one's reasons for exercising can affect levels of body image satisfaction. In particular, exercising for weight, tone, and attractiveness reasons has been associated with an increase in eating disturbance and body dissatisfaction for both genders (Davis & Cowles, 1991; McDonald & Thompson, 1992). Females and older males (older than 25 years) exercised more for weight and tone reasons than younger males. An increase in self-esteem and a decrease in eating disordered symptoms was related to exercising for health and fitness reasons in males (McDonald & Thompson, 1992). Young men increased body satisfaction with increased

exercise levels (Davis & Cowles, 1991). This trend was not observed for weight satisfaction levels, since most young males wished to gain weight.

Members of various athletic teams have been found to differ in their levels of body satisfaction. Females' participation in various sports may engender a desire to lose weight, at times to the point of the development of an eating disorder. This has been found among such sports as swimming and gymnastics (Benson, 1991; Ubbes, 1991). Although this trend has been found among males in such sports as wrestling (Tipton, 1980), the desire for weight loss does not appear to be the norm among athletic males. For example, varsity swimmers and football players were found to have higher ratings of body satisfaction than nonathletes (Huddy, Nieman, & Johnson, 1993). Adolescent male football players reported a more positive body image than same-aged male cross-country runners (McKay-Parks & Read, 1997). McKay-Parks and Read (1997) found that the football players' current weights were significantly less than their ideal weights, while the runners appeared to be divided between those who wished to lose weight (20%), and gain weight (43%). On a silhouette rating scale, 84% of runners chose an ideal which was larger than their current figure. Runners were also less satisfied with their physical attractiveness and upper body strength. The authors speculated that since football players were closer to the mesomorphic body type than runners, they were significantly more satisfied with their bodies.

The contention that football players have, or desire to have, large and mesomorphic figures is consistent with findings from several researchers. Wang, Downey, Perko, and Yesalis (1993) reported that members of *Parade Magazine's* High School All-American football teams showed a significant increase in Body Mass Index (BMI, weight in kilograms divided by height in meters²) during the years 1972 to 1989, while no such changes were observed during the period spanning 1963 to 1971. This trend was also not observed among young males in the general population, regardless of period surveyed. Similarly, Olsen and Hunter (1985) found that the BMIs of

collegiate-level football lineman rose from 29.11 to 31.42 during the years 1973 to 1983, which was a significant increase in reported weights.

The physical conditions required in the sport of football may affect players' desires to have mesomorphic body figures. In particular, football players are expected to exhibit strength, speed, agility, and endurance in order to be successful on the field. To this end, it has been reported that both muscle size and muscle strength are positively correlated with speed and power (Arthur & Bailey, 1998). Daniel, Brown, and Gorman (1984) found that success in university-level football was related to players' percent body fat and skinfold measurements, with leaner players exhibiting better performance. Those who are unable or unwilling to naturally obtain the necessary muscular levels may be in danger of resorting to steroid use in order to facilitate growth. In fact, the need for football players to be large and muscular may have led to an increase in steroid use among players, at least at the high school level (Buckley, Yesalis, Friedl, Anderson, Streit, & Wright, 1988; Goldberg, Elliot, Clarke, MacKinnon, Moe, Zoref, et al., 1996).

Another sport that requires a large, mesomorphic figure is body building. Paradoxically, significant levels of body dissatisfaction have been noted among competitive and recreational bodybuilders. Undergraduate bodybuilders have displayed significantly more size underestimation, body image disturbance, and eating disordered symptoms than hockey players and nonathletic controls (Loosemore, Mable, Galgan, Balance, & Moriarty, 1989). Comparisons between body builders, runners, and martial artists revealed similar trends (Blouin & Goldfield, 1995). Body builders evidenced significantly more body dissatisfaction than either of the comparison groups. They reported an increased drive for thinness as well as a drive for bulk, suggesting that they wished to gain muscle mass and lose body fat. Their ratings of self-esteem and feelings of ineffectiveness were significantly worse than those of martial artists, while their feelings of perfectionism and internal monitoring were higher than those of runners. Martial artists and runners did not significantly differ on any of these measures. Blouin

and Goldfield (1995) noted that body builders may evidence many of the same symptoms commonly seen in anorexic patients. In particular, they pointed to the observed eating disordered thoughts and behaviours, coupled with their increased desire for bulk and loss of fat. These symptoms may have lead some of the bodybuilders in the sample to use steroids in an effort to achieve their ideals and improve their athletic performance.

Pope, Katz, and Hudson (1993) originally coined the term “reverse anorexia” to refer to the feelings of being very small and weak when in actuality the body is very large and muscular. This condition was later termed “muscle dysmorphia”, and has been proposed as a type of Body Dysmorphic Disorder (BDD). BDD would fall under the category of the Somatoform Disorders in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV; American Psychiatric Association, 1994; Pope, Gruber, Choi, Olivardia, & Phillips, 1997). This proposed syndrome was delineated through the study of male bodybuilders, some of whom had reported feelings of not being big or muscular enough. These feelings led them to such typically anorexic behaviours as avoiding situations where others would see their bodies, and concealing their bodies under layers of clothing to mask their perceived lack of muscularity. The initiation or attenuation of steroid use was also very common among this group. Although females with this condition have been identified, reverse anorexia has been found to be more common among males (Pope et al., 1997). It is hypothesized that cultural pressures for males to be muscular produces a condition in some that is analogous to the anorexic’s response to social pressures for thinness (Pope, Katz, & Hudson, 1993; Pope et al., 1997). Although this condition is uncommon, with estimates ranging from 8.3% in a sample of 108 bodybuilders (Pope, Katz, & Hudson, 1993), to 10% in a sample of 156 bodybuilders, to 9.3% in a sample of 193 BDD patients (Pope et al., 1997), the potential numbers of unidentified cases in the general population could be greater given the large numbers of North Americans who routinely lift weights for exercise.

Steroid use is significantly related to body dissatisfaction, and has often been cited in conjunction with muscle dysmorphia (Blouin & Goldfield, 1995; Pope, Katz, & Hudson, 1993; Pope et al., 1997; Wroblewska, 1997). It appears that steroid use is increasingly becoming a way for both athletes and nonathletes to increase their muscle mass and improve athletic performance. Steroid use thus represents one of the potential dangers associated with body dissatisfaction among males, especially among adolescent and weight lifting groups (Wroblewska, 1997). In order to prevent such negative outcomes as muscle dysmorphia and steroid use among men, research must clarify the nature and causes of body image disturbance within this population.

Limitations of Body Image Research with Males

1. Most of the body image research with males has focused on gender comparisons. This tendency may have generated misleading findings, as it has been found that the components of body image for males and females are significantly different (Franzoi & Shields, 1984). Males focus on facial attractiveness, upper body strength, and physical condition in their bodily evaluations, while females focus on sexual attractiveness, weight concern, and physical condition. Although the physical conditioning aspect has overlapping features between the two genders, significant differences remain. It appears as though comparing males and females is less informative than comparing different male subgroups. This would foster more realistic comparisons and increase the accuracy of conclusions involving the nature of body image in males.
2. A further limitation of studies on body image is the routine use of widely discrepant measures between studies, some of which are not tested for their psychometric properties (Cash & Pruzinsky, 1990; Thompson, 1990). This is particularly common in research with males, as few measures have been validated for their use (Thompson, 1990). This practice makes the direct comparison of studies difficult, and may be a factor in the

proliferation of discrepant findings within the area. In order to clarify the nature of body image disturbance in males, it is imperative that measures which have been deemed psychometrically sound for this population be utilized on a consistent basis.

3. Although several studies have found that young males wish to increase their weight and body size, very few have clarified the nature of this dissatisfaction. Some studies claim that males do not desire weight gain per se, but rather an increase in muscle mass in order to meet societal standards of masculinity (Phelps et al., 1993; Raudenbush & Zellner, 1997). However, a majority of studies fail to include muscular figures in silhouette scales or ask questions concerning desired bulk, and therefore cannot make assertions concerning desired levels of muscularity. The inclusion of questions that directly assess perceived and desired levels of muscularity would serve to clarify the nature of body dissatisfaction in males.

4. A majority of body image research with males has failed to assess cultural differences in preferred size and shape. African American males have been found to prefer larger figures and more weight gain than Caucasian males (Furnham & Baguma, 1994; Thompson, Sargent, & Kemper, 1996). Conversely, it has been reported that African American males are more satisfied with their body size and shape than Caucasian males (Altabe, 1998). Researchers using these subgroups of males should be aware of possible within-group differences that may affect their results.

5. There is a general failure on the part of body image researchers to appropriately assess levels of exercise activity. Many studies compare groups solely on the basis of membership on varsity athletic teams; control groups are chosen based on their lack of sports-team membership, or participation in Psychology classes without mention of their exercise levels (Huddy et al., 1993; Loosemore et al., 1989; McKay-Parks & Read, 1997;

Pierce et al., 1991; Salusso-Deonier & Schwarzkopf, 1991). Studies on the effects of general exercise often fail to operationalize the term “exercise” (Davis & Cowles, 1991), making it difficult to generalize findings.

Theoretical Framework for the Study of Body Image in Males

Much of the research dealing with body image has lacked a theoretical framework on which to base findings. It appears that a majority of studies in the area are guided solely by the clinical interests of the investigator (Cash & Szymanski, 1995). One theory that has been proposed as an appropriate model for use in the study of body image is Higgins’s (1987) self-discrepancy theory. This framework proposes that individuals hold various self-beliefs based on different standpoints. The self is broken up into three separate domains, including the actual self, the ideal self, and the “ought” self. These selves are referenced according to two standpoints: the person’s own standpoint and the perceived standpoint of significant others. Individuals are motivated to attain congruence between their actual selves and other, personally relevant self-guides. Self-guides are internalized beliefs of what a person should be in an ideal situation, and can arise from either personal standards or the standards of others. If there is a discrepancy between the actual self and the ideals of the self or important others, the result is negative affect.

This theory provides an explanation of many research findings concerning body image. Investigators have cited the discrepancy between one’s current weight and shape and one’s reported self-ideals as evidence of body dissatisfaction (Altabe & Thompson, 1992, 1996; Jacobi & Cash, 1994; Keeton, Cash, & Brown, 1990; Williamson, Gleaves, Watkins, & Schlundt, 1993). Discrepancies between actual and self-perceived ideal body size were the best predictors of body dissatisfaction in women when compared to estimates of either current or ideal body size alone, or actual body size. (Williamson et al., 1993). These findings were replicated by Altabe and Thompson (1996), who further

noted that actual and self-perceived ideal body size discrepancies were highly correlated with body image anxiety and depression.

Research utilizing male and female groups has made similar conclusions. In particular, discrepancies between current figure and self-chosen ideals were positively correlated with eating symptomatology and global indices of maladjustment for both genders (Altabe & Thompson, 1992; Keeton et al., 1990). Discrepancies between current and desired body size, weight, and muscularity levels in men, and body size, weight, muscularity, height, hair length, hair color, and breast size in women have been associated with body image dissatisfaction (Jacobi & Cash, 1994).

Self-ideal discrepancies may also engender negative affect when the ideal is referenced from the standpoint of a significant other. Studies in this area have typically utilized one's perceived ratings of members of the opposite sex in calculating self-ideal discrepancies. Research with males has found a tendency to overestimate the male figure that females prefer (Cohn & Adler, 1992; Jacobi & Cash, 1994). Although the perceived ideal chosen by the opposite sex is not significantly different than respondent's own ideals, both are significantly larger than normal-weight males' current size, and significantly smaller than that for overweight males (Raudenbush & Zellner, 1997). These discrepancies may create unrealistic expectations for males, and contribute to their increased body image dissatisfaction.

The expectations of one's society and culture may serve as significant-other viewpoints that serve to create body dissatisfaction when self-ideal discrepancies exist. The figure that typifies society's masculine ideal is very lean and muscular, particularly in the upper body area (Mishkind, Rodin, Silberstein, & Striegel-Moore, 1986). This image has been equated with such stereotypically masculine qualities as strength, power, and self-confidence (Darden, 1972). A comparative analysis of popular men's and women's magazines revealed that men are exposed to far more body shape ads than women are (Andersen and DiDomenico, 1990). Shape ads were related to fitness,

weightlifting, body building, and muscle toning. It appears that while pressures exist for women to lose weight, men are pressured to gain weight in the form of muscle mass and bulk. These ads and related images appear to have an effect on men's body esteem, as evidenced by their significant decline in body satisfaction following the viewing of attractive male models (Grogan, Williams, & Conner, 1996). Although sociocultural hypotheses of body image disturbance have mostly been studied with women, it appears as though sociocultural pressures may account for some of the findings of body dissatisfaction in males as well. This may be due to perceived discrepancies between one's current and ideal figure as defined by society.

Fraternal Organizations

The majority of research involving fraternity populations has centered on sexual assault and alcohol abuse. In particular, the attitudes of fraternity members which foster such negative outcomes have been studied (Kalof & Cargill, 1991; Sanday, 1990; Yancey-Martin & Hummer, 1989). Although there have been no studies which focus on body image among fraternity males, the previous research using this population provides useful indications of how they may view and desire their bodies to be.

In their review of the social dynamics within fraternal organizations, Yancey-Martin and Hummer (1989) delineated several factors which contribute to the objectification and sexual abuse of women. They stated that fraternities are ultimately concerned with masculinity and achieving the stereotypical macho image. In order to achieve this image males narrowly focus on being powerful and achieving dominance in athletics and relationships with females. Based on anecdotal reports, the preferred fraternity member is sociable, attractive to females, athletic, competitive, and large in physical size. Since thinness is a trait commonly associated with females, fraternities try to avoid recruiting males who are small or unathletic. A bond is created among the fraternity members through ritualistic initiation activities which first make pledges feel

small and weak, and thus equated with women. When a pledge becomes a fraternity member, they are deemed to be men in the stereotypical sense. They are considered to possess the qualities which serve to dominate others, particularly those who are seen as small and weak. Women are placed into this stereotypical category, and thus tend to be exploited and abused by fraternity members.

Sanday (1990) reiterates these points in her analysis of gang rape within fraternities. Her findings support the notion that fraternal organizations put tremendous pressure on their members to meet stereotypically masculine ideals. Exerting power over women by having sex with them, particularly if they are unwilling or intoxicated, enforces the male's feelings of dominance and strength.

Kaloff and Cargill (1991) analyzed the gender dominance attitudes of 59 male and female undergraduates who were equally divided into groups based on membership in a Greek organization (i.e., a fraternity or sorority), or lack of such membership. Questions assessed the extent to which participants agreed with statements involving dominance and passivity among the two genders. Their findings indicated that fraternity members endorsed significantly more male-dominant attitudes than any other group. These findings further the notion that fraternities foster attitudes which are consistent with stereotypically masculine ideals.

The results of these studies suggest that male fraternity members adhere to a narrowly defined notion of masculinity. Based on these findings it appears likely that members of fraternal organizations desire to attain a highly mesomorphic body type, which is currently considered to be the masculine ideal in society (Mishkind, Rodin, Silberstein, & Striegel-Moore, 1986). Although these assumptions appear to intuitively follow from the research literature, they must be empirically tested before firm conclusions can be made.

Rationale for Present Study

To reiterate, a majority of body image research with males has been conducted with the inclusion of female groups. Results are often based on comparisons between the two groups, which invariably conclude that females are more dissatisfied with their bodies than males. In order to clarify the extent of body image disturbance in males, a study is needed which is based solely on male groupings. This will reduce the likelihood that dissatisfaction in males is misinterpreted because it has been overshadowed by a relatively more dissatisfied group.

Although it appears that a majority of young males wish to be larger than their current size, it is unclear whether they wish to gain weight per se, or wish to increase in muscle mass and bulk. The latter notion has often been inferred but rarely verified through assessment. A study is needed that clarifies the nature of body dissatisfaction in males through the inclusion of muscular options within the assessment procedure.

A study that uses assessment measures deemed appropriate and psychometrically sound for males is also necessary. This is in light of previous research which has used measures created for female populations and concerns, and which have not been validated for use with males. The use of such measures may lead to spurious conclusions, and should be avoided whenever possible.

It is also important to verify the effects of exercise on body esteem in males. Although much research has been done in the area, there has been a general failure to provide operational definitions of exercise. It is necessary to apply criteria for exercise participation that is based on current medical recommendations. This will provide a firm grounding for the division of groups, and will increase the validity of research findings.

Fraternity members and football players serve as interesting groups with which to study body image disturbance. The former group appears to be very concerned with achieving a highly masculine image, which may lead to body dissatisfaction and a

corresponding desire for bulk. Football players may also exhibit body dissatisfaction due to the increased pressure to be muscular in order to excel in their sport.

Research Questions

The overall purpose of this study was to explore the nature and extent of body image disturbance in young males. Fraternity members were studied, as they represent a group that seems to place a large emphasis on achieving masculine ideals. The effects of exercise on body image disturbance were also assessed. Although a group of football players were included in the final analyses, at the time that the following hypotheses were made no plans to survey this group had been made. Therefore, no specific hypotheses concerning football players were made. With this in mind, the hypotheses for this study included:

1. The fraternity group will report a significantly larger and more muscular ideal-figure than the non-fraternity group.
2. Both low-exercising groups will report an ideal level of muscularity that is larger than their current figures.
3. Fraternity members will report significantly more overall body dissatisfaction than non-fraternity members.
4. The regularly-exercising males will report significantly less body dissatisfaction than the lower-exercising males.

The following research question was also explored:

1. What are the reasons why males choose ideal figures that are discrepant from their current figures?

METHOD

Participants

Two hundred and two male undergraduates were sampled from the University of Detroit Mercy, Wayne State University, and the University of Michigan in the United States. Males from two of the three participating universities were entered into a draw for \$100. Although the third university did not allow the researcher to offer a tangible incentive for participation, males from a psychology class that was surveyed ($n = 14$) were offered course credit for taking part in this study. This incentive was offered by the professor of the course, and was independent from the researcher. All other males at this university were not compensated for their time.

The mean age of participants was 20.1 years ($SD = 1.97$). Of the 202 participants, 27% were Freshman in university ($n = 54$), 26% were Sophmores ($n = 52$), 24% were Juniors ($n = 49$), and 23% were Seniors ($n = 47$). In regards to ethnicity, 79% were Causasian ($n = 159$), 9% were African American ($n = 19$), 4% were Asian ($n = 8$), 3% were Middle-Eastern ($n = 6$), 3% were Hispanic ($n = 5$), 1% were bi-racial ($n = 3$), and 1% did not specify their ethnicity ($n = 2$).

Participants were grouped according to their membership in a fraternity or varsity football team, as derived from responses on the demographic questionnaire. Those who were neither fraternity members or football players formed a third group. Fraternity members comprised 40% of the total sample ($n = 81$), football players comprised 30% ($n = 61$), and the non-fraternity, non-football group accounted for 30% of participants ($n = 60$).

On average, fraternity members were 20.6 years old ($SD = 1.50$). Seventy-seven percent of the fraternity sample were Caucasian, 9% were Asian, 5% were Hispanic, 5% were Arabic, 2% were biracial, and 2% were unknown. The average age of the football sample was 19.9 ($SD = 2.79$). Seventy-nine percent of the football sample were Caucasian, 18% were African American, 2% were Serbian, and 2% were biracial. The

average age of the non-fraternity, non-football sample was 19.6 ($SD = 1.33$). The ethnic composition of this group included 82% Caucasians, 13% African Americans, 2% Hispanic, 2% Asian, and 2% Middle Eastern.

Although the inclusion of football players was not planned at the outset of this study, they were analyzed separately because of their unique group status. Specifically, they are known for their high levels of exercise involvement and larger body sizes when compared to males from the general population (Wang et al., 1993). Thus it was felt that in combining the football players with other non-fraternity members valuable information would be lost about both groups, and the study's validity would be compromised.

Groups were also classified according to their weekly exercise activity, which was a dichotomous variable consisting of "low exercisers" and "regular exercisers." Participants were classified as "regular exercisers" if they reported to strenuously exercising on at least three days per week over the past three months, for 20-30 minutes per day (Engel, 1993, p.37). Eighty percent of the total sample ($n = 162$) fit this criteria, while 20% of the sample ($n = 40$) were classified as "low exercisers." Since the number of low exercisers within each criterion group was quite low ($n = 24$ in the fraternity group, $n = 1$ in the football group, and $n = 15$ for the non-fraternity, non-football group), no interaction effects were analyzed. Instead, the effects of group membership on body image scores were analyzed using weekly exercise level as a continuous covariate. On average, males in the total sample exercised 235.7 minutes per week ($SD = 182.3$).

Measures

1. Demographic Questionnaire.

Participants completed a short demographic questionnaire that was created by the researcher (see Appendix A). Questions pertained to membership in a fraternal organization, as well as current extent and type of athletic involvement. Items also

queried about the participants' age, current and ideal weight, size of body frame, and ethnicity. Participants were also asked to rate on a seven-point scale their current and desired levels of upper and lower-body muscularity. Participants were separated into comparison groups based on their responses to the fraternal membership questions.

2. Body Esteem Scale (BES; Franzoi & Shields, 1984)

The BES is a 35-item measure of attitudes toward different dimensions of male and female body esteem. Individual body parts or aspects are rated on a 5-point Likert scale, with lower scores indicating dissatisfaction. The BES is a factorially derived revision of Secord and Jourard's (1953) Body-Cathexis Scale (BCS). The BCS is a unidimensional measure, while the BES is multifaceted, yielding scores on three distinct subscales for males and females. These subscales were derived through factor-analytic studies using undergraduate populations (Franzoi & Shields, 1984). The three subscales for men consist of a Physical Attractiveness subscale, an Upper Body Strength subscale, and a Physical Condition subscale. The Physical Attractiveness subscale consists of eleven facial and other physical features which largely determine how handsome a man is deemed to be. The Upper Body Strength subscale is comprised of nine body parts which can usually be altered through physical exercise. Higher scores on this subscale are generally associated with larger upper body parts. The Physical Condition subscale consists of thirteen items concerning stamina, strength, and agility, as well as such specific body parts as the waist, thighs, stomach, and overall physique. The subscales for women are generally quite different from those of men in terms of content and structure. Therefore, the BES represents a unique measure of body esteem for males and females, and results for the two genders are not comparable.

The BES has demonstrated very good reliability and validity, and has been found to be unaffected by socially desirable response styles (Franzoi, 1994; Franzoi & Herzog, 1986; Franzoi & Shields, 1984). The reported internal consistency of the male subscales ranged from 0.81 to 0.86 (Franzoi & Shields, 1984). High intercorrelations among the

male subscales have also been reported (Franzoi & Herzog, 1986; Franzoi & Shields, 1984). Test-retest reliability coefficients for males were found to range from 0.58 to 0.83 after a 3-month period (Franzoi, 1994). Convergent validity of the male subscales has been well established using several measures of self-esteem, body competence, and exercise involvement (Franzoi & Herzog, 1986; Franzoi & Shields, 1984). Despite these positive findings, a weak correlation was found between the Physical Attractiveness subscale and self-ratings of physical and sexual attractiveness (Franzoi & Herzog, 1986). The attractiveness measures were more highly correlated with the Upper Body Strength and Physical Condition subscales. This implies that changeable aspects of appearance and levels of functioning are more important than stable characteristics in males' determination of their own attractiveness. In terms of discriminant validity, weak correlations have been reported between the BES and measures body consciousness (Franzoi & Herzog, 1986), thus supporting the notion that feelings about the body are unrelated to how much attention it is given.

3. Figure Rating Scale (FRS; Fallon & Rozin, 1985)

The FRS is comprised of nine drawings of a male figure ranging in size from very thin to very overweight. A rating scale with its lower limits set at 10 (for the thinnest figure) and its upper limits set at 90 (for the heaviest figure) is provided. Participants are asked to indicate which figure best represents their current body shape. They are also asked to indicate which figure they would most like to resemble, which represents their ideal figure. A measure of body dissatisfaction is derived by analyzing the difference between the participants' current and ideal figure ratings. The FRS has been widely used in the assessment of body image (Cash & Pruzinsky, 1990), and has been found to be a psychometrically sound measure for both males and females (Thompson & Altabe, 1991). Test-retest correlation coefficients after a two-week period ranged from 0.60 for the figure males believed was the ideal in the opinion of females, to 0.92 for how males thought they currently looked. Choice of ideal figures was also highly stable over time,

with a correlation of 0.82. Good convergent validity was demonstrated using several known measures of eating disturbance and body dissatisfaction. Although significant results were found for both genders, the observed relationships were stronger for females than males. The FRS was highly correlated with a measure of self-esteem for females but not for males.

4. Reasons for Selection of Ideal Figure.

Following the presentation of the questions pertaining to muscularity, participants were asked to respond to the open-ended question, “If your answers for questions _ and _ [the previous two questions concerning current and ideal muscularity levels] are different, briefly explain why (i.e., why do you want your upper (or lower) body to be more/less muscular?”. Similarly, following presentation of the FRS, participants were asked, “If your ratings for your “current” and “ideal” body shape are different, what are your reasons for wanting a different body figure than what you currently have?”. These queries were intended to explore the reasons why males wish to change their body figures. It is hoped that answers will provide further insight into the causal factors of body dissatisfaction in males.

5. Bem Sex Role Inventory (BSRI; Bem, 1974).

In order to test the assumption that fraternity males endorse more masculine attitudes and attributes than non-fraternity males, the Bem Sex Role Inventory was administered.

The BSRI measures sex-role identification among both males and females. Respondents are asked to rate how well each of 60 personality characteristics describes himself. The measure includes 20 stereotypically masculine attributes, 20 stereotypically feminine attributes, and 20 neutral personality attributes. Scores converge to create subscales for Masculinity, Femininity, and Androgyny, which represents the relative amounts of masculinity and femininity endorsed. Masculine attributes include aggressive, ambitious, competitive, independent, and self-reliant; femininity items

include affectionate, compassionate, gentle, shy, and warm. Responses are rated on a 7-point Likert-type scale, ranging from 1 (“never or almost never true”) to 7 (“always or almost always true”). The Masculinity and Femininity scores are derived by averaging the ratings of their 20 respective items. Scores range from 1 to 7, with higher scores indicating greater endorsement of sex-typed characteristics. The Androgyny score is derived by subtracting the respondent’s Masculinity score from their Femininity score, and multiplying the result by 2.322. Scores that are greater than +1.0 indicate the simultaneous endorsement of feminine attributes and rejection of masculine attributes, while scores less than -1.0 indicate a rejection of feminine qualities in favor of masculine ones. Scores between -1.0 and +1.0 indicate an androgynous sex role, which incorporates masculine and feminine attributes equally (Bem, 1974).

The BSRI has been a widely used instrument as a result of its strong psychometric properties. The masculine and feminine attributes have been rated by both genders as being more desirable for males and females, respectively (Bem, 1974; Holt & Ellis, 1998). Bem (1974) reported highly reliable scores of internal consistency for both Masculinity ($\alpha = .86$) and Femininity ($\alpha = .80$ and $\alpha = .82$), while Holt and Ellis (1998) reported Cronbach alphas of .95 for Masculinity and .92 for Femininity. Test-retest reliabilities after a four-week interval were found to be high for all scales (Masculinity $r = .90$; Femininity $r = .90$; Androgyny $r = .93$; Bem, 1974). Bem (1974) reported that the Masculinity and Femininity subscales are not correlated for males ($r = .11$ and $r = -.02$) or females ($r = -.14$ and $r = -.07$), and are therefore independent measurements. Wong, McCreary, and Duffy (1990) failed to make similar conclusions, finding that the scales were significantly related for both genders. Further, Ruch (1984) concluded that the masculine and feminine subscales were not unidimensional. In terms of convergent validity, moderate correlations were found between the BSRI and the California Psychological Inventory, which also contains measures of masculinity and femininity

(Bem, 1974). The BSRI was also significantly related to scores on masculinity and femininity scales from the Adjective Check List (Ramanaiah & Martin, 1984).

6. The Rosenberg Self-Esteem Scale (SES; Rosenberg, 1965).

Since self-esteem has been found to relate to body dissatisfaction, the Rosenberg Self-Esteem Scale was given to account for its influence. The SES is a widely used instrument that provides an index of global self-esteem. Respondents were asked to rate their level of agreement with 10 statements, half of which are worded negatively (ex., "All in all, I am inclined to feel like a failure"). Positively-worded items include, "On the whole, I am satisfied with myself." Response choices range from 1 ("strongly agree") to 4 ("strongly disagree"). The total score is derived by summing all items, with lower scores indicating greater self-esteem.

The SES has well-established psychometric properties, and is typically used to validate new measures of self-concept (Blascovich & Tomaka, 1991). Several researchers have concluded that a unidimensional factor underlies the SES for adolescents and young adults, regardless of gender (Hensley & Roberts, 1976; Hensley, 1977). It was concluded that the SES should not be used as a unidimensional measure with older adults when a two-factor solution was found using males aged 60 years and older (Dobson, Goudy, Keith, & Powers, 1979).

In terms of reliability, reported measures of internal consistency range from $\alpha = .77$ (Dobson et al., 1979) to $\alpha = .88$ (Fleming & Courtney, 1984). A test-retest correlation for 259 subjects following a one-week interval was $r = .82$ (Fleming & Courtney, 1984). The SES has good convergent validity with several measures, including the Coopersmith Self-Esteem Inventory ($r = .55$); the Lerner self-esteem scale ($r = .72$); various Self-Rating subscales, including Self-Regard ($r = .78$), Social Confidence ($r = .51$), and Physical Appearance ($r = .42$); measures of anxiety ($r = -.64$), depression ($r = -.59$), and anomie ($r = -.43$); and the Body Esteem Scale ($r = .45$ to $r = .51$ for males; Demo, 1985; Fleming & Courtney, 1984; Franzoi & Shields, 1984; Savin-Williams &

Jaquish, 1981). As evidence of its discriminant validity, no significant relationships have been found between the SES and gender, age, work experience, marital status, birth order, grade point average, and vocabulary (Fleming & Courtney, 1984).

Procedure

Several means were utilized to recruit participants for this study. Fraternity members were recruited during chapter meetings at their communal residence. Access to these meetings was granted by chapter presidents or other fraternity officials, who were contacted by the researcher via e-mail or telephone. Football players were recruited at the university gym before a scheduled football practice, with the assistant coach's prior permission. All other undergraduates were recruited through undergraduate psychology classes and student residences, with the prior knowledge and approval of professors and residence officials. In all cases, participants completed questionnaires at the time and place of recruitment.

At the outset, all participants were told that the purpose of the study was to find out how undergraduate males rated their bodies, and if they were satisfied with their current appearance. They were told that questionnaires would take approximately 15 to 20 minutes to complete. Participants were given an informed consent sheet to read and sign before beginning the questionnaires. They were assured that they would remain anonymous, and that they were able to withdraw from the study at any time or refuse to answer questions without penalty. Due to the different ethical standards of the three universities involved, participants were given consent forms based on their home university's requirements (see Appendices B to D). Upon completion of questionnaires participants were given a debriefing sheet that provided them with some additional information about the study (see Appendix E).

RESULTS

Approach to Data Analysis

In order to test the hypotheses made for this study, a number of statistical procedures were conducted using SPSS. Specifically, a number of ANOVAs and MANCOVAs were conducted using all of the body image measures. Fraternity members, football players, and the non-fraternity, non-football group were entered into each of these analyses. When significant results on the ANOVAs were found, t-tests were conducted, and ANCOVAs followed the significant MANCOVA. In all cases, the significance level set for the MANCOVAs, ANOVAs, and ANCOVAs was at the .05 level, and subsequent analyses were set at a significance level of .017 in order to reduce the possibility of Type I errors.

Hypothesis 1: The fraternity group will report a significantly larger and more muscular ideal-figure than the non-fraternity group.

The percentages of males in each subgroup who are satisfied and dissatisfied with their current levels of upper body muscularity, lower body muscularity, and figure on the Figure Rating Scale are presented in Tables 1, 2, and 3. A majority of males in each group wished to increase their levels of upper body muscularity. Specifically, 90% of fraternity males, 88% of non-fraternity, non-football males, and 92% of football players reported this desire. Forty-nine percent of fraternity males, 47% of non-fraternity, non-football males, and 67% of football players wished to increase their levels of lower body muscularity. Contrary to the initial hypothesis, less than 50% of males in each group wished to have a larger body figure on the Figure Rating Scale, with 33% in the fraternity group, 42% in the non-fraternity, non-football group and 28% in the football group reporting this desire.

Three separate analyses of variance were conducted using the three groups of males to test for differences in reported ideal levels of upper and lower body muscularity

Table 1

Percentages of Males Satisfied and Dissatisfied with Upper-Body Muscularity, by Group

	Fraternity	Football	Non-frat/football
Desire to Lose	0.0	0.0	1.7
Satisfied	9.9	8.2	10.0
Desire to Gain	90.1	91.8	88.3

Table 2

Percentages of Males Satisfied and Dissatisfied with Lower-Body Muscularity, by Group

	Fraternity	Football	Non-frat/football
Desire to Lose	1.2	0.0	1.7
Satisfied	49.4	32.8	51.7
Desire to Gain	49.4	67.2	46.7

Table 3

Percentages of Males Satisfied and Dissatisfied with Current Figure on FRS, by Group

	Fraternity	Football	Non-frat/football
Smaller Figure Desired	50.6	47.5	23.3
Satisfied	16.0	24.6	35.0
Larger Figure Desired	33.3	27.9	41.7

and ideal figure on the Figure Rating Scale (see Table 4). Significant main effects were found for desired upper body muscularity ($F(2, 199) = 8.56, p \leq .001$), desired lower body muscularity ($F(2, 199) = 10.88, p \leq .001$), and desired figure on the FRS ($F(2, 199) = 10.98, p \leq .001$).

To test for specific group differences, t-tests that compared all group pairs were conducted for each body image measure. Results indicated that football players desired a more muscular upper body than both fraternity members ($t(140) = -3.84, p \leq .001$) and non-fraternity, non-football males ($t(119) = -3.49, p \leq .001$). No significant differences were found between fraternity males and non-fraternity, non-football males in desired level of upper body muscularity ($t(139) = 0.04, p > .017$) (see Table 5).

Football players also desired a more muscular lower body than fraternity members ($t(140) = -4.59, p \leq .001$) and non-fraternity, non-football males ($t(119) = -3.76, p \leq .001$). No significant differences were found between the desired level of lower body muscularity of fraternity males and non-fraternity, non-football males ($t(139) = 0.68, p > .017$) (see Table 6).

Football players wanted a larger figure on the FRS than fraternity members ($t(140) = -3.93, p \leq .001$) and non-fraternity, non-football males ($t(119) = -3.73, p \leq .001$). Fraternity and non-fraternity, non-football males did not desire significantly different body figures ($t(139) = 0.70, p > .017$) (see Table 7).

Hypothesis 2: Low-exercising groups will report an ideal level of muscularity that is larger than their current figures.

Since only 24 males from the fraternity group, 15 males from the non-fraternity, non-football group, and 1 male from the football group were classified as “low exercisers,” results were not analyzed according to group membership. Further, although no a-priori hypotheses were made concerning the ideal figures of the regular exercising group, their results were included for exploratory and comparison purposes.

Table 4

Summary of the ANOVA Results for Muscularity Measures and FRS

Measure	df	MS _{error}	F	Effect Size
Desired UBM	2, 199	0.68	8.56***	0.08
Desired LBM	2, 199	0.94	10.98***	0.10
Desired Figure on FRS	2, 199	1.23	10.88***	0.10

Note: These results were obtained by comparing the fraternity members ($n = 81$), the football players ($n = 61$), and the non-fraternity, non-football group ($n = 60$).

UBM = Upper Body Muscularity; LBM = Lower Body Muscularity; FRS = Figure Rating Scale

*** $p \leq .001$

Table 5

Summary of the t-test Results for Desired Upper Body Muscularity

Group	n	M	SD	t	Effect Size
1. Fraternity Football	81 61	5.80 6.33	0.83 0.77	-3.84***	-.65
2. Fraternity Non-Frat/Football	81 60	5.80 5.81	0.83 0.86	.04	-.01
3. Football Non-Frat/Football	61 60	6.33 5.81	0.77 0.86	-3.49***	.64

Note: *** $p \leq .001$

Table 6

Summary of the t-test Results for Desired Lower Body Muscularity

Group	n	M	SD	t	Effect Size
1. Fraternity	81	5.28	0.99		
Football	61	6.00	0.84	-4.59***	-.77
2. Fraternity	81	5.28	0.99		
Non-Frat/Football	60	5.35	1.05	.68	-.07
3. Football	61	6.00	0.84		
Non-Frat/Football	60	5.35	1.05	-3.76***	.68

Note: *** $p \leq .001$

Table 7

Summary of the t-test Results for Desired Figure on the Figure Rating Scale

Group	n	M	SD	t	Effect Size
1. Fraternity	81	4.23	0.84		
Football	61	4.97	1.38	-3.93***	-.67
2. Fraternity	81	4.23	0.84		
Non-Frat/Football	60	4.12	1.11	.70	.11
3. Football	61	4.97	1.38		
Non-Frat/Football	60	4.12	1.11	-3.73***	.68

Note: *** $p \leq .001$

The percentages of males from the low exercising group ($n = 40$) and the regular exercising group ($n = 162$) who are satisfied and dissatisfied with their current levels of upper body muscularity, lower body muscularity, and figure on the Figure Rating Scale are presented in Tables 8, 9, and 10. A majority of males in both groups wished to increase their levels of upper body muscularity, with 90% of low exercisers and 90% regular exercisers reporting this desire. Fifty-three percent of low exercisers and 54% of regular exercisers wished to have a more muscular lower body. Less than half of the males within each group wished to have a larger overall body figure, as reported on the FRS, with 35% of low exercisers and 34% of regular exercisers reporting this desire.

Paired sample t-tests were conducted, using within-group differences in current and desired figures for upper and lower body muscularity and the FRS (see Table 11). Among the low exercising group, significant differences were found between current and desired levels of upper body muscularity ($t(39) = -13.56, p \leq .001$) and lower body muscularity ($t(39) = -5.50, p \leq .001$). Among the regular exercisers, significant differences were found between current and desired levels of upper body muscularity ($t(161) = -20.45, p \leq .001$) and lower body muscularity ($t(161) = -10.92, p \leq .001$). No significant differences were found for either group on the FRS discrepancy.

Hypothesis 3: Fraternity members will report significantly more overall body dissatisfaction than non-fraternity members.

To test this hypothesis two one-way multiple analyses of covariance (MANCOVAs) were conducted, each comparing fraternity members, non-fraternity members, and football players on measures of body image. Prior to conducting these analyses descriptive information concerning all of the variables involved, according to group membership, was calculated (see Tables 12 and 13). To test for differences among the covariates based on group membership, ANOVAs were conducted for exercise level,

Table 8

Percentages of Males Satisfied and Dissatisfied with Upper-Body Muscularity, by Exercise Level

	Low	Regular
Desire to Lose	0.0	0.6
Satisfied	10.0	9.3
Desire to Gain	90.0	90.1

Table 9

Percentages of Males Satisfied and Dissatisfied with Lower-Body Muscularity, by Exercise Level

	Low	Regular
Desire to Lose	0.0	1.2
Satisfied	47.5	44.4
Desire to Gain	52.5	54.3

Table 10

Percentages of Males Satisfied and Dissatisfied with current figure on FRS, by Exercise Level

	Low	Regular
Smaller Figure Desired	50.0	39.5
Satisfied	15.0	26.5
Larger Figure Desired	35.0	34.0

Note: "Regular Exercise Level" = exercise on at least 3 days per week, 20 to 30 minutes per day; "Low Exercise Level" = any amount less than criteria for "regular"

Table 11

Summary of the t-test Results for Current and Desired Figures, by Exercise Level

Measure	<u>Chosen Figure</u>				t	Effect Size
	Current		Desired			
	M	SD	M	SD		
UBM						
Low	4.00	1.20	5.65	0.95	-13.56***	-1.5
Regular	4.67	1.05	6.04	0.82	-20.45***	-1.5
LBM						
Low	4.06	1.17	4.98	1.03	-5.50***	-.84
Regular	4.77	1.07	5.65	0.97	-10.92***	-.86
FRS						
Low	4.54	1.90	4.04	1.01	1.92	.33
Regular	4.61	1.65	4.51	1.18	1.07	.07

Note: *** $p \leq .001$

UBM = Upper Body Muscularity; LBM = Lower Body Muscularity; FRS = Figure Rating Scale

Table 12

Descriptive Data for Body Image Measures By Group

Measure	Fraternity n = 81		Football n = 61		Non-frat/football n = 60	
	M	SD	M	SD	M	SD
UBM						
Current	4.38	1.05	4.87	0.96	4.39	1.26
Desired	5.80	0.83	6.33	0.77	5.81	0.86
Discrepancy	-1.41	0.72	-1.46	0.87	-1.42	0.98
LBM						
Current	4.46	1.15	4.87	0.94	4.62	1.22
Desired	5.28	0.99	6.00	0.84	5.35	1.05
Discrepancy	-0.81	1.05	-1.13	1.04	-0.73	0.95
FRS						
Current	4.50	1.67	5.26	1.60	4.05	1.64
Desired	4.23	0.83	4.97	1.38	4.12	1.11
*Discrepancy	1.11	0.78	0.93	0.79	0.87	0.91
BES						
PA (M=39.1; SD=5.7)	39.36	7.39	40.98	6.57	39.12	6.84
PC (M=50.2; SD=6.1)	43.78	9.86	50.68	8.10	47.23	9.07
UBS (M=34.0; SD=7.7)	31.88	6.28	35.33	5.42	32.17	6.91

Note: Normative data from Franzoi & Shields (1984) are indicated in parentheses

UBM = Upper Body Muscularity

LBM = Lower Body Muscularity

FRS = Figure Rating Scale

BES = Body Esteem Scale

PA = Physical Attractiveness

PC = Physical Condition

UBS = Upper Body Strength

* FRS Discrepancy scores are absolute values

Table 13

Descriptive Data for Covariate Measures by Group

Measure	<u>Fraternity</u> n = 81		<u>Football</u> n = 61		<u>Non-frat/football</u> n = 60	
	M	SD	M	SD	M	SD
*Exercise (min/week)	165.23	145.00	334.26	205.24	251.27	213.92
BSRI						
Masculinity (M=4.97; SD=0.67)	5.41	0.67	5.60	0.56	5.32	0.67
Femininity (M=4.44; SD=0.55)	4.78	0.53	4.89	0.63	4.78	0.52
**Androgyny (M=-1.28; SD=1.99)	-1.47	1.71	-1.64	1.68	-1.25	1.62
SES	15.46	5.16	14.95	4.93	16.97	6.20

Note: Normative data from Bem (1974) are indicated in parentheses

BSRI = Bem Sex Role Inventory

SES = Rosenberg Self-Esteem Scale

* The top 5% of exercise values were adjusted in each group to account for outliers.

** Androgyny scores were derived from the formula: $[2.322 \times (\text{Femininity} - \text{Masculinity})]$ (Bem, 1974). Negative scores indicate male sex-role identification.

self-esteem, and androgyny, after outliers in self-esteem and exercise were adjusted for within each group. Significant results were found for exercise level ($F(2, 199) = 17.74$, $p \leq .001$) and self-esteem ($F(2, 189) = 7.25$, $p \leq .001$) (see Table 14). Further analyses using t-tests revealed that non-fraternity males exercised significantly more than fraternity males ($t(139) = -2.87$, $p \leq .01$), and football players exercised significantly more than fraternity members ($t(140) = -6.00$, $p \leq .001$). No significant differences were noted between the non-fraternity group and the football group ($t(119) = -2.09$, $p > .017$) (see Table 15).

T-tests that compared the groups in terms of self-esteem revealed that both fraternity members and football players were happier with themselves than were non-fraternity members ($t(131) = 3.15$, $p \leq .01$ and $t(113) = 3.16$, $p \leq .01$), respectively). No significant differences were noted between the fraternity and football groups ($t(134) = .40$, $p > .017$) (see Table 16).

Pearson product-moment correlations were also calculated for all of the body image measures and the covariates. Although many significant correlations were found, they do not appear to be large enough to necessitate the removal of any variables as redundant (see Table 17).

The first MANCOVA was conducted to determine if the absolute discrepancy scores for the FRS, and the discrepancy scores for upper and lower body muscularity varied according to group membership. The effects of weekly exercise, self-esteem, and androgyny were removed from the analysis prior to the determination of group differences. Preliminary analyses using Wilks' Lambda suggested that group membership did not account for a significant amount of the variance associated with the combination of the three dependent variables ($\Lambda = .95$, $p > .05$), with an effect size of .03. Similarly, androgyny only explained 3% of the variance ($\Lambda = .97$, $p > .05$). Exercise level explained 5% of the variance, which was significant ($\Lambda = .95$, $p \leq .05$), while self-esteem accounted for 9% of the variance ($\Lambda = .91$, $p \leq .001$). Since group membership did not

Table 14

Summary of the ANOVA Results for Covariates

Measure	df	MS _{error}	F	Effect Size
Exercise (mins/week)	2, 199	27764.7	17.74***	0.15
Self-Esteem Scale	2, 189	16.56	7.25***	0.07
Bem Androgyny	2, 199	2.80	.82	0.01

Note: These results were obtained by comparing the fraternity members ($n = 81$), the football players ($n = 61$), and the non-fraternity, non-football group ($n = 60$). Results for self-esteem were obtained following the deletion of outliers from each group.

*** $p \leq .001$

Table 15

Summary of the t-test Results for Exercise Frequency (mins/week)

Group	Exercise Frequency (mins/week)			t	Effect Size
	n	M	SD		
1. Fraternity	81	161.20	131.54	-6.00***	-1.06
Football	61	321.85	175.10		
2. Fraternity	81	161.20	131.54	2.87**	-.52
Non-Frat/Football	60	248.78	207.68		
3. Football	61	321.85	175.10	-2.09	.38
Non-Frat/Football	60	248.78	207.68		

Note: ** $p \leq .01$; *** $p \leq .001$

Table 16

Summary of the t-test Results for Self-Esteem

Group	n	<u>Self-Esteem</u>		t	Effect Size
		M	SD		
1. Fraternity	77	14.60	3.53	.40	.07
Football	59	14.36	3.67		
2. Fraternity	77	14.60	3.53	3.15**	-.56
Non-Frat/Football	56	16.95	5.05		
3. Football	59	14.36	3.67	3.16**	-.59
Non-Frat/Football	56	16.95	5.05		

Note: ** $p \leq .01$

Table 17

Correlations Between Body Image and Covariate Measures

	1	2	3	4	5	6	7	8	9
1. UBM-Disc.	---	.29**	-.37**	.06	.19**	.38**	.15*	-.16*	-.14*
2. LBM-Disc.		---	-.18**	.14	.10	.02	.06	-.01	-.15*
3. FRS-Abs. Disc.			---	-.22**	-.44**	-.40**	-.23**	.22**	.16*
4. BES-PA				---	.66**	.53**	.16*	-.28**	-.20**
5. BES-PC					---	.75**	.43**	-.40**	-.28**
6. BES-UBS						---	.40**	-.34**	-.27**
7. Exercise (mins/week)							---	-.13	-.05
8. SES								---	.27**
9. Bem-Androgyny									---

Note: * $p \leq .05$ ** $p \leq .01$

UBM Disc. = Upper Body Muscularity Discrepancy (Current - Ideal Figure)

LBM Disc. = Lower Body Muscularity Discrepancy

FRS- Abs. Disc. = Figure Rating Scale - Absolute Discrepancy

BES-PA = Body Esteem Scale - Physical Attractiveness subscale

BES-PC = Body Esteem Scale - Physical Condition subscale

BES UBS = Body Esteem Scale - Upper Body Strength subscale

SES = Rosenberg Self-Esteem Scale

Bem-Androgyny = Bem Sex Role Inventory - Androgyny subscale

account for variance associated with the dependent variables, the MANCOVA analysis did not proceed. These findings were replicated when the covariates were not included in the analysis, further indicating that group membership has little to do with differences on the figural measures.

The second MANCOVA compared the groups on the Physical Condition, Physical Attractiveness, and Upper Body Strength subscales of the Body Esteem Scale (BES), while controlling for the effects of weekly exercise, self-esteem, and androgyny. Group membership accounted for only 2% of the variance associated with the combination of the dependent variables, which was not significant ($\Lambda = .97, p > .05$). Androgyny also failed to account for a significant amount of the variance, with only 3% explained ($\Lambda = .97, p > .05$). Exercise level accounted for 23% of the variance ($\Lambda = .77, p \leq .001$), while self-esteem accounted for 19% of the variance ($\Lambda = .81, p \leq .001$). The value of these two latter variables is illustrated by the fact that if only group membership was considered in the analysis, significant results were obtained ($\Lambda = .86, p \leq .001$), with 7% of the variance accounted for. In addition, if exercise and self-esteem weren't accounted for, group effects emerged for physical condition ($F(2, 199) = 10.03, p \leq .001$) and upper body strength ($F(2, 199) = 6.10, p \leq .01$).

Hypothesis 4: The regularly-exercising males will report significantly less body dissatisfaction than the lower-exercising males.

Several t-tests for independent groups were conducted to determine if the low exercisers were more dissatisfied with their bodies than the regular exercisers. All of the body image measures were used in separate analyses. Results indicated that low exercisers were significantly more dissatisfied than regular exercisers with their current figure on the FRS ($t(200) = 3.66, p \leq .001$). All of the Body Esteem Scale measures were also significantly different, with low exercisers being more dissatisfied with their physical attractiveness ($t(200) = -3.20, p \leq .001$), physical condition ($t(200) = -6.05, p \leq$

.001), and upper body strength ($t(200) = -5.07, p \leq .001$). No significant differences were found on the two muscularity measures (see Table 18).

Exploratory Research Question: Reasons for Selection of Ideal Figures

Upper Body Muscularity

Of the 182 males who desired changes to their upper-body muscularity, 16 males did not provide a response to the open-ended query of why they wished to change. Results from the remaining 166 participants were analyzed by the researcher, and responses were organized into six common themes. Although the themes were identical among the three groups, their relative importance as indicated by the number of times a theme was mentioned within each group, was found to be varied as a function of group membership (see Table 19).

One theme that was identified was termed “primary physical reasons.” Reasons falling into this category were related to the form, shape, and size of one’s body. In particular, subjects mentioned that they wished to improve their body’s tone, definition, cut, mass, as well as lose fat. This theme was identified by fraternity members as the number one reason for desiring a more muscular upper-body. It rated third in importance for football players, and fourth for the non-fraternity, non-football group.

A second theme was termed “secondary physical reasons.” This category related to functions of the body, such as increased energy, strength, fitness, and health. In terms of relative importance among groups, this category rated third for fraternity members, second for football players, and first for the non-fraternity, non-football group.

“Improvement in athletics” was identified as a third theme among the groups. Items that comprised this category included improved shape, strength, and endurance specifically for sports, as well as general improvement in sports. While fraternity members rated this as being the least important to them, football players reported that it was their most important reason for wanting a more muscular upper-body.

Table 18

Summary of the t-test Results for Body Image Measures, by Exercise Level

Measure	Exercise Level				t	Effect Size
	Low (n=40)		Regular (n=162)			
	M	SD	M	SD		
UBM-Disc	-1.67	0.77	-1.37	0.85	-1.87	-.36
LBM-Disc	-0.91	1.05	-0.88	1.03	-0.18	-.03
FRS-Abs Disc	1.40	0.98	0.88	0.75	3.66***	.65
BES-PA	36.68	7.18	40.54	6.76	-3.20***	-.56
BES-PC	39.38	10.14	48.74	8.41	-6.05***	-1.07
BES-UBS	28.68	6.09	34.07	6.07	-5.07***	-1.22

Note: *** $p \leq .001$

UBM Disc. = Upper Body Muscularity Discrepancy (Current - Ideal Figure)

LBM Disc. = Lower Body Muscularity Discrepancy

FRS- Abs. Disc. = Figure Rating Scale - Absolute Discrepancy

BES-PA = Body Esteem Scale - Physical Attractiveness subscale

BES-PC = Body Esteem Scale - Physical Condition subscale

BES UBS = Body Esteem Scale - Upper Body Strength subscale

Table 19

Reasons for Selection of Ideal Upper Body Muscularity Level by Group

Measure	Reason	Frequency n^*	Percentage
Upper Body Muscularity			
Fraternity ($n=72$)			
	1. Primary Physical Reasons	22	30.1
	2. Attractiveness Reasons	20	27.4
	3. Secondary Physical Reasons	19	26.0
	4. Social/Self-Esteem Reasons	9	12.3
	5. Other/Nonspecific Reasons	9	12.3
	6. Improvement in Athletics	4	5.5
	No Answer Given	4	5.5
Football ($n=56$)			
	1. Improvement in Athletics	14	25.0
	2. Secondary Physical Reasons	13	23.2
	3. Primary Physical Reasons	12	21.4
	4. Attractiveness Reasons	6	10.7
	5. Other/Nonspecific Reasons	5	8.9
	6. Social/Self-Esteem Reasons	2	3.6
	No Answer Given	8	14.3
Non-frat/football ($n=54$)			
	1. Secondary Physical Reasons	20	37.0
	2. Attractiveness Reasons	14	25.9
	3. Improvement in Athletics	13	24.1
	4. Primary Physical Reasons	9	16.7
	5. Social/Self-Esteem Reasons	6	11.1
	6. Other/Nonspecific Reasons	3	5.6
	No Answer Given	4	7.4

Note: Frequencies in parentheses indicate the number within each group that desired changes in their upper body muscularity

* frequencies total more than numbers who desired changes in muscularity due to multiple responding by some participants

The non-fraternity, non-football group rated it as being third in importance.

“Attractiveness reasons” was another identified theme. Common quotes from this category included that they wanted to be more muscular “to look better,” and “for appearance.” These reasons were second in importance for both fraternity members and the non-fraternity, non-football group, while it was fourth in importance for the football players.

“Social/self-esteem reasons” was the final coherent theme. This category focused mainly on attracting the opposite sex, and feeling better and more confident. This factor did not seem to be an important one for most of the sample, with fraternity members rating it fourth, non-fraternity, non-football males rating it fifth, and football players rating it as their least important reason for increasing their upper-body muscularity.

The remainder of responses were coded as “other/nonspecific reasons,” since they were random, and did not fit into any of the aforementioned themes. Responses in this category mostly included reasons for why the respondent was not as muscular as he would prefer, as opposed to why they wished to increase their muscularity. Quotes include, “I’m lazy and I don’t work out;” “I eat fatty foods too often;” “my genetics are not good to be extremely muscular;” and “I’m too skinny.” Although relatively infrequent, this “theme” was the fifth most common for both fraternity members and football players, and least common among the non-fraternity, non-football group.

Lower-Body Muscularity

Of the 111 males who desired changes to their lower-body muscularity, 12 males did not provide a response to the open-ended query of why they wished to change. Results from the remaining 99 participants were analyzed by the researcher, and responses were organized into six common themes. These themes were identical to those delineated for the query regarding upper-body muscularity, and thus the general

definitions remain the same. Upon further analysis, the order of themes was found to vary according to group membership (see Table 20).

Primary physical reasons were found to be the third most important area for both fraternity members and football players, while it rated fourth for non-fraternity, non-football males. Secondary physical reasons were identified quite often within all groups, being rated as the most important reason for wanting a more muscular lower-body by fraternity males, and being second-most important to the other two groups. Improvement in athletics remained a high priority for football players, who rated it as their number one reason for desiring lower-body changes. This was also the case for the non-fraternity, non-football group. The fraternity group rated improvement in athletics as fourth in importance. Attractiveness reasons rated as second in importance for the fraternity members, fourth for football players, and third for the non-fraternity, non-football group. Social/self-esteem reasons remained a low priority among all of the groups, with both fraternity males and non-fraternity, non-football males rating it fifth in importance before other/nonspecific reasons. Football players did not mention social/self-esteem reasons at all, and thus had other/nonspecific reasons as last on their list of common themes.

Figure Rating Scale

Of the 153 males who desired changes to their figure on the FRS, 19 males did not provide a response to the open-ended query of why they wished to change. The responses of the remaining 99 participants were organized into the themes that were previously described. As with the two prior theme reviews, themes were ordered differently for each group (see Table 21).

Primary physical reasons rose in importance for all of the groups, with males from both the fraternity and the football samples mentioning this theme most often. An interesting finding is that on the FRS query both of these groups reported much more

Table 20

Reasons for Selection of Ideal Lower Body Muscularity Level by Group

Measure	Reason	Frequency n*	Percentage
Lower Body Muscularity			
Fraternity (n=41)			
	1. Secondary Physical Reasons	12	29.2
	2. Attractiveness Reasons	10	24.4
	3. Primary Physical Reasons	9	22.0
	4. Improvement in Athletics	7	17.1
	5. Social/Self-Esteem Reasons	6	14.6
	6. Other/Nonspecific Reasons	5	12.2
	No Answer Given	4	9.8
Football (n=41)			
	1. Improvement in Athletics	12	29.3
	2. Secondary Physical Reasons	9	22.0
	3. Primary Physical Reasons	9	22.0
	4. Attractiveness Reasons	5	12.2
	5. Other/Nonspecific Reasons	3	7.3
	No Answer Given	6	14.6
Non-frat/football (n=29)			
	1. Improvement in Athletics	11	37.9
	2. Secondary Physical Reasons	9	31.0
	3. Attractiveness Reasons	5	17.2
	4. Primary Physical Reasons	5	17.2
	5. Social/Self-Esteem Reasons	3	10.3
	6. Other/Nonspecific Reasons	1	3.4
	No Answer Given	2	6.9

Note: Frequencies in parentheses indicate the number within each group that desired changes in their lower body muscularity

* frequencies total more than numbers who desired changes in muscularity due to multiple responding by some participants

Table 21

Reasons for Selection of Ideal Figure on Figure Rating Scale by Group

Measure	Reason	Frequency n*	Percentage
Figure Rating Scale			
Fraternity (n=68)			
	1. Primary Physical Reasons	32	47.1
	2. Secondary Physical Reasons	24	35.3
	3. Attractiveness Reasons	17	25.0
	4. Social/Self-Esteem Reasons	11	16.2
	5. Improvement in Athletics	4	5.9
	6. Other/Nonspecific Reasons	2	2.9
	No Answer Given	6	8.8
Football (n=46)			
	1. Primary Physical Reasons	23	50.0
	2. Secondary Physical Reasons	14	30.4
	3. Improvement in Athletics	7	15.2
	4. Attractiveness Reasons	5	10.9
	5. Other/Nonspecific Reasons	2	4.3
	6. Social/Self-Esteem Reasons	1	2.2
	No Answer Given	7	15.2
Non-frat/football (n=39)			
	1. Secondary Physical Reasons	16	41.0
	2. Primary Physical Reasons	14	35.9
	3. Social/Self-Esteem Reasons	10	25.6
	4. Attractiveness Reasons	6	15.4
	5. Improvement in Athletics	5	12.8
	No Answer Given	6	15.4

Note: Frequencies in parentheses indicate the number within each group that desired changes in their body figure on the FRS

* frequencies total more than numbers who desired changes in body figure due to multiple responding by some participants

frequently that they wanted to lose fat ($n = 28$; 25% of the 2 combined groups), as compared to the query for upper-body muscularity ($n = 4$; 3% of the 2 combined groups) and lower-body muscularity ($n = 2$; 2% of the 2 combined groups). This trend was not observed for the non-fraternity, non-football group, who rated primary physical reasons as being second-most important without increasing mention of the desire to lose fat (group's FRS query, $n = 3$; 8%; group's upper-body query, $n = 1$; 2%; group's lower-body query, $n = 1$; 3%).

Secondary physical reasons were second in importance for both fraternity members and football players, while it was rated as the most important reason among the non-fraternity, non-football group. Improvement in athletics dropped in importance for the groups, being fifth most reported in both the fraternity and non-fraternity, non-football groups. It ranked third among the football players. Attractiveness reasons ranked third for fraternity males, and fourth for the remaining two groups. Social/self-esteem reasons were fourth in importance to fraternity members, sixth for football players, and third for the remaining group. Other/nonspecific responses were fifth in frequency for football players and least frequent for fraternity members. This "theme" was not present in the non-fraternity, non-football sample.

DISCUSSION

The overall purposes of this study were to explore the nature and extent of body image disturbance among different groups of young males, and to assess the relationships between levels of exercise and body image ratings. Although the initial intent was to explore the differences and similarities between fraternity members and non-fraternity members, a third group consisting of varsity football players was added to this study. Since no a-priori hypotheses were made concerning the football group, this study sought to answer questions specifically concerning the fraternity and non-fraternity groups. Exploratory analyses and comparisons were also made, which included the football sample.

Participant Characteristics

Analyses of participant characteristics revealed several important differences and similarities that affect how the overall results are interpreted. One of the commonalities that was observed concerned ethnicity. In particular, 79% of the total sample was comprised of Caucasian males, while 9% was African American. The remaining 12% was made up of males of Asian, Middle-Eastern, Hispanic, and bi-racial descent. This composition is similar to many other body image studies that report the ethnicity of male participants (Jacobi & Cash, 1994; Muth & Cash, 1997; Phelps et al., 1993). The conclusions from this study can thus be related to much of the previous research in the area, yet is limited in its generalizability to groups other than Caucasians. This is particularly true of African American males, who report more body satisfaction while desiring a larger body figure than Caucasian males (Altabe, 1998; Thompson, Sargent, & Kemper, 1996).

Contrary to previous research (Kalof & Cargill, 1991), fraternity members did not rate themselves as being more masculine than the other groups. Fraternity members, football players, and non-fraternity, non-football males were rated as “near-masculine,”

rather than “masculine” on a measure of androgyny, which takes into account scores on masculinity and femininity items (Bem, 1974). This means that all groups adopted sex-role attitudes that were mostly male dominant, but were tempered by co-existing feminine attitudes. This finding may be attributed to differences in type of fraternity, which was not specifically assessed in this study. Although all of the fraternities that were assessed labeled themselves as “social” organizations on their internet websites, it is possible that differences existed in the importance that is put on such aspects as academics, athletics, philanthropy, and other social interactions. These factors may play a role in fraternity members’ perceptions of their own masculine and feminine qualities. Similarly, these findings may be indicative of a trend towards a change in focus and attitudes within fraternal organizations. Since much of the research that reported on the male-dominant attitudes within fraternities was conducted several years ago, it seems possible that these organizations have progressed beyond hypermasculine ideologies to adopt a more differentiated view. This view would naturally be more similar to those of undergraduate males in general.

Another variable of interest was level of weekly exercise. It was found that both football players and non-fraternity, non-football males exercised more than fraternity males. These results were significant even when the outliers from each group were adjusted. Despite these findings, all of the groups exercised more than the national average for males aged 18-29 years (Pratt, Macera, & Blanton, 1999). Only 30% of young adult males in the United States exercise at the recommended level of 20 minutes daily, three times per week, while 70% of fraternity members, 98% of football players, and 75% of non-fraternity, non-football males exercised at that level. While it is expected that most football players exercise more often than other groups (Wang et al., 1993), it is somewhat surprising that the other groups were so active. One possible explanation lies in the fact that a majority of the non-fraternity, non-football group lived in on-campus communal residences, while most fraternity members lived together in

homes close to their university campuses. These living arrangements may be related to increased access to intramural sports teams, as well as many potential workout partners and university gyms in close proximity. Those living on-campus may experience these benefits more than those living on the periphery. Since living arrangements such as these are more likely to occur within university populations, results may not relate as well to young males in the general population.

Self-esteem was also considered in this study, with significant findings. In particular, fraternity and football males were found to have higher self-esteem than non-fraternity, non-football males. One possible explanation for this finding is that these males feel good about themselves because they are members of selective and highly cohesive groups, which often choose their individual members based on their personal qualities. If these males feel that they possess certain qualities that make them worthy of such group membership, and if their membership is important to them, their participation may enhance their self-esteem.

Body Image of Fraternity versus Non-Fraternity, Non-Football Groups

A main purpose of this study was to determine if group differences exist on several body image variables, including muscularity and figure rating scales. It was thought that fraternity members would desire a larger and more muscular body figure than the non-fraternity group. Contrary to this hypothesis, results indicated that both groups wished to have similar levels of upper and lower body muscularity, and chose comparable overall body figures. One factor that may have affected these results is the fact that both groups shared similar levels of male-dominant attitudes, which were consistent with scores from the normative sample (Bem, 1974). In addition, the ideal body figures that were chosen by fraternity members (4.23) and non-fraternity males (4.12) were highly similar to estimates from other studies, which ranged from 3.95 to 4.28 (Lamb et al., 1993; Phelps et al., 1993; Raudenbush & Zellner, 1997). These

findings indicate that the fraternity members in this sample are highly similar not only to the non-fraternity sample from this study, but also to males from university populations in general.

The notion that both groups are highly similar is further strengthened by the finding that no differences were observed among any of the body image variables used in this study. In particular, fraternity and non-fraternity males reported comparable discrepancies between their current and ideal levels of upper and lower body muscularity, and figure on the FRS once the effects of exercise level were removed from the analysis. Similarly, no group differences were found on the Physical Attractiveness, Physical Condition, and Upper Body Strength subscales of the Body Esteem Scale once the effects of exercise level, self-esteem, and androgyny were accounted for and removed. All mean subscale scores on the BES closely approximated those of the normative group, which fell between neutral and moderately satisfied levels (Franzoi & Shields, 1984). This suggests that males in the present study have some degree of body satisfaction when various body parts and functions are considered.

Although the fraternity and non-fraternity groups desired similar body figures and levels of muscularity, and had similar scores on the BES, findings indicate that both groups are dissatisfied with their current body figures. Approximately 90% of males in each group wished to increase their levels of upper body muscularity, while nearly half of each group wanted a more muscular lower-body. A very small minority of males wished to decrease their levels of muscularity. These results are consistent with prior estimates of males' desire to increase their upper body muscularity, which range from 60% (Tucker, 1982) to 91% (Jacobi and Cash, 1994). Findings from the present study likely resemble those of Jacobi and Cash (1994) due to the similarity in methods used to assess muscularity levels. Since no previous studies have specifically assessed lower body muscularity, comparisons cannot be made concerning this variable. It is interesting to note, however, that a much larger percentage of males are satisfied with their lower

bodies than with their upper bodies. This may be indicative of a desire to attain a mesomorphic body figure, which is consistent with cultural ideals of attractiveness for males (Mishkind et al., 1986).

Contrary to predictions, less than half of the fraternity and non-fraternity males wanted a larger overall body figure as measured by the Figure Rating Scale. Although nearly one-quarter of the non-fraternity sample wished to be smaller, half of the fraternity members had this desire. Based on self-report data, it appears as though fraternity members were more concerned with losing fat than was the non-fraternity group. Despite these differences, both groups desired similar body figures on the FRS. These findings are similar to those of Raudenbush and Zellner (1997), who found that despite perceived weight status all males chose similar ideal body figures on a measure comparable to the FRS.

Based on the present findings, it appears as though the FRS measures a different aspect of body image than is measured by the muscularity indices. While the FRS seems to be related to level of adiposity, and allows for its measurement, the muscularity options tap into males' desire for bulk. Future studies would likely benefit from using these measures together, as each provides new information that is not accessible when only one of the tests is used.

Since it was found that both fraternity and non-fraternity groups wished to alter their bodies, it was of interest to explore their reasons for such desires. Although the themes that emerged were highly similar, the groups showed variability in the importance that was placed on each theme. For instance, a majority of fraternity males wished to have a more muscular upper body in order to improve the look and physical qualities of their bodies, to be more attractive, and to have more energy, strength, and fitness. In contrast, most non-fraternity males valued a larger upper body for energy, strength, and fitness reasons, followed by attractiveness reasons and improvements in athletics. While fraternity members wanted larger lower bodies in order to improve energy, strength, and

fitness, to be more attractive, and to improve the look and physical qualities of their bodies, non-fraternity males were most interested in improvements in athletics, as well as energy, strength, and fitness, attractiveness, and changes in the look and physical qualities of their bodies.

These findings are similar to those of Edwards and Launder (2000), who reported that the benefits derived by males who are muscular include enhanced feelings of masculinity and confidence, and greater attractiveness. Although the males in the present study related self-esteem and confidence to their desire to be more muscular, it was not as widely reported as attractiveness or physical reasons. It may be that it is common among young males to desire more muscularity, which would parallel the “normative discontent” that has been described among females who wish to lose weight (Rodin, Silberstein, & Streigel-Moore, 1984). If this is true, then dissatisfied males may feel that they resemble rather than deviate from their peers. It may also account for the low frequency of reports that muscularity is desired for self-esteem reasons, since the normative nature of their discontent may serve as a buffer against lowered self-esteem. This notion has been observed among women who report weight dissatisfaction (Silberstein et al., 1988). This rationale may also be used to account for the reportedly high levels of self-esteem among the males in this study.

Additional thematic analyses were conducted to determine why fraternity and non-fraternity males wished to have different overall body figures. Results indicated that fraternity males wished to improve the look and physical qualities of their bodies, to have more energy, strength, and fitness, and to be more attractive. These reasons may be closely tied to their strong desire to lose fat. Most non-fraternity males desired changes in order to have more energy, strength, and fitness, to improve their body’s look and physical qualities, and to improve self-esteem and confidence with women.

Taken as a whole, these qualitative results suggest that young males typically wish to alter their body figures for physical conditioning and appearance reasons.

Differences between the groups may have emerged due to the nature of the self-report data and the subsequent coding process. In particular, if males reported that they wanted improvements in areas such as strength and energy specifically for athletic reasons, it was coded as improvements in athletics. Similar responses that did not mention athletics were coded as either primary or secondary physical reasons. Also, responses coded under attractiveness reasons may be related to the less-frequent response of increased popularity with women, which was coded as a social reason. These potential difficulties may be remedied in future studies by providing subjects with a list of possible response options, including an “other” category. The benefit of the exploratory method used in this study is that it provides future researchers with a list of response options that have been found to be applicable to young males.

Body Image of Football versus Fraternity and Non-Fraternity, Non-Football Groups

Since no a-priori hypotheses were made concerning the football group, all analyses that were conducted with this group were exploratory in nature. Results indicated that football players desired significantly larger and more muscular bodies than both the fraternity and non-fraternity, non-football groups, as shown on the muscularity measures and the FRS. On a 7-point scale, with higher scores indicating greater levels of muscularity to the point of being “extremely muscular,” football players desired a 6.33 level of upper body muscularity, and a 6.00 level of lower body muscularity. Sixty-seven percent of players wished to gain lower body muscularity, while none wished to lose. Similarly, 92% of football players desired increases in upper body muscularity, while none desired decreases. Interestingly, a majority of players wished to have a smaller overall body figure, which is convergent with the desires of the less-active fraternity members. This appears to be related to the desire to lose fat, which was frequently reported among these groups. Taken as a whole, these findings are likely related to the physical conditions needed to successfully play football, which place value on a large,

lean, hyper-muscular overall body figure (Arthur & Bailey, 1998; Daniel, Brown, & Gorman, 1984). Since these conditions are likely not required of males from the general university population, between-group differences would be expected to exist on figural ratings.

Not surprisingly, football players rated improvements in athletics as the number one reason for wanting increases in both upper and lower body muscularity. The next main reasons were improvement in strength, and increased physical size and “cut.” In regards to overall body figures, most football players wished to lose fat and increase tone, muscle definition, and size. They also wished to be smaller in order to improve their physical condition and strength, and improve in their sport. These findings converge more closely with those from the non-fraternity, non-football sample than with those from the fraternity sample. This may be because of the similarly high levels of exercise between the former two groups, and the corresponding interest in athletics and physical condition over attractiveness reasons.

Analyses that included all of the body image variables revealed no significant group difference when the effects of exercise, self-esteem, and androgyny were accounted for. It is particularly interesting to note that no group differences were found for attributes that relate to upper body strength, including body build, biceps, arms, chest, and muscular strength. This may pose a problem for some football players, since the majority wish to become leaner and more muscular in order to achieve physical benefits, but are already exercising at a very high level. At least some of these players may be in danger of resorting to steroid use in order to gain any muscular effects not produced through exercise (Buckley, Yesalis, Friedl, Anderson, Streit, & Wright, 1988; Goldberg, Elliot, Clarke, MacKinnon, Moe, Zoref, et al., 1996). Future studies should address this possibility by examining current steroid use among football players, and assessing the conditions under which males would consider taking steroids in the present or future.

Body Image of Low Exercisers and Regular Exercisers

In addition to analyzing specific group members on body image indices, one of the aims of this study was to analyze the effects of exercise level on males' ratings of body satisfaction. As expected, significant relationships were found between exercise level in minutes per week and several of the body image measures. In particular, increased exercise was associated with improvements in satisfaction with physical attractiveness, physical condition, and upper body strength as defined by the BES. Smaller discrepancy scores for upper body muscularity and the FRS, indicating greater satisfaction, were also related to increased exercise levels.

Following this preliminary correlational analysis, males were categorized according to exercise level, which was restricted to "low" and "regular" exercisers. Regularly exercising males exercised at least 20 minutes per day, three days per week. According to this criterion, more males qualified as regular exercisers ($n = 162$) than low exercisers ($n = 40$). At the outset of this study it was predicted that low exercising males would report an ideal level of muscularity that was larger than their current figures. Findings confirmed this hypothesis for both upper and lower body muscularity levels. Interestingly, this trend was also observed among the regularly exercising group, which suggests that males are dissatisfied with their current figures regardless of exercise levels. The percentages of males in each group who wish to change their levels of muscularity further supports the notion that both groups are dissatisfied, since equal percentages wish to gain upper body muscularity (90%) and lower body muscularity (53.5%).

These results contradict those of previous research in the area, which have typically concluded that increased exercise is related to improved body satisfaction (Davis & Cowles, 1991; Huddy, Nieman, & Johnson, 1993). It is possible that these differences exist because muscularity levels were not assessed in most previous studies. Perhaps many males wish to increase their muscularity levels above what their bodies are

capable of, or above what their exercise regimen can create. It is also possible that as males exercise more, or become involved in a physically demanding sport such as football, that their desires for muscularity increase incrementally. These possibilities seem plausible within this study, since 98% of football players and 75% of non-fraternity, non-football males comprise the regular exerciser category. These groups, particularly the football players, were interested in gaining muscularity in order to improve athletic performance. These possibilities need to be addressed in future studies, in order to accurately attribute reasons for muscular dissatisfaction among males.

An additional prediction in this study was that low exercisers would be more dissatisfied than regular exercisers on body image ratings. Results tended to support this hypothesis, with low exercisers reporting more dissatisfaction than regular exercisers on the physical attractiveness, physical condition, and upper body strength subscales of the BES, as well as on the FRS. These findings converge with previous research in the area (Davis & Cowles, 1991; Huddy, Nieman, & Johnson, 1993). Consistent with earlier findings from this study, the two groups did not differ on either of the muscularity measures.

Summary and Future Research Directions

This study attempted to clarify discrepancies in the research literature concerning the nature and extent of body dissatisfaction among different subgroups of males. Although fraternity, football, and non-fraternity, non-football groups were found to be similarly satisfied with their physical attractiveness, upper body strength, and physical condition, varying levels of dissatisfaction emerged among the groups on measures of muscularity and overall body figure. As expected, a majority of all groups wished to be more lean and muscular, with football players wishing to be hypermuscular relative to the other groups. Exercise levels were found to significantly affect several of the body

image measures, with lower exercisers exhibiting more body dissatisfaction than regular exercisers on all measures except those for muscularity.

These findings lend support to the need to include both measures of muscularity and overall physique in body image studies with males. Each of these measures provides a unique contribution to the interpretation of findings, since they appear to measure slightly different yet equally important aspects of body image in males. Future research should also continue to assess males' reasons for wanting changes to their bodies, as the results in this study are preliminary and need to be more systematically assessed in order to make generalizable conclusions.

Future research could also assess both the current use of steroids, as well as the potential for future steroid use among different groups of males, in the context of muscularity ratings and reasons for wanting a different body figure. It seems reasonable to assess these variables together, since it is likely that steroid users have a muscularity and attitudinal profile that is different from non-steroid users. Getting an attitudinal profile of those who have used steroids in the past or present may help to identify future users. This could have implications for the prevention and early identification of males likely to be steroid users in the present or future. For example, if it were found that steroid users were primarily interested in improvement in athletics, then prevention and education programs could be targeted more specifically at members of certain sports teams. Education could focus on how to maximize performance in sport without resorting to steroid use.

Further body image studies need to be conducted using muscularity measures and reasons for wanting a different body figure that sample a wider range of athletic and non-athletic males. This is in light of the present findings indicating that different subgroups of males report varying degrees of dissatisfaction, and different reasons for wanting to change their physiques. The inclusion of several different types of athletes would allow for the determination of similarities and differences among groups. A larger

sample of non-athletic males would allow for clarifications of body image that extends findings from the present study. It would also enable researchers to perform analyses of interaction effects between group and exercise level, which was not possible in this study due to the paucity of low exercising males in each group.

Finally, a majority of the body image studies that involve males fail to assess sexual orientation. This appears to be an important risk factor for body dissatisfaction, since it has been found that gay males desire to be thinner than their current figures, standard height and weight norms, and the desired figures of heterosexual men (Herzog, Newman, & Warshaw, 1991). Previous studies have thus focused mainly on gay males' desires to be thinner, invariably concluding that they are at an increased risk for the development of eating disorders. Of interest would be to determine if muscularity plays a role in gay males' desires for a different body figure, as it could be the case that they wish to be very lean yet muscular (Beren, Hayden, Wilfley, & Grilo, 1996). If this possibility is validated, then assessment and treatment approaches to body dissatisfaction with gay males may need to be changed to address not only drive for thinness, but drive for bulk as well.

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Appendix A
Demographic Questionnaire

1. How old are you? _____

2. What is your cultural or ethnic background (please check any that apply)?
 - Caucasian _____
 - African American _____
 - Hispanic _____
 - Asian _____
 - Native American _____
 - Other (please specify) _____

3. What year are you in at university? _____

4. What is your major in university? _____

5. Are you currently a member of a fraternity? Yes No

- 5a. If you answered yes, how long have you been a fraternity member?

6. What is your current weight (in pounds)? _____

7. What is your ideal weight? _____

8. What size body frame do you have? Small Medium Large

9. How muscular is your upper-body?

1	2	3	4	5	6	7
No Muscularity			Moderately			Extremely Muscular

10. How muscular would you like your upper-body to be?

1	2	3	4	5	6	7
No Muscularity			Moderately			Extremely Muscular

11. If your answers in questions 9 and 10 are different, briefly explain why (i.e., why do you want your upper-body to be more/less muscular?)

12. How muscular is your lower-body?

1 2 3 4 5 6 7
No Muscularity Moderately Extremely Muscular

13. How muscular would you like your lower-body to be?

1 2 3 4 5 6 7
No Muscularity Moderately Extremely Muscular

14. If your answers in questions 12 and 13 are different, briefly explain why (i.e., why do you want your lower-body to be more/less muscular?)

15. Do you consider yourself to be a regular exerciser? Yes No

16. Over the past three months, about how often have you engaged in exercise that increased your breathing rate and made you sweat? _____ days per week , for _____ minutes per day

17. Are you currently on a varsity athletic team, or involved in any other organized sports activities?

Yes No

17a. If you answered yes, what sport(s) are you involved in?

18. Do you engage in any other types of exercise? Yes No

18a. If you answered yes, what types of exercise do you engage in?

Appendix B

Consent Form for Participants: University of Michigan

Body Image in Males as Related to Fraternity Membership and Levels of Exercise

Researcher: Melanie Kelly, B.A.

Department of Psychology, University of Windsor, Canada

Supervisor: Dr. Cheryl Thomas, Ph.D.

I am a graduate student in Clinical Psychology, and am presently conducting research in order to complete my Master's thesis. The present study will investigate how undergraduate males rate the shape and condition of their bodies, and their levels of satisfaction with various body parts.

If you choose to participate in this study, it will take approximately 20 minutes of your time. You will be asked to complete a questionnaire package that involves rating various body parts in terms of shape, condition, and satisfaction levels. You will also be asked questions relating to attitudes about yourself. There are no risks involved in participating in this study. For your participation in this study, you will be entered into a draw for \$100.

Your participation in this study is completely voluntary. If you wish to withdraw your participation, or choose to skip any questions, you may do so at any time without explanation or penalty. You will not be asked to identify yourself in any way on the questionnaires, and thus will remain anonymous. In addition, signed consent forms and completed questionnaires will be stored separately from one another. All information collected will remain confidential except as may be required by federal, state, or local law.

If you have any questions regarding this study, please feel free to ask me at any time. If you have any comments or concerns about this study at a later date, please contact myself (phone: (519) 977-1543; e-mail: aaronkelly@sprint.ca), or my thesis supervisor, Dr. Cheryl Thomas (phone: (519) 253-3000, Ext. 2252; e-mail: cdthomas@uwindsor.ca). This study has been approved by both the University of Windsor ethics committee and the IRB for the University of Michigan. If you have any concerns regarding the ethics of this study, please contact Dr. Stewart Page, Chairperson of the Ethics Committee, University of Windsor (phone: (519) 253-3000, Ext. 2243; e-mail: page@uwindsor.ca) or Kate Keever in the Human Subjects Protection Office, University of Michigan (phone: (734) 936-0933; e-mail: keever@umich.edu). Thank you for your participation.

I have read the description of the study, and understand the information provided. I understand that my answers will be kept confidential, and that I may withdraw from the study at any time without penalty. I understand that I will be given a copy of this form. I voluntarily consent to take part in this research study.

Printed Name: _____ Signature: _____

Date: _____

Appendix C

**Consent Form for Participants: University of Detroit Mercy
Body Image as Related to Fraternity Membership and Levels of Exercise**

TO: _____

My name is Melanie Kelly. I am a Master's student in the Department of Psychology at the University of Windsor, in Ontario, Canada. I have asked you to agree to be a volunteer in some research that I plan to conduct. Before I can accept your consent, I want to make known to you the following information pertaining to the project.

The present study will investigate how undergraduates rate the shape and condition of their bodies, and their levels of satisfaction with various body parts. I am hoping to collect information from approximately 130 volunteers.

If you choose to participate in this study, it will take approximately 20 minutes of your time. You will be asked to complete a questionnaire package that involves rating various body parts in terms of shape, condition, and satisfaction levels. You will also be asked questions relating to attitudes about yourself. I have considered all aspects of the proposed project and determined that the procedures indicated above are the best procedures to be used in achieving the research goal intended. There are no attendant discomforts or risks reasonably to be expected.

Your participation in this study is completely voluntary. If you wish to withdraw your participation, or choose to skip any questions, you may do so at any time without explanation or penalty. You will not be asked to identify yourself in any way on the questionnaires, and thus will remain anonymous. In addition, signed consent forms and completed questionnaires will be stored separately from one another. The confidentiality of the records will be maintained unless disclosure is required by law. Confidentiality of records will be maintained by Melanie Kelly.

Please feel free to ask me questions at any time during the study. If you have any comments or concerns about this study at a later date, please contact myself (phone: (519) 977-1543; e-mail: aaronkelly@sprint.ca), or my thesis supervisor, Dr. Cheryl Thomas (phone: (519) 253-3000, Ext. 2252; e-mail: cdthomas@uwindsor.ca). This study has been approved by both the University of Windsor ethics committee and the IRB for the University of Detroit Mercy. If you have any questions concerning your rights as a volunteer, please contact Dr. Stewart Page, Chairperson of the Ethics Committee, University of Windsor (phone: (519) 253-3000, Ext. 2243; e-mail: page@uwindsor.ca) or Dr. Leonard Weber, Director of the University of Detroit Mercy's Ethics Institute (phone: (313) 993-6154). Thank you for your participation.

ACKNOWLEDGMENT AND CONSENT:

I, _____ of _____
Printed Name Street City State
_____, hereby state:
Zip Code

I have read all of the statements above pertaining to the research project entitled "Body Image as Related to Fraternity Membership and Levels of Exercise" and I understand them.

I have been given the opportunity to ask questions I wish concerning this research project, and any questions I have asked have been answered to my satisfaction.

I have been given a full copy, with signatures, of this document.

I hereby consent to be a volunteer in this research project.

Full signature of volunteer: _____ Date: _____

Full signature of witness: _____ Date: _____

As the investigator in the research project entitled "Body Image as Related to Fraternity Membership and Levels of Exercise," I hereby state to the best of my knowledge and belief all of the statements made in the above consent form are true and that in consenting the prospective volunteer exercised free power of choice without undue inducement or any element of force, fraud, deceit, duress, or any other form of constraint or coercion. In addition to the participation by the volunteer being voluntary, the volunteer has been advised that he may discontinue participation at any time without penalty or loss of benefits to which the volunteer is entitled.

Appendix D

Information Sheet: Wayne State University

Body Image in Males as Related to Fraternity Membership and Levels of Exercise

Researcher: Melanie Kelly, B.A.

Department of Psychology, University of Windsor, Canada

Supervisor: Dr. Cheryl Thomas, Ph.D

Introduction/Purpose: I am a graduate student in Clinical Psychology, and am asking you to participate in a research study. This study will investigate how undergraduate males rate the shape and condition of their bodies, and their levels of satisfaction with various body parts.

Procedure: If you choose to participate in this study, it will take approximately 20 minutes of your time. You will be asked to complete a questionnaire package that involves rating various body parts in terms of shape, condition, and satisfaction levels. You will also be asked questions relating to attitudes about yourself.

Risks: There are no risks involved in participating in this study.

Alternative Procedures: There are no other alternative procedures to this study, other than not participating. You may choose either not to participate at all, or to stop your participation once you have started, at any time during the study.

Benefits: Aside from any satisfaction you may get from helping me answer a research question, there is no benefit to you for participating in this study.

Compensation: In the unlikely event of any injury resulting from this research study, no reimbursement, compensation, or free medical care is offered by Wayne State University or the University of Windsor.

You will also not be paid or given any gifts for your participation in this study.

Voluntary Participation/Withdrawal: Your participation in this study is completely voluntary. If you wish to withdraw your participation, you may do so at any time without explanation or penalty. You may also choose to skip any questions that you do not wish to answer, without explanation or penalty.

Questions: If you have any questions concerning your participation in this study, please feel free to ask me at any time. If you have any comments or concerns about this study at a later date, please contact myself (phone: (519) 977-1543; e-mail: aaronkelly@sprint.ca), or my thesis supervisor, Dr. Cheryl Thomas (phone: (519) 253-3000, Ext. 2252; e-mail: cdthomas@uwindsor.ca). This study has been approved by both the IRB for Wayne State University and the University of Windsor ethics committee. If you have any questions regarding your rights as a research subject, please contact the Chairman of the Human Investigations Committee at Wayne State University

(phone: (313) 577-1628), or Dr. Stewart Page, Chairperson of the Ethics Committee, University of Windsor (phone: (519) 253-3000, Ext. 2243; e-mail: page@uwindsor.ca).

Confidentiality: You will not be asked to identify yourself in any way on the questionnaires, and thus will remain anonymous. Completed questionnaires will be stored in a locked cabinet. Only the primary investigator (Melanie Kelly) will have access to these completed forms.

Consent to Participate in a Research Study: Before you choose to participate, please take into consideration all of the above information about this research study, including what you are being asked to do. Be sure that the content and meaning of all of the information is clear to you, and that all of your questions have been answered. If you choose to participate in this study, you will not be asked to sign any forms, and your completion of the questionnaires will be understood as consent. You will be given a copy of this form.

Thank you for your participation.

Appendix E
Debriefing Information

Thank you again for participating in my study. I would like to tell you a little bit more about the rationale and purposes for this research. As you already know, I am exploring how undergraduate males rate the shape and condition of their bodies, and their levels of satisfaction with various body parts. While recent research has suggested that young males generally wish to gain weight, or be larger than their current figures, much of it has failed to ask about muscularity levels. In my study, I have hypothesized that muscularity is important to feelings of body satisfaction. I have also predicted that levels of exercise and membership in a fraternity (or lack thereof) will play a role in ratings of body satisfaction. The results of this study will hopefully help to clarify the nature and extent of body dissatisfaction in college-aged males.

VITA AUCTORIS

Melanie Kelly (Astle) was born on September 22, 1974 in Newcastle, New Brunswick. She graduated from Marathon High School in Marathon, Ontario in 1993. She proceeded to graduate in 1998 from Carleton University with an Honours B.A. in Psychology. She is currently working towards a doctoral degree in Clinical Psychology at the University of Windsor.