

GOING BEYOND MUSCULARITY:
DEVELOPING A MULTIDIMENSIONAL MEASURE OF MALE BODY CONCERNS

by

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ABSTRACT

Until recently, concern with body shape and image has primarily been considered a female domain and body image concerns among men were all but ignored. Researchers are now beginning to address this gap in the literature, as evidenced by the rapid rise in the number of studies pertaining to male body image. However, there are currently only a limited number of body image measures available that attempt to tap male body image concern, with these measures predominantly focusing only on the drive for muscularity. As a result, these measures are likely excluding other aspects important to men's body image.

The purpose of the current dissertation was to develop a multidimensional measure of male body image, named the Multidimensional Male Body Concerns Questionnaire (MMBCQ), and determine whether it yields reliable scores and valid interpretations. This purpose was achieved through a series of three studies. The first study consisted of a qualitative investigation that identified nine major aspects of men's bodies and appearance that are most important to their body image. The second study developed items to assess these nine dimensions. A pilot test then reduced the original 55 items to a total of 39 items, which assessed the dimensions of muscularity, body fat, youthfulness, body hair, and penis. The third study refined the MMBCQ to a total of 35 items and provided additional reliability and validity evidence for the MMBCQ subscales. This new measure will allow researchers to extend their understanding of the male body image construct beyond muscularity alone. Through the use of a mixed methods approach and a combination of CTT and IRT, this dissertation uses modern validity theory to provide a comprehensive model of test development and validation.

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1 INTRODUCTION

To ask what is beauty today is to come face to face with the changing definition of beauty. Perhaps more than any other time in history, we are preoccupied with, even confused by beauty: its power, its pleasures, its style, and its substance. Beauty may not be the most important of our values, but it affects us all; today more than ever, because we live in a Media Age where our visual landscape changes in seconds, and our first reaction to people is sometimes our last. Given this reality, the so-called “triviality” of beauty suddenly seems not so trivial after all. (Schefer, 1997, p. 9)

Although this quotation was written with the notion of female beauty in mind, in today’s day and age it could easily be applied to the increasing importance that is being placed on male attractiveness. Until recently, concern with body shape and image has primarily been considered a female domain and body image concerns among men were all but ignored. In fact, it was often permissible for men to have a “spare tire” around their midsection, a double chin, and sagging buttocks (Luciano, 2001). In the last two decades, however, considerable pressure has increasingly been placed on men to value and attend to their appearance (Mishkind, Rodin, Silberstein, & Striegel-Moore, 1986; Pope, Phillips, & Olivardia, 2000). Men now rate the importance of their appearance as being on a level similar to that of women (Furnham, Badmin, & Sneade, 2002; Pope et al., 2000), and are just as likely as women to engage in efforts to improve their bodies (Davison & McCabe, 2005).

1.1 Men’s Perceptions of Their Bodies

Body image refers to the internal picture one has about the size, shape and form of their body, as well as their feelings associated with this picture (Slade, 1988). A man’s perception of his body image can be a powerful influence on how he feels about himself and his self-concept (Thompson, Heinberg, Altabe, Tantleff-Dunn, 1998), which makes the understanding of how men perceive their body of prime importance.

1.1.1 Preferences for Body Shape

Contrary to women, who tend to show a common desire for an ideal body shape that is thinner than their current shape, men are generally evenly split between wanting an ideal body shape that is either thinner or heavier than their current shape (Cafri, Strauss, & Thompson, 2002; Cohn & Adler, 1992; Hatoum & Belle, 2004; Keeton, Cash, & Brown, 1990; McCabe & Ricciardelli, 2004; Ochner, Gray, & Brickner, 2009; Silberstein, Mishkind, Striegel-Moore, Timko, & Rodin, 1989; Vartanian, Giant, & Passino, 2001). More recently, researchers have gone beyond using the thin to obese continuum and made a further distinction between men who want to be heavier and men who want to be more muscular. For instance, Vartanian et al. (2001) found that, while 26% of the men in their sample chose a body shape that was larger than their current shape, 85% of the men in their sample wanted to be more muscular. That is, not all of the men who wanted to be more muscular wanted a larger body shape; some men wanted more muscles while remaining at the same body shape and others wanted more muscles on a smaller body shape. This finding that men do share a common desire for an ideal body shape that is more muscular than their current shape has been found in other studies (Butler & Ryckman, 1993; Grieve, Newton, Kelley, Miller Jr., & Kerr, 2005; Hatoum & Belle, 2004; Ochner et al., 2009; Tantleff-Dunn & Thompson, 2000). Ideally, men have reported wanting to gain an additional 15 to 29 pounds of muscle (Cafri et al., 2002; Hatoum & Belle, 2004; Olivardia, Pope, Borowiecki, & Cohane, 2004; Pope et al., 2000). However, men have also expressed that, while they want to be muscular, they do not want to be too muscular. For instance, the physiques of body builders have often been cited as unattractive and undesirable (Fawkner & McMurray, 2002; Grogan & Richards, 2002; Labre, 2005).

In a qualitative study by Morrison, Morrison, and Hopkins (2003), the authors sought to examine men's motivations behind their desire for more muscularity. The two main reasons cited for why men want to be more muscular were for health benefits (i.e., improved physical health and enhanced mental well-being) and social benefits (i.e., increased attractiveness to self and to women, enhanced ability to play sports, and increased strength and power). Two minor reasons that were also mentioned included wanting to appear intimidating and wanting to conform to societal standards.

Men have also been found to differ from women in their perceptions of a normal weight. For instance, McCreary (2002) found that 43% of overweight men saw themselves as normal weight, while only 12% of overweight women perceived themselves as normal weight. Of those individuals who were of normal weight, 10% of men thought they were overweight, while 29% of women saw themselves as overweight. Keeton et al. (1990) also found that men tend to underestimate their body size.

1.1.2 Body Dissatisfaction

Although women are typically more dissatisfied with their bodies than men (Davison & McCabe, 2005; Forbes, Adams-Curtis, Rade, & Jaberg, 2001; Green & Pritchard, 2003; Hebl, King, & Lin, 2004; Hoyt & Kogan, 2001; McCabe & Ricciardelli, 2004; McDonald & Thompson, 1992; Smith, Thompson, Raczynski, & Hilner, 1999; Sondhaus, Kurtz, & Strube, 2001; Vartanian et al., 2001), research has also shown that men too are dissatisfied. For instance, Hatoum and Belle (2004) found that over 80% of the men in their sample were dissatisfied with their weight and over three-quarters of the men wanted to have more upper body muscle. The areas that the men were the most dissatisfied with were the abdominals (38.5%), arms (21.5%), chest/upper body (18.5%), legs (10.8%), weight (10.8%), health

(9.2%), back (7.7%), gluteus (6.2%), and face (3.1%). Many other researchers (e.g., Hoyt & Kogan, 2001; Labre, 2005; Ridgeway & Tylka, 2005) have also found men to be particularly concerned with the upper body. Given this, it may not be that surprising that Tantleff-Dunn and Thompson (2000) found that men's satisfaction with their chest size was more important than women's satisfaction with their breast size for determining their body image and self-esteem.

1.2 Body Image Concerns among Gay Men

Gay men exist in a culture that is heavily aesthetically oriented (Beren, Haydon, Wilfley, & Grilo, 1996; Dillon, Copeland, & Peters, 1999; Herzog, Newman, & Warshaw, 1991). A gay man's body and overall appearance play a critical role in determining his cultural status and sex appeal to other men. Siever (1994) argues that the gay male subculture imposes strong pressures on gay men to be physically attractive and that gay men, like women, experience extreme pressure to be eternally slim and youthful looking. Thus, gay men tend to face a double blow when it comes to body image concerns. On the one hand, similar to straight men, they may worry about inadequacy in terms of strength or athletic ability. On the other hand, similar to straight women, they may also hold doubts about their physical attractiveness (Harvey & Robinson, 2003). This is in contrast to straight men who tend to be less concerned with their attractiveness compared to women or gay men (Siever, 1994; Silberstein et al., 1989; Yelland & Tiggemann, 2003).

Although this certainly does not apply to all gay relationships, Harvey and Robinson (2003) state that appearances are often what draws gay couples together with these relationships tending to be short lived because they are often based only on attractiveness and not interpersonal qualities. Harvey and Robinson (2003) further argue that, because these gay

relationships tend to be less stable than straight relationships, it is vital for gay men to stay in shape in case their relationship ends and they want to pursue a new partner. Within a gay relationship, men are also more at risk for simultaneously experiencing sexual rejection as well as unfavourable comparisons because, as they are of the same sex, not only do they want to appear desirable, but they also want to feel confident in how their own body compares to that of their partners (Adams, Turner, & Bucks, 2005).

A qualitative study by Drummond (2005a) sought to investigate issues surrounding body image for young gay men living in contemporary Western culture. Four main themes emerged from these interviews as factors that influence how gay men perceive their bodies and masculinity. The first theme dealt with gay men having to live multiple lives, especially when it comes to notions of masculinity within both the straight and gay community.

Although many straight men may perceive gay men as lacking in masculinity, the gay men in this study all identified themselves as masculine, but acknowledged that there were ranges and variations in masculinity. For instance, masculinity could manifest itself in both physical (e.g., aesthetic characteristics) and functional (e.g., ability to perform masculine acts) ways, with physical strength being a strong signifier of masculinity. This struggle between masculinity and being gay is also particularly pronounced for young Asian gay men (Drummond, 2005b). The second theme dealt with the meaning of muscles. For gay men, muscles carried multiple meanings. They not only represented physical strength and masculinity, but also emotional strength and strength of character, which translates into a sense of control. Muscles were also seen as a sign of health and vitality within a culture that does not want to look thin and unhealthy in the wake of the HIV/AIDS panic. The third theme concerned gay men's criticism of the media and its unrealistic expectations that are

increasingly being placed on men in regards to appearance. The final theme involved the importance that gay men place upon their clothing as a symbol of their identity. Given that appearance is so central to the gay culture, clothing was seen as a dominant part of their appearance.

Given that greater emphasis is often placed on physical attractiveness in the gay community (Siever, 1994), many researchers have sought to examine perceptions of body image among straight and gay men. Compared to straight men, gay men score significantly higher on body dissatisfaction (Beren et al., 1996; Conner, Johnson, & Grogan, 2004; Kaminski, Chapman, Haynes, & Own, 2005; Morrison, Morrison, & Sager, 2004; Siever, 1994; Silberstein et al., 1989; Strong, Singh, & Randall, 2000), concern for physical attractiveness (Siever, 1994; Silberstein et al., 1989; Yelland & Tiggemann, 2003), drive for muscularity (Kaminski et al., 2005; Yelland & Tiggemann, 2003), fear of fatness (Kaminski et al., 2005), drive for thinness (Kaminski et al., 2005), restrictive dieting practices (Kaminski et al., 2005), and disordered eating symptomatology (Siever, 1994; Yelland & Tiggemann, 2003). The levels of appearance and body dissatisfaction that gay men report are similar to the levels of dissatisfaction reported by women (Beren et al., 1996, Siever, 1994; Yelland & Tiggemann, 2003).

In general, gay men tend to be less heavy than straight men and many more gay men are classified as being underweight (Conner, et al., 2004; Herzog et al., 1991). They also tend to choose a lower ideal body weight (Herzog et al., 1991; Kaminski et al., 2005), but a more muscular ideal body shape (Yelland & Tiggemann, 2003).

1.3 Measures of Male Body Image

Although there is an abundance of body image measures currently available in the literature, the majority of these instruments are geared toward women. That is, most body image measures solely reflect theoretical models of female body image in that their items are primarily geared towards assessments relative to a thin body ideal. Because of known gender differences in perceptions of the ideal body shape, these instruments may not provide valid scores for men, and clearly should not be used with men (Cafri & Thompson, 2004). With the growing interest in male body image and recognition of a need for body image measures tailored specifically to address male body image concerns, a few measures targeting male body image have been developed, primarily within the last decade. These measures can be broadly grouped into silhouette drawings and Likert-type scales. Each of these measures will be briefly summarized. This will be followed by a discussion of the limitations of these measures and the need for a more comprehensive measure of male body image.

1.3.1 Silhouette Drawings

Silhouette drawings are the most popular method of assessing the subjective dimension of body satisfaction. The earliest silhouette drawings consisted of a series of male physiques that ranged along a continuum of thin to obese. However, these measures have been criticized for failing to take into account levels of muscularity, which has been argued to be the most important feature of a male physique (e.g., Cafri & Thompson, 2004). Only two measures are currently available that consist of figures that vary along both adiposity and muscularity: the Somatomorphic Matrix and the Bodybuilder Image Grid.

1.3.1.1 Somatomorphic Matrix (SM)

Developed by Gruber, Pope, Borowiecki, and Cohane in 1999, the SM is a bidimensional computerized body image test that can assess body image satisfaction and perceptual accuracy with respect to muscularity and body fat for both men and women. This test was initially developed by photographing individuals with known fat-free mass indices (FFMIs; Kouri, Pope, Katz, & Oliva, 1995) and body fat percentages, then having a graphic artist develop these into drawings (Gruber et al., 1999). For each gender, the test consists of 100 images arranged in a 10 x 10 matrix, representing 10 degrees of body fat (beginning at 4% and increasing in increments of 4%) and 10 degrees of muscularity (beginning at an FFMI of 16.5 kg/m^2 and increasing in increments of 1.5 kg/m^2)¹. Participants are first presented with an image from the middle of the matrix and are able to scroll through the images by selecting to either add or subtract muscularity or body fat. Participants are generally asked to select the image that best corresponds to their current body shape and the body shape they would ideally like to have. Each image has a corresponding numerical value for muscularity and body fat to allow for current shape minus ideal shape discrepancy calculations (i.e., indices of dissatisfaction).

The SM has been found to demonstrate good, albeit limited, construct validity, but less than adequate reliability. Through the development of the SM, evidence of construct validity was provided through the use of figures that correspond to particular FFMIs and body fat percentages, derived from photographs of individuals with known FFMIs and body fat percentages (Gruber et al., 1999). Further validation was achieved by having experienced kinanthropists (i.e., experts at body composition assessment) repeatedly review the images

¹ For a frame of reference, an FFMI of 18 would be below average, an FFMI of 20 would be average, an FFMI of 22 would be distinctly muscular, and an FFMI of 25 would be the upper limit of muscularity achieved without the use of steroids (Gruber et al., 1999).

produced by the graphic artist, until it was possible to reliably assign the correct FFMI and body fat percentage to each image in the matrix (A. Gruber, personal communication, January 30, 2001, as cited in Cafri & Thompson, 2004). Cafri, Roehrig, and Thompson (2004) assessed the test-retest reliability of the SM scores spaced 7-10 days apart and found the following test-retest correlations for the male ratings: self-muscularity ($r = .78$), self-body fat ($r = .64$), ideal-muscularity ($r = .55$), ideal-body fat ($r = .79$), self-ideal muscularity discrepancy ($r = .34$), and self-ideal body fat discrepancy ($r = .57$). Clearly, the majority of these values are well below the .70 cut-off regarded as adequate for test-retest reliability (Nunnally & Bernstein, 1994).

1.3.1.2 Bodybuilder Image Grid (BIG)

Developed by Hildebrandt, Langenbacher, and Schlundt in 2004, the BIG was designed as a figure rating grid to measure perceptual body image disturbance in males and perceived attractiveness of the male body. The figure grid was initially developed based on an artist's drawings of human models selected for their dimensions of muscularity and body fat percentage. Levels of muscularity range from a FFMI of 15.5 to 29.0, with an index change of approximately three between figures. Levels of body fat range from 3.5% to 36%, with a distance of 6.5% between each figure. Each of the figures was revised for the final version by replacing the heads with circles, levelling heights, and splitting each figure in half and mirroring the left side of the figure. This was done to ensure similarity and to remove the potential bias from facial features.

The BIG has two versions: the BIG original (BIG-O) and the BIG scaled (BIG-S). Both versions use a 6 by 5 grid of male figures that range in body fat (horizontal) and muscularity (vertical) and include both a frontal and side view. The BIG-S differs from the

BIG-O in that it is scaled along the top and side to allow for finer discriminations in figure choice, rather than just selecting an exact figure. Men are asked to choose up to four figures representing (1) “the figure they think best represents their **current** body type,” (2) “the figure they think best represents their **ideal** body type,” (3) “the body type that is **most attractive**,” and (4) “the body type that is **most attractive to the opposite sex**.” A discrepancy index is calculated for both body fat (current fat – ideal fat = desired fat) and muscle mass (ideal muscle – current muscle = desired muscle).

In a series of three studies, Hildebrandt and colleagues (2004) provided preliminary evidence of the validity of the inferences derived from the BIG. In the first study, one week test-retest reliability of the scores for the BIG-O (i.e., current, desired, and ideal body type) were satisfactory and ranged from .84 to .94. In the second study, evidence of convergent validity was provided through the positive associations of the BIG-O with self-reported body fat percentage, body mass index (BMI), self-reported maximum bench press, drive for bulk, and appearance intolerance. In the third study, one week test-retest reliability for the BIG-O and BIG-S scores were satisfactory and ranged from .72 to .96 for the BIG-O and from .72 to .93 for the BIG-S. Construct validity was also assessed by having participants order individual figures in rows and columns. Males demonstrated 97% accuracy and females 94% accuracy in their ordering of the figures.

1.3.2 Likert-Type Scales

Another type of subjective assessment commonly used in the evaluation of body image attitudes or behaviours are Likert-type scales. These scales have participants respond to items using a multi-point rating scale. Currently there are eight Likert-type scales that have been developed or validated primarily for men.

1.3.2.1 Body Esteem Scale (BES)

The BES was developed by Franzoi and Shields in 1984 through an extensive revision of the Body-Cathexis Scale (BCS; Secord & Jourard, 1953). They initially conducted a principal components factor analysis with varimax rotation on the BCS scores and, instead of the purported single factor structure, three factors were revealed. Items for the BES were then created based on this three factor solution and initially contained 23 original BCS items and 16 new items. Based on a preliminary study, four of these items were then dropped, resulting in the final 35-item BES. The BES was found to have differing factor structures for men and women, making it the first scale that was relevant to measuring body image specifically in men.

The BES lists 35 body parts and body functions, and asks respondents to assess how they feel about each item on a 5-point scale ranging from 1 (have strong negative feelings) to 5 (have strong positive feelings). For men, the first factor, physical attractiveness (11 items), contains items that deal with facial features (e.g., eyes) and some aspects of the physique (e.g., hips), and largely determines the degree to which a man is judged handsome. The second factor, upper body strength (9 items), contains items dealing with upper body parts and functions that can be changed through exercise (e.g., biceps). The third factor, physical condition (13 items), contains items reflecting one's stamina, strength, and agility (e.g., physical stamina). For each subscale, a higher score indicates a higher level of body esteem.

Initial validation evidence for the BES was provided by examining its reliability, convergent validity, and discriminant validity (Franzoi & Shields, 1984). Coefficient alphas for the three subscales were satisfactory: attractiveness = .81, upper body strength = .85, physical condition = .85. As predicted, the three BES subscales had moderate positive

relationships with self-esteem (convergent validity) and only the upper body strength subscale significantly differentiated between a group of male weightlifters and nonweightlifters (discriminant validity²). Further studies have continued to provide support for the reliability and validity of the BES subscales for men (Cecil & Stanley, 1997; Franzoi, 1994; Franzoi & Herzog, 1986)

1.3.2.2 Drive for Muscularity Scale (DMS)

The DMS was developed by McCreary and Sasse in 2000. A total of 15 items were developed by examining weight training magazine articles and by surveying male and female weight-training enthusiasts. These items reflected individuals' attitudes and behaviours toward their preoccupation with increasing their muscularity.

The DMS assesses an individual's desire for a more muscular body. The measure can be used with both men and women. Items are scored on a 6-point scale ranging from 1 (always) to 6 (never). All items are reverse scored so that a higher score indicates a greater drive for muscularity. In addition to a total score that is applicable to both men and women, two subscale scores can also be calculated for men. The muscularity-oriented body image subscale (7 items) and the muscularity behaviour subscale (7 items) separate out the attitudinal and behavioural aspects of the drive for muscularity, respectively. One item concerning the use of anabolic steroids did not load on either subscale and, although it has been recommended that this item be removed from the scale (McCreary, Sasse, Saucier, & Dorsch, 2004), it is often still included and used in the calculation of the total score.

McCreary and Sasse (2000) provided initial validation evidence for the 15-item DMS. Reliability for the total score was satisfactory, with an alpha of .84. Evidence of the validity

² Although cited by the authors as discriminant validity, the comparison of weightlifters and nonweightlifters better represents the "known-groups technique".

of the inferences derived from the scale were assessed by testing a series of hypotheses. For example, the authors hypothesized that boys would score higher than girls and that higher scores on the DMS would correlate with higher levels of depression and lower levels of self-esteem for boys, but not for girls (differential salience). These hypotheses were supported. McCreary, Saucier, and Courtenay (2005) examined the associations of the DMS with masculinity and femininity. As predicted, masculinity was positively associated with the drive for muscularity. Against predictions, femininity was uncorrelated to the drive for muscularity rather than negatively correlated. Overall, the DMS is currently the most widely used measure of male body image and has undergone the most thorough validation of available body image measures for men (see McCreary, 2007, for a review).

1.3.2.3 Swansea Muscularity Attitudes Questionnaire (SMAQ)

Edwards and Launder created the SMAQ in 2000 as a measure of muscularity concern. In the development of the SMAQ, an initial scale was drafted with 33 items assessing the areas of body building behaviour, desirability of muscularity, attributes of muscularity, and perceived social benefits of muscularity. Preliminary analyses refined the scale to a two-factor, 32 item version. A factor analysis using varimax rotation revealed a seven factor solution; however, only the first three factors were considered interpretable. The authors took the 10 highest loadings on the first factor and 10 of the 11 highest loadings on factors 2 and 3 and factor analyzed them. A two factor solution emerged with 10 items loadings on factor 1 (Drive For Muscularity) and 10 items loading on factor 2 (Positive Attributes of Muscularity).

Thus, the SMAQ is a 20-item scale assessing the constructs of Drive for Muscularity (DFM) and Positive Attributes of Muscularity (PAM). The DFM subscale (10 items) assesses

the desire for muscularity, with a higher score indicating a greater desire for muscularity and more engagement in activities that would increase muscle mass. The PAM subscale (10 items) assesses perceived benefits of being muscular; with a higher score indicating a greater belief in the benefits that being muscular can confer, such as greater masculinity, increased confidence, and greater attractiveness. Items are rated on an 7-point scale, marked “definitely,” “strongly agree,” “agree,” “neutral,” “disagree,” “strongly disagree,” and “definitely not.”

Reliability for the scale scores were quite good, with an alpha of .94 for the SFM subscale and .91 for the PAM subscale (Edwards & Launder, 2000). Further validation work done with the SMAQ has only provided moderate evidence for the reliability and validity of the SMAQ scores (Wojtowicz & von Ranson, 2006) and has suggested that the SMAQ may be best represented by a three factor solution (Morrison & Morrison, 2006).

1.3.2.4 Drive for Muscularity Attitudes Questionnaire (DMAQ)

Morrison, Morrison, Hopkins, and Rowan developed the DMAQ in 2004. Initially, the authors created 41 items to assess individuals’ attitudes toward muscularity, which were based on the previous literature and the items composing the DMS and SMAQ. An initial principal components analysis reduced the 41 items to a final set of eight items that loaded on a single factor.

The DMAQ consists of eight items that assess the desire for more muscularity. Items are rated on a 5-point scale ranging from “strongly disagree” (1) to “strongly agree” (5), with a higher score indicating a greater drive for muscularity. Two of the items are reverse scored.

In a series of three studies with male undergraduate students, Morrison et al. (2004) provided initial validation evidence for the interpretation of the DMAQ by examining its

factor structure, reliability, relationship to theoretically relevant variables, and ability to discriminate between known groups. Two principal components analyses (PCAs), and a follow-up confirmatory factor analysis (CFA), supported the unidimensionality of the scale. Reliability was satisfactory, with coefficient alphas ranging from .80 to .84. As hypothesized, higher scores on the DMAQ (i.e., a higher drive for muscularity) were found to be positively related to the desire to have a more muscular ideal body, a greater discrepancy between actual and ideal body shapes, consumption of protein supplements, amount of weight training, contemplation of steroid use, and vanity, and was found to be negatively related to physical appearance self-esteem. For the known groups discrimination, as expected, varsity athletes reported higher scores on the DMAQ than did nonathletes.

Morrison and Harriman (2005) provided further validation evidence for the DMAQ with a sample of undergraduate male students by again demonstrating its unidimensional factor structure and satisfactory reliability ($\alpha = .82$). They also showed that the DMAQ was negatively related to muscle satisfaction and was not affected by social desirability.

1.3.2.5 Muscle Dysmorphic Disorder Inventory (MDDI)

Based on a modification of the 16 item Muscle Dysmorphia Inventory (MDI; Schlundt, Woodford, & Brownlee, 2000, as cited in Hildebrandt et al., 2004), Hildebrandt, Langenbacher, and Schlundt developed the MDDI in 2004. Three of the original MDI items were deleted and seven new items were added, creating an initial 21-item measure that targeted the three diagnostic features associated with muscle dysmorphia: desire for size, appearance anxiety and avoidance, and functional impairment. A PCA was used to examine the factor structure of these initial items. Eight items were dropped from the scale for cross loading or insufficiently loading on a single factor. Another PCA was conducted on the

remaining 13-items which supported the three factor structure.

Thus, the final 13 item MDDI consists of three subscales. The first subscale, Drive for Size (DFS; 5 items), assesses thoughts about inadequate size, with a higher score indicating a desire to be more muscular. The second subscale, Appearance Intolerance (AI; 4 items), assesses negative beliefs about one's body, with a higher score indicating increased negativity and appearance anxiety regarding one's body. The third subscale, Functional Impairment (FI; 4-items), assesses preoccupation with one's workout schedule, with a higher score indicating greater rigidity to exercise routines and avoidance of social situations. In addition to the three subscale scores, a total score can also be calculated, with a higher score indicating greater body image disturbance related to muscle dysmorphia. All items are rated along a 5-point scale ranging from "never" to "always".

Hildebrandt and colleagues (2004) provided preliminary evidence of the reliability of the MDDI scores and the validity of the inferences derived from the MDDI. Alphas for the MDDI scores were satisfactory: DFS = .85, AI = .77, FI = .80, and total score = .81. As predicted, the DFS subscale correlated positively with drive for bulk and desired amount of muscle, the AI subscale correlated positively with body dissatisfaction and physique anxiety, and the FI subscale correlated positively with bulimic symptomatology, obsessive compulsive symptomatology, and behavioural signs of functional impairment.

1.3.2.6 Masculine Body Ideal Distress Scale (MBIDS)

The MBIDS was developed by Kimmel and Mahalik in 2004 by first consulting with a focus group of six young adult men on what was "important about an ideal masculine body" (p. 2). An initial 12 items were developed that were then taken back to three focus groups members for review. Eight of the items were retained for the final version of the

MBIDS.

Thus, the MBIDS is an 8-item scale assessing distress from failing to meet masculine body ideals, with a higher score indicating greater distress. Participants indicate their expected level of distress to the items on a 4-point scale ranging from 1 (not distressing at all) to 4 (very distressing).

Initial validity evidence was provided by Kimmel and Mahalik (2004) by examining the factor structure, reliability, and relation of the MBIDS to theoretically relevant variables. A PCA supported the presence of a unidimensional scale. Reliability for the MBIDS scores were good, with an alpha of .89. As predicted, higher scores on the MBIDS were related to higher levels of body dissatisfaction and conformity to masculine norms.

1.3.2.7 Male Body Attitudes Scale (MBAS)

The MBAS was developed by Tylka, Bergeron, and Schwartz in 2005. An initial 29 items were created to reflect the dimensions of men's body attitudes that have been most prevalent in the theoretical and empirical literature. Of the initial 29 items, 12 assessed attitudes toward muscularity, eight assessed attitudes toward body fat, two assessed attitudes toward height, and seven assessed general attitudes toward one's overall body. The items were created to assess two types of body attitudes: dissatisfaction and preoccupation. Initial testing of the scale resulted in 5 items being dropped, forming the final 24-item scale.

Thus, the MBAS is a 24-item scale composed of three subscales. The first subscale, Low Body Fat (8 items), assesses attitudes toward one's body fat. The second subscale, Muscularity (10 items), assesses attitudes toward one's muscularity. The third subscale, Height (2 items), assesses attitudes toward one's height. For all three subscales, a higher score indicates more negative body attitudes. In addition to the three subscale scores, the

MBAS can also be averaged for a total score. There are four items on the MBAS that cross load on both the body fat and muscularity subscales, and these items are only used in the calculation of the MBAS total score. All items are rated along a 6-point scale ranging from “rarely” (1) to “always” (6). Four of the items are reverse scored.

In a series of three studies, Tylka and colleagues (2005) provided initial validation evidence for the interpretation of the MBAS scores by examining its factor structure, reliability, and relationship to theoretically relevant variables. An initial principal axis factor analysis revealed the presence of three factors (as specified above), which accounted for 62.6% of the variance. In a second study, a CFA was performed using testlets, which confirmed the three factor solution. Coefficient alphas for the subscales and total score across all three studies were satisfactory, with alphas of .91 for the total score, .93 - .94 for the Low Body Fat subscale, .89 - .90 for the Muscularity subscale, and .82 - .88 for the Height subscale. Two week test-retest reliability for the MBAS scores were also satisfactory: total score = .91, Muscularity = .88, Low Body Fat = .94, and Height = .81. To determine the validity of the inferences derived from the scale, Tylka and colleagues (2005) tested a series of hypotheses. For example, as evidence of convergent validity, they predicted that the MBAS total score, muscularity items, and low body fat items would be related to certain aspects of body esteem (i.e., physical condition and upper body strength). These hypotheses were supported. Further evidence of convergent and concurrent validity was provided by correlating the MBAS with measures of muscularity attitudes, muscularity behaviours, self-esteem, eating disorder symptomatology, internalization of societal ideals, engagement in physical appearance comparison, drive for thinness, and drive for muscularity. Evidence of discriminant validity was provided by correlating the MBAS and its subscales with a

measure of impression management. Discriminant validity evidence was also provided through the non-significant or weaker correlations of specific MBAS subscales with other variables (i.e., the low body fat subscale and muscularity attitudes). With a few minor exceptions, all hypotheses were supported.

Further validity evidence for the MBAS has been provided by examining the relations of the MBAS total and subscale scores to other theoretically relevant variables (Bergeron & Tylka, 2006). The Low Body Fat subscale was significantly and positively related to actual weight, depressive symptomatology, and general psychological distress, and significantly and negatively related to self-esteem and psychological hardiness. The Height subscale was significantly and positively related to actual height and general psychological distress, and significantly and negatively related to lower psychological hardiness. The Muscularity subscale was significantly and negatively related to self-esteem and proactive coping. As evidence of discriminant validity, the Muscularity subscale was found to be more strongly related to the muscularity-oriented body image component of drive for muscularity than the muscularity behaviours component of overall drive for muscularity, as measured by the DMS. Blashill and Vander Wal (2009) have also demonstrated the generalizability of the three-factor structure of the MBAS in a sample of community-based gay men.

1.3.2.8 Male Body Dissatisfaction Scale (MBDS)

The MBDS was developed by Ochner, Gray, and Brickner in 2009. Initially 29 items were developed based on expert consensus and previous literature that targeted men's attitudes toward the lean and muscular male ideal, with a particular emphasis on the upper body region. In addition to responding to the content of each of the items, men are also asked to rate each item on how important it is to them. An initial pilot test examining item-total

correlations resulted in the elimination of four items.

The MBDS consists of 25 items that assess body dissatisfaction. Items are rated on a 5-point Likert-type scale ranging from “Always” (1) to “Never” (5) or from “Strongly Agree” (1) to “Strongly Disagree” (5) depending upon the item. Each item is also rated for importance on a scale of 1 (no importance to you) to 10 (great importance). The importance rating is divided by 10 and multiplied by the item response to get an overall score for each item. These items are then summed for a total score. A higher total score indicates more body dissatisfaction. Thirteen of the items are reversed scored.

Initial validity evidence for the MBDS scores were provided by examining the reliability, convergent validity, discriminant validity, and factor structure of the MBDS in a series of three studies. However, it should be noted that the sample sizes used in these validation studies were very small (25 to 40); thus these findings should be interpreted with caution. Cronbach’s alpha and test-retest reliability for the MBDS total score was good (alpha: .92-.93; test-retest: .95). The MBDS was also found to be: (1) inversely related to measures of body esteem, self-esteem, and a single-item on body dissatisfaction and (2) positively related to shape and weight-based self esteem and body shape and weight concerns. The MBDS was not found to be statistically significantly related to positive and negative affect or to BMI. Finally, a “preliminary factor analysis” was conducted on the items, which revealed a three factor structure: musculature, definition, and relative standing/external evaluation. The authors did not provide definitions for these three factors, but rather provided examples of items from each of these factors.

1.3.2.9 Limitations of Current Male Body Image Measures

Although many of these measures show promise as reliable and valid indicators for

assessing aspects of male body image, several general limitations must also be mentioned. First, the majority of these measures are still in their infancy and are in need of further reliability and validity evidence to strengthen the interpretations of their scores. Second, the majority of these measures were developed and validated with young, straight, Caucasian male student samples. Thus, their generalizability to other groups of men (i.e., older, gay, non-student, men of other ethnicities/races) is limited. Third, some of the scales are questionable in their use of a total score. The MDDI, MBAS and MBDS propose that their respective items can be averaged or summed to form a total score. However, initial factor analyses of these scales reveal that these scales are multidimensional. Although it is plausible that a higher order factor could exist that would support the use of a total score, no evidence of this has been provided. Combining items that tap different dimensions will make the interpretation of a total score meaningless. Only the DMS has provided sufficient evidence for the calculation and use of a total score (McCreary, 2007). Fourth, several of the scales have problem items. Inspection of the factor loadings for the SMAQ shows that two of the items (i.e., 16 and 17) cross-load on both factors. For instance, “It is important to me that I should be more rather than less muscular” loaded at .65 and .49 on Factors 1 and 2, respectively. Edwards and Launder (2000) retained this item on Factor 1. However, according to Stevens (1992), factor loadings of .40 or greater possess “practical significance” and should be used for interpretative purposes. Thus, these items are not clear exemplars of either factor and should be removed. The BES scale also has two items (i.e., 15 and 25) that cross load on two factors and, although they are retained on both factors, again they are not clear indicators of the factors and should be removed. The MBAS has four items (i.e., 10, 18, 24, and 25) that cross-load on two of the factors. However, Tylka and colleagues (2005)

recommended that these items only be used in the calculation of the total score and not the subscale scores. Furthermore, the MBAS height subscale consists of only two items which makes it questionable as to whether this is a stable factor (Costello & Osborne, 2005). The DMS has also been criticized for combining attitudinal and behavioural items (Morrison et al., 2004) although recent factor analytic work has moved these items into two separate subscales (i.e., muscularity-oriented body image and muscularity behaviour). Finally, the SM has been heavily criticized for inadequate stability of actual-ideal body difference scores over time (Cafri et al., 2004).

Although not necessarily a limitation, these measures are limited in their scope, with the main and often only focus being on muscularity (this can also be a criticism of the male body image literature in general). For instance, the DMS, SMAQ, DMAQ, and MBIDS only tap the concept of drive for muscularity. While muscularity is certainly an important, and arguably most important, component of male body image, it is not the only component. One of the more recently developed scales, the MBAS, has recognized this and has incorporated two other aspects that have been identified as being important to male body image: body fat and height. However, it is my belief that the construct of male body image is even broader. For instance, the male participants in Hatoum and Belle (2004) identified aspects such as body hair, freckles, and penis size as being important for men's body image. Ridgeway and Tylka (2005) noted that baldness, body hair, facial features, and disabilities may be aspects of male body image that are important to examine. More recently, researchers have used single items to evaluate penis size, head hair, and body hair as important components of male body image (Martins, Tiggemann, & Churchett, 2008; Tiggemann, Martins, & Churchett, 2008). This suggests that a more multidimensional and comprehensive approach to assessing

men's body image is needed, but, in order to accomplish this, measures that target and assess the multidimensionality of male body image must first be developed.

1.4 Purpose of the Set of Studies

Although men have long been understudied in the field of body image, and the exact nature of male body image concerns is not fully understood (McCabe & Ricciardelli, 2004; McCreary & Sasse, 2000), researchers are beginning to address this gap in the literature, as evidenced by the rapid rise in the number of studies pertaining to male body image. A better understanding of the concept of male body image is particularly important given the recent rise in the valuation of the muscular male body and a surge in media pressure on men to be more concerned with their appearance and to conform to the male muscular ideal (Pope et al., 2000). A negative body image can result in adverse psychological consequences for men, including disordered eating (Cash & Deagle, 1997; Stice, 2002), anxiety (Davis, Brewer, & Weinstein, 1993; Tantleff-Dunn & Thompson, 2000), depressive symptomatology (Cafri et al., 2002), poor self-esteem (Cafri et al., 2002; Forbes et al., 2001; Green & Pritchard, 2003; Hatoum & Belle, 2004; Miller & Downey, 1999; Olivardia et al., 2004; Tantleff-Dunn & Thompson, 2000), diminished life satisfaction (Cafri et al., 2002), and increased use of anabolic steroids (Olivardia et al., 2004). Given that greater emphasis is often placed on physical attractiveness in the gay community (Siever, 1994), these negative consequences are particularly a concern for gay men.

Given these concerns, it is imperative to accurately assess how males perceive, think, and behave with respect to their bodies. However, there are currently only a limited number of body image measures available that attempt to tap male body image concerns. And, as noted previously, many of these measures only focus on the drive for muscularity, and are

likely excluding other aspects important to men's body image. The purpose of the present research was to develop a multidimensional measure of male body image, named the Multidimensional Male Body Concerns Questionnaire (MMBCQ), and determine whether it yields reliable scores and valid interpretations. This was achieved through a series of three studies. The first study consisted of a qualitative investigation to identify those aspects of men's bodies and appearance that are most important to their body image. This involved an in-depth examination of the body image concerns that are pertinent and unique to both straight and gay men, and men of varied ages and ethnicities, as it cannot be assumed that these groups of men will identify the same issues. None of the other measures of male body image appear to have taken sexual orientation, age, or ethnicity into account as a specific factor in the development of their items. The second study made use of the information obtained in the first study to develop potential items for the MMBCQ. Pilot data was then gathered on these items and a series of item analyses and exploratory factor analyses were conducted to delete and revise items until a satisfactory final version of the MMBCQ was achieved. The third and final study sought to provide further reliability and validity evidence for the MMBCQ.

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2 STUDY 1: WHAT ARE MEN'S CONCERNS AND DESIRES REGARDING THEIR BODIES AND APPEARANCE?³

2.1 Introduction

Until recently, concern with body shape and image has primarily been considered a female domain and body image concerns among men were all but ignored. In fact, it was often permissible for men to have a “spare tire” around their midsection, a double chin, and sagging buttocks (Luciano, 2001). In the last two decades, however, considerable pressure has increasingly been placed on men to value and attend to their appearance (Mishkind, Rodin, Silberstein, & Striegel-Moore, 1986). Although researchers are beginning to address this gap in the literature, as evidenced by the rapid rise in the number of studies pertaining to male body image, the exact nature of male body image concerns is still not fully understood (McCabe, & Ricciardelli, 2004; McCreary & Sasse, 2000).

Research has shown that men now rate the importance of their appearance as being on a level similar to that of women, and are just as likely as women to engage in efforts to improve their bodies (Davison & McCabe, 2005). Contrary to women, who tend to show a common desire for an ideal body shape that is thinner than their current shape, men are generally evenly split between wanting an ideal body shape that is either thinner or heavier than their current shape (Cafri, Strauss, & Thompson, 2002; Cohn & Adler, 1992; Hatoum & Belle, 2004; Keeton, Cash, & Brown, 1990; McCabe & Ricciardelli, 2004; Silberstein, Mishkind, Striegel-Moore, Timko, & Rodin, 1989; Vartanian, Giant, & Passino, 2001). More recently, researchers have gone beyond using the thin to obese continuum and made a further distinction between men who want to be heavier and men who want to be more muscular.

³ A version of this chapter will be submitted for publication. Rusticus, S. A. What are men's concerns and desires regarding their appearance?

For instance, Vartanian et al. (2001) found that, while 26% of the men in their sample chose a body shape that was larger than their current shape, 85% of their sample wanted to be more muscular. That is, not all of the men who wanted to be more muscular wanted a larger body shape; some men wanted more muscles while remaining at the same body shape and others wanted more muscles on a smaller body shape. This finding that men share a common desire for an ideal body shape that is more muscular than their current shape has been found in other studies (Butler & Ryckman, 1993; Grieve, Newton, Kelley, Miller Jr., & Kerr, 2005; Hatoum & Belle, 2004; Tantleff-Dunn & Thompson, 2000). However, men have also expressed that, while they want to be muscular, they do not want to be too muscular. For instance, the physiques of body builders have often been cited as unattractive and undesirable (Fawkner & McMurray, 2002; Grogan & Richards, 2002; Labre, 2005).

Although muscularity, in terms of both muscle tone and muscle mass, is a key, and arguably the most important, component of male body image, it is not the only component. Two other components of male body image that have been receiving more attention in the literature include leanness (Fawkner & McMurray, 2002; Labre, 2005; Martins, Tiggemann, & Churchett, 2008a; Ridgeway & Tylka, 2005; Tiggemann, Martins, & Churchett, 2008) and height (Martins et al., 2008a; Ridgeway & Tylka, 2005; Tiggemann et al., 2008). More recently, penis size, head hair, and body hair have also been identified as important components of male body image (Martins et al., 2008a; Tiggemann et al., 2008). The present study seeks to further explore these, and other, areas of the body that are identified by men as being important to their body image.

2.1.1 Masculinity Theory and the Muscular Body

Originating from sex role theory, masculinity theory gained widespread recognition

in the mid 1980s with the publication of an article by Carrigan, Connell, and Lee (1985) entitled, "Towards a New Sociology of Masculinity". In this article, the authors provided a critical account of the history of masculinity research from the 1900s forward with regards to how masculinity has been constructed under the theoretical position of sex role theory. Periods of time that were especially critical to the construction of masculinity were the women's movement in the late 1960s and the gay liberation movement in the 1970s. The smaller scale anti-sexist men's movement in the 1970s also played a role in redefining conceptions of masculinity. Throughout their review of the masculinity literature, the authors heavily critiqued sex role theory as a means of understanding masculinity because of its failure to clearly distinguish between norms and actual behaviours, its focus on a role concept that is seen as too static and unreceptive to change and, most importantly, its failure to address issues of power.

Carrigan et al. (1985) thus proposed a new theory for understanding masculinity. Their theory is based on the notion of multiple masculinities, as opposed to masculinity being a single trait, and the interplay of power among these masculinities. In this model, masculinity is not only based on men's subordination of women, but also men's subordination of other men, which was highlighted through the experiences of homosexual men. Up until the gay liberation of the 1970s, heterosexuality was seen as a necessity of masculinity, resulting in homosexual men being ostracized from traditional conceptions of masculinity. With the gay liberation, homosexual men were now being seen, and seeing themselves, as embodying masculinity. However, because of the violence and prejudice these men received from straight men, the notion of a hierarchy of masculinities emerged. Positioned at the top of this hierarchy is the current historical dominant form of masculinity

termed hegemonic masculinity, with all other masculinities being considered as subordinated masculinities.

It is necessary at this point to take a step back and define what exactly is meant by masculinity. Unfortunately, it is not so easy to provide a succinct definition of masculinity. As Cornwall and Lindisfarne (1994) noted, “Meaning depends on who is being described in what setting. Masculinity has multiple and ambiguous meanings which alter according to context and over time. Meanings of masculinity also vary across cultures and admit to cultural borrowing; masculinities imported from elsewhere are conflated with local ideas to produce new configurations” (p. 12). Broadly speaking, masculinity is a gender identity that is constructed socially, historically, and politically. It is a “configuration of practices” that is learned through participation in society and its institutions and has the effect of subordinating women (Carrigan et al., 1985; Connell, 1995).

Hegemonic forms of masculinity are constructed to represent widespread cultural ideals, fantasies, and desires. As Connell and Messerschmidt (2009) remarked, “It [hegemonic masculinity] embodied the currently most honoured way of being a man, it required all other men to position themselves in relation to it, and it ideologically legitimated the global subordination of women to men” (p. 832). Few men may actually completely embody the current hegemonic form of masculinity; however, because men who are considered exemplars of masculinity (e.g., professional sports stars) are seen as figures of power and authority, men strive to meet these ideals so that they too may partake of the benefits that masculinity grants. This serves to maintain the current view of hegemonic masculinity in society as a whole. However, it is important to keep in mind that hegemonic masculinities are open to change as aspects of subordinated masculinities are incorporated

into the dominant patterns (e.g., gay men's aesthetic sense and style of dress have recently become more mainstream).

Muscularity, which implies strength, virility, and dominance, has been identified as an important component of hegemonic masculinity (Klein, 1993; Mishkind et al., 1986; Pope, Phillips, & Olivardia, 2000; Wienke, 1998). As supported by the literature on physical attractiveness, the muscular body is seen as a privileged body. This has been demonstrated by individuals who closely resemble cultural standards of beauty receiving advantages and opportunities not readily available to others (Mishkind et al., 1986). Throughout history muscularity has been a standard against which men's bodies are judged, although the degree of muscularity idealized has fluctuated by historical periods (Wienke, 1998). Currently, less emphasis is placed on bulging, hyper-mesomorphic body builds and more on being, lean and athletic with well-defined but not excessively large muscles (Grogan, 1999, 2007; Ridgeway & Tylka, 2005).

In times past, men could be assured of their masculinity by virtue of their occupations, interests, or certain personality characteristics; however, within Western culture, women are now reaching parity with men in many of these roles. This has left muscularity as one of the few remaining ways in which men can assert their masculinity and differentiate themselves from women (Faludi, 1999; Gray & Ginsberg, 2007; Klein, 2007; Mishkind et al., 1986; Pope et al., 2000). The biggest natural strength difference between men and women is in the arms, chest, and shoulders; thus men who want to exaggerate their difference from women, or from other "lesser men", would focus on these areas (Klein, 2007). This theory, referred to as "crisis in masculinity" or "threatened masculinity," has been used to explain men's increasing focus on muscularity, despite the fact that the physical need for strength has

decreased. This focus on muscularity may also be especially salient for homosexual men, who by virtue of their sexual orientation, may be considered less masculine than their heterosexual counterparts.

2.1.2 Purpose of the Present Study

The focus on the appearance of the body, and primarily its muscularity, as a prominent symbol of masculinity suggests that a desire to appear masculine would likely play a key role in explaining men's increasing concerns regarding their body image. As such, masculinity theory may thus be valuable in explaining which areas of the body are of most concern to men. If men are concerned about appearing masculine, then it would be expected that they would focus on, or be more concerned about, the areas of the body that are traditionally seen as more masculine (e.g., muscularity). The purpose of the present study was to conduct in-depth individual interviews with a sample of men, varied in sexual orientation, age, and ethnicity, to determine which aspects of their bodies and appearance the men would identify as being important to their body image. Such a varied sample was included because it cannot be assumed that these subgroups of men will identify the same aspects of the body as being important to their body image. The use of a qualitative methodology is particularly suitable for exploratory investigations and allows for an extensive examination of men's understanding of body image from their own point of view.

2.2 Methods

2.2.1 Participants

A total of 30 men were interviewed for this study. Sixteen of the participants identified their sexual orientation as straight and 14 identified their orientation as gay. Participants ranged in age from 19 to 57 years ($M = 34.63$, $SD = 10.94$). Twelve participants

described their ethnicity as Caucasian, eight as East Asian, seven as South Asian, two as Hispanic, and one as First Nations. Nineteen of the participants indicated that they were single and 11 indicated that they were currently married, common-law, or in a long-term relationship. Participants tended to be well educated: one completed graduate studies, 19 completed a Bachelor's degree, six completed some college or university, three completed high school, and one completed less than high school. All participants were from a large Canadian metropolitan city.

2.2.2 Interview Schedule and Procedure

Recruitment for this study took place by means of: (1) emails sent to family, colleagues, and friends asking if they knew of anyone who might be interested in taking part in this study, (2) posters placed throughout the community (e.g., fitness centers, community centers, supermarkets), and (3) advertisements placed on online community boards (e.g., Craigslist). Participants were interviewed individually and, with the exception of one individual who chose not to take part in the second interview, were interviewed twice, for a total of 59 interviews. The participants were interviewed at a location that was agreeable to them and the interviewer, and in which they felt comfortable and at ease. Some men felt comfortable about being interviewed in public settings (i.e., coffee shops, community centers, libraries, McDonalds), while others preferred quieter and less obtrusive locations (i.e., UBC, workplace). Interviews ranged from 25 minutes to two hours, for a total of 45.5 interview hours. The average length of the first interview was 48.5 minutes ($SD = 13.0$ minutes) and the average length of the second interview was 44.0 minutes ($SD = 22.0$ minutes). Forty-nine interviews (25 participants) were conducted by the primary researcher and 10 interviews (5 participants) were conducted by a male research assistant (TS) under

careful supervision and following extensive training. The participants assigned to the research assistant were based on our scheduling availability, with the exception of one participant who specifically requested a male interviewer.

With the consent of each participant, each interview was audio taped and transcribed verbatim. Myself, or one of three trained research assistants, transcribed the interviews. I reviewed all interview transcripts that were not transcribed by myself. The first interview followed a semi-structured format whereby each individual was asked open-ended questions on various aspects of their body and appearance using a modified version of an interview guide developed by Hurd Clarke (2005). See Appendix A for the list of questions asked in the first interview. The second interview was used to ask any questions in the interview guide that were not asked in the first interview and to clarify and expand on any issues raised in the first interview or in other men's interviews. Thus, the questions in the second interview varied greatly among participants. I developed the second interview guide for all participants, with input from the research assistant. There was a one week to five month interval between the first and second interviews to allow time for the study participant and I (or the research assistant and I) to reflect on the issues discussed in the initial interview, for the first interview to be transcribed and the second interview guide to be created, and to account for scheduling difficulties because of participants' work and travel commitments.

2.2.3 Analysis

Grounded theory methods were used to code the data for this study. In brief, grounded theory is an approach for generating middle-range theories that are grounded in, and systematically derived from, data. The main components of grounded theory include theoretical sampling, the constant comparative method, coding and categorizing, memo

writing, and theory generation, with an emphasis on the comparative method of concurrent data collection and analysis (Charmaz, 2005, 2006; Dey, 1999; Glaser & Strauss, 1967). As Walker and Myrick (2006) note, grounded theory combines “the depth and richness of qualitative interpretive traditions with the logic, rigor and systematic analysis inherent in quantitative survey research” (p. 548). The aim is to develop a well grounded theory that describes, explains, interprets, and predicts the phenomenon of interest. This approach encourages researchers to stay close to their data and to develop an integrated set of theoretical concepts that synthesizes and interprets that data, as well as shows processual relationships (Charmaz, 2005).

For this particular study, I did not follow grounded theory methodology in full; rather I made extensive use of the constant comparative method, coding and categorizing, and memo writing components of grounded theory. Time constraints did not permit me to follow theoretical sampling to its full potential. In gathering the sample for this study, I did seek to include a variety of men of different backgrounds (i.e., sexual orientation, ethnicity, age); however, ideally, the interviews of each participant should have been coded before the next participant was recruited and interviewed, so that the analysis of these prior interviews could guide the selection of new participants and modifications to the interview guide. Aspects of theoretical sampling were followed, however, as a brief analysis of each participant’s first interview occurred concurrently with further data collection and did influence the interview guide. Furthermore, I recruited and interviewed an additional 10 participants after the first 20 participants had been interviewed and the data preliminarily coded. The addition of these new participants accomplished two important goals: (1) the targeting of particular groups of men to increase the generalizability of the findings (e.g., gay South Asians) and (2) the

further exploration of the themes that emerged from the first round of data collection, which indicated saturation of the initial themes identified.

When I initially began this study, I chose to use grounded theory methodology because I thought that I may have been able to use the data collected to develop a theory on male body image (either as part of this dissertation or as a post-doctoral project). However, as the interviews progressed and I began reviewing the transcripts and analyzing the data, I realized that the data that I was gathering were suitable for my ultimate purpose of identifying important dimensions of male body image, but was not going to be rich and deep enough to develop a theory of male body image. Thus, theory generation, an important component of grounded theory methodology, will not be a product of this analysis. However, I still feel that the process of analyzing this data using grounded theory methods is appropriate for this study because it allows me to really explore the data in an iterative process so that the important dimensions of the body can be formed from the data in a rigorous and systematic way.

In coding the data, I coded all of the data and followed the methods described by Charmaz (2006). Initially, a sentence-by-sentence coding of each of these transcripts was undertaken, generating a wide range of initial codes. Repeated readings of the transcripts and collapsing of the codes resulted in a list of 25 major codes. The re-analysis of these codes culminated in three overarching themes: physical appearance, appearance investment, and attitudes towards appearance. This dissertation is based on the analysis of the “physical appearance” theme because this was the theme that focused on identifying the particular areas of the body that were considered important and meaningful to the men.

Finally, comparisons were conducted within subthemes to examine if there were potential differences on three sets of subgroups: sexual orientation (14 gay, 16 straight), age (15 younger, 15 older), or ethnicity (12 Caucasian, 8 East Asian, 7 South Asian)⁴. For age, the younger group consisted of all men aged 35 and younger, whereas the older group consisted of all men over 35 years of age. This age was chosen as a dividing point because it equally divided the men into two groups and could arguably be used as an age that distinguished between young adulthood and middle adulthood. The mean age of the younger group was 25.67 years (SD = 4.81) and the mean age of the older group was 43.67 years (SD = 7.34). Because of the small sample sizes within each of these subgroups, statistically significant differences across groups could not be determined; rather, the purpose of making subgroup comparisons was to identify any possible trends across these groups in whether certain aspects of the body appeared to be more salient to one group over another (i.e., was mentioned by a greater proportion of men in one group compared to their counterpart(s)). A difference of approximately 25% or greater between groups was considered worthy of noting. The information gained from any potential subgroup differences could then be used to guide future research examining group differences in perceptions of male body image.

2.3 Results

Overall, five major themes emerged from the analysis of the data. These included components of an ideal physique, areas of importance and concern, likes, dislikes, and unattractive physiques. Each of these themes, as well as their corresponding subthemes, are presented below.

⁴ The two men who identified themselves as Hispanic and the one man who identified himself as First Nations were not included in any analyses looking at ethnic differences because of their small sample sizes.

2.3.1 Components of an Ideal Physique

Thirteen physical characteristics were identified by the men as to what was important in an ideal male physique: muscular, low body fat, large penis size, youthful, full head of non-grey and attractively styled head hair, little to no body hair, tall, attractive facial features, Caucasian, clean shaven, tanned, clear complexion, and good posture.

2.3.1.1 Muscular

The most important component of an ideal physique, mentioned by all 30 men, was a physique that was muscular. Muscular, as defined by these men, was athletic-looking, with well-defined musculature, but was not overly muscular in size. A conveyance of strength, masculinity, and the appearance of health were strongly linked to a muscular physique.

“I like a body that's um, toned, like ah, maybe a little bit muscular, but not like a guy that looks like he goes to the gym seven days a week.” (GC36)⁵

“So the muscular definition and, and in proportion. So not like super bulky, not like wiry.” (SC22)

“And then I think that the masculine appearance, again the way that I described, like the flat belly, the pecs, the abs, you know the, the v-shaped back.” (SS35)

The features most prominent in the men's descriptions of a muscular physique were a “six pack” (17 men (57%)), a “classic v-shape” (16 men (53%)), defined pectorals (13 men (43%)), muscular arms (7 men (23%)), broad shoulders (6 men (20%)), defined buttocks (6 men (20%)), and defined legs (6 men (20%)).

“I think that, the upper body is more focused on than the lower body, you know, just, the v-shaped back, the shoulders, and the arms, and the chest.” (SS35)

“I think, the ideal sexy man would be someone who's you know big shoulders big chest and then you know abs, tight butt and all that.” (SE19)

⁵ The first letter identifies the participants' sexual orientation (G = gay; S = straight). The second letter identifies ethnicity (C = Caucasian; E = East Asian; S = South Asian; H = Hispanic; F = First Nations). The number identifies age.

However, 17 of the men (57%) specifically mentioned that a body builder's physique was *too* muscular.

“Heavy scary body builder type muscle that I think is disgustingly unattractive and unnatural.” (GC23)

Although the upper body did come across as being more prominent and focused upon, 13 of the men (43%) made comments about the importance of looking proportioned.

“He's got the, lean muscle physique, very chiselled, and just not too bulky, not too skinny. Just well proportioned.” (GC23)

“Proportioned. (P) Lower body and upper body, not just a big upper body and twigs for legs.” (SS25)

In looking at trends across the three groups (i.e., sexual orientation, ethnicity, age), the younger men, compared to the older men, appeared more likely to specifically mention a six pack (11 younger (73%), 4 older (27%)), defined pectorals (7 younger (47%), 3 older (20%)) and a tight butt (5 younger (33%), 1 older (7%)) as being important aspects of an ideal muscular physique. The older men, in contrast, were more likely to talk about an ideal muscular body in general and not focus on specific body areas. There were no other apparent differences among the groups.

2.3.1.2 Low Body Fat

Twenty-six of the men (87%) commented that a physique that was low in body fat was an important component of an ideal physique.

“Uh, like because all the so-called good looking male stars, they're not fat. Okay. So that's one, thing, that every guy should be skinny. Or not skinny, at least like, like a medium size, right.” (SE20)

“I mean if you go through like fashion magazines, like male fashion magazines, you see the models are usually slim, but muscular.” (GC36)

“I think the ideal would be lean, slender, the healthiest for the heart, the easiest for the body” (SC52)

Furthermore, 11 of these men (37%) indicated that the thin ideal needed to consist of a flat stomach and slim waist.

“In the gay community like you know there’s this ideal like image you know. You have to be like, have a flat stomach” (GF32)

“Someone who’s about a 30 inch waist, 42 inch chest, typical model kind of figure.” (GS44)

Six of the men (20%) commented that, while the ideal was to be slim, looking too skinny was seen as unattractive, less masculine, weak, and unhealthy.

“There is thin people, but to be like skinny, like very bony is, is weird. They look sick, right.” (GH25)

“Where someone is thin like you know, someone who’s thin, they might be like weak and stuff like that which isn’t great either.” (SC22)

Furthermore, one of the gay men noted that gay men who appear too skinny are often labelled as HIV positive.

“And then of course another huge issue for the gay community is HIV. So, with the gay community another huge reason why body type is so important is because if you appear too skinny then people think that you’re HIV positive.” (GF32)

Although there appeared to be no emerging differences among the groups on body fat overall, the South Asian and East Asian men tended to be more likely than the Caucasian men to specifically indicate that a slim waist was important in an ideal physique (5 South Asian (71%), 4 East Asian (50%), 1 Caucasian (8%)). The younger men also appeared to value a thin waist more than the older men (8 younger (53%), 3 older (20%)). The younger men were also more likely than the older men to indicate that a physique that was too skinny was not ideal (8 younger (53%), 0 older (0%)).

2.3.1.3 Large Penis

Twenty-four of the men (80%) discussed that a large sized penis was considered ideal.

“Going by just the ads, big dicks are what they want.” (GS55)

“I think that’s how, that’s also how our society perceives right, a more, more manly person as you know, someone who has a big penis right.” (SE19)

“Yes its wrongly, perpetrated by magazines that its, size is not important. I think it is. Its totally important.” (GS37)

In looking at trends across the three groups, the only potential difference that emerged was that the younger men were more likely than the older men to mention penis size as being an important component of an ideal physique (14 younger (93%), 10 older (67%)).

2.3.1.4 Youthful

Twenty-two of the men (73%) indicated that looking youthful was an important component of an ideal physique.

“You have to look young regardless of your age.” (GF32)

“I feel like one of the components of the ideal male in North America is looking eternally youthful.” (GC23)

In addition to looking young, an overall fit and healthy appearance was also tied into youthfulness.

“Youth is definitely cherished, um, is it a bad thing? I don’t think so. I think it’s, if you can do it, if you can do it in a healthy way, if you’re not going under the knife, and artificially making yourself young. But if you eat well, if you stay fit, you exercise, and those are the ways you keep looking young, and hopefully, be feeling young, and being healthier.” (GS44)

There were no trends that emerged among the three groups.

2.3.1.5 Head Hair

Sixteen men (53%) identified head hair as being an important component of an ideal

physique. Head hair was discussed in terms of three categories: balding, going grey, and hairstyle. Thirteen men (43%) indicated that having a full head of hair was important and eight men (27%) indicated that the ideal physique did not have grey hair. Four of the men (13%), however, commented that, for men, grey hair could look dignified. Retaining a full head of non-grey hair was closely linked with maintaining a youthful appearance.

“Like hair matters, I think you're seen as more youthful if you're if you still have a lot of hair.” (SE19)

“The balding overrules everything. The grey hair, perhaps if you're 45 or older then you will be at peace with that. They look more dignified, with a full head of hair. Balding, I don't think anybody is ever fine with it unless you just shave it off too. That is living with it, not fine with it.” (GE27)

“I don't think [grey] hair makes anyone look distinguished. (L) I think it makes us all look old, really.” (SC52)

Four of the men (13%) mentioned that it was important to have a fashionable and clean looking hairstyle.

“In my culture, the people very um, very take care of their hair...they spend a lot of time on their hair because if your hairstyle is different your imagery is totally different.” (GE38)

The straight men appeared to be more likely than the gay men to indicate that the ideal physique did not have grey hair (6 straight (38%), 2 gay (14%)). An ethnic trend regarding grey hair suggested that Caucasian men were the most likely to indicate that not having grey hair was important in an ideal physique, while South Asian men were the least likely to discuss grey in regards to body ideals (5 Caucasian (42%), 2 East Asian (25%), 1 South Asian (14%)). An ideal physique with a full head of hair also tended to be described more often by the Caucasian and East Asian men than by the South Asian men (6 Caucasian (50%), 5 East Asian (63%), 1 South Asian (14%)).

2.3.1.6 Little to No Body Hair

Fourteen of the men (47%) described an ideal physique as one that has little to no body hair. The chest, back, and groin were the areas that were most commonly mentioned as needing to be free of hair or neatly groomed.

“Body hair I would say, ah, trim or light. Not heavy. And definitely no back hair.” (GS55)

“Well all the models now they shave themselves. So they actually, um, in the media that prototype would be hairless just because they shave themselves.” (SH39)

Only three of the men (10%) specifically commented that having natural body hair was considered ideal.

“No, because [having no body hair is] not very masculine (L). Its part of a man to have hair, on your chest, on your arms and legs. (GH25)

The hairless, or nearly hairless, ideal appeared to be more commonly mentioned by the gay men than the straight men (9 gay (64%), 5 straight (31%)).

2.3.1.7 Tall

Thirteen of the men (43%) described an ideal physique as one that was tall. The men further defined the ideal height as ranging from 5’10” to 6’2”.

“Uh I think 6 foot is the best, that would be like uh the perfect, perfect height.” (SE19)

“We have a prototype of, of the man, and that prototype is not a short man, or a very tall man, right. It’s just a tall man, not too much, and not very short.” (GH25)

The East Asian men, compared to their counterparts, appeared more likely to indicate that height was an important component of an ideal physique (5 East Asian (63%), 4 Caucasian (33%), 2 South Asian (29%)).

2.3.1.8 Attractive Facial Characteristics

Eleven of the men (37%) identified that attractive facial characteristics were

important components of an ideal physique.

“Just like all those characteristics that I described as being like handsome face, so you know defined jaw, high cheekbones, pronounced brow, proportional nose, all that kind of stuff, right.” (SC22)

“See I guess that faces are also very important. You could have the perfect body, but if you look like someone hit your face with a shovel, then its gonna make life a little bit difficult for you.” (GC23)

The only difference that began to emerge among the groups was that the gay men appeared more likely than the straight men to mention facial characteristics when describing an ideal physique (7 gay (50%), 4 straight (25%)).

2.3.1.9 Caucasian

One-third (6) of the 18 non-Caucasian participants, five of them gay, remarked that the North American ideal was a Caucasian ideal. None of the Caucasian participants discussed a Caucasian ideal.

“Because the, the um North American standard for male beauty is, is, is a Caucasian standard... the Caucasian standard of beauty is also something that a lot of gay men of colour I think try very hard to achieve.” (GE27)

“The ultimate in beauty is supposed to be this Greek god, White man, muscled, or at least toned if not muscled, definitely not fat, definitely not hairy, uh, not dark, right, so, when you see all those things, you have an image of what's truly beautiful and, um, people from the East are naturally not like that at all.” (GS37)

2.3.1.10 Clean Shaven

Four of the men (13%), all straight men, mentioned that a clean-shaven face was considered ideal. None of the men specifically indicated that an ideal physique had facial hair.

“I think men that are generally well shaved, no facial hair, none of that, clean cut, men like that are more uh, I find uh more attracting, something that I look up to.” (SE19)

“The business-like look, well you know the way it is. Clean shaven.” (SC26)

2.2.1.11 Tanned

Four of the men (13%) indicated that having tanned skin was an indicator of attractiveness and health.

“But I think you do look good after a tan. That golden, you know, that, that, you look like you have colour in you, which is kind of nice.” (SS30)

“I just think people that are in the sun in sunny climates look so healthy.” (SC52)

2.3.1.12 Clear Complexion

Two men (7%) commented that having clear, smooth skin was a component of an ideal physique.

“So I think healthy skin is you know like free from blemishes and not too greasy.” (GF32)

2.3.1.13 Good Posture

Two men (7%) noted that walking tall and not stooping was considered ideal.

“I see people that are slouched and walking kinda like this, and I don’t find that very attractive.” (SC52)

“I think it’s a status thing where you can walk with your back straight and you look forward.” (SE20)

2.3.2 Areas of Importance and Concern

The areas that the men focused on in describing an ideal physique were also the same areas that the men identified as being areas of importance or concern for themselves: muscularity, body fat, youthfulness, head hair, facial hair, body hair, facial characteristics, penis size, height, tanned skin, posture, and complexion.

2.3.2.1 Muscular

Twenty-four of the men (80%) identified muscularity as an area of importance for themselves. These men either wanted to maintain a toned looking physique, or more commonly, wanted to further tone, define, and/or increase their muscle mass, generally without a big increase in their body weight. Moreover, they were very clear that they did not want to add too much bulk.

“If I could kind of um, get a bit more musculature on my body while still staying at around the same weight that would be nice.” (GE27)

“What would make me satisfied with my body would be having kind of muscular definition, like a small amount of bulk but mostly just definition everywhere.” (SC22)

Additionally, 11 of the men (37%) specifically indicated that they were more concerned about the muscularity of their upper body than their lower body, with eight of the men (27%) specifically desiring to have a six-pack.

“I’m not concerned about defining my legs, like define my legs. Its more of a concern about the upper body, and the look of it.” (SC24)

“Where you see um, you know the guys with their, their, their six pack and you know their pecs and stuff and you want to look like that.” (SS35)

Only two of the men (7%) remarked that they would like to increase the muscularity of their legs.

Six of the men (20%) commented that they would like to increase both their muscle mass and their body weight.

“I’d want to gain 20, 30 pounds...Just kind of thicken, thicken out a little bit.” (SC24)

“Um, and I’d actually like to gain weight if anything. Um, but lose the 5 pounds of fat and gain 10 pounds of muscles or something.” (SC22)

Seven of the men (23%) expressed a desire for their body to look proportional, both in terms of the muscularity of their body and in the way they carried extra weight.

“So I think for me I'd rather be proportional and have like nice legs, nice butt, but also a nice upper body too, stomach. So its, its just being proportional.” (GF32)

“Yeah I've always carried excess around the mid thing, whereas its not in proportion to, see my arms and the legs.” (GS39)

In looking at emerging trends among the groups, the younger men, compared to the older men, appeared more likely to be concerned about overall levels of muscularity (14 younger (93%), 10 older (67%)). Both the straight men and the younger men, compared to their counterparts, appeared to be more focused on the upper body (8 straight (50%), 2 gay (14%); 8 younger (50%), 3 older (20%)) and more likely to desire a six-pack (6 straight (38%), 2 gay (14%); 8 younger (53%), 0 older (0%)).

2.3.2.2 Body Fat

While only five of the men (17%) considered themselves to be overweight, twenty-two men (73%) expressed a concern with wanting to lose body fat (19 men (63%)) or keeping oneself at their current level of body fat (3 men (10%)).

“So for me I always joke to my friends that I'm like 10 lbs from perfection right.” (GF32)

“Um, the abdomen. Ah, the chest area could be skinnier. Ah I guess my lower thighs and stuff like that. Those are the three major areas.” (SE20)

“You say fine, I do not have muscles, but at least I don't have fat.” (GS39)

Several older men made comments on how they have gained weight with age and that they now find it harder to lose weight or maintain their current weight. Turning 30 was commonly mentioned as the age when they started noticing the extra weight gain.

“Now that I'm in my mid thirties, uh I'm noticing that the weight is staying on longer, um, I'm having a harder time losing weight, the unnecessary or unwanted weight.” (SE36)

“I lost it and uh had no problem keeping it off until you get a little older here now (L) and have to work hard to keep it off so, I'm working on 4lbs right now I have to lose” (SC42)

For 18 of the men (60%), they were particularly concerned about losing, or not gaining, weight around their middle.

“Like when I look at myself in the mirror I can always grab, this love handle can go.” (SS25)

“Okay cause I'm kinda fat and, on my stomach area and there's some ridges of fat that I really don't like those things.” (SE20)

“I do want to lose my stomach, I want to concentrate there.” (GS44)

Six of the men (20%) indicated that they thought of themselves as too skinny and five of the men (17%) wanted to gain weight.

“Like I'm thinner than kind of what I'd like to be.” (SC22)

“Ah, I weigh 190 pounds and I still think I'm, I think its for my height, cause it depends on your height and stuff, but um I have that perception that I'm still too thin.” (SS30)

The South Asian men and the older men, compared to their counterparts, tended to be more concerned about losing belly fat (6 South Asian (88%), 7 Caucasian (53%), 4 East Asian (50%); 11 older (73%), 7 younger (47%)). The men who described themselves as underweight were more likely to be straight (5 straight (31%), 1 gay (7%)) or Caucasian (5 Caucasian (42%), 1 East Asian (13%), 0 South Asian (0%)).

2.3.2.3 Youthfulness

Nineteen of the men (63%) remarked that looking younger and/or maintaining a youthful appearance was important to them.

“I want to look young and, don't want to age quickly. I want to age as slowly as possible.” (SC52)

“Because, again, it's that, I said, eternal fountain of youth. Yeah, I work hard to look good, I work hard to take care of myself... and being told [I look younger than my age], shows that I've done a good job.” (GS44)

“I love the fact that I have that ability to look young.” (SS30)

Specifically, three of the men (10%) commented that maintaining a smooth complexion was an important part of maintaining a youthful appearance and was something that was a concern to them.

“For me people still think that my skin is good, and you know not so far in my age.” (GE38)

“I have wrinkles around my eyes. That shows my age. So, that’s my only spot that I feel a bit of weakness.”(SC42)

In looking at emerging differences among the groups, maintaining a youthful appearance appeared to be more of a concern to the older men than the younger men (12 older (80%), 7 younger (47%)).

2.3.2.4 Head Hair

Twenty-one men (70%) discussed head hair, in terms of balding, going grey, or hairstyle, as being an area of concern for themselves. Again, there was a strong link among the men between head hair and youthfulness. Twelve of the men (40%) currently had grey hair. Five of these men (42%) were unhappy with or concealed their grey hair, while the remaining seven men were not concerned about their grey hair.

“Of course gray hair is related to age. Uh, I wouldn’t mind if they delayed a little bit until I really deserve it.” (SH39)

“Occasionally I will kind of um, stand in front of the mirror or, or, um, have a hand held mirror to see the hair in the back of my head and take a pair of tweezers and pluck out any greys that I see.” (GE27)

“So my sense is, that I have grey hair and I’m, I’ve had some grey hair since I’ve been 31 years old. So, so its all part of what seems to be my luck, or, fate, so, so I’d rather, I’d rather just be fit and happen to have grey hair then to be making it go blond or brown or that kind of thing.” (GC48)

For the 18 men (60%) who did not currently have grey hair, six (33%) indicated that it was important to them to not have grey hair in the future, five (28%) expressed that they

would keep their grey hair when it did appear, and the remaining seven men (39%) had given no thought to the idea of getting grey hair or had no definite opinions on grey hair.

“So I don't really um want to go grey cause it might make me look older.” (GC36)

“I don't care. Its just grey hair, it's natural.”(SS25)

Four of the men (13%), two (50%) who had grey and two (50%) who did not, remarked that they thought the grey hair made (would make) them look more attractive or dignified.

“I think grey hair kind of gives you an impression of being you know being wise and, and ah, what's the word I'm looking for? I don't know, just experienced and stuff like that, right.” (SC22)

Five of the men (17%) commented that they currently had thinning hair. Three of these men (60%) were unhappy with this hair loss (one got hair transplants) and the remaining two (40%) had accepted it as result of aging. Eleven of the men (37%) expressed concerns with the thought of losing their hair. For another nine of the men (30%), they believed their cultural background and family genetics would keep them from losing their hair.

“If I went bald it would. Oh yeah that would be a major, upset. That would be a shock...I think baldness is ugly.” (SC52)

“Like I thought of trying to go somewhere to get my hair thickened. I probably will do that one day. Go to Hair Club for Men. Getting the transplants, I'd probably do that.” (SC24)

“I think, for me I think its not something that I'm concerned with, I think it also has to do with culture, I think typically, ah Asians don't, they don't bald necessarily. And I think typically, its not something that they will worry until you know midlife.”(SE19)

Seven of the men (23%) indicated that if they were to start losing their hair, they would just shave their head bald.

“Once I start going bald I'm just going to shave the whole think off cause I don't like the clown cut.” (SC26)

“I think if I started losing my hair I'd just shave my head. I wouldn't be one of these guys with the comb over or any of that.” (SS35)

Nine of the men (30%) commented that they are concerned about their hairstyle. For these men, their hairstyle played a prominent role in their body image and contributed to a particular look they wanted to portray.

“I think hair is a large component of ah, um how a person presents themselves to the rest of the world and it also says a lot about how, how they style their hair says a lot about their, who they are and their personality.” (GE27)

“And my hairstyle changes depending on where I am too. If I'm going to work it will be a little bit more conservative.. If I'm going out in the evening I will fluff it up and just give it more of a just got out of bed look.” (GS44)

There were several trends among the groups of men in regards to head hair. One, an ethnic difference appeared to emerge among the men on their opinions on balding. The East Asian men, compared to their counterparts, tended to express very little concern about losing their hair, while the Caucasian men expressed the most concern (1 East Asian (13%), 3 South Asian (43%), 7 Caucasian (58%)). In line with this, the Caucasian men also tended to perceive themselves as less likely to retain a full head of hair as they aged (1 Caucasian (8%), 3 East Asian (38%), 4 South Asian (57%)). Three, the South Asian men, compared to their counterparts, appeared more likely to want to shave their head when they started to lose their hair (4 South Asian (57%), 2 East Asian (25%), 1 Caucasian (8%)). Finally, one's hairstyle appeared to be more of a concern among the gay men than the straight men (6 gay (43%), 3 straight (19%)).

2.3.2.5 Facial Hair

Fifteen of the men (50%) talked about facial hair as being important to their body

image. The men were somewhat mixed in their opinions on whether or not they liked having facial hair. Seven of the men (23%) specifically indicated that they preferred a clean-shaven look.

“Um, I have to shave. Every day. If I'm going out in the evening I'll shave again. I hate, hate, hate facial hair. Always hated it.” (GS44)

“When you are clean shaven its clean and presentable and oh like all proper.” (SS30)

Six men (20%) commented that they naturally had little facial hair, with some men happy about this and others wishing that they had the option of growing a beard or moustache.

“Asian, I can't grow it if I try. Forever baby face. Its great.” (GE27)

“Um, I do kind of regret the fact that I'm not able to, um fully have a goatee um because I'm able to grow in like the moustache area, but not along the sides of my mouth here. So it, it's not a full goatee. And, and of the facial hair that I do have is pretty sparse. Um, so it, it is nice in that um I don't have to shave every day. I can usually get by every other day or even every three days sometimes. But it would be nice to have that, the option of changing up my look in terms of facial hair.”(GE27)

Five of the men (17%) commented that they like using their facial hair to enhance or change up their appearance, but it was important that their facial hair be well groomed.

“Yeah I shave every few days with an electric razor. I kind of like varying between clean shaven and three day beard, but I don't like having anything more than that.” (GC23)

The South Asian men, compared to their counterparts, appeared to be more likely to keep clean shaven (4 South Asian (57%), 1 Caucasian (8%), 1 East Asian (13%)). All of the men who commented that they naturally had little facial hair were non-Caucasian.

2.3.2.6 Body Hair

Fourteen of the men (47%) commented that they remove or trim body hair, with the amount of hair removed ranging from the plucking of errant hairs to nearly full body hair removal. The most common areas of hair removal included: chest (10 men (67%)), back (8

men (57%)), pubic area (8 men (57%)), arms (5 men (36%)), and legs (4 men (29%)).

“Even with body hair, like, just trim chest hair and stuff like that. I don’t like, its just the image that everything must be groomed.” (SS25)

“The waxing and the hair removal has always been there. Ever since I was, hit puberty.” (GS44)

Six men (20%) remarked that they were happy that they naturally had little body hair.

“I think it just looks better. I wouldn't want a big hairy bush on my chest, or back, or on my ass.” (SC24)

“Yeah, well, I’m not, I’m not hairy. Thank god.” (GH25)

Only one man (3%) indicated that he wished he had more chest hair.

Finally, six of the men (20%) specifically indicated that they liked having body hair, often citing it as a sign of masculinity.

“Like I'm not shaving the hair on my legs, and or my chest. I'm not ripping them out like all these body men do, and they don't have a hair on their bodies, cause that's the look that Hollywood wants and whatever. Um, and um, I just, I don't buy into all that. I think hair is beautiful.” (SC52)

“When you grow up, when you’re a teenager you probably tend to worry a little bit if you are going to have hair on your chest for example. And that wasn’t a problem for me.” (SH39)

“I think so, I think it looks more manly. Um, yeah, no, I would never wax my chest.” (SS35)

The removal of body hair tended to be more of a concern among the gay men than the straight men (11 gay (79%), 3 straight (19%)). Furthermore, all six men who indicated that they were happy with their body hair were straight. The South Asian men also tended to be more likely than their counterparts to remove body hair (5 South Asian (71%), 4 Caucasian (33%), 3 East Asian (38%)). Finally, the younger men appeared more likely than the older men to report naturally having little body hair (7 younger (47%), 2 older (13%)).

2.3.2.7 Facial Characteristics

Twelve of the men (40%) noted that certain facial characteristics were, or are, sources of concern regarding their body image. More specifically, eight of the men (27%) were/are concerned about their teeth, two men (7%) are concerned about the bags under their eyes, one man was concerned about the narrowness of his face, one man (3%) is concerned about not having a very defined jaw line, one man (3%) is concerned about the size of his nose, one man is concerned about his acne scars, and one Asian man (3%) expressed concerns about his facial features not meeting Caucasian ideal standards. Three of the men had undergone surgical procedures to fix the aspects of their face they did not like (i.e., teeth, narrow face).

“Teeth are an important part of the body image to me. I’ve spent a lot of money trying to fix my teeth.” (SC52)

“I’ve always been self-conscious about having a narrow face and so I had some kind of surgery, oral surgery they call it where I had um, something, done here, up around here [pointing to cheekbone area] to make my face look more full.” (GC36)

The gay men appeared slightly more likely than the straight men to be concerned about their teeth (6 gay (43%), 2 straight (13%)).

2.3.2.7 Penis Size

Eleven of the men (37%) remarked that penis size was important to their body image, with five of the men (17%) indicating that they wished they had a larger penis. The other six men generally indicated that they were satisfied with their current size and commented that given there was nothing they could do about the size of their penis anyway, there was no point in being concerned about it. The men commented that the ideal penis size was generally around average-sized to slightly above average. Anything smaller or bigger than that was considered undesirable.

“I think deep down all guys are self-conscious about whether it, its big enough or too small.” (SS35)

“Like I guess it is important to me as well, but like there's really nothing you can do even if you have say like a small penis right. So, to ah, to say at least you are, like, it concerns me, I'd rather just not think about it right.” (SE20)

The East Asian men tended to be the most concerned about their penis size, followed by the South Asian men and then the Caucasian men (5 East Asian (63%), 3 South Asian (43%), 1 Caucasian (8%)). Penis size also appeared to be more of a concern for younger men than for older men (8 younger (53%), 2 older (13%)).

2.3.2.9 Height

Eight of the men (27%) reported that they wished they were taller - anywhere from a couple of inches to over a foot taller.

“It's no secret that I'd, I'd love to be taller.” (SE36)

“When I look at TV stars or actors on, yeah, and they all look, like have, at least an average height, close to 6 feet. So then I don't think I can match that. So, yeah. It makes me feel more and more inferior compared to the standard male type of character.” (SE19)

The East Asian men, compared to their counterparts, appeared more likely to want to be taller (4 East Asian (50%), 1 South Asian (13%), 3 Caucasian (25%)).

2.3.2.10 Tanned Skin

Five of the men (17%) commented that they suntan, either outdoors or at a tanning salon, for the purposes of darkening their skin.

“I feel better when I look at myself, my body image is much better when I have a nice brown tan. I feel better about myself. To me, it, I look more beautiful, more attractive, when the tanned face goes away, don't, I just don't seem to have that glow.” (SC52)

2.3.2.11 Posture

Four of the men (13%) commented that having good posture and standing tall was

important to their body image.

“Posture, posture’s important for me, I always, you know, whenever I’m meeting someone of importance I always try to stand up right and square my shoulders and appear larger.” (SC26)

2.3.2.12 Complexion

Three of the men (10%) noted that having a clear complexion was important to their body image.

“I guess I’m pretty fortunate that I have relatively clear skin.” (GE27)

2.3.3 Likes

When asked about what the men liked the most about their body, twenty-seven of the thirty men (90%) were able to name at least one body part or aspect that they liked. These body areas were classified into six categories: muscularity, body fat, facial characteristics, functionality, height, and other. Because of the small sample sizes within each of these categories, group trends were not examined.

2.3.3.1 Muscularity

For ten of the men (33%), their favourite body part was one that they considered to be attractive because it was muscular. Four of these men (40%) liked the muscular definition of their legs, three (30%) liked the definition of their chest, one (10%) liked the definition of his arms, one (10%) liked the definition of his stomach, and one (10%) liked his overall level of body definition.

“I think I have nice legs, from running and cycling.” (GC45)

“I have very defined muscle tone in my body.” (SC24)

2.3.3.2 Body Fat

Seven of the men (23%) commented that their favourite aspect of their body had to do

with its level of body fat. While one of these men (14%) remarked that he liked his overweight size because of the safety it provided him, the remaining six men (86%) noted that it was the leanness of their body that they favoured because of its appearance and its association with a healthy body. In particular, five of these men (71%) liked their current level of leanness and/or the ability of their body to remain lean, and one (14%) man liked the leanness of his face.

“I like the fact that I have always been fairly svelte or slim.” (SE36)

“Ah, well I like my face because, despite the fact that I am overweight, most people see me, see my face, they think that I am not overweight. It's, they don't, I guess the fat doesn't show on my face.” (SE20)

2.3.3.3 Facial Characteristics

Seven of the men (23%) indicated that the aspect of their body that they liked the most, and that they thought was attractive, was a facial characteristic. More specifically, three of these men (43%) like the colour and clarity of their complexion, two (29%) liked their eyes, one man (14%) liked his smile, one man (14%) liked his ears, and one man (14%) liked the ability of his face to be expressive.

“I'm, more grateful and blessed that I have like a, a good skin complexion and stuff like that. Um, and I look younger than I am. That's something that you can't get from working out.” (SS30)

“I love my eyes. I think they're really warm and beautiful.” (SC52)

2.3.3.4 Functionality

Five of the men (17%) noted that what they liked best about their body was the ability of their body to do the things they wanted it to. Although functionality was specifically cited as their favourite aspect of their bodies, it cannot be ignored that the ability of the body to engage in activities is highly related to the athleticism of the body, and I would consider all

of these men to be moderately to highly athletic.

Three of these men (60%) indicated that it was their overall level of functionality that they liked best and one man each (20%) liked the functionality of their hands or knees.

“That it does what I want it to do, like running for three hours if I want to. Um, that’s pretty much it. The shape, the functionality.” (SH39)

“My hands... Yeah. I’d be nowhere without them.” (SC26)

2.3.3.5 Height

Four men (13%) commented that they liked that they were tall because it was more attractive, people gave them more respect, and it gave them advantages in sports.

“My height. Uh, I see, it’s a mix, I’m good both at sports. People judge you differently a little bit when you’re taller... I find I get a little bit more respect.” (SS25)

2.3.3.6 Other

One man each indicated that what he liked most about his body was that he had little body hair, had small feet, or had a mind/body interconnectedness. For the former two, the men considered these features to be more attractive, and, for the latter, this feature allowed the man to remain balanced and calm.

“Ah the no hair hassle. Just because its, I go, later when I met people with body hair I noticed how much trouble it is and I just thank god that I don't have it, that kind of unnecessary trouble. So that's the part I like the best.” (GE27)

“Ah, (P) I think its a mental attitude. More and more calm. More relaxed. I meditate on a regular basis. More balanced, sort of. My body is in tune with me.” (GS55)

2.3.4 Dislikes

When asked about what the men disliked the most about their body, 26 of the 30 men (87%) were able to name one or more aspects that they did not like about their body. The men were varied in their responses, but their dislikes were classified into eight categories: body fat, facial characteristics, skin, hair, muscularity, height, functionality, and

other. Because of the small sample sizes within each of these categories, group trends were not examined.

2.3.4.1 Body Fat

Ten of the men (33%) indicated that they currently did not like the amount of body fat they had. This was mainly for appearance reasons; however, health considerations were also cited by some of the men. For seven of the men (23%), they particularly disliked the extra weight that they carried around their midsection. Two of the men (7%) did not like the extra weight they carried on their body in general. One man (3%) disliked the extra weight he carried in his chest (“man boobs”). Finally, one man (3%) disliked the fact that he was too skinny.

“The least would probably be the abdomen. Just, it doesn't seem to want to tone up. I don't have much fat left, but its all there.” (GC23)

“I think just the weight that I'm carrying around in my midsection. And ah, just that its, the fact that its, well I'd say its unappealing, that's the first thing that comes into my brain. But I just know that its not, its not conducive to being in good health. (GS39)

2.3.4.2 Facial Characteristics

Seven of the men (23%) commented that they did not like particular aspects of their face because they did not consider them to be attractive. More specifically, two men (7%) did not like their teeth, two men (7%) did not like their eyes, one man (3%) thought his mouth was too big, one man (3%) thought his nose was too big, one man (3%), thought his ears were too big, and one man (3%) disliked his facial acne scarring.

“I did have an issue with my teeth for awhile. Not that they were bad, but they just weren't perfect. So I had them fixed.” (GS44)

“Because, other people may think when I was young, people think that I have too big mouth. They always laugh at me.” (GE38)

2.3.4.3 Skin

Four of the men (13%) commented that they disliked the appearance of their skin. In particular, two men (7%) did not like the appearance of scars they had on their legs, one man (3%) did not like aging spots that had begun to appear, and one man (3%) did not like having dry and itchy skin.

“I also have a scar on my right leg, which I don’t wear shorts because of it. I mean a lot of people tell me its not very noticeable or, its not a big deal, but I see it. I notice it.” (GC36)

“Well in my, as I’m in, approaching my midlife now I’ve started to get some little red spots on my skin, which are very disconcerting to me. I’ve been told they’re just normal aging. Um, it does bother me.” (SC52)

2.3.4.4 Hair

Four of the men (13%) indicated that they disliked aspects of their head hair or body hair. Two of the men (7%) did not like the appearance of their head hair and found it difficult to manage. One man (3%) did not like the appearance of hair he had on his buttocks. Finally, one man (3%) did not like the fact that he had facial hair because he found it to be too itchy.

“Mmm, I don’t really like my hair (P) it’s curly, and I, I think it’s pretty hard to organize it, and to apply hair gel, and like my friend their hair are all straight so it, it looks cool, it’s just, I, I want to have straight hair.” (SE19)

2.3.4.5 Muscularity

Three men (10%) noted that they disliked aspects of their body because they were not muscular enough. More specifically, two men (7%) disliked their overall level of muscularity and one man (3%) wanted to have a stronger, thicker neck.

“No matter how hard I work out I can’t (L) create the perfect build. Like I can work out hard and I’ll just, my body builder, my muscles are working hard but I just won’t get the definition.” (SS25)

2.3.4.6 Height

Three men (10%) disliked their height and wished they were taller.

“I wish I were taller. I’m kind of below your average height for men.” (SC22)

2.3.4.7 Functionality

Two men (7%) made comments that they disliked their backs because they were recovering from an injury or had a spinal deformation that limited their full range of motion.

2.3.4.8 Other

One man each indicated that they disliked the shape of his ribs, his aging body, or his smaller penis size.

2.3.5 Unattractive Physiques

Over three quarters of the men (24; 80%) described an unattractive physique as one that was overweight.

“Ah, (P) well I think if you're fat, like you know you'll get used to it, but you also have to get used to the fact that a lot of people find it grotesque, like they don't just find it like unattractive, they find it gross.” (GF32)

“Um, obese. So someone whose gut is totally falling over their belt.” (GC45)

Other characteristics that were commonly used to describe an unattractive physique were physiques that were too muscular (17 men; 57%), unkempt or unclean (11 men; 37%), too skinny (9 men; 30%), overly hairy (6 men; 20%), too feminine (5 men; 17%), going bald (4 men; 13%), or had ungroomed facial hair (3 men; 10%).

“I mean its part of appearance, if you can't maintain your personal hygiene well, no matter how attractive you are, you know, you have beautiful eyes, your hair, it turns me off.” (SE50)

“I think that a guy that's got too much body hair is unattractive to me. Ah, when I mean too much I mean when its all over his back, or all over his, maybe his chest, or too much in certain areas.” (GC36)

“But in terms of the gay community, like bald men are generally I would say frowned upon, like ah, cause I, cause, cause very few gay men would find a bald man attractive.” (GF32)

In looking at emerging trends among the groups, both the South Asian men and the older men, compared to their counterparts, appeared less likely to describe an unattractive physique as overweight (4 South Asian (57%), 11 Caucasian (92%), 7 East Asian (88%); 10 older (67%), 14 younger (93%). The East Asian men, compared to their counterparts, also appeared more likely to describe an overly skinny physique as unattractive (5 East Asian (63%), 3 Caucasian (25%), 0 South Asian (0%)).

2.4 Discussion

There were two overarching goals of this study. One goal was to identify the components of the male body that are important to men’s body image, in terms of both ideals and desires. Previous research (e.g., McCabe & Ricciardelli, 2004; Ridgeway & Tylka, 2005; Martins et al., 2008a); Tiggemann et al., 2008) has clearly documented muscularity and body fat, and to a lesser extent, height, as important components of men’s body image; the present study found this as well. However, as I anticipated in this study, other aspects, such as youthfulness, body hair, head hair, facial hair, penis size, facial characteristics, tanned skin, complexion, posture, and ethnicity are also important to consider. Recent research (Martins et al., 2008a; Tiggemann et al., 2008), has also identified penis size, head hair and body hair as additional elements that should be explored when examining male body image.

The second goal of this study was to explore, at least at a preliminary level, whether these components were consistently identified across sexual orientation, age, and ethnicity. Overall, there was a high degree of similarity among the men in this study, as a whole, and within particular sexual orientation, age, or ethnic groupings, as to what they desired and

found ideal and attractive. However, some differences also appeared to exist in whether or not a specific area of the body was mentioned as being an important component of an ideal or desired physique, or more commonly, whether certain components were more salient for one group than they were for other groups. In this next section, I will discuss each of the nine major components (i.e., muscularity, body fat, youthfulness, head hair, body hair, facial hair, height, penis size, facial characteristics) individually, followed by a brief discussion of the four minor components (tanned skin, complexion, posture, ethnicity). The relationship of these components to masculinity theory will then be discussed. This section will conclude with an overall summary of these findings, as well as a presentation of the strengths, limitations, and implications of this research.

2.4.1 Muscularity

Confirming previous research on male body image, a physique that was muscular was identified as one of the most important components of male body image (e.g., Cafri & Thompson, 2004; Tiggemann et al., 2008). A muscular physique was the one component that was identified as ideal by all of the men, regardless of age, ethnicity, or sexual orientation. Muscularity was also the most commonly mentioned area of concern regarding the men's own bodies.

There was consensus among the men that the ideal physique should have well-defined muscularity, but should not be overly muscular. This idealization of an athletic-looking ideal, as opposed to a hyper-mesomorphic ideal has been reported in the literature (Fawcner & McMurray, 2002; Grogan & Richards, 2002; Labre, 2005; Ridgeway & Tylka, 2005). Furthermore, similar to the men in Grogan and Richards' (2002) study, the men in this study thought that an overly muscular physique (e.g., body builder) was considered unattractive

and reflected an unacceptable obsession with the body because of the time commitment involved in achieving such a body type.

The men's dialogue about an ideal muscular physique tended to center on the upper body, with particular emphasis on the stomach and pectorals. Again, this is consistent with past research which has shown that the upper body, particularly the stomach, pectorals, and arms, is more focused on and of concern to men (Franzoi & Herzog, 1987; Hatoum & Belle, 2004; Hoyt & Kogan, 2001; Labre, 2005; McCreary, Karvinen, & Davis, 2006; Ridgway & Tylka, 2005). However, several men also mentioned the importance of looking proportional, such that there was not a great imbalance between the muscularity of their upper body and their lower body.

There were two group trends that emerged regarding muscularity. One, the younger men in this study appeared more likely than the older men to be concerned about muscularity and to idealize and desire visible definition. For instance, the younger men were more likely to specifically talk about defined pectorals or six-pack abdominal muscles, while the older men were more likely to talk about muscularity in more general terms, such as maintaining an overall toned appearance. These results are consistent with the review of male body image by McCabe and Ricciardelli (2004), which concluded that older men are less focused on increasing muscle mass and are more concerned with both losing weight and increasing muscle tone. Lynch and Zellner (1999) also found that their sample of undergraduate men desired greater muscularity than a sample of men aged 30 to 60 years. Taken together, these findings suggest that, while muscularity is important to both the younger and older groups of men, these groups may differ in the amount of muscularity they desire, with younger men desiring to be more muscular. Furthermore, younger and older men may also differ in their

desire for the visibility of the muscle. As men typically gain weight as they age (Strandberg, Strandberg, Salomaa, Pitkälä, & Miettinen, 2003; Williams & Wood, 2006), having visible definition of the muscles is harder to achieve because a low level of body fat is required in order to see the underlying muscles. Thus, having “six pack” abdominal muscles, for instance, may become less of a goal for older men.

The second trend that emerged in the present study was that the straight men appeared to be more concerned about upper body muscularity than the gay men. This is surprising given that greater emphasis is often placed on physical attractiveness in the gay community (Morrison, Morrison, & Sager, 2004; Siever, 1994) and that gay men have been found to have a higher drive for muscularity in other studies (Kaminski, Chapman, Haynes, & Own, 2005; Yelland & Tiggemann, 2003). One possible explanation of these findings could be that the gay men in this sample tended to be slightly older than the straight men (gay: $M = 37.64$ $SD = 10.95$; straight: $M = 32.06$, $SD = 10.69$) and, as stated above, older men may be less inclined to be focused on attaining visible definition. Another explanation could be that, from my visual inspection, the gay men in this sample tended to appear, on average, more athletic-looking than the straight men. Thus, the straight men may have been more concerned about upper body muscularity because they are still trying to achieve what the gay men have already achieved.

So why do men want to be muscular? Morrison, Morrison, and Hopkins (2003) sought to answer this question by directly asking male undergraduate students. They found that men wanted to be muscular primarily for social and health benefits. Social benefits included increasing one’s overall attractiveness for self and for potential partners, muscles acting as a proxy for status and success, and playing sports. Health benefits included

improving both mental (i.e., self-confidence and mental well-being) and physical health (overall health, strength, stamina). To a much lesser degree, men also desired to be muscular as a response to sociocultural pressures or as a way of affirming one's masculinity.

Similarly, comments made by the men in the present study suggested that they too idealize and desire to be muscular because they consider it to be more attractive, healthier and more masculine. However, while only 5% of the men in the Morrison et al. (2003) study cited wanting to be muscular to be masculine, the link between muscularity and masculinity appeared to be much stronger in the present sample of men. This may only be a factor of the different methodology used, but is important to note. Similar to Drummond (2005), the men in this study associated muscularity with strength, often citing that they wanted to increase their muscularity because they wanted to be stronger. Both muscularity and strength have been identified in the literature as symbols of masculinity (Drummond, 2002, 2005; Mishkind et al., 1986; Pope et al., 2000; Wienke, 1998).

2.4.2 Body Fat

A low level of body fat has also been consistently documented in the literature as an important component of men's body image (e.g., Labre, 2005; Olivardia, Pope, Borowiecki, & Cohane, 2004; Ridgeway & Tylka, 2005). In support of this, a physique that was low in body fat, particularly in the waist, was mentioned by nearly all of the men as a component of an ideal physique and an area of concern for themselves. Although body fat is closely linked to muscularity in that low body fat is required in order for the muscles to be visible, it is also a concern for men above and beyond muscularity.

Having a lean physique was important to these men because they considered it both attractive and healthy. For instance, many of the men made comments on the visual appeal

and health benefits (e.g., better cardiovascular health) of maintaining a healthy weight. However, it was clear that there was a balance between looking lean and looking too skinny. For these men, looking too skinny was considered unattractive, less masculine, and, particularly for the gay men, indicative of potential health concerns. As mentioned previously, masculinity is closely tied with strength, and someone that appeared to be too skinny was perceived to be weak.

Although previous research tends to talk about a lean body in general, the results of the present study suggest that it is the stomach in particular that is of most concern to men when talking about their weight and levels of body fat. Nearly all of the men who wanted to lose weight were specifically concerned with their stomachs. Furthermore, several men were concerned that carrying extra weight in their stomach made them look disproportional compared to the rest of their body. While having six-pack abdominal muscles was considered ideal by the men, there was the realization that it would be nearly impossible for them to obtain definition at that level. Thus, their concern for themselves was more directed at having a slim waist line that did not have to be defined, as long as it was flat. Other researchers (Hatoum & Belle, 2004; Ridgeway & Tylka, 2005) have also found that the abdominal area ranks as more concerning to men in comparison to other areas of the body.

Consistent with previous research (e.g., Hatoum & Belle, 2004; Silberstein et al., 1989; Vartanian et al., 2001), the men in the present study were divided into those who wanted to lose weight and those who wanted to gain weight. However, inconsistent with these previous studies, which suggest men are roughly evenly split between wanting to gain weight and wanting to lose weight, there was a much greater percentage of men in this study who wanted to lose weight; approximately three to one. Given that the present study is based

on a sample that is, on average, older than is usually studied, this finding may not be surprising. Many of the older men made comments on noticeable weight gain or more difficulty in maintaining their weight as they entered their 30s, which is consistent with research that shows men tend to gain weight as they age (Strandberg et al., 2003; Williams & Wood, 2006). This suggests that weight loss may be a more common desire among older men than among younger men.

There were two group trends that emerged regarding body fat. The first group trend was that the Caucasian men were far less likely than the South Asian and East Asian men to describe an ideal physique as specifically having a slim waist. No previous research appears to have discussed ethnic differences in the idealization of a slim waist. Thus, these results should be considered exploratory and warrant further investigation. The older men were also less likely than the younger men to mention a slim waist in their descriptions of an ideal physique. This apparent age difference could also be reflective of their knowledge that they, or men in general, tend to gain weight as they age, making them more aware that a slim waist is even less achievable.

The second group trend that emerged was that although at least half of the Caucasian, East Asian, and South Asian men were concerned about losing belly fat, this appeared to be a particular concern for the South Asian men, with all but one of these men commenting that they would like to lose weight around their waist. Research by Chandalia and colleagues (2007) and Lear and colleagues (2007) have shown that South Asian men, compared to Chinese and European men, are more likely to have a higher amount of body fat, even after controlling for BMI. Furthermore, they are also more likely to retain this extra body fat in the

torso area. Therefore, South Asian men would be less likely to have a slim stomach, which may explain why they are more concerned about attaining one.

Overall, based on the frequency and type of comments made by the men, the results of the present study indicate that both muscularity and body fat are the two most important components of men's body image. These findings are consistent with previous research (e.g., Martins et al., 2008a; Tiggemann et al., 2008). However, while it is arguable that muscularity and body fat may be nearly equally important for younger men, this study suggests that body fat may become a higher concern than muscularity for older men. Further research is needed to more fully explore the relationship between age and both muscularity and weight.

2.4.3 Youthfulness

A youthful appearance was identified as another important component of men's body image; however, this component differs slightly from the other areas of the body identified in this study. On the one hand, it was discussed by the men as distinct characteristic that relates to the aging of the body. On the other hand, it was also discussed as an outcome of achieving or maintaining other ideal characteristics. As discussed by Schouten (1991) and Firat (1993), a youthful appearance is based on a cultural idealization of a body that has adhered to a strict set of demands for the retention of youthfulness. For instance, many of the men talked in a general sense about wanting to look younger or maintain their youthful appearance; however, when this was further explored, looking youthful was consistently linked with being muscular, slim, and having a full head of non-grey hair. To a lesser degree, it was also linked to body hair in that the men believed more body hair is accumulated and less cared about as one ages.

The conception of a youthful appearance as one that is slim and fit may explain why there is very little research in the body image field that directly documents or discusses youthfulness as a component of men's body image. Instead, youthfulness appears to be subsumed within the constructs of muscularity and body fat. For example, Grogan (1999) found that, on average, men and women thought that they would look younger if they became more slender. Gupta and Schork (1993) have also noted that youthfulness is achieved by being slim and toned. Thus, it appears that beauty and youth are often seen as equivalent, with the former being the dominant construct focused on in the literature. However, I believe that it is necessary to separate these constructs and study them both individually, as well as together.

One noteworthy fact about the men's conceptions of youthfulness was the lack of discussion around wrinkles. Only three of the 30 men identified any concerns about having or getting wrinkles. This suggests that, among these men, youthfulness is less about the rejuvenation of the skin and more about the maintenance of a youthful appearance by weight loss, toning of the body, and keeping a full head of hair. This finding is consistent with research by Gupta and Schork (1993) who found that having youthful-looking skin (i.e., no wrinkles) was not statistically significantly related to body dissatisfaction for men, while it was related to body dissatisfaction for women. It would be beneficial to further explore this idea as to whether there may be a difference in the meaning and significance of wrinkles between men and women.

Although there were no apparent differences among the groups in terms of the idealization of a youthful appearance, the older men, compared to the younger men, tended to be more likely to indicate that looking youthful was important to their own body image. This

is not surprising given that these men are older and thus further away from, or have a harder time achieving, the youthful ideal.

2.4.4 Head Hair

Head hair was another major component of men's body image that was identified in this study, and was also the most commonly discussed specific indicator of a youthful appearance. Consistent with previous research on male pattern baldness (Butler, Pryor, & Grieder, 1998; Cash, 1989, 1990, 2001; Martins et al., 2008a; Tiggeman et al., 2008), the men in this study idealized and desired a full head of hair. As verified through the men's comments, having a full head of hair was seen as more attractive and more youthful. Not surprisingly, there were no men who wanted to go bald, but there were differences among the men in their perceived likelihood of going bald and in how they would deal with their baldness. For instance, some men were quite confident that they would not go bald, some discussed the option of hair plugs, others commented that they would do nothing, and several indicated that they would completely shave their head if they began to lose their hair. Cash (2001) has noted that this latter method is paradoxically employed by some men as a way to hide the fact that one is balding.

There were many differences that appeared to emerge among the groups regarding hair loss. One, the South Asian men appeared less likely than their counterparts to describe an ideal physique as having a full head of hair. Two, the East Asian men, compared to their counterparts, tended to express less concern about losing their hair. Three, the Caucasian men, compared to their counterparts, tended to perceive themselves as likely to go bald and thus also expressed the most concern about losing their hair. Four, the South Asian men, compared to their counterparts, appeared more likely to want to shave their head if they

started losing their hair. There appears to be no previous research that has explained ethnic differences in body image concerns related to balding. Thus, while these differences are noteworthy, they should be considered exploratory and need to be replicated.

It is only recently that head hair, specifically in terms of having a full head of hair, has been identified as a factor that should be considered when examining men's body image (Martins et al., 2008a; Tiggemann et al., 2008). While this study also recommends including head hair in the assessment of men's body image, the construct of head hair should be broadened to include not only concerns about balding, but also concerns about grey hair, and possibly even hairstyle.

To my knowledge, there is no previous research that has examined men's body image and grey hair. The results of the present study suggest that it is considered ideal to not have grey hair, primarily because of the association of grey hair with aging. However, it is important to note that some of the men did comment that having grey hair did not detract from one's attractiveness and, in some cases, could even enhance one's image, for instance, by making them look more distinguished or experienced. In regards to their own preferences for grey hair, the men held mixed opinions. They were roughly divided into thirds as to those who did not want, or were unhappy with, grey hair, those who were fine with having, or with getting, grey hair, and those who had given no thought as to what they would do if (or when) they got grey hair. The only difference that appeared to emerge among the groups was that the straight men and Caucasian men, compared to their counterparts, appeared more likely to describe an ideal physique as specifically not having any grey hair. Again, as there appears to be no previous research in this area, these findings should be taken as exploratory.

Finally, hairstyle was also discussed as an important component of head hair, more in

regards to individual preferences than in the description of an ideal physique. Based on the men's comments, hairstyle was considered important to their sense of self because it allowed them to present a particular image that they felt reflected their personality. Furthermore, they had relatively quick control over creating, or changing, this image. For instance, one could cut his hair short if he wanted to present a clean-cut image, or one could spike his hair if he wanted to go for a punk look. Overall, there appeared to be a trend for the gay men to be more concerned about hairstyle than the straight men. It is possible that the greater pressure in the gay culture to be concerned about physical appearance (Siever, 1994) could result in an elevation of gay men's concerns over their hairstyle.

2.4.5 Penis Size

Another important component of men's body image identified in this study related to the penis; particularly in regards to size, with a large penis being seen as ideal. In a detailed examination of the aspects of the penis that are of concern to men, Morrison, Bearden, Ellis, and Harriman (2005) found that it was penile length, girth and appearance, primarily in the flaccid state, that men were most dissatisfied with. Consistent with this, the men's discussions of the penis in the present study did tap into all three of these areas, but focused mostly on the combination of length and girth, discussed as penis size. Interestingly, only one participant made the distinction between an erect and a non-erect penis in his comments. This may reflect a hesitation among the men to disclose such detailed information to a young female interviewer. In a large scale quantitative study of men's views of the penis, it was found that 45% of the men were unhappy with the size of their penis and wished it were larger (Lever, Frederick, & Peplau, 2006). In the present study, only 17% of the men indicated that they wanted a larger penis. While this may reflect true preferences among the

men in this sample, it may also reflect discomfort among some of the men in disclosing such information directly to another person instead of responding to an anonymous survey.

While only a small proportion of the men indicated that they desired a larger penis, a greater proportion, but still only a third of the men, indicated that penis size was important to their own body image. There were two directions that the men's comments took in regards to their concern, or lack of concern, over penis size. One, the size of the penis was largely considered uncontrollable, short of undergoing penile surgery, and thus many of the men indicated that there was no point in worrying over something they could do nothing about. The second direction that the men's remarks took related to the association between the penis and masculinity. Several men noted that having a large penis was considered by society as a sign of manliness and virility; a relationship this is often emphasized by the media. Within a culture that bombards men with messages that equate a large penis size with masculinity (Bordo, 1999; Kilmartin, 2000; Lehman, 1993) and often refers to the penis as a man's "manhood" (Kilmartin, 2000), it should not be surprising that the penis is such a focal point for men's body image. However, aside from the present study, only two other studies (Martins et al., 2008a; Tiggemann et al., 2008), both recent, have recognized penis size as a component that should be considered when assessing men's overall body image.

There were two group trends that emerged regarding penis size. One, the younger men appeared more likely than the older men to indicate that a large penis was an important component of an ideal physique and that penis size was important to their own body image. Relating penis size to concerns regarding masculinity, it would seem plausible that, as men age, their achievements and life experiences would reduce their concerns for masculinity and thus penis size. However, the available research does not support this. Lever and colleagues

(2006) found that dissatisfaction with penis size only slightly declines as men age and concluded that the symbolism of having a large penis remains important across the life span. More research is needed to more fully determine the relationship between concern about penis size and age. Two, the East Asian men appeared to be the most concerned about their penis size and the Caucasian men the least concerned. Although there appears to be no academic research examining ethnic differences in penis size, the New Urban Male.Com website reported that Caucasian men, on average, have the largest penile length, followed by Indian men, followed by East Asian men who have the smallest average penile length (“Talk about Size Again,” n.d.). Thus, if East Asian men do indeed tend to have a smaller penis, it would explain why they appear to be the most concerned; and why Caucasian men, with the largest average penis size, are the least concerned.

2.4.6 Height

The men in this study identified height as another important component of men’s body image, with approximately six feet considered to be the ideal height. The men’s comments suggested that height was important because taller men were generally considered to be more attractive, masculine, and respected. Other research has also indicated that height is an important component of men’s body image (Martins et al., 2008a; Ridgeway & Tylka, 2005; Tiggemann et al., 2008; Tylka , Bergeron, & Schwartz, 2005), and a newly developed scale by Tylka and colleagues (2005) is the first, and currently only, scale that includes height, in addition to muscularity and body fat, in the assessment of men’s body attitudes.

While the ideal physique was identified as being tall, this characteristic was mentioned by less than half of the men. Furthermore, it is noteworthy to mention that, while several men acknowledged that the current societal preference is for men to be tall, they

argued that a man could have a very attractive physique whether he is short or tall. Given the lack of control men have over their height (aside from wearing shoes with extra lift), it is possible that some men adapt their ideals to match with something that is more congruent with what they could potentially achieve (i.e., focus more on body fat and muscularity because they have more control over this than height). Comments made by the men support this notion, such as, for example, one of the men specifically indicating that the men he idealizes are those who are of similar height to him. Research by Martins et al. (2008a) and Tiggeman et al. (2008) found that, for both gay and straight men, height, compared to muscularity, weight, head hair, penis size, and body hair, evinced the least amount of worry among the men.

The only group trend that appeared to emerge regarding height was that the East Asian men appeared more likely than their counterparts to both indicate that the ideal physique was tall, as well as desire to be taller themselves. One study has shown that Asian men tend to be shorter and more dissatisfied with their height than Caucasian men (Kawamura, 2001). The present study is consistent with this finding and may explain why more East Asian men appear to want to be taller and why height may be a more salient feature for them.

2.4.7 Body Hair

Body hair was also mentioned by the men in this study as an important component of men's body image. While having little to no body hair was generally considered the ideal, a small proportion of the men described the ideal physique as having body hair, particularly on the chest. Overall, the participants themselves were nearly evenly split between those who removed body hair and those who did not. Of those who did not remove body hair, half of

these men reported naturally having little body hair, a trait they were quite happy with, and thus they had no need for hair removal. Traditionally, body hair has been symbolic of masculinity (Basow & Braman, 1998; Hope, 1982; Tiggemann & Kenyon, 1998) and this relationship may explain why some men still prefer having body hair. In support of this, reasons of masculinity were given by some of the men in the present study as to why they liked their body hair.

Current trends in the media have shifted to the use of bare-chested men in advertising (Pope, Olivarida, Borowiecki, & Cohane, 2001), making the hairless body more visible and increasing its desirability (Luciano, 2001). One explanation for the current hairless trend, noted by Boroughs, Cafri, and Thompson (2005), is the cultural phenomenon known as metrosexual. The term metrosexual is defined by Boroughs et al. (2005) as “a fashion-conscious urban heterosexual man with a strong aesthetic sense who spends a great deal of time and money on his appearance and lifestyle” (p. 640). Another possible explanation could be the increased marketing of the hairless ideal by companies looking to expand into an untapped market segment (Boroughs et al., 2005).

In a study looking at body depilation (removal of hair below the neck) practices among men, Boroughs et al. (2005) found that over 60% of their sample engaged in some sort of body depilation. The primary areas for body depilation were reported to be the chest, groin, abdomen, legs, arms, and hands (Boroughs et al., 2005; Boroughs & Thompson, 2002). The most commonly cited reasons for body hair removal included attractiveness, cleanliness, and emphasis of muscular definition. The results of the present study are consistent with these findings in that 47% of the current sample reported engaging in body depilation. If you counted the men who naturally had little body hair, it would bring the total

up to 67% of the sample desiring little body hair. Additionally, the chest, groin, arms, and legs were commonly mentioned as areas of hair removal, and attractiveness, cleanliness and muscularity were mentioned as reasons for hair removal. One way in which the current study differed from these two previous studies was in the greater concern expressed over back hair by the men in the current study. In discussing their own body image concerns, back hair was the second most commonly mentioned area of depilation (after the chest), with over half of the men who removed body hair reporting removing hair from their back. In the Borough et al. studies (2002, 2005), the removal of back hair was near the bottom of the list of body depilation sites, with approximately 12% to 25% of the men in their samples reporting removing body hair from the back. Current research by Tiggemann et al. (2008) and Martins et al. (2008a, 2008b) focused exclusively on back or back and pubic hair in their assessments of body hair concerns, supporting the emphasis on concern about back hair, as found in the current study, yet also limiting themselves in their failure to include other areas of the body where body hair has been identified as a concern (e.g., chest).

The hairless, or nearly hairless, ideal appeared to be more commonly mentioned and desired by the gay men than the straight men. Given that the gay community tends to be more aesthetically focused (Siever, 1994), this finding is not surprising. In a study looking at body depilation practices among gay and straight men, Martins et al. (2008b) found that gay men were more likely than straight men to remove hair from their back and pubic areas. Furthermore, in two related studies, Tiggemann et al. (2008) and Martins et al. (2008a) found that gay men ranked body hair higher in importance than straight men (fourth versus sixth place on a list of six characteristics); however, both groups of men ranked it the same for worry – fourth place, after weight, muscularity, and head hair. Thus, while gay men may be

slightly more likely to engage in body hair removal practices, these findings suggest that body hair is still also an important concern for straight men.

The South Asian men in this sample were also more likely than their counterparts to remove body hair. Biologically speaking, there are variations in the amount and patterns of hair among different ethnic groups. Men of Middle Eastern, South Asian, West European, North American, South American, or general Mediterranean descent naturally tend to have more body hair, and in some cases this hair is also darker. Men of East Asian, and Northern European descent tend to have very little body hair with some having virtually none (Androgenic hair, 2009). Thus, for South Asian men, who naturally tend to have thicker and darker hair, this would put them farther from the hairless ideal and may create more concern.

2.4.8 Facial Characteristics

Facial characteristics often appear to be ignored in the male body image literature; however, the men in this study indicated that facial characteristics are an important aspect of men's body image. The few studies that have looked at the face in conjunction with the body have found that the face does have an important role in contributing to feelings of attractiveness (Franzoi & Herzog, 1987; Hatoum & Belle, 2004; Wade, 2000; Wade & Cooper, 1999). Researchers (e.g., Grogan, 2007) have noted that there is no clear definition of body image, and thus, I would argue that the face should be examined along with the body to gather a complete picture of one's perception of their body image.

The areas of the face that were most commonly discussed by the men as being important, both in terms of what is considered ideal and what is of concern to them, included the teeth, eyes, nose, smile, and facial structure. For the most part, the men were unable to describe these features in their ideal form and instead remarked generally that these features

were important or needed to be attractive. Commonly, the men talked about the face being the first thing they see when meeting someone and subsequently using the face to make judgements about a person's overall attractiveness and personality. Interestingly, over one quarter of the men expressed concern regarding the colour and/or spacing of their teeth, wanting whiter teeth and an evenly spaced smile. This focus on the teeth suggests that the teeth may have a large influence on overall perceptions of facial attractiveness.

The only trend that appeared to emerge among the groups was that the gay men, compared to the straight men, appeared to be more likely to discuss facial features when describing an ideal physique and also appeared to be more concerned about their teeth. As mentioned previously, because of the greater importance of appearance in gay culture (Siever, 1994), and the visibility of the face when first meeting people, it may make the importance of having an attractive smile and face more important and more salient to gay men.

2.4.9 Facial Hair

Facial hair is another area that has received little attention in the body image literature. However, the men in the current study identified facial hair as an important aspect of men's body image. Arguably, facial hair could be considered as an aspect of the face, but I chose to discuss it separately because it was generally discussed by the men as a separate characteristic. The importance of facial hair largely centered on the men's own concerns regarding facial hair and not on what was considered ideal. For the most part, facial hair was not discussed when commenting on an ideal physique, except for a relatively small group of men who remarked that the ideal is to be clean-shaven.

In speaking about their own concern for facial hair, there was great variety among the

men as to what they preferred. Some men were adamant about having to be clean shaven at all times, often shaving up to two times per day. Some men preferred to keep a groomed look, such as a moustache, goatee or a soul patch (small section of hair just under the bottom lip). Other men reported not being very concerned about their facial hair and only shaved every two to three days. Some of these men noted that they only needed to shave every couple of days because they had such little growth – a fact some were happy about and some disliked because their hair often came in uneven. There was also discussion among some of the men about the importance of being able to change up their appearance and alternating the ways in which they would groom their facial hair. Only one man in this sample had a full beard, which he remarked that he put no effort into grooming. Overall, the various ways in which the men chose to groom, or not groom, their facial hair speaks to the versatility of facial hair to accentuate one's personality and personal preferences of attractiveness.

The only trend that emerged among the groups was that the South Asian men appeared more likely than their counterparts to keep clean-shaven. This may relate to their tendency to have more hair, but could also represent other culture differences. As this appears to be the first study to note such a difference, more research is needed to replicate and further explore this finding.

2.4.10 Tanned Skin, Complexion, and Posture

Other characteristics that were identified by the men as being important to men's body image included tanned skin, a clear complexion, and good posture. However, as only a small minority of the men discussed these components (5 men or less), I feel it is worth noting these components as potential areas of concern regarding men's body image, but not putting too much emphasis on these components at this time. As with the other components,

having tanned skin, a clear complexion, and good posture were considered to be signs of attractiveness and good health. Comments were made by the men that good posture (i.e., standing tall) was also considered symbolic of confidence and masculinity. At this time there appears to be no other research that has discussed these components.

2.4.11 Ethnicity

Another component mentioned by one-third of the non-Caucasian men as being important to their body image was ethnicity. These men remarked that the current North American ideal is based on a Caucasian ideal, both in terms of light coloured skin (which is somewhat contradictory to the ideal of tanned skin) and facial features (e.g., nose, cheekbones). Thus, as non-Caucasian men, and particularly those who were also gay, they felt automatically disadvantaged, especially in the dating arena, because of their ethnic background and skin colour. These findings support a qualitative study by Drummond (2005), who found that Asian gay men in Australia experience dating challenges and diminished masculinity as a result of a being in a culture that idealizes Caucasian men as potential partners. These findings could have serious implications for gay men of colour and future research is needed to determine the impact of ethnicity on men's perceptions of their body image, as well as their self-worth.

2.4.12 Likes and Dislikes

Nearly all of the men were able to name at least one aspect of their own body that they liked and one aspect that they disliked. The general characteristics that were identified for both likes and dislikes were similar (i.e., muscularity, body fat, facial characteristics, height, and functionality); however, in most cases they differed as to whether the identified feature was considered to be their most attractive or most unattractive feature. Reasons

related to health and/or functionality were also frequently mentioned by the men as to why they liked or disliked a particular body area. For a few men, functionality of the body was the feature (not just an explanation) that they most liked or disliked, depending on whether they felt their body was capable or deficient in some way (e.g., injury). Because of the small sample sizes for each of the identified characteristics, no group trends were examined.

This study appears to be the first to specifically ask men to identify their favourite and least favourite aspect of their body. Not surprisingly, the results suggest that what the men like and do not like about their body is closely tied with their perceptions of what is considered to be an ideal physique. Furthermore, the concern that is placed on wanting to appear attractive, and the resulting value that is placed on those features that the men consider to be most attractive, shows the cultural importance that is placed on appearance (Mishkind et al., 1986).

2.4.13 Unattractive PhysiQUES

When asked to describe an unattractive physique, the most commonly cited response, identified by over three quarters of the men, was a physique that was overweight; this finding is consistent with previous research (Harris, Harris, & Bochner, 1982; Harris & Smith, 1983; Tiggemann & Rothblum, 1998). Other characteristics that were identified as being unattractive were bodies that were: too muscular, unkempt/unclean, too skinny, overly hairy, too feminine, balding, and/or had ungroomed facial hair. The commonality among all these characteristics is that they represent deviations from the perceived ideal physique.

Two group trends are noteworthy regarding perceptions of an unattractive physique. One, both the South Asian and the older men appeared less likely to describe an unattractive physique as overweight. This finding may reflect the tendency for these two groups of men to

be slightly heavier than their counterparts (Chandalia et al., 2007; Lear et al., 2007; Strandberg et al., 2003; Williams & Wood, 2005) and, thus, possibly more accepting of extra weight in themselves and in others. Two, the East Asian men appeared more likely than the Caucasian and South Asian men to indicate that an overly skinny physique was unattractive. Previous research has shown that Asian men, compared to Caucasian men, tend to choose a smaller current figure on figure drawings and tend to have a larger discrepancy between their current and ideal figure (Barnet, Keel, & Conoscenti, 2001). Thus, because East Asian men tend to be on the thinner side already, they may be more cognizant of the fact that the ideal is not to be too skinny.

2.4.14 Masculinity Theory and Striving for an Ideal Physique

Wanting to be masculine is something that many men desire (Drummond, 2005; Mishkind et al., 1986). Men learn masculinity through socialization (Carrigan et al., 1985; Connell, 1995, 2000; Kimmel, 2001; Peoples, 2001). They are bombarded with cultural ideas of how to enact hegemonic masculinity that lead them to behave in particular ways and to avoid particular situations and behaviours that might otherwise cause them to fail to measure up to the hegemonic form of masculinity (Cohen, 2001).

Given that our cultural conceptions of gender and masculinity are altering (Peoples, 2001), men strive to find ways in which to assert their masculinity. As women have gained greater equity in society, traditional masculine roles (e.g., breadwinner) have deteriorated, leaving the body, and primarily muscularity, as the cultural symbol of masculinity (Pope et al., 2000). Coupled with a culture that has commodified the body as a marketing and iconic figure, masculinity is no longer defined by what a man can “do” with his body (Connell, 1983), but is largely based on how his body “looks”, primarily in terms of his physical stature

and muscularity (Drummond, 2003; Pope et al., 2000).

Thus, men's increased focus on, and concern about, their appearance can be linked to their desire to be masculine. The threatened masculinity theory, which tends to focus on muscularity, could be extended to include any key appearance components of masculinity – muscularity, leanness (but not too skinny), penis size, height, youthfulness – as areas that are important and concerning to men because of their relationships to men's sense of masculinity. Aside from all of these components being named as areas of the body that men deem to be important to their body image (muscularity and leanness were named as both the most important and most concerning areas of the body), many of the comments from the men directly indicated that concerns about particular aspects of their body stemmed from a desire to appear masculine. Being muscular, having a large penis, not being too thin, and being tall were specifically discussed by the men in this sample as ways in which they assert, or could assert, their masculinity. Body hair was an additional component that was discussed by the men as an indicator of masculinity; however, the relationship between body hair and masculinity was more complex. Traditionally, body hair has been symbolic of masculinity (Basow & Braman, 1998; Hope, 1982; Tiggemann & Kenyon, 1998) and this was seen in some of the men's desire for body hair, particularly in the chest area. However, current media trends, which promote a more hairless ideal (Pope et al., 2001), may be changing the way in which body hair fits into conceptions of masculinity. While less body hair is currently being seen as the ideal, a small amount of body hair is still generally preferred over being completely hairless; and this likely ties back to its earlier connection to masculinity.

2.4.15 Conclusion

This paper sought to identify the areas of men's bodies that are important to their

body image. In the men's discussions on both what they considered to be an ideal physique and what they were concerned about regarding their own bodies and body image, the same characteristics were identified. However, the salience of these characteristics differed slightly depending on whether the men were discussing ideals or their own personal concerns. Over twice as many men discussed penis size when talking about an ideal physique compared to talking about their own body image concerns. Muscularity, body fat, youthfulness, and height were also more commonly discussed in regards to an ideal physique. Although muscularity, body fat, and youthfulness were also the three most commonly mentioned areas of concern for the men themselves, there does appear to be a realization among many of the men that these characteristics are ideals and are not always realistic, which may be reflected in the slightly lower number of men who mentioned these characteristics in discussions of their own body image concerns. For head hair and facial hair, these characteristics were more commonly discussed in reference to the men's own body image concerns, especially for facial hair. These characteristics may be more salient as personal concerns because head and facial hair preferences and styles tend to be more personal and subjective, with no one ideal being agreed upon by the men. Furthermore, the men have more control over changing, and quickly changing, these aspects of their appearance, potentially making them more interactive with, and aware of, these characteristics on a daily basis. Finally, body hair and facial characteristics were nearly equally discussed as ideal characteristics and as areas of personal concern.

This paper also sought to preliminarily explore whether men from different age, ethnic or sexual orientation subgroups would identify different areas of the body as being ideal or as being important to their body image. Overall, the same characteristics were

identified and discussed in all subgroups examined. However, there were some areas where the salience of these characteristics appeared to differ slightly between subgroups. For instance, several characteristics (i.e., muscularity, body fat, penis size, height) appeared to be more salient to the younger men. This suggests that younger men may be more concerned about their body image than older men; a finding that has received support in the literature (Davison & McCabe, 2005; Lynch & Zellner, 1999). More gay men also indicated concern with facial characteristics, body hair and head hair, suggesting that these areas may be particularly salient for gay men. Several potential ethnic differences were also noted regarding body fat, head hair, height, facial hair, and body hair. As this is the first study to identify many of these potential differences, these findings should be treated as exploratory and more research is needed to replicate these findings.

There are three important strengths of this study that are worth noting. One was the use of a qualitative methodology with broad open-ended questions that allowed for the men to spontaneously and freely indicate the areas of the body that are of concern to their body image. As a result, and along with the inclusion of a second session, these identified areas were explored more in-depth than if a quantitative approach had been used. Two, although much of the previous research on male body image has focused on muscularity and body fat, and to a lesser extent height, body hair, and balding, this study extends this literature to also include youthfulness, penis size, grey hair, hairstyle, facial hair, facial characteristics, complexion (clear and tanned), posture, and ethnicity. Three, this study specifically aimed to include a diverse sample of men ranging in age, ethnicity, and sexual orientation. As all of these groups of men tended to identify and discuss similar body areas and body image concerns, this begins to extend the male body image literature from predominantly young

Caucasian student samples to a more broadly based community sample, which also includes older men, gay men, and men of varied ethnicities. Furthermore, the varied sample allowed for the exploration of trends across these different subgroups. Although the sample sizes in the present study were too small to examine group differences, potential trends were highlighted, which can act as a springboard for future research. As Grogan (2007) has noted, there is currently little work on ethnic differences in male body image. This study has begun to address this gap.

Four limitations of this study also need to be mentioned. One, the purpose of this study was to explore how men would spontaneously describe an ideal physique and to see what areas of the body the men would describe as important to their body image. Thus, each participant was asked broad open-ended questions. However, a limitation of this is that each participant was not specifically asked whether every component identified in this study was important in an ideal physique or to their own body image. This was, however, ameliorated somewhat by the use of a second session in which participants were asked to comment on some of the key body image dimensions that had emerged in other interviews (e.g., grey hair and balding). Nevertheless, the frequencies of men indicating each component may actually be underrepresented. It cannot be determined whether someone did not identify a particular component because they did not think it was important or because they just did not think of it. Therefore, this could also have an impact on the potential group differences noted.

Although many of these trends identified fit with previous literature, all of these trends should be treated as preliminary only. A second limitation of this study is the small sample size. Although a sample size of 30 is certainly acceptable for a qualitative study and saturation of the categories was reached during coding, the small sizes in each of the

subgroups of men did not allow for the statistical analysis of group differences, and only potential trends could be discussed. A third potential limitation of this study relates to the use of an interview format. Some of the areas identified and discussed are sensitive in nature (e.g., penis size) and participants may not have fully disclosed their concerns with certain body areas, especially to a young female interviewer. Although a second male interviewer conducted some of the interviews, and, in a small number of cases, participants indicated a preference for a male interviewer when given the option, it is still possible that these participants may also have been restrained in their comments. Finally, although a strength of this study is the inclusion of a more diverse sample compared to previous research, these findings are still limited to the particular characteristics of the current sample. The men in this sample ranged in age from 19 to 57; thus these findings may not be generalizable to adolescence or older adulthood. For instance, with increasing age, physical and health limitations may play into perceptions of men's body image and what aspects are considered important. The men in this sample also identified themselves as gay or straight and thus these findings may not be generalizable to other sexual orientations (e.g., transgendered, transsexual, two-spirit, queer, intersex). The same limitation would apply to ethnicities not included in this sample.

In summary, although much of the previous research on men's body image has tended to focus on muscularity, the results of the present study suggest two things. One, if one wants to achieve a full picture of men's body image, one needs to consider more than just muscularity; one also needs to consider body fat, youthfulness, penis size, head hair, body hair, facial hair, facial characteristics, and height. Complexion, tanned skin, posture, and ethnicity were also identified in this study as minor components that may also be important

to men's body image. Two, concern over losing, or maintaining one's weight, may be equally, if not more, important to men than is muscularity, particularly for older men. Future research needs to continue to explore these understudied areas, beginning with the development of suitable measures to assess these areas.

2.5 References

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3 STUDY 2: ITEM DEVELOPMENT AND PILOT TEST OF THE MMBCQ⁶

3.1 Introduction

Although the number of studies relating to male body image has increased dramatically in the last several years, the construct of male body image concern is still not fully understood (McCabe & Ricciardelli, 2004; McCreary & Sasse, 2000). In order to accurately assess how males perceive, think, and behave with respect to their bodies, researchers need to use measures that are accurately and reliably assessing the relevant and important aspects of the male body that are important to men's body image. Currently, there are relatively few measures available that are targeted specifically towards male body image, and as this dissertation has noted, these measures may be limited in their scope as they tend to focus almost exclusively on men's satisfaction or preoccupation with muscularity, while potentially neglecting other important areas.

Study 1 sought to qualitatively explore the areas of the body that men would identify as being important to their body image so that these identified dimensions could be used in the present study to guide the development of a more comprehensive measure of male body image. Therefore, the development of potential items for the Multidimensional Male Body Concerns Questionnaire (MMBCQ) was largely based on the qualitative findings of Study 1. The results of this study identified 13 characteristics that were important to men's body image: muscularity, body fat, youthfulness, head hair, body hair, facial hair, penis size, height, facial characteristics, ethnicity, complexion, posture, and tanned skin. Given that the characteristics of tanned skin, posture, and complexion were only mentioned by approximately 15% or less of the men, I decided to drop these characteristics as potential

⁶ A version of this chapter will be submitted for publication. Rusticus, S. A. Going beyond muscularity: Development of a multidimensional measure of male body concerns.

dimensions of the MMBCQ because of their low frequency. Additionally, I decided to drop the characteristic of ethnicity because it did not seem appropriate to include in that it may be deemed politically incorrect or racist to include items specifically targeting one's ethnicity. The remaining nine characteristics were selected as dimensions for item development. A review of the previous literature did not indicate that any further dimension should be added; however, previous research on the penis did result in the expansion of this dimension (Lever, Frederick, & Peplau, 2006; Morrison, Bearden, Ellis, & Harriman, 2005), which will be discussed below.

Cash and Szymanski (1995) have made an important distinction between the evaluation and investment components of body image, with the former referring to individuals' evaluative thoughts and beliefs about their appearance and the latter referring to behaviours individuals engage in to manage or enhance their appearance. The MMBCQ was developed as a measure of body image evaluation. More specifically, the purpose of the MMBCQ was to assess men's degree of concern with various aspects of their body. I chose to focus on degree of concern, as opposed to satisfaction, with various body areas for three reasons. One, I felt it would differentiate the MMBCQ from other body image scales, which largely focus on satisfaction. Two, a previous attempt at item development that created items focused on satisfaction revealed that assessing degree of concern worked better with some of the identified dimensions (e.g., head hair). Three, on a personal level, the content and tone of the items seemed more appropriate and appealing by focussing on the assessment of body concern rather than body satisfaction.

Given that the MMBCQ was developed based on the interviews of adult men in the general community, this scale is currently intended for non-patient adult men. At present, the

intended use of this scale is for research purposes and not clinical purposes. However, if appropriate validity evidence is gathered, this scale could possibly be used as a screening device for identifying men with body image disorders or for monitoring changes in men's body concerns before and after treatment for a body image disorder.

Instructions for completing the MMBCQ are as follows: "Below you will find a series of statements related to your physical appearance. Think about how you feel about your body and appearance RIGHT NOW and, using the following scale (not at all, a little bit, moderately, very, extremely), indicate how concerned you are about the following aspects of your body." A 5-point Likert-type response format (not at all concerned [1], a little bit concerned [2], moderately concerned [3], very concerned [4], extremely concerned [5]) was chosen because this format is widely used in measures assessing attitudes (DeVellis, 1991) and, as such, is also the format most consistent with the previous literature on body image. I chose to use an intensity-type response option for two reasons. One, I was interested in assessing the degree of concern men exhibited towards their bodies and appearance. Two, even with an odd number of scale points, the middle option in an intensity scale still provides valuable information, as opposed to a neutral middle option commonly used in agreement-type response options, which provides little or even ambiguous information. Five scale points were chosen because I felt the five response points used were roughly equidistant from one another and would give respondents sufficient variability in responding to the items. The following paragraphs detail the development of items for each of the nine dimensions. The number of items developed for each of the dimensions was based on the number of specific aspects regarding that dimension that were mentioned by the men in Study 1. See Table 3.1 for a complete list of all items.

3.1.1 Muscularity

For the dimension on muscularity, 10 items were developed. Three of these items represented an overall level of muscularity. One item each represented muscularity of arms, back, chest, buttocks, and legs. Two items were developed for abdominal muscularity, to recognize the distinction between general abdominal muscularity and concern about a “six-pack.” These specific body parts were selected because the men in Study 1 identified these areas as being of most importance. For all of the muscularity items, I chose to focus on muscular definition, as opposed to muscle mass, because muscular definition was the term most commonly used by the men when talking about muscularity.

3.1.2 Body Fat

For the body fat dimension, nine items were developed. Five items represented overall levels of body fat, two items represented concern about carrying extra weight in the stomach, one item was about excess fat in the chest, and one item was about excess fat in the face. Most of the men’s discussion around body fat in Study 1 centered generally on their overall weight or specifically on the stomach, and, to a lesser degree, the face and the chest (or as one man termed it, “man boobs”). Thus, items were developed to specifically target these areas.

3.1.3 Facial Characteristics

Nine items were developed for the dimension of facial characteristics. Three items represented an overall level of concern regarding the face. One item each represented concern about the eyes, nose, mouth, eyebrows, and teeth. These were the areas of the face that were discussed most often by the men in Study 1. An additional item on teeth was added to focus on having white teeth because a concern about having white(r) teeth was also

commonly mentioned in Study 1. I purposefully chose to leave the items for this dimension nonspecific to allow for multidirectional responding. For instance, the purpose of the item on the nose is only to determine whether a man is concerned about his nose, irrespective of whether he thinks it is too large, too small, crooked, etc. As the item is written, men with concern for their nose for any reason will indicate a degree of concern for this item. If I had wanted to be more specific about the type of concern, I would need to create items for each way in which a man could be concerned with his nose. Doing this process for each facial feature would result in a scale that would have too many items to be practical. It is also likely that such items would have little variability and thus be discarded during the item analysis phase of this study.

3.1.4 Body Hair

For the dimension on body hair, eight items were developed. One item each represented body hair in general, chest hair, pubic hair, leg hair, stomach hair, back hair, arm hair, and body hair colour. Each of these elements was identified by the men as areas of concern regarding body hair and/or as areas from which they removed or trimmed body hair. The item on body hair colour was added because a number of men indicated that they disliked that their body hair was too dark.

3.1.5 Head Hair

A total of six items were developed for the dimension on head hair. Three items represented concern over balding. One item represented grey hair. One item each represented the texture and thickness of one's hair. Items were developed for each of these areas because these were the areas of concern identified by the men in Study 1.

3.1.6 Penis

Five items were developed for the dimension on the penis. Each of the items represented a slightly different perspective on the penis, with four of them relating to the size of the penis and one relating to the appearance of the penis. Multiple items were specifically created for this dimension to determine which would be the best way to word an item on penis size and to see how men would respond to small differences in the wording of these items. Although the difference in length between a flaccid and erect penis, as well as the girth of the penis, were not specifically mentioned by the men in Study 1, previous research (Lever et al., 2006; Morrison et al., 2005) has indicated that these elements are important to men and thus two separate items were created to represent the length of the flaccid and erect penis and one item was created to represent the girth of the penis.

3.1.7 Youthfulness

For the dimension on youthfulness, five items were developed. Two items represented an overall appearance of youthfulness, two items represented the youthfulness of the skin, and one item represented the youthfulness of the face. An overall appearance of youth was most commonly mentioned by the men in Study 1. To a lesser degree, the aspects of the skin and the face were also discussed. Thus, items to address each of these areas were developed.

3.1.8 Facial Hair

Two items were created for the dimension on facial hair. These items represented the general concerns regarding facial hair mentioned by the men in Study 1.

3.1.9 Height

Finally, one item was developed for the dimension on height. The fact that there is

only a single item in this dimension is problematic from a statistical viewpoint because it, like the dimension on facial hair, will be unable to stand alone as a subscale. However, this dimension is so narrow that this seemed to be the only suitable item.

3.1.10 Summary

Overall, a total of 55 items were developed for the MMBCQ. In some cases, items were specifically developed to be repetitive, especially for those items representing an overall degree of concern on a particular dimension. This allowed for multiple phrasings of an item to be tested in the pilot study. The results of the pilot test were then used to reduce these repetitive items, as well as eliminate poor items. The next section of this dissertation will focus on the results of the pilot testing.

3.2 Methods

3.2.1 Participants

One hundred and forty-nine men took part in the pilot test. The men ranged in age from 19 to 84 years ($M = 34.43$, $SD = 13.44$). The vast majority of the men (89.3%) identified their sexual orientation as straight, 4.0% identified as gay, and 4.0% identified as bisexual. Approximately 62% of the men identified themselves as Caucasian, 17.4% as East Asian, 10.1% as South Asian/Middle Eastern, 2.0% as Aboriginal/First Nations, 1.3% as Hispanic, 0.7% as Black, and 3.4% as other. The men tended to be well educated with 16.8% beginning or completing graduate studies, 33.6% completing college or university, 30.9% completing some college or university, 8.7% completing high school, 2.7% completing less than high school, and 8.1% completing a trades program. Four of the men (2.7%) did not complete any demographic information.

3.2.2 Measure

Table 3.1 contains the list of items used in the pilot test. A total of 55 items were used to assess men's concern with various aspects of their body (i.e., muscularity, body fat, facial characteristics, body hair, head hair, facial hair, height, penis, and youthfulness). Each item was rated on a five point scale ranging from not at all concerned (1) to extremely concerned (5). All items were scored in the positive direction. At the end of the questionnaire, participants also had the opportunity to provide qualitative comments about the items in the scale.

3.2.3 Procedure

After obtaining UBC Behavioural Research Ethics Board approval to conduct the research, data were collected in two forms: (a) web-based survey ($n = 109$) and (b) paper and pencil survey ($n = 40$). The content of the two surveys was identical. Recruitment for the web survey took place by means of "snowball sampling" via emails sent to family, colleagues, and friends asking individuals to take part and/or forward the survey to other adults they know. The emails provided individuals with a link to the survey and those who were interested in participating were able to complete the survey at a time and location of their choice. All participants viewed an electronic informed consent form and gave their consent by completing and submitting the survey materials. All information was collected on a secure server. Once data collection was complete, all survey materials were removed from the Internet.

Recruitment for the paper and pencil version of the survey took place through oral classroom and community announcements. An envelope containing the research materials was provided to interested individuals who then took the materials home and completed the

survey at a time and place of their choosing to maintain a similar research setting to those participants who chose to complete the study online. All participants viewed a consent cover letter and gave their consent by completing and submitting the survey materials. Once the survey was complete, participants were instructed to return the materials to the envelope and seal the envelope. Participants were asked to return the package to a place set by the researcher by a specified time.

3.3 Results

The data were first analyzed by examining the frequency counts for each response option for each item (see Table 3.1). It was arbitrarily decided that any item that had over 80% of the responses in one response option would be dropped from the scale because of low variability. This resulted in only one item being removed (item 22 – colour of body hair).

Next, the mean and standard deviation for each of the items were calculated (see Table 3.1). In general, the means of the items tended to be in the low range of the scale, with 32 of the 55 items ranging between 1.00 and 1.99 and 21 items ranging between 2.00 and 2.99. Only one of the items had a mean score above the midpoint of the scale (item 2 – stomach body fat). At this point it was decided not to drop any of the items based on their means and instead see how all of the items performed in an exploratory factor analysis (EFA).

Thus, the next step in this analysis was to conduct an EFA using principal axis factoring (PAF) and a Pearson correlation matrix. PAF was chosen over a principal components analysis (PCA) based on the recommendations by Pett, Lackey, and Sullivan (2003) who note that the former may be a superior solution to the latter. In a PCA, all of the variance is assumed to be explicable by the factors, thus overestimating the linear patterns of

relationships among the variables for the extracted components. In PAF, only the common variance shared among the variables is used to reproduce the intercorrelations among the variables, thus providing more accurate results in terms of the population factor loadings (Pett et al., 2003; Widaman, 1993). An oblique rotation was used to allow for correlations among the factors given that multiple dimensions were specifically created and at least some, if not all, were expected to correlate (e.g., muscularity and body fat). In addition, an oblique rotation also allows for a zero correlation among factors if the factors do not correlate. An additional exploratory factor analysis which treats the item data as ordered categorical (Likert) was also conducted using the software Mplus and resulted in the same conclusions being drawn. Because factor loadings based on the Pearson correlation matrix are most commonly seen in the literature, these are the loadings that are reported⁷.

Factors were retained based on the eigenvalues over one rule and an examination of the scree plot. Items were flagged for removal or modification if they were found to cross-load on more than one factor or failed to load on at least one factor. Factor loadings of .40 or greater were considered meaningful (Stevens, 1992).

The EFA of the 54 remaining items in the MMBCQ revealed 12 factors with eigenvalues greater than 1. Examination of the scree plot (see Figure 3.1) indicated that there was one dominant factor with at least one, and possibly up to four, secondary factors. Two, three, four, and five factor solutions were then explored. A five factor solution was deemed to provide the best fit to the data as this was the factor structure that represented the “simplest structure” (Thurstone, 1947) and was the easiest to interpret. These five factors represented youthfulness, body fat, penis, muscularity, and body hair. Tables 3.2 and 3.3 present the

⁷ In this dissertation, all EFAs conducted treating the item responses as ordered categorical data resulted in the same conclusions being drawn as with the Pearson correlation matrix.

factor loadings and interfactor correlations for the five factor solution. None of the facial characteristic items that addressed specific facial features (items 16, 21, 29, 32, 36, 45) loaded on any of the factors and were dropped from the scale. The three general items regarding the face loaded on the youthfulness factor and were retained in the scale. Item 33 (facial hair) also did not load on any factor and was dropped from the scale. Although the item on height (item 3) also did not load on any factors, I decided to retain this item in the scale as I still felt it was an important dimension to include. Two of the items (items 4 (looking fit) and 44 (overall muscularity)) cross loaded on both the body fat and muscularity scale; however, at this point it was decided to flag these items and monitor their performance in further analyses.

I next reran the EFA with items 16, 21, 29, 32, 33, 36, and 45 removed. The results of the EFA again supported a five factor solution (muscularity, body fat, penis, youthfulness, body hair). See Tables 3.4 and 3.5 for the factor loadings and interfactor correlations. Item 4 (looking fit) still cross-loaded on the muscularity and body fat dimensions and was dropped from the scale. In this analysis, item 44 (overall muscularity) loaded only on the muscularity dimension. Items 12 (grey hair) and 46 (back hair) no longer loaded on the body hair factor, but still had a factor loading greater than .3. It was decided to flag these items and monitor their performance in further analyses.

At this point in the analysis, 46 of the 55 items remained in the MMBCQ. The muscularity subscale contained nine items (items 1, 8, 14, 18, 24, 26, 44, 48, 54), the body fat subscale contained nine items (items 2, 9, 17, 19, 20, 28, 37, 49, 53), the penis subscale contained five items (items 7, 15, 30, 35, 47), the youthfulness subscale contained 13 items (items 5, 13, 23, 27, 31, 34, 39, 40, 41, 43, 51, 52, 55), and the body hair subscale contained

nine items (items 6, 10, 11, 12, 25, 38, 42, 46, 50). A single item was also retained regarding height (item 3).

3.3.1 Muscularity Subscale

Coefficient alpha for the muscularity subscale was .92. Table 3.6 presents the corrected item-total correlations and the alpha if item deleted. All corrected item-total correlations were above the lower bound of .30 (Nunnally & Bernstein, 1994; DeVellis, 1991). There were slight variations in the alpha if an item was to be removed, but nothing that would improve the overall alpha. Examination of the inter-item correlations reported in Table 3.7 indicated that the items were statistically significantly correlated, with correlations ranging from 0.36 (items 24 and 48) to .78 (items 26 and 44). Given that items 26 and 44 were highly correlated and both related to an overall level of muscularity, I decided to remove item 26 (overall muscularity) because I preferred the wording of item 44 (overall definition). Items 8 and 48 were also highly correlated ($r = 0.70$) and both related to the muscularity of the stomach. I decided to drop item 48 based on some qualitative feedback from one participant who did not know what a “six-pack” was. This comment was from an older participant, suggesting that some older men may not know what a “six-pack” is. Thus, the final Muscularity subscale contained a total of seven items, with an overall alpha of .89. The mean subscale score was 2.20 with a standard deviation of 0.77.

3.3.2 Body Fat Subscale

Coefficient alpha for the body fat subscale was .93. Table 3.8 presents the corrected item-total correlations and the alpha if item deleted. All corrected item-total correlations were above the lower bound of .30. There were slight variations in the alpha if an item was to be removed, but nothing that would improve the overall alpha. Examination of the inter-item

correlations reported in Table 3.9 indicated that the items were statistically significantly correlated, with correlations ranging from 0.42 (items 20 and 49) to .78 (items 9 and 17). Given that items 9 and 17 were highly correlated and both related to an overall amount of body fat, I decided to remove item 9 (weight) because I preferred the wording of item 17 (overall body fat) and thought it was more specific. Items 2 and 37 were also highly correlated ($r = 0.71$) and similar in content (stomach). I decided to drop item 37 (weight around the middle) because the mean and factor loading of item 2 (stomach fat) was much higher than item 37. The final body fat subscale contained a total of seven items, with an overall alpha of .90. The mean subscale score was 2.53 with a standard deviation of 0.94.

3.3.3 Penis Subscale

Coefficient alpha for the penis subscale was .92. Table 3.10 presents the corrected item-total correlations and the alpha if item deleted. All corrected item-total correlations were above the lower bound of .30. There were slight variations in the alpha if an item was to be removed, but nothing that would improve the overall alpha. Examination of the inter-item correlations reported in Table 3.11 indicated that the items were statistically significantly correlated with correlations ranging from .63 (items 7 and 35) to .79 (items 7 and 15). Given that item 7 (penis size) correlated quite highly with three of the four remaining penis items ($r = 0.70$ to 0.79), it was decided that this item was redundant and removed from the scale. The final penis subscale contained a total of 4 items, with an overall alpha of .90. The mean subscale score was 1.71 with a standard deviation of 0.85.

3.3.4 Youthfulness Subscale

Coefficient alpha for the youthfulness subscale was .92. Table 3.12 presents the corrected item-total correlations and the alpha if item deleted. All corrected item-total

correlations were above the lower bound of .30. There were slight variations in the alpha if an item was to be removed, but nothing that would improve the overall alpha. Examination of the inter-item correlations in Table 3.13 indicated that the items were statistically significantly correlated with correlations ranging from 0.20 (items 13 and 55) to .84 (items 40 and 52). Given that items 40 and 52 were highly correlated and both related to head hair, I decided to drop item 52 (amount of hair) in favour of the wording of item 40 (thickness of hair). Items 5 and 34 were also highly correlated ($r = 0.80$) and similar in content (balding). I decided to drop item 34 (losing hair) because I preferred the wording of item 5 (bald). The final youthfulness subscale contained a total of 11 items, with an overall alpha of .90. The mean subscale score was 1.86 with a standard deviation of 0.74.

3.3.5 Body Hair Subscale

Coefficient alpha for the body hair subscale was .86. Table 3.14 presents the corrected item-total correlations and the alpha if item deleted. All corrected item-total correlations were above the lower bound of .30. There were slight variations in the alpha if an item was to be removed, but nothing that would improve the overall alpha. Examination of the inter-item correlations in Table 3.15 indicated that all items, except for two pairs, were statistically significantly correlated. Correlations ranged from .14 (items 38 and 48) to .71 (items 10 and 42). None of the items in this subscale were deemed to be redundant, leaving this as a nine item subscale. The mean subscale score was 1.50 with a standard deviation of 0.59.

3.3.6 Factor Analysis for Final MMBCQ Version

For the next step in the analysis, I ran another EFA on the remaining 39 items of the MMBCQ. The results of the EFA again supported a five factor solution (muscularity, body

fat, penis, youthfulness, body hair; see Figure 3.2). Tables 3.16 and 3.17 present the factor loadings and factor intercorrelations for the 39 item version of the MMBCQ. Although items 24 (buttock muscularity), 12 (grey hair), and 46 (back hair) loaded slightly below the .40 factor loading cutoff, I decided to retain these items as they were deemed valuable items and warranted further analysis.

3.3.7 Qualitative Item Revisions

Finally, based on written qualitative feedback from participants regarding the items of the MMBCQ, the wording of four of the items was modified slightly. For the item, “the girth of my penis,” girth was changed to thickness. For the item, “the length of my flaccid penis,” the word “soft” was added in brackets after the word flaccid. For the item, “the length of my erect penis”, the word “hard” was added in brackets after the word erect. These changes were made to make items more understandable, as there were a couple of comments from men who did not know what the words girth, flaccid, and/or erect meant. Finally, for the item, “Making my facial features more attractive,” the word “more” was deleted to prevent possible ambiguity in the item. Table 3.19 presents the final version of the MMBCQ.

3.4 Discussion

The purpose of Study 2 was to develop items to assess the nine body dimensions identified in Study 1 and to conduct a pilot study examining the quality of each of these items as potential items for the MMBCQ. A series of item analyses and EFAs were conducted to evaluate the items. A total of nine of the 55 original items were identified as poor items and removed from the scale. These nine items included one item (body hair colour) that had little variability, seven items (eyes, nose, eyebrows, mouth, teeth, white teeth, facial hair) that did not load on any of the five factors identified in the EFAs, and one item (looking fit) that

cross-loaded on two factors in the EFAs. Another seven items were removed from the scale for being redundant. This included two items each from the muscularity, body fat, and youthfulness subscales and one item from the penis subscale. The wording of four of the items was also modified slightly to accommodate qualitative feedback from participants. Overall, this resulted in a final version of the MMBCQ that contained 39 items. There are a total of seven items in the Muscularity subscale, seven items in the Body Fat subscale, four items in the Penis subscale, 11 items in the Youthfulness subscale, nine items in the Body Hair subscale, and a single item for height.

Three items in the final MMBCQ have been flagged as potential problem items that need to be monitored. These items represent grey hair, back hair, and muscularity of the buttocks. While both the items on grey hair and back hair loaded significantly on the body hair factor in the first factor analysis, their factor loadings dropped below the .40 cutoff in the second and third factor analyses. Furthermore, these two items also had a few low and/or non-significant correlations with the other items in the body hair subscale. For the item on the muscularity of the buttocks, this item loaded significantly on the muscularity factor in the first and second factor analyses, but dropped below the .40 cutoff in the final factor analysis.

Although the items of the MMBCQ were developed to assess the nine dimensions of muscularity, body fat, facial characteristics, head hair, facial hair, body hair, penis, height, and youthfulness, the results of the EFA revealed that these items were best accounted for by five factors – muscularity, body fat, penis, youthfulness, and body hair – plus a single item on height. The final items in the Muscularity, Body Fat, and Penis subscales contained only items from those original dimensions. The Youthfulness subscale, however, contained all of the original items from the youthfulness dimension, as well as the three remaining items from

the facial characteristics dimension and three items from the head hair dimension. The Body Hair subscale contained items from the body hair dimension, the remaining item from the facial hair dimension, and one item from the head hair dimension regarding grey hair. It is a little surprising that the item on grey hair loaded on the body hair factor, as opposed to the youthfulness factor, which contained the other head hair items. One possible explanation could be that men may also have concerns about body and facial hair turning grey and are interpreting this item to refer to grey hair anywhere on the body. As indicated above, this item has been flagged as a potential problem item and warrants further investigation.

Coefficient alphas for the five subscales of the MMBCQ were good, ranging from .86 to .90. Overall, the means for the subscales were below the midpoint of the scale, suggesting that a community sample of adult men aged 19 to 84 (but averaging in their 30s) have only a little bit of concern regarding the various aspects of their bodies assessed by this scale. Future research may want to consider administering the MMBCQ to a sample of men with a known body image disorder to determine whether a clinical sample would report higher levels of concern. Overall, the men expressed the most concern about body fat, followed by muscularity, youthfulness, penis, height, and then body hair.

The failure of the facial characteristic items that focused on specific facial features to load significantly on a factor suggests that concerns regarding the face may be multidimensional. Given how cleanly the other items loaded onto the factors identified in this study, the easiest decision to make regarding these facial items was just to drop them from the scale. Researchers interested in studying men's concerns regarding the face may wish to further study this area and identify more clearly how men conceptualize their concerns regarding the face.

Overall, the results of the first pilot test of the MMBCQ were very promising. Study 3, the final phase of this dissertation, focuses on a validation study of the 39-item MMBCQ.

Table 3.1 Items, Response Counts, Frequencies, and Means (Standard Deviations) of the Initial MMBCQ Dimensions

Item	Response count	Not at all concerned (1)	A little bit concerned (2)	Moderately concerned (3)	Very concerned (4)	Extremely concerned (5)	M (SD)
Muscularity							
1. The muscular definition of my arms	149	25.5%	30.2%	32.2%	11.4%	0.7%	2.32 (1.00)
4. Looking fit	148	14.9%	18.9%	32.4%	27.0%	6.8%	2.92 (1.15)
8. The muscular definition of my abdominals	149	15.4%	31.5%	36.2%	14.8%	2.0%	2.56 (0.99)
14. The muscular definition of my back	149	44.3%	31.5%	19.5%	3.4%	1.3%	1.86 (0.94)
18. The muscular definition of my chest	147	19.7%	29.9%	32.7%	15.0%	2.7%	2.51 (1.06)
24. The muscular definition of my buttocks	147	53.7%	27.9%	16.3%	2.0%	0.0%	1.67 (0.82)
26. The overall amount of muscle I have	148	18.2%	27.0%	39.2%	13.5%	2.0%	2.54 (1.01)
44. My overall level of muscular definition	148	18.9%	29.7%	33.1%	15.5%	2.7%	2.53 (1.05)
48. Having or getting a “six-pack”	147	31.3%	32.7%	21.8%	10.9%	3.4%	2.22 (1.11)
54. The muscular definition of my legs	148	43.2%	29.1%	20.9%	5.4%	1.4%	1.93 (0.99)
Body Fat							
2. The amount of body fat around my stomach	148	8.8%	18.9%	32.4%	31.8%	8.1%	3.11 (1.09)
9. My weight	149	22.1%	22.1%	34.3%	14.8%	6.7%	2.61 (1.18)
17. My overall amount of body fat	149	18.8%	21.5%	30.9%	22.1%	6.7%	2.77 (1.19)
19. Having or getting a chubby face	149	46.3%	20.1%	18.8%	10.1%	4.7%	2.07 (1.22)
20. Being height and weight proportional	149	46.3%	20.1%	18.8%	10.1%	4.7%	2.34 (1.15)
28. Having or getting a flabby chest (“man boobs”)	148	43.6%	16.9%	16.9%	16.2%	6.1%	2.24 (1.33)
37. Having or getting extra weight around my middle	148	10.1%	35.1%	27.0%	23.6%	4.1%	2.76 (1.05)
49. Being or becoming overweight	148	21.6%	24.3%	25.0%	20.3%	8.8%	2.70 (1.26)
53. The shape of my body	148	25.0%	29.1%	26.4%	14.2%	5.4%	2.46 (1.17)
Height							
3. My height	148	62.2%	20.9%	12.2%	3.4%	1.4%	1.61 (0.92)
Penis							
7. The size of my penis	149	50.3%	28.8%	15.4%	4.7%	1.3%	1.79 (0.96)
15. The girth of my penis	149	57.0%	24.2%	13.4%	4.0%	1.3%	1.68 (0.95)
30. The length of my flaccid penis	148	56.1%	25.0%	14.2%	2.7%	2.0%	1.70 (0.95)
35. The appearance of my penis	147	56.5%	25.9%	10.2%	6.1%	1.4%	1.70 (0.98)
47. The length of my erect penis	146	52.7%	27.4%	12.3%	4.1%	3.4%	1.78 (1.04)

Item	Response count	Not at all concerned (1)	A little bit concerned (2)	Moderately concerned (3)	Very concerned (4)	Extremely concerned (5)	M (SD)
Head Hair							
5. Being or becoming bald	149	45.6%	22.8%	10.1%	13.4%	8.1%	2.15 (1.34)
12. Having or getting grey hair	149	64.4%	17.4%	12.8%	3.4%	2.0%	1.61 (0.97)
31. The texture of my head hair	148	63.5%	18.1%	14.2%	2.7%	1.4%	1.60 (0.92)
34. Losing my head hair	147	49.7%	20.4%	12.9%	10.2%	6.8%	2.04 (1.29)
40. The thickness of the hair on my head	148	56.1%	20.9%	11.5%	9.5%	2.0%	1.80 (1.10)
52. The amount of hair I have on my head	148	54.1%	23.0%	11.5%	7.4%	4.1%	1.84 (1.14)
Body Hair							
6. The amount of body hair I have	149	46.3%	32.2%	12.8%	7.4%	1.3%	1.85 (1.00)
10. The amount of chest hair I have	149	67.1%	21.5%	7.4%	2.7%	1.3%	1.50 (0.85)
22. The colour of my body hair	148	89.2%	6.8%	3.4%	0.7%	0.0%	1.16 (0.49)
25. The amount of pubic hair I have	148	68.9%	17.6%	8.1%	4.7%	0.7%	1.51 (0.88)
38. The amount of hair I have on my legs	148	79.7%	11.5%	6.1%	1.4%	1.4%	1.33 (0.77)
42. The amount of hair I have on my stomach	148	71.6%	20.9%	4.7%	2.0%	0.7%	1.39 (0.73)
46. The amount of hair I have on my back	147	59.2%	23.1%	10.2%	7.5%	0.0%	1.66 (0.94)
50. The amount of hair I have on my arms	148	79.7%	14.2%	4.7%	0.0%	1.4%	1.29 (0.68)
Facial Hair							
11. The amount of facial hair I have	149	75.5%	14.8%	7.4%	2.0%	0.7%	1.38 (0.77)
33. The appearance of my facial hair	148	55.4%	30.4%	12.8%	1.4%	0.0%	1.60 (0.76)
Facial Characteristics							
13. Making my facial features more attractive	148	51.4%	23.6%	16.9%	6.1%	2.0%	1.84 (1.04)
16. My eyes	148	70.3%	15.5%	10.1%	2.0%	2.0%	1.50 (0.91)
21. My nose	148	67.6%	19.6%	10.1%	2.7%	0.0%	1.48 (0.79)
29. My mouth	148	75.0%	18.2%	5.4%	1.4%	0.0%	1.33 (0.64)
32. My eyebrows	148	64.2%	24.3%	10.1%	1.4%	0.0%	1.49 (0.73)
36. Making my teeth whiter	148	25.0%	37.2%	27.7%	7.4%	2.7%	2.26 (1.00)
39. Having attractive facial features	147	41.5%	23.1%	25.2%	6.8%	3.4%	2.07 (1.12)
41. The shape of my face	148	67.6%	21.6%	8.1%	1.4%	1.4%	1.47 (0.81)
45. My teeth	148	18.9%	29.7%	33.1%	15.5%	2.7%	2.49 (1.08)

Item	Response count	Not at all concerned (1)	A little bit concerned (2)	Moderately concerned (3)	Very concerned (4)	Extremely concerned (5)	M (SD)
Youthfulness							
23. Looking youthful	148	39.9%	33.1%	20.9%	4.7%	1.4%	1.95 (0.96)
27. Making my skin look more youthful	148	48.6%	23.6%	19.6%	6.8%	1.4%	1.89 (1.03)
43. Having or getting wrinkles	147	46.9%	31.3%	15.6%	4.8%	1.4%	1.82 (0.96)
51. Making my face look more youthful	148	56.8%	25.7%	12.2%	2.7%	2.7%	1.69 (0.98)
55. Getting older	148	35.1%	25.7%	26.4%	6.8%	6.1%	2.23 (1.18)

Figure 3.1: Scree Plot of the Initial MMBCQ Items (Minus Item 22).

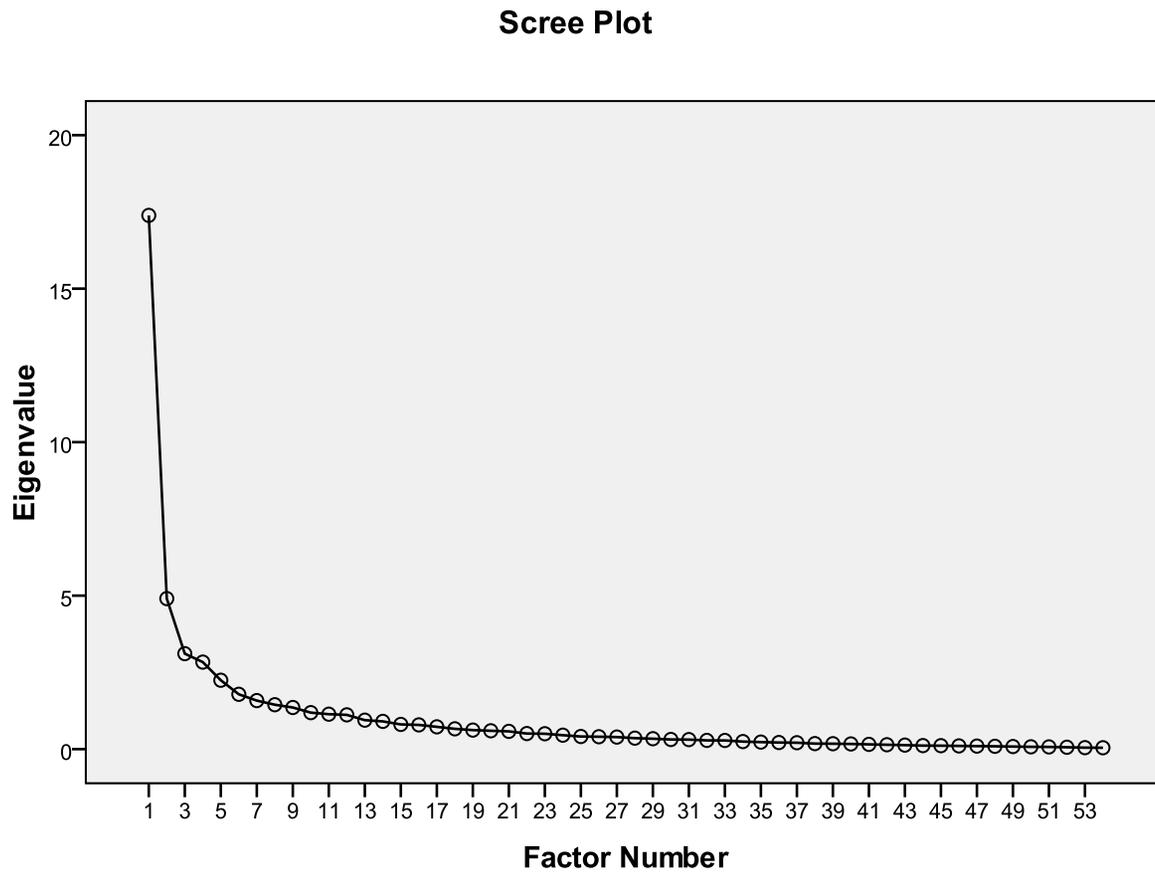


Table 3.2 Factor Loadings, Communalities, Eigenvalues, and Percentages of Variance for the MMBCQ without Item 22

Item	Factor 1 (Youthfulness)	Factor 2 (Body Fat)	Factor 3 (Penis)	Factor 4 (Muscularity)	Factor 5 (Body Hair)	Communality
1 (muscular arms)	.01	-.12	.15	-.62	.13	.59
2 (stomach fat)	-.07	-.70	.08	-.15	-.01	.58
3 (height)	.04	-.15	.25	-.05	.28	.30
4 (looking fit)	.14	-.54	.01	-.42	-.01	.67
5 (bald)	.60	-.12	.25	.29	.07	.60
6 (amount of body hair)	.19	-.11	-.16	.14	.69	.56
7 (size of penis)	.00	-.07	.87	-.06	-.10	.77
8 (muscular abs)	-.01	-.30	.16	-.47	.09	.52
9 (weight)	-.15	-.81	.02	.01	.15	.68
10 (chest hair)	-.11	-.03	-.04	-.01	.86	.64
11 (amount of facial hair)	-.07	-.04	.08	-.03	.61	.40
12 (grey hair)	.21	.03	.13	-.06	.40	.38
13 (making face attractive)	.60	.08	.01	-.22	.06	.50
14 (muscular back)	-.03	-.18	.18	-.61	.03	.57
15 (girth of penis)	-.09	-.02	.87	-.09	.00	.78
16 (eyes)	.23	.16	.17	-.14	.13	.20
17 (overall body fat)	-.01	-.81	-.06	-.07	.00	.67
18 (muscular chest)	.02	-.21	.09	-.65	.16	.71
19 (chubby face)	.18	-.50	.07	-.05	.26	.57
20 (proportional)	.22	-.54	.06	-.18	.00	.54
21 (nose)	.24	.05	.26	.00	.25	.32
23 (looking youthful)	.76	-.01	-.29	-.27	.01	.67
24 (muscular buttocks)	.16	-.09	.05	-.43	.10	.35
25 (pubic hair)	-.01	-.10	.09	-.11	.60	.51
26 (overall muscle)	.07	-.27	.09	-.65	-.02	.62

Item	Factor 1 (Youthfulness)	Factor 2 (Body Fat)	Factor 3 (Penis)	Factor 4 (Muscularity)	Factor 5 (Body Hair)	Communality
27 (skin youthful)	.73	-.05	-.17	-.24	-.11	.56
28 (flabby chest)	.09	-.61	.05	-.10	-.07	.45
29 (mouth)	.17	.13	.00	-.24	.15	.15
30 (flaccid penis)	-.02	-.07	.71	.03	.08	.57
31 (texture of hair)	.59	.02	.29	.14	.10	.57
32 (eyebrows)	.37	.03	-.01	-.15	.15	.27
33 (appearance of facial hair)	.16	.03	.13	-.07	.23	.19
34 (losing hair)	.73	-.20	.13	.29	-.09	.62
35 (appearance of penis)	-.07	-.12	.58	-.15	.24	.62
36 (teeth whiter)	.17	.07	.15	-.13	.28	.27
37 (weight around middle)	.02	-.78	.07	.02	-.06	.63
38 (leg hair)	.09	.02	.08	-.11	.60	.52
39 (having attractive face)	.62	-.09	.16	-.27	-.02	.68
40 (thickness of hair)	.65	-.14	.15	.29	.11	.62
41 (shape of face)	.47	-.17	-.03	-.02	.13	.37
42 (stomach hair)	-.04	.00	-.07	-.05	.75	.51
43 (wrinkles)	.48	-.05	-.08	-.14	.30	.52
44 (overall definition)	.13	-.44	.01	-.58	-.03	.72
45 (teeth)	.28	.10	.18	-.21	.16	.30
46 (back hair)	.18	-.23	-.07	.21	.45	.35
47 (erect penis)	.05	.00	.87	-.05	-.10	.73
48 (six-pack)	.07	-.19	.26	-.47	.06	.52
49 (overweight)	-.02	-.78	.04	.09	.04	.60
50 (arm hair)	-.06	.13	.09	-.03	.72	.53
51 (face youthful)	.68	.04	.01	-.12	.10	.59
52 (amount of hair)	.72	-.15	.21	.35	.12	.79
53 (shape of body)	.17	-.66	.04	-.18	.09	.72
54 (muscular legs)	.05	-.16	.11	-.45	.14	.42

Item	Factor 1 (Youthfulness)	Factor 2 (Body Fat)	Factor 3 (Penis)	Factor 4 (Muscularity)	Factor 5 (Body Hair)	Communality
55 (getting older)	.45	.00	.12	.02	.12	.32
Eigenvalue	17.39	4.90	3.11	2.84	2.24	
% of Variance	32.20	9.08	5.76	5.25	4.16	

Note. Boldface indicates a meaningful factor loading.

Table 3.3 Inter-Factor Correlations for the MMBCQ without Item 22

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Factor 1 (Youthfulness)	--				
Factor 2 (Body Fat)	-.26	--			
Factor 3 (Penis)	.31	-.31	--		
Factor 4 (Muscularity)	-.24	.26	-.23	--	
Factor 5 (Body Hair)	.50	-.21	.40	-.27	--

Table 3.4 Factor Loadings, Communalities, Eigenvalues, and Percentages of Variance for the MMBCQ without Items 16, 21, 22, 29, 32, 33, 36, 45

Item	Factor 1 (Muscularity)	Factor 2 (Body Fat)	Factor 3 (Penis)	Factor 4 (Youthfulness)	Factor 5 (Hair)	Communality
1 (muscular arms)	.65	-.06	.13	-.04	.14	.58
2 (stomach fat)	.15	-.70	.06	-.07	-.03	.59
3 (height)	.06	-.16	.22	.05	.29	.30
4 (looking fit)	.46	-.50	-.02	.10	-.03	.67
5 (bald)	-.22	-.11	.23	.65	.06	.59
6 (amount of body hair)	-.10	-.07	-.14	.23	.67	.58
7 (size of penis)	.09	-.06	-.84	.04	-.06	.77
8 (muscular abs)	.54	-.20	.16	-.02	.09	.54
9 (weight)	-.04	-.86	-.01	-.15	.13	.73
10 (chest hair)	.00	-.03	-.03	-.10	.86	.67
11 (amount of facial hair)	.01	-.07	.06	-.06	.61	.40
12 (grey hair)	.12	.08	.12	.27	.35	.36
13 (making face attractive)	.25	.08	-.02	.54	.09	.45
14 (muscular back)	.68	-.09	.15	.03	.00	.57
15 (girth of penis)	.12	.02	-.86	-.03	.04	.80
17 (overall body fat)	.05	-.85	-.09	-.03	-.01	.70
18 (muscular chest)	.70	-.13	.08	-.03	.17	.71
19 (chubby face)	.08	-.47	.07	.18	.26	.58
20 (proportional)	.22	-.52	.03	.22	-.01	.54
23 (looking youthful)	.33	.05	-.28	.71	.00	.66
24 (muscular buttocks)	.48	-.02	.04	.16	.07	.35
25 (pubic hair)	.18	-.02	.09	.06	.56	.50
26 (overall muscle)	.66	-.22	.08	-.01	.02	.63
27 (skin youthful)	.31	.01	-.17	.68	-.11	.56

Item	Factor 1 (Muscularity)	Factor 2 (Body Fat)	Factor 3 (Penis)	Factor 4 (Youthfulness)	Factor 5 (Hair)	Communality
28 (flabby chest)	.09	-.62	.04	.06	.06	.46
30 (flaccid penis)	.01	-.04	.70	.05	.07	.58
31 (texture of hair)	-.09	.02	.26	.60	.12	.55
34 (losing hair)	-.22	-.18	.12	.75	.09	.61
35 (appearance of penis)	.19	-.08	.57	-.02	.24	.63
37 (weight around middle)	-.01	-.79	.05	.02	-.08	.62
38 (leg hair)	.12	.04	.09	.08	.63	.55
39 (having attractive face)	.32	-.06	.14	.57	.02	.66
40 (thickness of hair)	-.22	-.12	.14	.67	.13	.62
41 (shape of face)	.08	-.13	-.03	.46	.14	.37
42 (stomach hair)	.05	.02	-.04	-.04	.74	.52
43 (wrinkles)	.22	.02	-.09	.50	.25	.52
44 (overall definition)	.62	-.37	-.02	.06	-.01	.72
46 (back hair)	-.14	-.17	-.07	.26	.38	.31
47 (erect penis)	.09	.03	.84	.09	-.06	.74
48 (six-pack)	.56	-.07	.25	.08	.04	.55
49 (overweight)	-.09	-.78	.04	.00	.02	.59
50 (arm hair)	.02	.13	.10	-.04	.75	.56
51 (face youthful)	.20	-.10	.00	.68	.10	.60
52 (amount of hair)	-.27	-.14	.19	.77	.11	.79
53 (shape of body)	.21	-.64	.02	.15	.09	.72
54 (muscular legs)	.52	-.08	.08	.06	.10	.42
55 (getting older)	.03	.03	.11	.48	.08	.31
Eigenvalue	16.15	4.58	3.06	2.73	2.25	
% of Variance	34.36	9.75	6.51	5.81	4.80	

Note. Boldface indicates a meaningful factor loading.

Table 3.5 Inter-Factor Correlations for the MMBCQ without Items 16, 21, 22, 29, 32, 33, 36, 45

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Factor 1 (Youthfulness)	--				
Factor 2 (Body Fat)	-.37	--			
Factor 3 (Penis)	.22	-.34	--		
Factor 4 (Muscularity)	.26	-.28	.23	--	
Factor 5 (Body Hair)	.28	-.27	.35	.44	--

Table 3.6 Item Analysis of the Muscularity Subscale

Item	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1 (muscular arms)	.72	.90
8 (muscular abs)	.70	.91
14 (muscular back)	.72	.91
18 (muscular chest)	.80	.90
24 (muscular buttocks)	.53	.92
26 (overall muscle)	.77	.90
44 (overall definition)	.78	.90
48 (six-pack)	.69	.91
54 (muscular legs)	.62	.91

Table 3.7 Intercorrelations for the Muscularity Subscale Items

Items	1	8	14	18	24	26	44	48	54
1	--								
8	.49	--							
14	.66	.55	--						
18	.68	.66	.58	--					
24	.43	.38	.48	.43	--				
26	.68	.48	.57	.73	.45	--			
44	.57	.61	.58	.72	.41	.78	--		
48	.46	.70	.53	.59	.36	.50	.59	--	
54	.49	.41	.52	.47	.49	.50	.52	.50	--

Note. All coefficients are significant at $p < .001$.

Table 3.8 Item Analysis of the Body Fat Subscale

Item	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
2 (stomach fat)	.74	.92
9 (weight)	.79	.91
17 (overall body fat)	.81	.91
19 (chubby face)	.66	.92
20 (proportional)	.65	.92
28 (flabby chest)	.68	.92
37 (weight around middle)	.75	.92
49 (overweight)	.73	.92
53 (shape of body)	.78	.91

Table 3.9 Intercorrelations for the Body Fat Subscale Items

Items	2	9	17	19	20	28	37	49	53
2	--								
9	.62	--							
17	.70	.78	--						
19	.49	.53	.54	--					
20	.49	.56	.56	.57	--				
28	.55	.57	.56	.48	.44	--			
37	.71	.59	.63	.45	.49	.57	--		
49	.58	.66	.64	.57	.42	.56	.66	--	
53	.56	.66	.66	.59	.61	.60	.65	.58	--

Note. All coefficients are significant at $p < .001$.

Table 3.10 Item Analysis of the Penis Subscale

Item	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
7 (size of penis)	.84	.90
15 (girth of penis)	.85	.90
30 (flaccid penis)	.78	.91
35 (appearance of penis)	.72	.92
47 (erect penis)	.81	.90

Table 3.11 Intercorrelations for the Penis Subscale Items

Items	7	15	30	35	47
7	--				
15	.79	--			
30	.70	.73	--		
35	.63	.68	.64	--	
47	.77	.77	.68	.64	--

Note. All coefficients are significant at $p < .001$.

Table 3.12 Item Analysis of the Youthfulness Subscale

Item	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
5 (bald)	.65	.91
13 (making face attractive)	.58	.92
23 (looking youthful)	.65	.91
27 (skin youthful)	.64	.91
31 (texture of hair)	.67	.91
34 (losing hair)	.69	.91
39 (having attractive face)	.71	.91
40 (thickness of hair)	.72	.91
41 (shape of face)	.59	.92
43 (wrinkles)	.59	.92
51 (face youthful)	.73	.91
52 (amount of hair)	.79	.91
55 (getting older)	.54	.92

Table 3.13 Intercorrelations for the Youthfulness Subscale Items

Items	5	13	23	27	31	34	39	40	41	43	51	52	55
5	--												
13	.29	--											
23	.32	.52	--										
27	.33	.52	.67	--									
31	.47	.47	.37	.37	--								
34	.80	.27*	.40	.34	.51	--							
39	.42	.66	.54	.58	.56	.37	--						
40	.65	.36	.38	.33	.61	.68	.48	--					
41	.33	.46	.45	.45	.42	.35	.57	.43	--				
43	.37	.36	.53	.51	.38	.37	.45	.34	.44	--			
51	.34	.58	.67	.68	.53	.34	.61	.47	.51	.54	--		
52	.72	.36	.42	.42	.62	.78	.52	.84	.41	.39	.54	--	
55	.36	.20*	.42	.37	.44	.39	.43	.43	.26*	.44	.47	.48	--

Note. * $p < .05$. All other coefficients are significant at $p < .001$.

Table 3.14 Item Analysis of the Body Hair Subscale

Item	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
6 (amount of body hair)	.67	.84
10 (chest hair)	.71	.84
11 (amount of facial hair)	.55	.85
12 (grey hair)	.49	.86
25 (pubic hair)	.62	.85
38 (leg hair)	.62	.85
42 (stomach hair)	.64	.85
46 (back hair)	.45	.86
50 (arm hair)	.67	.84

Table 3.15 Intercorrelations for the Body Hair Subscale Items

Items	6	10	11	12	25	38	42	46	50
6	--								
10	.55	--							
11	.42	.56	--						
12	.30	.33	.33	--					
25	.48	.46	.38	.40	--				
38	.49	.51	.42	.48	.39	--			
42	.45	.71	.43	.25*	.53	.40	--		
46	.56	.31	.16 ^{ns}	.27*	.42	.14 ^{ns}	.35	--	
50	.45	.54	.43	.47	.41	.67	.45	.32	--

Note. ^{ns} = non-significant. * $p < .05$. All other coefficients are significant at $p < .001$.

Figure 3.2 Scree Plot of the 39 Item Version of the MMBCQ

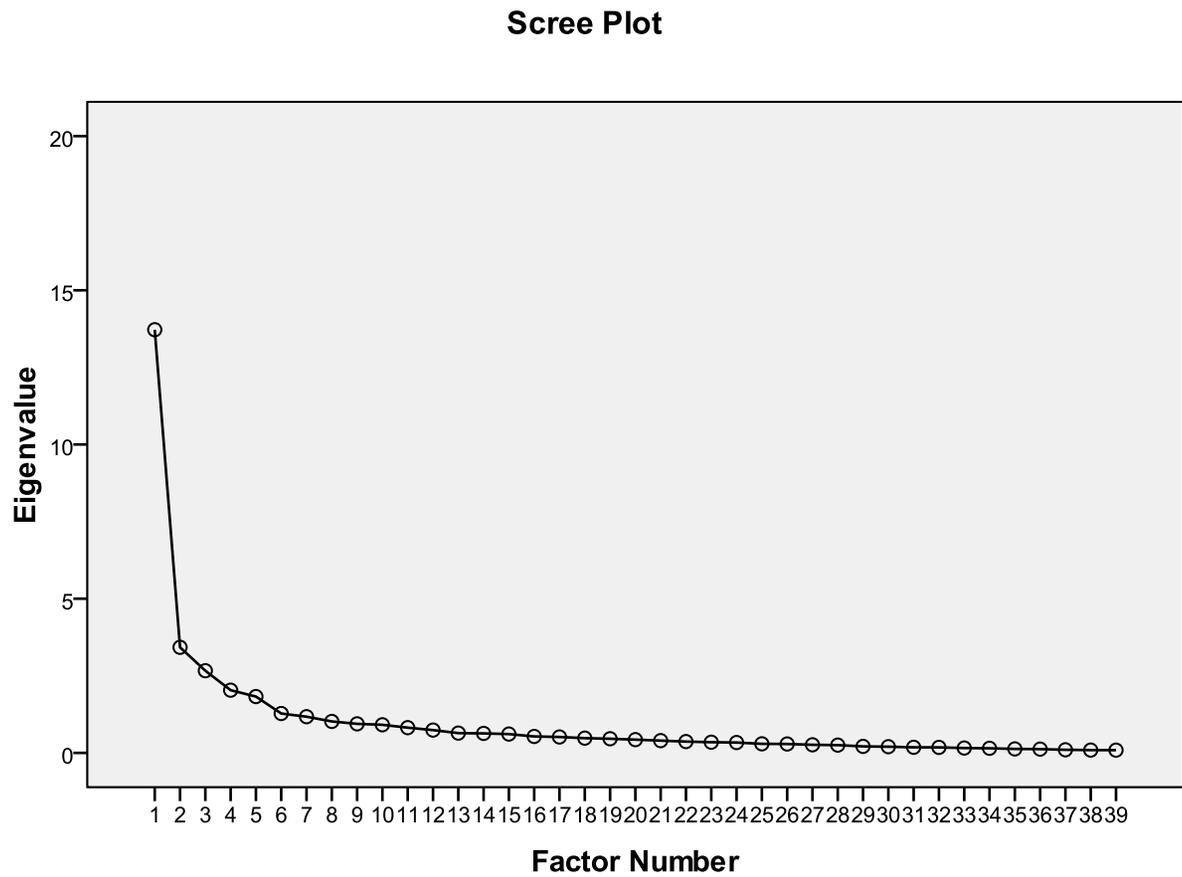


Table 3.16 Factor Loadings, Communalities, Eigenvalues, and Percentages of Variance for the 39 Item Version of the MMBCQ

Item	Factor 1 (Youthfulness)	Factor 2 (Body Fat)	Factor 3 (Penis)	Factor 4 (Muscularity)	Factor 5 (Body Hair)	Communality
1 (muscular arms)	.03	-.04	.08	-.66	.17	.61
2 (stomach fat)	-.10	-.70	.05	-.17	-.03	.58
3 (height)	.03	-.19	.24	-.05	.26	.31
5 (bald)	.41	-.14	.23	.22	.15	.44
6 (amount of body hair)	.22	-.13	-.13	.17	.68	.61
8 (muscular abs)	.04	-.26	.11	-.89	.11	.54
10 (chest hair)	-.15	-.09	-.04	-.05	.89	.69
11 (amount of facial hair)	-.04	-.04	.04	-.06	.60	.39
12 (grey hair)	.27	.08	.11	-.09	.36	.35
13 (making face attractive)	.62	.06	.04	-.12	.05	.46
14 (muscular back)	.05	-.07	.11	-.71	.01	.63
15 (girth of penis)	-.10	.01	.88	-.13	.00	.79
17 (overall body fat)	-.07	-.86	-.09	-.07	-.02	.68
18 (muscular chest)	.07	-.13	.06	-.67	.18	.70
19 (chubby face)	.14	-.55	.06	-.02	.25	.62
20 (proportional)	.25	-.55	.08	-.14	-.05	.57
23 (looking youthful)	.85	.02	-.24	-.17	.00	.70
24 (muscular buttocks)	.28	-.07	.09	-.38	.03	.37
25 (pubic hair)	.07	-.04	.09	-.15	.53	.46
27 (skin youthful)	.84	-.05	-.09	-.12	-.16	.66
28 (flabby chest)	.03	-.66	.07	-.05	-.08	.49
30 (flaccid penis)	.00	-.07	.73	.02	.03	.59
31 (texture of hair)	.50	-.03	.33	.18	.12	.54
35 (appearance of penis)	-.07	-.09	.60	-.18	.22	.65
38 (leg hair)	.08	.04	.09	-.09	.62	.52

Item	Factor 1 (Youthfulness)	Factor 2 (Body Fat)	Factor 3 (Penis)	Factor 4 (Muscularity)	Factor 5 (Body Hair)	Communality
39 (having attractive face)	.63	-.12	.21	-.16	-.02	.69
40 (thickness of hair)	.46	-.15	.18	.24	.20	.50
41 (shape of face)	.48	-.24	.04	.06	.10	.44
42 (stomach hair)	-.04	.04	-.03	-.08	.75	.52
43 (wrinkles)	.57	.01	-.05	-.11	.24	.52
44 (overall definition)	.12	-.38	-.03	-.55	.03	.67
46 (back hair)	.19	-.21	-.02	.17	.39	.32
47 (erect penis)	.07	.00	.88	-.04	-.10	.75
49 (overweight)	-.09	-.79	.04	.09	.01	.56
50 (arm hair)	.00	.13	.12	-.04	.70	.54
51 (face youthful)	.80	.04	.06	-.02	.04	.69
53 (shape of body)	.15	-.66	.06	-.14	.06	.72
54 (muscular legs)	.18	-.11	.08	-.46	.07	.42
55 (getting older)	.48	.02	.16	.05	.07	.33
Eigenvalue	13.72	3.42	2.66	2.03	1.83	
% of Variance	35.18	8.78	6.83	5.21	4.68	

Note. Boldface indicates a meaningful factor loading.

Table 3.17 Inter-Factor Correlations for the 39 Item Version of the MMBCQ

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Factor 1 (Youthfulness)	--				
Factor 2 (Body Fat)	-.37	--			
Factor 3 (Penis)	.31	-.39	--		
Factor 4 (Muscularity)	-.22	.36	-.24	--	
Factor 5 (Body Hair)	.46	-.31	.43	-.21	--

Table 3.18 Subscale Correlations for the 39 item Version of the MMBCQ

	Youthfulness	Body Fat	Penis	Muscularity	Body Hair
Youthfulness	--				
Body Fat	.48	--			
Penis	.43	.48	--		
Muscularity	.46	.59	.48	--	
Body Hair	.58	.38	.42	.47	--

Note. All coefficients are significant at $p < .001$.

Table 3.19 Items in the Final Version of the MMBCQ

Item
Muscularity (7 items)
1. The muscular definition of my arms
8. The muscular definition of my abdominals
14. The muscular definition of my back
18. The muscular definition of my chest
24. The muscular definition of my buttocks
33. My overall level of muscular definition
37. The muscular definition of my legs
Body Fat (7 items)
2. The amount of body fat around my stomach
9. The shape of my body
13. My overall amount of body fat
19. Having or getting a chubby face
20. Being height and weight proportional
28. Having or getting a flabby chest (“man boobs”)
32. Being or becoming overweight
Penis (4 items)
7. The appearance of my penis
15. The thickness of my penis
27. The length of my flaccid (soft) penis
36. The length of my erect (hard) penis
Youthfulness (11 items)
4. Having attractive facial features
5. Being or becoming bald
11. Making my skin look more youthful
17. Making my facial features attractive
21. The thickness of the hair on my head
23. Getting older
26. Looking youthful
30. Making my face look more youthful
31. The texture of my head hair
35. Having or getting wrinkles
39. The shape of my face

Item

Body Hair (9 items)

- 6. The amount of body hair I have
- 10. The amount of chest hair I have
- 12. Having or getting grey hair
- 16. The amount of facial hair I have
- 22. The amount of hair I have on my legs
- 25. The amount of pubic hair I have
- 29. The amount of hair I have on my arms
- 34. The amount of hair I have on my back
- 38. The amount of hair I have on my stomach

Height (1 item)

- 3. My height
-

3.5 References

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4 STUDY 3: PSYCHOMETRIC EVALUATION OF THE MMBCQ⁸

4.1 Introduction

Study 3 represents the third and final study in a series of studies related to the development and initial validation of the Multidimensional Male Body Concerns Questionnaire (MMBCQ). Study 1 was a qualitative investigation seeking to identify the components of the male body that are considered important to men's body image. This study revealed nine major dimensions of men's body image that should be considered when evaluating men's concerns regarding their bodies and appearance: muscularity, body fat, youthfulness, body hair, head hair, facial hair, penis size, height, and facial characteristics.

In Study 2, a total of 55 items were developed to assess these nine dimensions, with the focus of the items being on men's concern with each of these dimensions. A pilot study was then conducted and a series of item analyses and factor analyses were performed to examine the quality of each of these items. The original 55 items were reduced and refined to a total of 39 items. An exploratory factor analysis indicated that the items addressing these nine dimensions were best accounted for by five factors: muscularity (seven items), body fat (seven items), penis (four items), youthfulness (11 items), and body hair (nine items). There was also a single item representing height. The reduction in the number of dimensions assessed were accounted for by: (1) the items regarding specific facial features being dropped from the scale as they did not load on any factors and the remaining facial characteristic items loading on the youthfulness factor, (2) the facial hair and body hair items loading together on the body hair factor, and (3) the head hair items (with the exception of grey hair which loaded on the body hair factor) loading on the youthfulness factor. Overall, the

⁸ A version of this chapter will be submitted for publication. Rusticus, S. A. Going beyond muscularity: Development of a multidimensional measure of male body concerns.

preliminary evaluation of the MMBCQ demonstrated an acceptable factor structure for the 39 items and good reliability of the subscale scores.

4.1.1 Purpose of the Present Study

The purpose of the present study was to provide further reliability and validity evidence for the newly developed MMBCQ. Evidence of the reliability and validity of the MMBCQ scores was provided by examining its factor structure, reliability (Cronbach's alpha), and construct validity (i.e., convergent, discriminant, known-groups). Item response modeling was also used to examine item performance along the continuum of the latent variable in terms of expected item responses and conditional reliability.

It is expected that the items of the MMBCQ will reveal the same factor structure and similar reliabilities for the subscales as was found in the pilot test. Construct validity evidence will be demonstrated by correlating the subscale scores of the MMBCQ to two types of other measures: (1) measures of male body image, and (2) measures of theoretically relevant constructs. The measures of male body image that were selected for the present study were the Male Body Attitudes Scale (MBAS; Tylka, Bergeron, & Schwartz, 2005) and the Multidimensional Body-Self Relations Questionnaire – Appearance Scales (MBSRQ-AS; Cash, 2000; Brown, Cash, & Milkulka, 1990). The measures of theoretically relevant constructs selected for the present study were the Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965) and the Self-Consciousness Scale –Revised (SCS-R; Scheier & Carver, 1985).

The MBAS was selected because it is the measure of body image specifically developed for men that was the most similar to the MMBCQ. The MBAS is the only measure of male body image to also include subscales on muscularity, body fat, and height. Other

measures of male body image predominantly focus only on muscularity. The MBSRQ-AS was selected for the present study because it is one of the most widely known and used measures of body image for men and women. The MBSRQ-AS contains the following subscales: Appearance Evaluation (AE), Appearance Orientation (AO), Overweight Preoccupation (OP), Self-Classified Weight (SCW), and Body Areas Satisfaction (BAS). Because the BAS subscale has been shown to potentially have different factor structures across age and gender groups (Rusticus & Hubley, 2006), only specific items from this subscale were used in the present study (i.e., muscle tone, weight, height). Additionally, because previous research does not present a clear picture of the relationship between appearance orientation and body concern/body satisfaction, the AO subscale will not be used to make any claims about the validity of the MMBCQ scores. The RSES was selected because it was the most commonly used measure in validation studies of the other currently available measures of male body image. In general, researchers using the RSES (e.g., McCreary & Sasse, 2000; Tylka et al., 2005) have found that body dissatisfaction is negatively related to self-esteem. The SCS-R, which contains public self-consciousness, private self-consciousness, and social anxiety subscales, was selected for the present study because self-consciousness and social anxiety have been shown to be negatively related to a positive body image (Theron, Nel, & Lubbe, 1991) and positively related to body importance (Cash & Szymanski, 1995). Also, it has been found that men show increased self-consciousness and social anxiety when presented with images of attractive males (Thornton & Moore, 1993).

In regards to the Muscularity subscale of the MMBCQ, the following hypotheses were made: (1) it will have at least a moderately sized positive correlation with the MBAS

Muscularity subscale and a moderately sized negative correlation with the MBSRQ-AS BAS item on muscle tone; (2) it will correlate positively with the MBAS Low Body Fat subscale and MBAS Total Score and negatively with the MBSRQ-AS AE subscale, at a strength below its relationships with the MBAS Muscularity subscale and BAS muscle tone item; (3) it will have positive, but even smaller, correlations with the OP subscale of the MBSRQ-AS and the Public Self-Consciousness and Social Anxiety subscales of the SCS-R, and a small negative correlation with the RSES; and (4) it will demonstrate low correlations with the MBAS Height subscale, MBSRQ-AS SCW subscale, and the SCS-R Private Self-Consciousness subscale.

For the Body Fat subscale of the MMBCQ, the following hypotheses were made: it will have (1) at least moderately sized positive correlations with the MBAS Low Body Fat subscale and the MBSRQ-AS OP and SCW subscales, and a moderately sized negative correlation with the MBSRQ-AS BAS item on weight, (2) smaller positive correlations with the MBAS Total Score and Muscularity subscale score, and a smaller negative correlation with the MBSRQ-AS AE subscale, (3) even smaller positive correlations with the Public Self-Consciousness and Social Anxiety subscales of the SCS-R and a small negative correlation with the RSES; and (4) low correlations with the MBAS Height subscale and the SCS-R Private Self-Consciousness subscale.

For the Youthfulness, Body Hair, and Penis subscales, there were no measures included in the present study that provided good evidence for the construct validity of these subscale scores. Part of the reason for this is because the assessment of these constructs for male body image is new and thus somewhat of an exploratory approach is being taken. However, to demonstrate discriminant validity, it is hypothesized that, like the Muscularity

and Body Fat subscales, these remaining subscales will also demonstrate (1) small positive correlations with the SCS-R Public Self-Consciousness and Social Anxiety subscales, and a small negative correlation with the RSES, and (2) low correlations with the MBAS Height subscale and the SCS-R Private Self-Consciousness subscale.

For the MMBCQ single item on height, the following hypotheses are being made: (1) it will have at least a moderately sized positive correlation with the MBAS height subscale and a moderately sized negative correlation with the MBSRQ-AS BAS item on height, and (2) all other relationships this item has with the other measures will be low.

Evidence of known-groups validity, a form of construct validity that shows that a measure can discriminate between groups that are known to vary on the variable(s) being measured, will be provided by comparing the subscale scores of the MMBCQ between (1) gay and straight men, (2) men with high BMI and low BMI (top 25% compared to the bottom 25% of the sample), and (3) men who weight train and men who do not weight train.

Because of the increased emphasis that is often placed on physical attractiveness in the gay community (Siever, 1994) and the findings that gay men have a greater concern for physical attractiveness (Siever, 1994; Silberstein, Mishkind, Striegel-Moore, Timko, & Rodin, 1989; Yelland & Tiggemann, 2003), drive for muscularity (Kaminski, Chapman, Haynes, & Own, 2005; Yelland & Tiggemann, 2003), fear of fatness (Kaminski et al., 2005), drive for thinness (Kaminski et al., 2005), and, as suggested in Study 1, a greater concern over body hair, it is hypothesized that gay men will score significantly higher than straight men on each of the MMBCQ subscale scores.

Body mass index (BMI) has been reported as the most consistent biological correlate of body dissatisfaction in men and has been found to be directly related to weight concern

(Bardone-Cone, Cass, & Ford, 2008). Thus, it is predicted that men with a higher BMI will score significantly higher on the Body Fat subscale than men with a lower BMI. No other specific hypotheses are being made regarding how these two groups will compare on the other subscales of the MMBCQ.

Engagement in weight training has been shown to be positively related to a drive for muscularity (McCreary & Sasse, 2000; Morrison, Morrison, Hopkins, & Rowan, 2004). Thus, it is hypothesized that men who reported engaging in weight training will score significantly higher on the Muscularity subscale than men who do not engage in weight training. No other specific hypotheses are being made regarding how these two groups will compare on the other subscales of the MMBCQ.

4.1.1.1 Item Response Theory

Although classical test theory (CTT) has been, and still is, the dominant form of test development, item response theory (IRT) has been gaining momentum as a basis for psychological measurement. It is now recommended that IRT be used in conjunction with CTT in establishing valid inferences (Zumbo, Gelin, & Hubley, 2002). In brief, IRT uses model-based measurement to estimate trait levels based on both individuals' responses and on the properties of the items in the scale (Embretson & Reise, 2000). The advantage of IRT is that this approach can provide item information over the range of the latent variable rather than modeling responses to scale items as a function of some set of parameters that are specific to the given set of items and the given sample of respondents (Zumbo, et al., 2002). In other words, in CTT, item-level statistics, reliability, and factor analysis estimates will change from sample to sample and as items are added or deleted from scales, while IRT provides a more robust item assessment that is based on the underlying latent trait.

Furthermore, IRT recognizes that individuals who have different levels of the underlying latent trait can have different scale properties (Hambleton, Swaminathan, & Rogers, 1991).

A nonparametric IRT method was chosen for three reasons: (1) the use of a relatively small sample size (parametric IRT models require thousands of participants), (2) the small number of items in each of the subscales, and (3) I wanted to take an exploratory approach that was data driven. Two types of nonparametric item response models were analyzed in the present study: the item response function (defined as the relation between the probability of selecting a particular item response and the amount of the latent variable) and conditional reliability (indices of reliability along the latent variable continuum). Item response functions that monotonically increase steadily from lower to higher levels of the latent variable indicate good items (e.g., an individual who is high on the latent variable (e.g., muscularity concern) should be more likely to indicate a high level of concern on the muscularity items). An item response function that is flat indicates a poor item as it does not discriminate well among respondents. Although it is not expected that conditional reliability will be the same at all levels of the latent variable, good items will demonstrate acceptable levels of reliability (minimum of .70; Nunnally & Bernstein, 1994) across the continuum.

4.2 Methods

4.2.1 Participants

A total of 234 men took part in this study. Of these men, 234 completed the MMBCQ, 230 completed the MMBCQ and RSES, 225 completed the MMBCQ, RSES, and MBAS, and 219 completed all five scales included in the present study.

The men ranged in age from 19 to 81 years ($M = 35.58$, $SD = 13.53$). The majority of the men (85.7%) identified their sexual orientation as straight, 11.1% identified as gay, 1.8%

identified as bisexual, .5% as queer, .5% as bi-curious, and .5% as other. Approximately three quarters of the men identified themselves as Caucasian, 11.9% as East Asian, 7.3% as South Asian/Middle Eastern, 0.9% as Hispanic, 0.9% as Black, 0.5% as Aboriginal/First Nations, and 4.1% as other. The men tended to be well educated with 22.3% beginning or completing graduate studies, 33.2% completing college or university, 30.9% completing some college or university, 3.6% completing high school, 2.3% completing less than high school, 6.8% completing a trades program, and 0.9% indicating other. A total of 42.7% of the men reported being married or common-law, 32.3% reported that they were not married and not in a relationship, 18.6% reported that they were not married, but in a relationship, 5.9% reported that they were divorced or separated, and 0.5% reported that they were widowed. The men's BMI⁹ ranged from 16.38 to 40.09 ($M = 25.63$, $SD = 4.07$).

4.2.2 Measures

4.2.2.1 MMBCQ

The 39-item MMBCQ is a newly developed measure that assesses men's levels of concern with various aspects of their bodies. The MMBCQ is composed of five subscales: Muscularity (7 items), Body Fat (7 items), Youthfulness (11 items), Body Hair (9 items), and Penis (4 items). There is also a single item assessing concern with height. Responses are measured on a 5-point scale ranging from 1 (not at all concerned) to 5 (extremely concerned). For each subscale a higher value indicates greater levels of concern.

4.2.2.2 MBAS

The 24-item MBAS (Tylka et al., 2005) measures men's negative attitudes toward their body. The 8-item Low Body Fat subscale assesses attitudes toward one's body fat. The

⁹ BMI can be interpreted as follows: <16.5 = severely underweight, 16.5-18.4 = underweight, 18.5-24.9 = normal, 25.0-30.0 = overweight, >30.0 = obese.

10-item Muscularity subscale assesses attitudes toward one's muscularity. The 2-item Height subscale assesses attitudes toward one's height. In addition to the three subscale scores, the MBAS can also be averaged for a total score. There are four additional items used only in the calculation of the total score. Responses are measured on a 6-point scale ranging from 1 (never) to 6 (always). For each subscale, and the total score, higher values indicate more negative body attitudes. Coefficient alphas for the subscales and total score in the present study were as follows: Low Body Fat = .93; Muscularity = .89; Height = .83; Total Score = .92.

4.2.2.3 MBSRQ-AS

The 34-item MBSRQ-AS (Cash, 2000; Brown et al., 1990) is a short version of the 69-item MBSRQ and contains only the appearance related subscales. Participants respond to all subscales using a 5-point Likert-type response format; however, a variety of anchor points are used (i.e., definitely agree to definitely disagree, never to always, very underweight to very overweight, very dissatisfied to very satisfied). The Appearance Evaluation (AE) subscale (7 items) assesses feelings about physical appearance; higher scores indicate greater satisfaction with appearance. Coefficient alpha for this subscale was .88. The Appearance Orientation (AO) subscale (12 items) assesses investment in appearance; higher scores indicate more importance and attention placed on looks and more engagement in grooming activities. Coefficient alpha for this subscale was .88. The Body Areas Satisfaction (BAS) subscale (9 items) assesses satisfaction with discrete aspects of appearance; higher scores indicate contentment with more areas of one's body. Coefficient alpha for this subscale was .84. The Overweight Preoccupation (OP) subscale (4 items) assesses fat anxiety, weight vigilance, dieting, and eating restraint; higher scores indicate greater weight preoccupation.

Coefficient alpha for this subscale was .69. The Self-Classified Weight (SCW) subscale (2 items) assesses perception and labelling of weight, from very underweight to very overweight (Cash, 2000). Coefficient alpha for this subscale was .87.

4.2.2.4 RSES

The 10-item RSES (Rosenberg, 1965) assesses global self-esteem, with higher scores reflecting higher levels of self-esteem. Responses are measured on a 4-point scale ranging from 1 (strongly agree) to 4 (strongly disagree). Coefficient alpha for this scale was .87.

4.2.2.5 SCS-R

The 22-item SCS-R (Scheier & Carver, 1985) is composed of three subscales. The 9-item Private Self-Consciousness subscale assesses the tendency to attend to inner thoughts, feelings, and motives which are not easily accessible to others. Coefficient alpha for this subscale was .78. The 7-item Public Self-Consciousness subscale assesses how aware a person is of the self as a social object. Coefficient alpha for this subscale was .85. The 6-item Social Anxiety subscale assesses apprehensiveness over being evaluated by others in a social context. Coefficient alpha for this subscale was .82. Participants respond to each item on a 4-point scale ranging from 0 (not at all like me) to 3 (a lot like me). For each subscale, higher scores indicate greater self-consciousness.

4.2.2.6 Personal Demographic Form

A personal demographics form was included at the end of the survey. The demographic form inquired about each participants' age, sexual orientation, country of residence, ethnic/racial/cultural background, level of education, marital status, height, weight, and exercise routines. This information was collected for the purpose of describing the sample and to provide further validity evidence of the MMBCQ scores (e.g., calculating

BMI from weight and height). A copy of the personal demographic form may be found in Appendix B.

4.2.3 Procedure

After obtaining UBC Behavioural Research Ethics Board approval to conduct the research, data were collected using a web-based survey. Recruitment for the web survey took place by means of: (1) “snowball sampling” via emails sent to family, colleagues, and friends asking individuals to take part and/or forward the survey to other adults they know, (2) advertisements placed on Craigslist, and (3) classroom announcements. In each case, individuals were provided with a link to the survey in an email or online advertisement and those who were interested in participating were able to complete the survey at a time and location of their choice. All participants viewed an electronic informed consent form and gave their consent by completing and submitting the survey materials. All information was collected on a secure server. Once data collection was complete, all survey materials were removed from the Internet.

4.3 Results

4.3.1 Exploratory Factor Analysis and Reliability Analysis

To examine whether the factor structure identified in the pilot test would generalize to a new sample, an EFA on the Pearson correlation matrix was conducted using principal axis factoring (PAF) and an oblique rotation.¹⁰ The number of factors to retain was based on the results of the pilot study and a parallel analysis. For the parallel analysis (Reise, Waller, & Comrey, 2000), a random set of uncorrelated data was generated, matching the group data on the number of variables and the sample size. A principal components analysis was then

¹⁰ EFAs treating the item responses as ordered categorical data resulted in the same conclusions being drawn as with the Pearson correlation matrix.

conducted on this randomly generated data and the eigenvalues from the random data were compared to the eigenvalues from the group data. Factors were retained in the group data if their eigenvalue was greater than the largest eigenvalue produced by the random data. A PAF was then rerun for the group data specifying the number of factors to be extracted. Items were flagged as problematic if they were found to cross-load on more than one factor or failed to load on at least one factor. Factor loadings of .40 or greater were considered meaningful (Stevens, 1992).

While the pilot study suggested that five factors should emerge, the parallel analysis suggested that a four factor model was the best fit to the data. Both of these models were explored and will be discussed separately.

4.3.1.1 Four Factor Solution

The findings from the parallel analysis indicated that the items of the MMBCQ may be best accounted for by a four factor solution. Tables 4.1 and 4.2 present the factor loadings and inter-factor correlations, respectively. The factors revealed by this analysis were similar to the five factor structure found in the pilot study in that three of the factors represented body hair, youthfulness, and penis. The difference in the four factor structure was the muscularity and body fat items loaded together on one factor, which I called the lean and muscular factor. Of the original 14 items in the Muscularity and Body Fat subscales (7 items each), 13 of these items loaded on the lean and muscular factor. The item representing the muscularity of the buttocks (item 24) did not load on this factor, or any other factor. Of the nine items in the Body Hair subscale, seven of these items loaded on the body hair factor. The item on facial hair (item 16) loaded below the .40 cutoff (.36). The item on grey hair (item 12), which loaded on the body hair factor in the pilot study, loaded instead on the

youthfulness factor in the present study. This item was noted as a potential problem item in the pilot study because it was expected to load on the youthfulness factor instead of the body hair factor. The current loading of this item on the youthfulness factor is more consistent with the theory that grey hair is a sign of aging. Of the original four items in the Penis subscale, all four items loaded on the penis factor in the present study. Finally, of the original 11 items in the Youthfulness subscale, only seven items loaded on the youthfulness factor. Items 4 (having attractive face), 5 (bald), 21 (thickness of hair), and 39 (shape of face) did not load as expected on this factor. Finally, as expected, the item on height failed to load meaningfully on any factor.

4.3.1.2 Five Factor Solution

In extracting a five factor solution, the same five factors identified in the pilot test also emerged in the present study (i.e., muscularity, body fat, youthfulness, body hair, and penis); however, there were some inconsistencies in the items loading onto the factors. Table 4.3 presents the factor loadings and Table 4.4 presents the inter-factor correlations. Similar to the pilot test and, as expected in the present study, the item on height failed to load meaningfully on any factor. This item is being retained as a single item.

Of the original seven items in the Muscularity subscale, only six of these items loaded on the muscularity factor. The item representing the muscularity of the buttocks (item 24) did not load on this factor, or any other factor. Given that this item was also identified as a potential problem item in the pilot study, I have decided to remove this item. The items representing the muscularity of the abdominals (item 8) and overall muscular definition (item 33) were found to cross-load on both the muscularity and the body fat factor. In looking back at the results of the pilot study, the abdominals item clearly loaded on the muscularity factor

(.89) and not on the body fat factor (.26), while the overall definition item was closer to cross loading on both factors (muscularity = .55; body fat = .38). When cross-loadings occur in a factor analysis, the general recommendation is to remove the items because the items are complex (i.e., do not fit simple structure) and are being influenced by more than one factor (Costello & Osborne, 2005; Shultz & Whitney, 2005; Worthington & Whittaker, 2006). However, it has also been advised that the items can be inspected for their content and rationally categorized into the factor that is seemingly most relevant (Shultz & Whitney, 2005). I believe these two items are too important to the construct of muscularity to be deleted outright. I prefer to keep them in the scale for future evaluations and to monitor their performance. Coefficient alpha for the Muscularity subscale with item 24 (buttocks) removed was .91. Table 4.5 presents the corrected item-total correlations and the alpha if item deleted. All corrected item-total correlations were above the lower bound of .30. There were slight variations in the alpha if an item was to be removed, but nothing that would improve the overall alpha. Coefficient alpha for the Muscularity subscale with items 8, 24, and 33 removed was .87.

Of the original seven items in the Body Fat subscale, all seven items loaded on the body fat factor in the present study. Coefficient alpha for the Body Fat subscale was .91. Table 4.5 presents the corrected item-total correlations and the alpha if item deleted. All corrected item-total correlations were above the lower bound of .30. There were slight variations in the alpha if an item was to be removed, but nothing that would improve the overall alpha.

Of the original four items in the Penis subscale, all four items loaded on the penis factor in the present study. Coefficient alpha for the Penis subscale was .90. Table 4.5

presents the corrected item-total correlations and the alpha if item deleted. All corrected item-total correlations were above the lower bound of .30. There were slight variations in the alpha if an item was to be removed, but nothing that would improve the overall alpha.

Of the nine items in the Body Hair subscale, eight of these items loaded on the body hair factor. The item on facial hair (item 16) loaded slightly below the .40 cutoff (.39) but is being retained on this factor. The item on grey hair (item 12), which loaded on the body hair factor in the pilot study, loaded on the youthfulness factor in the present analysis. Given that the current loading of this item on the youthfulness factor is more consistent with the theory that grey hair is a sign of aging, this item is being moved to the Youthfulness subscale. The item on back hair (item 34), which was noted as a potential problem item in the pilot study because of a factor loading below .40 (.39); was well above the .40 criterion (.66) in the present study. Coefficient alpha for the Body Hair subscale was .87. Table 4.5 presents the corrected item-total correlations and the alpha if item deleted. All corrected item-total correlations were above the lower bound of .30. There were slight variations in the alpha if an item was to be removed, but nothing that would improve the overall alpha.

Finally, of the original 11 items in the Youthfulness subscale, only six items loaded on the youthfulness factor. The items, “having attractive facial features” (item 4), “being or becoming bald” (item 5), “making my facial features attractive” (item 17), and “the thickness of the hair on my head” (item 21) did not load on the youthfulness factor nor any other factor. The item, “the shape of my face” (item 39) loaded instead on the penis factor. Because of their poor factor loadings and because I believe their theoretical relationship to youthfulness is not as strong as the other items, I am removing items 4, 17, and 39. As I believe that items 5 and 21 are more indicative of aging and more important to the construct

of youthfulness than items 4, 17, and 39, which are more related to the face in general, I am hesitant to remove these items from the scale. Thus, I have decided to retain items 5 and 21 in the scale and monitor their performance in future studies. Coefficient alpha for the Youthfulness subscale with items 4, 17, and 39 removed was .87. Table 4.5 presents the corrected item-total correlations and the alpha if item deleted. All corrected item-total correlations were above the lower bound of .30. There were slight variations in the alpha if an item was to be removed, but nothing that would improve the overall alpha. Coefficient alpha with items 5, 21, 4, 17, and 39 removed was .88.

Two further EFAs were conducted on the items of the MMBCQ. One EFA was run with items 4, 17, 24, and 39 removed (See Tables 4.6 and 4.7 for factor loadings and inter-factor correlations, respectively) and one EFA was run with items 4, 5, 8, 17, 21, 24, and 33 removed (See Tables 4.8 and 4.9 for factor loadings and inter-factor correlations, respectively). In the EFA with four items removed, items 8 (muscular abs) and 33 (overall definition) continued to load on both the muscularity and body fat factors. Items 5 (bald) and 21 (thickness of hair) still failed to load meaningfully on any factor. In the EFA with eight items removed, all items loaded meaningfully on their expected factors. For both EFAs, height did not load meaningfully on any factor.

4.3.1.3 Final Factor Structure

Given the results of both the four factor and five factor solutions, my decision was to go with the five factor solution. Evans (1999) advocates that theory and personal values, as well as computer results, can be factored into the decision of how many factors to retain in a factor analysis. In general, the main difference between the four factor and five factor solutions is whether the muscularity and body fat factors should be construed as separate

factors or as one combined factor. As the literature clearly supports muscularity and body fat as distinct, but correlated, constructs, I think it is necessary to keep these constructs separate for the purposes of studying the uniqueness that each has to offer in the understanding of male body image. Furthermore, aside from the two items that cross-loaded onto both factors, the remaining items in these two factors were clearly assessing two distinct dimensions: muscularity versus body fat. The factor loadings of these remaining items onto the other factor were all well below .40, with all of them, except for one, being below .20 (see Tables 4.3 and 4.8).

At this point, the MMBCQ has a total of 35 items. There are six items in the Muscularity subscale, seven items in the Body Fat subscale, four items in the Penis subscale, eight items in the Body Hair subscale, nine items in the Youthfulness subscale, and a single item on height. For the purposes of assessing construct validity and examining item response modelling in the present study, the two cross-loading items in the Muscularity subscale (items 8 and 33) and the two items in the Youthfulness subscale that failed to loading meaningfully on the youthfulness factor (items 5 and 21) are being temporarily removed from their respective subscales so that the validity evidence is gathered on more “pure” constructs. Therefore, for all further analyses in the present study, the Muscularity subscale is composed of four items and the Youthfulness subscale is composed of seven items. See Table 4.10 for the items used to assess construct validity and examine item response modeling.

4.3.2 Construct Validity

4.3.2.1 Correlations

To explore the relations between the MMBCQ and the measures of male body

image and theoretically relevant constructs (self-esteem and self-consciousness), Pearson r correlations were used. Given the large number of correlations, p -values were set at .001 to control for experiment-wise error. Following Cohen's (1992) recommendations, correlations of .10 were considered small, correlations of .30 were considered moderate, and correlations of .50 were considered large.

Correlations between the 31-item MMBCQ and the other measures are presented in Table 4.11. A summary of the predicted correlations and actual correlations are presented in Table 4.12. As predicted, the Muscularity subscale was the most strongly related to the MBAS Muscularity subscale. However, while the Muscularity subscale was statistically significantly negatively correlated to the MBSRQ-AS BAS item on muscle tone, the size of this correlation was only small in size. The Muscularity subscale was also found to show moderate to large positive correlations with the MBAS Total Score and the SCS-R Public Self-Consciousness subscale. Statistically significant and small correlations were also found between the Muscularity subscale and (1) the MBAS Low Body Fat and Height subscales, (2) the MBSRQ-AS OP subscale, and (3) the SCS-R Private Self-Consciousness subscale. The Muscularity subscale was not found to be statistically significantly correlated to the MBSRQ-AS AE or SCW subscales, the RSES, or the SCS-R Social Anxiety subscale. These findings provide partial support for the construct validity of the Muscularity subscale scores.

As predicted, the Body Fat subscale had the strongest relationships with the MBAS Low Body Fat subscale and the MBSRQ-AS OP subscale. The Body Fat subscale also had a large positive correlation with the MBAS Total Score. The Body Fat subscale was moderately and positively related to the MBSRQ-AS SCW subscale, the MBAS Muscularity and height subscales, and the SCS-R Public Self-Consciousness subscale, and moderately

and negatively correlated to the MBSRQ-AS AE subscale and BAS weight item. A statistically significant small negative correlation was found between the Body Fat subscale and the RSES. Finally, the Body Fat subscale was not found to be statistically significantly correlated to the SCS-R Private Self-Consciousness and Social Anxiety subscales. The findings provide good support for the construct validity of the Body Fat subscale scores.

For the Youthfulness subscale, no a priori hypotheses were made regarding convergent validity evidence for this subscale. However, predictions were made, and partially supported, regarding discriminant validity evidence for this subscale. The Youthfulness subscale was found to demonstrate a statistically significant and moderate positive correlation with the SCS-R Public Self-Consciousness subscale and a statistically significant and small negative correlation with the RSES. This subscale was not found to be statistically significantly related to the MBAS Height subscale or the SCS-R Private Self-Consciousness and Social Anxiety subscales.

For the Body Hair subscale, no a priori hypotheses were made regarding convergent validity evidence for this subscale. However, predictions were made, and partially supported, regarding discriminant validity evidence for this subscale. This subscale demonstrated statistically significant and small positive correlations with the SCS-R Public Self-Consciousness subscale and MBAS Height subscale. This subscale was not found to be statistically significantly related to the RSES or the SCS-R Private Self-Consciousness and Social Anxiety subscales.

For the Penis subscale, no a priori hypotheses were made regarding convergent validity evidence for this subscale. However, predictions were made, and partially supported, regarding discriminant validity evidence for this subscale. This subscale was found to

demonstrate statistically significant and moderate positive correlations with the SCS-R Public Self-Consciousness subscale and MBAS Height subscale and a statistically significant small negative correlation with the RSES. This subscale was not found to be statistically significantly related to the SCS-R Private Self-Consciousness and Social Anxiety subscales.

As predicted, the single item on height showed a large positive correlation with the MBAS Height subscale and a large negative correlation with the MBSRQ-AS BAS item on height. Also as predicted, with the exception of a small positive statistically significant correlation with the MBAS Total Score, there were no other statistically significant correlations between the height item and the other measures. These findings provide good support for the construct validity of the height score.

4.3.2.2 Known Groups

A series of analyses of variance (ANOVAs) were conducted with the MMBCQ subscales as separate dependent variables and (1) sexual orientation (gay or straight), (2) BMI group (high BMI or low BMI), or (3) weight training group (weight training or no weight training) as separate independent variables. In the analysis involving sexual orientation, the sample was highly unbalanced in terms of the number of gay and straight men who participated in the present study (25 gay men¹¹ compared to 186 straight men); thus, an equal sized sample of straight men was matched to the sample of gay men and comparisons were conducted on this matched sample. These men were matched on age (with one exception of matching a 70 year old straight man to an 81 year old gay man, all matches were made on exact age or within one year) and BMI (with two exceptions, which were still within 3 BMI points, all matches were within 1 BMI point difference). If after matching on

¹¹ For the purposes of this analysis, the one man who identified himself as queer was combined with the sample of men who identified themselves as gay.

age and BMI, there were still several potential straight men that could be matched to a gay man, exercise frequency was also taken into account.

Table 4.13 presents the means, standard deviations, and ANOVA results for the analysis involving gay and straight men. Statistically significant differences between the gay and straight men were found for the Muscularity, Body Fat, and Body Hair subscales. A large effect size¹² was observed for the Muscularity subscale and medium effect sizes for the Body Fat and Body Hair subscales. Non-significant results were found for the Youthfulness and Penis subscales. These results partially support the predictions made regarding differences between gay and straight men.

In the analysis involving the comparison of men with high BMI and men with low BMI, the 25th and 75th percentiles were determined for the present sample. Those men who had a BMI at the 25th percentile (23.03¹³) or lower were classified as the low BMI group ($n = 54$) and those men who had a BMI at the 75th percentile (27.34) or greater were classified as the high BMI group ($n = 54$). As predicted, the men in the high BMI group scored statistically significantly higher on the Body Fat subscale than the men in the low BMI group. The effect size results indicated that this was a medium sized effect. There were no other statistically significant differences. See Table 4.14 for the means, standard deviations, and ANOVA results.

In the analysis involving the comparison of men who engage in weight training and men who do not engage in weight training, the groups were selected based on participants'

¹² Effect sizes are reported to indicate whether an effect is non-trivial or not (Zumbo & Hubley, 1998). Kirk's (1996) criteria for interpreting omega-squared may be appropriately applied to interpreting partial eta-squared, which is a similar measure of strength of association: small effect = .010 to .058, medium effect = .059 to .137, and large effect = >.137.

¹³ BMI categories: <18.5 = underweight; 18.5-24.9 = normal weight; 25.0-29.9 = overweight; 30.0 and over = obese.

responses to a yes/no question on whether they engage in weight training as a form of exercise (yes: $n = 101$, no: $n = 118$)¹⁴. As predicted, men who reported engaging in weight training scored statistically significantly higher on the Muscularity subscale than those men who did not engage in weight training. The effect size results indicated that this was a medium sized effect. There were no other statistically significant differences. See Table 4.15 for the means, standard deviations, and ANOVA results.

4.3.2.3 Item Response Modeling

Nonparametric item response modeling was conducted on each of the MMBCQ subscales using TestGraf (Ramsey, 2000). TestGraf estimation is based on a type of local averaging called kernel smoothing. Analysis of TestGraf results is largely based on the visual inspection of the graphical output.

The results of the item response function analysis for each of the MMBCQ subscales are presented in Figures 4.1 to 4.5. For each of the plots, it should be noted that the distributions for each of the items were highly skewed, with the bulk of the respondents scoring at the low end of the scale.

For the Muscularity subscale, each plot starts at the bottom left and monotonically increases steadily to the top right indicating that these items are performing well at discriminating among respondents along the latent variable continuum (see Figure 4.1). The vertical solid lines indicate the 95% pointwise confidence intervals. The slightly broader intervals on the upper end of the expected score¹⁵ range indicates that these estimates are less precise at higher levels of the latent variable (likely because of low variability at the high end of the continuum).

¹⁴ 15 men did not answer this question.

¹⁵ The expected score represents a predicted value and is similar to a factor score.

For the Body Fat subscale, each plot starts at the bottom left and monotonically increases steadily to the top right indicating that these items are performing well at discriminating among respondents along the latent variable continuum (see Figure 4.2). The relatively narrow pointwise confidence intervals indicate that these estimates are fairly precise at all levels of the expected score range.

For the Youthfulness subscale, each plot starts at the bottom left and monotonically increases steadily to the top right (see Figure 4.3). For items 12 and 31, the graphs do not span the full range of the item scores. This suggests that these items are performing less well at discriminating among respondents. The large pointwise confidence intervals on the higher end of the expected score range indicates a lack of precision in these estimations.

For the Body Hair subscale, each plot increases monotonically from left to right, but does not span the full range of items scores for any of the items (see Figure 4.4). This indicates somewhat poor discrimination among respondents for these items, especially for items 16, 22, 25, and 29. Similar to the other subscales, the pointwise confidence intervals indicate a lack of precision in these estimations on the higher end of the expected score range. It should also be noted that the range of the expected score continuum does not span the full range of possible scores (i.e., the plots only go up to 26 when it is possible to get a score of 40). This is likely a result of the extremely low variability for this subscale.

For the Penis subscale, each plot starts at the bottom left and monotonically increases to the top right indicating that these items are performing well at discriminating among respondents along the latent variable continuum (see Figure 4.5). Similar to the other subscales, the pointwise confidence intervals indicate a lack of precision in these estimations on the higher end of the expected score range.

Figure 4.6 presents the conditional reliabilities for the MMBCQ subscales. A similar pattern is observed in that reliability is highest at the lower and upper ends of the expected score range. For the Muscularity, Body Fat, and Youthfulness subscales, reliability along the expected score continuum remained above the minimally acceptable criteria of .70. For the Body Hair subscale, the conditional reliability was quite poor across the range of the spectrum and only rose above the .70 criteria in the lower end of the expected score range. For the Penis subscale, the conditional reliability dropped below the .70 criteria in the middle range of the continuum. It should be noted that the positively skewed distribution for each of the subscales is likely impacting these conditional reliability findings. Because the bulk of the scores are at the low end of the scales, more confidence can be placed in the findings at the low end of the expected score ranges.

4.4 Discussion

The purpose of the present study was to provide further reliability and validity evidence for the newly developed MMBCQ. This evidence was provided by examining the factor structure, reliability, construct validity (i.e., convergent, discriminant, known-groups), and item response modeling of the MMBCQ scores.

In examining the factor structure of the MMBCQ, two potential factor structures emerged: a four factor model and a five factor model. The major difference between these two factor structures was that the muscularity and body fat factors were separate factors in the five factor model and were collapsed together in the four factor model. Given that a strong literature base has developed in the male body image field distinguishing between the concepts of muscularity and body fat, and that, except for two cross-loading items, the remaining items in the muscularity and body fat factors showed clear factor loadings for their

respective factor, the five factor solution was accepted as the better model.

While the five factor model was congruent with the results of Study 2, there were a few inconsistencies in the loadings of particular items. This resulted in four items being removed from the MMBCQ and another four items being flagged as problematic (two items that cross-loaded on both the muscularity and body fat factors and two items on head hair that failed to load meaningfully on the youthfulness factor). For the purposes of providing construct validity evidence for the subscales of the MMBCQ, the four problematic items were removed from analyses in the present study. However, the intention is to keep these items in the MMBCQ for further examination in future studies.

Thus, for the present study, the Muscularity subscale consisted of four items, the Body Fat subscale consisted of seven items, the Youthfulness subscale consisted of seven items, the Body Hair subscale consisted of eight items, and the Penis subscale consisted of four items. In total, the MMBCQ consisted of 31 items in the present study (each of the items in the subscales plus a single item on height). Coefficient alpha for each of the subscales was good, ranging from .87 to .91. Once the factor structure was determined, the remaining analyses focused on providing validity evidence for the interpretations that can be drawn from the five subscales of the MMBCQ and the single item on height.

4.4.1 Muscularity Subscale

The hypotheses made regarding the construct validity of the Muscularity subscale scores were partially supported. As predicted, this subscale was positively related to negative body attitudes, weight preoccupation, public self-consciousness, and social anxiety and was negatively related to appearance satisfaction, muscle tone satisfaction, and self-esteem. Muscularity concern was found to be moderately and positively related to investment in

appearance. Also as predicted, this subscale showed a low correlation with perceptions of weight, and a somewhat low correlation with height satisfaction. However, against predictions, the correlation between the Muscularity subscale and the item on muscle tone satisfaction was much lower than expected. This suggests that, although both measures deal with muscularity, there is a larger distinction between the focus of the two items; muscularity concern appears to be a distinct construct from muscularity satisfaction. Also against expectations, there were much larger correlations between the Muscularity subscale and both private and public self-consciousness. The relationship between muscularity concern and public self-consciousness may be explained by the focus of both of these measures being on appearance concerns, with “concern” being a key word. I am unsure how the correlation between muscularity concern and private self-consciousness can be explained, except for the possibility that they both share a commonality in expressing some sort of concern about the self.

Validity evidence for the Muscularity subscale was also provided through the hypothesized findings that gay men and men who engage in weight training would score statistically significantly higher on this subscale than straight men and men who do not engage in weight training, respectively. Finally, the item response functions and the conditional reliability results indicated that the items in the Muscularity subscale differentiate well and are acceptably reliable at all levels of the latent variable. Taken together, these results provide moderate to strong support for the validity of the Muscularity subscale scores.

4.4.2 Body Fat Subscale

The hypotheses made regarding the construct validity of the Body Fat subscale scores were supported. As predicted, this subscale was positively related to negative body attitudes,

weight preoccupation, perceptions of weight, public self-consciousness, and social anxiety and negatively related to weight satisfaction, general appearance satisfaction, and self-esteem. Also as predicted, this subscale showed a low correlation with private self-consciousness, but showed a somewhat larger than predicted correlation with height satisfaction. The Body Fat subscale was also found to be positively correlated with investment in appearance.

Validity evidence for the Body Fat subscale was also provided through the hypothesized findings that gay men and men who were classified as having a high BMI would score statistically significantly higher on this subscale than straight men and men classified as having a low BMI. Finally, the item response functions and the conditional reliability results indicated that the items in the Body Fat subscale differentiate well and are acceptably reliable at all levels of the latent variable. Taken together, these results provide strong support for the validity of the Body Fat subscale scores.

4.4.3 Youthfulness Subscale

Although no measures were included in the present study that could provide good evidence for the convergent validity of the Youthfulness subscale, all hypotheses made regarding the discriminant validity of this subscale were supported. As predicted, low positive correlations were found between this subscale and public self-consciousness, social anxiety, height satisfaction, and private self-consciousness. Concern for a youthful appearance was also found to be negatively related to self-esteem. Although it was hypothesized that gay men would score higher on this subscale than straight men, this hypothesis was not supported. Finally, the item response functions and the conditional reliability results indicated that the items in the Youthfulness subscale generally differentiate

well, although the items on grey hair and hair texture discriminate less well. The subscale was also found to be acceptably reliable at all levels of the latent variable; however reliability was a little bit low around the midpoint of the expected score continuum. Taken together, these results provide preliminary support for the validity of the Youthfulness subscale scores, but suggest that some minor improvements to this subscale may be needed.

4.4.4 Body Hair Subscale

Although no measures were included in the present study that could provide good evidence for the convergent validity of the Body Hair subscale, all hypotheses made regarding the discriminant validity of this subscale were supported. As predicted, low correlations were found between this subscale and public self-consciousness, social anxiety, private self-consciousness, self-esteem, and attitude towards height. Validity evidence specifically targeted for the Body Hair subscale was provided through the hypothesized finding that gay men scored statistically significantly higher on this subscale than straight men. Finally, the item response functions and the conditional reliability results indicated that most of the items in the Body Hair subscale showed low to moderate discrimination among respondents along the latent variable continuum. Furthermore, the conditional reliability of the subscale was fairly poor across the expected score continuum, which was in contrast to the coefficient alpha which was acceptable for this subscale. This discrepancy in reliabilities is an unusual finding and suggests that coefficient alpha may be artificially inflated, possibly because of the skewed distribution of the data or potential multidimensionality in this subscale¹⁶.

¹⁶ A separate factor analysis on just the items in the Body Hair subscale still supports a one factor solution; however, there is the possibility of a secondary dimension that separates the items of the torso from the items of the extremities.

Inspection of the frequencies of the items in this subscale showed that there were very few men who scored at the high end of the rating scale (i.e., very concerned or extremely concerned). Furthermore, the mean score for this subscale was 1.53, indicating the bulk of the men in this sample indicated a one or two for the items of this subscale. This limited variability could explain why this subscale does not differentiate well and why reliability is low at the high end of the latent variable continuum. It may also explain why the range of the expected score continuum does not span the full range of possible scores (i.e., the range on the graphs goes up to 26, whereas, the maximum possible score a person could get on this subscale is 40). This still raises the question, however, as to what should be done with this subscale. I can see at least three questions that need to be answered. One, are these poor items that should be rewritten or discarded? I think at this point, I am unsure as to whether it is the items themselves that are problematic or whether it may be a sampling issue. Two, do these items need to be tested on a larger sample of the general population to increase the number of men scoring at the high end of this subscale? By having more variability along the full range of possible scores, the discrimination and conditional reliability of these items may be markedly improved. If not, this would then provide evidence that it is the items themselves that are poor. Three, do these items need to be tested on a clinical sample of men? It could be that men in the general population are not that concerned about body hair, but this subscale could show its utility in a clinical sample of men with body image disorders. It is assumed that men who have been diagnosed with a body image disorder would express more concern regarding their bodies, thus improving the variability of this scale and again addressing the item versus sample question.

There are also two other avenues one could take with this subscale. One, there are a

total of eight items in this subscale, with nearly all of the items performing similarly. The items regarding hair on the arms and legs had the least variability with over 92% of the men indicating a one or two for this item. Related to this, these two items showed the lowest discrimination among respondents. Thus, given that these items don't seem to add anything to the Body Hair subscale, they could be removed. Two, given that the items in the Body Hair subscale are generally not discriminating well among respondents, another potential solution could be to change the rating scale these items are responded on; that is, make the range of the scale less extreme. For instance, maybe the rating scale could go from 1 (not at all concerned), 2 (slightly concerned), 3 (somewhat concerned), 4 (moderately concerned), 5 (very concerned). This could also help improve the variability of the other subscales and may improve discrimination among respondents who score around the midpoint of the latent variable continuum. Overall, more research is needed on this subscale to better establish the validity of the interpretations that can be made with this subscale.

4.4.5 Penis Subscale

Although no measures were included in the present study that could provide good evidence for the convergent validity of the Penis subscale, all hypotheses made regarding the discriminant validity of this subscale were supported. As predicted, low correlations were found between this subscale and public self-consciousness, social anxiety, private self-consciousness, self-esteem, and attitude towards height. However, the size of the correlation between this subscale and the MBAS height subscale was slightly larger than expected. This could potentially be explained by the weak positive association that has been found between height and both penile length (Siminoski & Bain, 1993) and satisfaction with penile length (Lever, Frederick, & Peplau, 2006). Additionally, there was a fairly substantial correlation

between penis concern and negative attitudes toward muscularity (as well as with the total score for the MBAS). It is unclear to me why such a large correlation may exist, except perhaps, that they both relate to masculinity. Thus, someone who has a high drive for masculinity may be concerned about both their muscularity and penis size, both of which are symbols of masculinity. Although it was hypothesized that gay men would score higher on this subscale than straight men, this hypothesis was not supported. Finally, the item response functions for the Penis subscale indicated good discrimination among the items; however, the conditional reliability around the midpoint of the scale dropped slightly below acceptable levels. Taken together, these results provide partial support for the validity of the Penis subscale scores.

4.4.6 Height Item

Construct validity evidence for the item on height was provided through its hypothesized positive correlation with negative height attitudes and negative correlation with height satisfaction. Further evidence was provided by the substantially smaller correlations between this item and the other measures included in the present study. Overall, these results provide initial support for the construct validity of this item.

4.4.7 Summary

The purpose of the present study was to provide validity evidence for the interpretations of the MMBCQ subscales. Overall, I would conclude that these results are generally supportive of the MMBCQ. However, there are four areas of concern that have been identified and should be addressed in future studies. One, there were four items identified in the factor analysis as problematic; two items from the original Muscularity subscale that cross-loaded onto both the muscularity and body fat factors and two items that

failed to load meaningfully on the youthfulness factor. More research is needed to determine whether these items should remain in the scale as is or whether they should be modified to better represent the construct they were intended to assess. Two, a clearer distinction may need to be made regarding body concern and body satisfaction. The results of the correlations between the Muscularity subscale and the two satisfaction measures showed smaller than expected correlations. This would suggest that concern and satisfaction may be distinct constructs. However, the correlations between the Body Fat subscale and the satisfaction measures were at expected levels. Thus, I am unsure whether this difference is because of the way muscularity and body fat concerns are being measured by the MMBCQ or whether this may be a difference in the underlying constructs themselves. Three, the Body Hair subscale was identified as being problematic; in particular, these items did not discriminate well among the respondents and showed low conditional reliability across the latent variable continuum. More work on this subscale is recommended to explore whether it is the items themselves that are poor or whether this subscale may be less suited for the general population. Finally, for each of the subscales, the conditional reliability dropped at around the midpoint level of the expected score continuum. This may be due to the skewed distribution of the items in the MMBCQ. For the Body Hair and Penis subscales in particular, which had the least variability in scores, the conditional reliabilities dropped below the criteria of .70, whereas for the Muscularity and Body Fat subscales, which had better variability in scores, the conditional reliabilities were at more acceptable levels. Future research may want to look at how the reliability could be improved for individuals in this middle area. This may need to take the form of modifying the current items in the scale or through the addition of new items that are better able to differentiate among individuals

scoring around the midpoint of these underlying constructs of body concern.

Table 4.1 Factor Loadings, Communalities, Eigenvalues, and Percentages of Variance for the MMBCQ: Four Factors

Item	Factor 1 (Lean and Muscular)	Factor 2 (Body Hair)	Factor 3 (Youthfulness)	Factor 4 (Penis)	Communality
1 (muscular arms)	.57	.01	-.10	.13	.48
2 (stomach fat)	.88	.13	.10	-.09	.73
3 (height)	.17	.11	-.04	.30	.23
4 (having attractive face)	.26	.11	-.31	.27	.51
5 (bald)	.17	.29	-.32	-.03	.34
6 (amount of body hair)	.13	.80	.09	-.03	.65
7 (appearance of penis)	.17	.05	.12	.77	.69
8 (muscular abs)	.73	-.08	-.09	.10	.63
9 (shape of body)	.68	.06	-.05	.14	.64
10 (chest hair)	.11	.75	.04	.02	.60
11 (skin youthful)	.02	-.05	-.83	-.03	.65
12 (grey hair)	-.08	.00	-.48	.13	.27
13 (overall body fat)	.78	.13	-.01	-.05	.65
14 (muscular back)	.58	-.12	-.20	.13	.51
15 (thickness of penis)	.13	-.07	-.10	.76	.73
16 (facial hair)	-.11	.36	-.26	.23	.37
17 (making face attractive)	.13	.01	-.46	.34	.57
18 (muscular chest)	.52	-.08	-.21	.21	.54
19 (chubby face)	.44	.12	-.19	.19	.51
20 (proportional)	.48	.06	-.07	.26	.50
21 (thickness of hair)	.10	.21	-.34	-.02	.25
22 (leg hair)	-.32	.61	-.18	.23	.53
23 (getting older)	.02	-.01	-.52	.00	.27
24 (muscular buttocks)	.29	-.01	-.24	.32	.44

Item	Factor 1 (Lean and Muscular)	Factor 2 (Body Hair)	Factor 3 (Youthfulness)	Factor 4 (Penis)	Communality
25 (pubic hair)	-.01	.54	-.08	.13	.40
26 (looking youthful)	.14	-.09	-.88	-.13	.73
27 (flaccid penis)	.13	.04	.10	.66	.50
28 (flabby chest)	.49	.19	.00	.22	.50
29 (arm hair)	-.17	.61	-.13	.24	.54
30 (face youthful)	-.05	.01	-.90	-.04	.76
31 (texture of hair)	.08	.13	-.58	-.03	.44
32 (overweight)	.65	.18	.09	.06	.52
33 (overall definition)	.75	-.10	-.16	.10	.72
34 (back hair)	.24	.67	.02	-.20	.50
35 (wrinkles)	.08	.15	-.61	-.09	.49
36 (erect penis)	.15	.06	.01	.74	.71
37 (muscular legs)	.44	-.06	-.21	.24	.47
38 (stomach hair)	.09	.80	-.08	-.09	.70
39 (shape of face)	.03	.13	-.34	.36	.45
Eigenvalue	14.46	3.44	2.58	1.89	
% of Variance	37.08	8.82	6.60	4.85	

Note. Boldface indicates a meaningful factor loading.

Table 4.2 Inter-Factor Correlations for the MMBCQ: Four Factors

	Factor 1	Factor 2	Factor 3	Factor 4
Factor 1 (Lean and Muscular)	--			
Factor 2 (Body Hair)	.30	--		
Factor 3 (Youthfulness)	-.40	-.39	--	
Factor 4 (Penis)	.46	.30	-.44	--

Table 4.3 Factor Loadings, Communalities, Eigenvalues, and Percentages of Variance for the MMBCQ

Item	Factor 1 (Muscularity)	Factor 2 (Body Hair)	Factor 3 (Youthfulness)	Factor 4 (Penis)	Factor 5 (Body Fat)	Communality
1 (muscular arms)	.64	.09	.05	-.14	-.15	.62
2 (stomach fat)	.15	.10	.06	.08	-.82	.76
3 (height)	.19	.12	-.02	-.30	-.01	.22
4 (having attractive face)	.18	.14	-.28	-.27	-.15	.51
5 (bald)	.28	.33	-.24	.04	.02	.36
6 (amount of body hair)	.06	.80	.14	.05	-.11	.62
7 (appearance of penis)	.03	.02	.10	-.79	-.13	.70
8 (muscular abs)	.41	-.06	-.04	-.13	-.45	.62
9 (shape of body)	.25	.05	-.08	-.14	-.54	.64
10 (chest hair)	.12	.80	.13	-.04	-.01	.66
11 (skin youthful)	.05	-.03	-.80	.02	-.04	.65
12 (grey hair)	-.09	-.01	-.51	-.13	.00	.30
13 (overall body fat)	.02	.06	-.11	.04	-.83	.76
14 (muscular back)	.60	-.04	-.06	-.14	-.19	.61
15 (thickness of penis)	.13	-.07	-.07	-.79	-.02	.75
16 (facial hair)	-.01	.39	-.16	-.27	.08	.36
17 (making face attractive)	.21	.06	-.25	-.36	-.02	.55
18 (muscular chest)	.67	.01	-.03	-.22	-.08	.68
19 (chubby face)	.05	.10	-.19	-.21	-.45	.54
20 (proportional)	-.02	.02	-.16	-.26	-.52	.56
21 (thickness of hair)	.30	.25	-.25	.03	.10	.28
22 (leg hair)	-.24	.57	-.20	-.19	.10	.50
23 (getting older)	-.05	-.04	-.58	.01	-.07	.33
24 muscular buttocks)	.28	-.01	-.17	-.32	-.13	.43
25 (pubic hair)	-.07	.51	-.11	-.11	-.06	.38

Item	Factor 1 (Muscularity)	Factor 2 (Body Hair)	Factor 3 (Youthfulness)	Factor 4 (Penis)	Factor 5 (Body Fat)	Communality
26 (looking youthful)	.12	-.10	-.85	-.09	-.10	.73
27 (flaccid penis)	-.02	.02	.05	-.67	-.14	.51
28 (flabby chest)	.07	.15	-.06	-.22	-.46	.51
29 (arm hair)	-.22	.59	-.12	-.26	-.01	.55
30 (face youthful)	-.01	-.01	-.80	.02	-.01	.79
31 (texture of hair)	.37	.20	-.45	.01	.17	.51
32 (overweight)	-.15	.08	-.07	-.06	-.80	.69
33 (overall definition)	.50	-.06	-.07	-.14	-.42	.74
34 (back hair)	.10	.66	.02	.20	-.18	.49
35 (wrinkles)	.01	.13	-.67	.08	-.11	.54
36 (erect penis)	.11	.06	.04	-.77	-.05	.72
37 (muscular legs)	.49	.00	-.10	-.25	-.12	.53
38 (stomach hair)	.00	.81	.02	.01	-.09	.68
39 (shape of face)	.06	.16	-.28	-.40	.00	.46
Eigenvalue	14.38	3.37	2.63	1.88	1.59	
% of Variance	36.87	8.63	6.73	4.83	4.07	

Note. Boldface indicates a meaningful factor loading.

Table 4.4 Inter-Factor Correlations for the MMBCQ

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Factor 1 (Muscularity)	--				
Factor 2 (Body Hair)	.23	--			
Factor 3 (Youthfulness)	-.32	-.40	--		
Factor 4 (Penis)	-.33	-.34	.40	--	
Factor 5 (Body Fat)	-.42	-.28	.26	.44	--

Table 4.5 Item Analysis of the MMBCQ Subscales

Item	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Muscularity Subscale (6 items)		
1 (muscular arms)	.75	.89
8 (muscular abs)	.71	.90
14 (muscular back)	.74	.89
18 (muscular chest)	.79	.88
33 (overall definition)	.80	.88
37 (muscular legs)	.67	.90
Body Fat Subscale (7 items)		
2 (stomach fat)	.76	.90
9 (shape of body)	.74	.90
13 (overall body fat)	.80	.89
19 (chubby face)	.69	.90
20 (proportional)	.72	.90
28 (flabby chest)	.67	.91
32 (overweight)	.76	.90
Penis Subscale (4 items)		
7 (appearance of penis)	.80	.87
15 (thickness of penis)	.82	.86
27 (flaccid penis)	.71	.90
36 (erect penis)	.79	.87
Body Hair Subscale (8 items)		
6 (amount of body hair)	.71	.84
10 (chest hair)	.74	.84
16 facial hair)	.49	.87
22 (leg hair)	.58	.86
25 (pubic hair)	.57	.86
29 (arm hair)	.64	.86
34 (back hair)	.60	.86
38 (stomach hair)	.78	.84
Youthfulness Subscale (9 items)		
5 (bald)	.51	.87
11 (skin youthful)	.68	.85

Item	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
12 (grey hair)	.50	.87
21 (thickness of hair)	.51	.87
23 (getting older)	.54	.86
26 (looking youthful)	.73	.84
30 (face youthful)	.76	.84
31 (texture of hair)	.64	.85
35 (wrinkles)	.69	.85

Table 4.6 Factor Loadings, Communalities, Eigenvalues, and Percentages of Variance for the MMBCQ without Items 4, 17, 24, 39

Item	Factor 1 (Body Fat)	Factor 2 (Body Hair)	Factor 3 (Youthfulness)	Factor 4 (Penis)	Factor 5 (Muscularity)	Communality
1 (muscular arms)	.17	.07	.04	.13	.63	.62
2 (stomach fat)	.83	.09	.07	-.08	.14	.76
3 (height)	.02	.12	-.02	.28	.20	.22
5 (bald)	-.01	.32	-.23	-.04	.29	.35
6 (amount of body hair)	.11	.80	.14	-.05	.06	.62
7 (appearance of penis)	.12	.03	.08	.78	.02	.69
8 (muscular abs)	.45	-.08	-.05	.16	.40	.62
9 (shape of body)	.57	.05	-.07	.11	.24	.64
10 (chest hair)	.00	.80	.13	.06	.13	.66
11 (skin youthful)	.05	-.02	-.79	-.03	.06	.65
12 (grey hair)	-.01	-.01	-.51	.13	-.08	.30
13 (overall body fat)	.83	.06	-.11	-.03	.01	.76
14 (muscular back)	.21	-.05	-.07	.15	.59	.60
15 (thickness of penis)	-.01	-.06	-.10	.82	.12	.78
16 (facial hair)	-.05	.40	-.15	.22	.00	.34
18 (muscular chest)	.10	.00	-.05	.23	.65	.69
19 (chubby face)	.48	.10	-.18	.17	.04	.53
20 (proportional)	.54	.03	-.15	.22	-.02	.55
21 (thickness of hair)	-.11	.24	-.25	.00	.30	.29
22 (leg hair)	-.09	.58	-.20	.14	-.22	.49
23 (getting older)	.05	-.04	-.59	.02	-.06	.35
25 (pubic hair)	.06	.52	-.11	.09	-.07	.38
26 (looking youthful)	.11	-.10	-.85	.09	.11	.74
27 (flaccid penis)	.10	.02	.03	.70	-.02	.55
28 (flabby chest)	.45	.14	-.07	.24	.07	.52

Item	Factor 1 (Body Fat)	Factor 2 (Body Hair)	Factor 3 (Youthfulness)	Factor 4 (Penis)	Factor 5 (Muscularity)	Communality
29 (arm hair)	.00	.60	-.13	.25	-.21	.56
30 (face youthful)	.03	.00	-.88	-.03	.00	.77
31 (texture of hair)	-.17	.19	-.47	.01	.38	.52
32 (overweight)	.80	.09	-.06	.06	-.16	.68
33 (overall definition)	.43	-.07	-.08	.16	.48	.74
34 (back hair)	.17	.65	.01	-.17	.10	.48
35 (wrinkles)	.09	.12	-.68	-.05	.02	.56
36 (erect penis)	.01	.06	.02	.81	.10	.76
37 (muscular legs)	.14	.00	-.11	.23	.46	.51
38 (stomach hair)	.10	.81	.03	-.03	.01	.68
Eigenvalue	12.63	3.33	2.58	1.80	1.57	
% of Variance	36.08	9.52	7.37	5.14	4.50	

Note. Boldface indicates a meaningful factor loading.

Table 4.7 Inter-Factor Correlations for the MMBCQ without Items 4, 17, 24, 39

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Factor 1 (Body Fat)	--				
Factor 2 (Body Hair)	.29	--			
Factor 3 (Youthfulness)	-.27	-.39	--		
Factor 4 (Penis)	.46	.33	-.37	--	
Factor 5 (Muscularity)	.40	.23	-.29	.31	--

Table 4.8 Factor Loadings, Communalities, Eigenvalues, and Percentages of Variance for the MMBCQ without Items 4, 5, 8, 17, 21, 24, 33, 39

Item	Factor 1 (Body Fat)	Factor 2 (Body Hair)	Factor 3 (Youthfulness)	Factor 4 (Penis)	Factor 5 (Muscularity)	Communality
1 (muscular arms)	.10	.09	-.02	.07	.71	.65
2 (stomach fat)	.82	.05	-.08	-.06	.15	.75
3 (height)	.03	.12	.00	.25	.26	.24
6 (amount of body hair)	.10	.81	-.13	-.04	.04	.64
7 (appearance of penis)	.14	.03	-.08	.76	.08	.70
9 (shape of body)	.54	.04	.06	.09	.29	.63
10 (chest hair)	-.02	.79	-.10	.02	.14	.64
11 (skin youthful)	.00	.01	.80	-.06	.14	.68
12 (grey hair)	-.01	.01	.49	.16	-.09	.30
13 (overall body fat)	.84	.02	.10	-.04	.04	.77
14 (muscular back)	.13	-.06	.10	.06	.73	.70
15 (thickness of penis)	.00	-.06	.12	.77	.16	.77
16 (facial hair)	-.12	.42	.21	.16	.10	.37
18 (muscular chest)	.07	.01	.09	.18	.65	.64
19 (chubby face)	.49	.08	.19	.15	.08	.53
20 (proportional)	.55	-.09	.13	.22	.06	.56
22 (leg hair)	-.10	.62	.18	.14	-.19	.50
23 (getting older)	.09	-.04	.57	.07	-.13	.35
25 (pubic hair)	.05	.54	.08	.10	-.03	.40
26 (looking youthful)	.08	-.06	.87	-.12	.14	.77
27 (flaccid penis)	.12	.02	-.04	.70	-.02	.55
28 (flabby chest)	.46	.13	.05	.22	.12	.53
29 (arm hair)	.00	.61	.13	.21	-.16	.54
30 (face youthful)	.03	.03	.87	-.05	.03	.76

Item	Factor 1 (Body Fat)	Factor 2 (Body Hair)	Factor 3 (Youthfulness)	Factor 4 (Penis)	Factor 5 (Muscularity)	Communality
31 (texture of hair)	-.10	.18	.46	-.01	.29	.43
32 (overweight)	.83	.05	.03	.09	-.16	.71
34 (back hair)	.17	.64	-.01	-.16	.04	.46
35 (wrinkles)	.10	.13	.66	-.05	.01	.55
36 (erect penis)	.04	.07	.00	.77	.13	.75
37 (muscular legs)	.12	.00	.13	.19	.50	.51
38 (stomach hair)	.06	.83	.02	-.12	.08	.72
Eigenvalue	11.20	3.02	2.53	1.74	1.50	
% of Variance	36.13	9.75	8.17	5.61	4.85	

Note. Boldface indicates a meaningful factor loading.

Table 4.9 Inter-Factor Correlations for the MMBCQ without Items 4, 5, 8, 17, 21, 24, 33, 39

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Factor 1 (Body Fat)	--				
Factor 2 (Body Hair)	.33	--			
Factor 3 (Youthfulness)	.29	.37	--		
Factor 4 (Penis)	.41	.32	.38	--	
Factor 5 (Muscularity)	.44	.24	.26	.32	--

Table 4.10 Items Used to Assess Construct Validity and Item Response Modeling of the MMBCQ Scores

Item
Muscularity (4 items)
1. The muscular definition of my arms
14. The muscular definition of my back
18. The muscular definition of my chest
37. The muscular definition of my legs
Body Fat (7 items)
2. The amount of body fat around my stomach
9. The shape of my body
13. My overall amount of body fat
19. Having or getting a chubby face
20. Being height and weight proportional
28. Having or getting a flabby chest (“man boobs”)
32. Being or becoming overweight
Youthfulness (7 items)
11. Making my skin look more youthful
12. Having or getting grey hair
23. Getting older
26. Looking youthful
30. Making my face look more youthful
31. The texture of my head hair
35. Having or getting wrinkles
Body Hair (8 items)
6. The amount of body hair I have
10. The amount of chest hair I have
16. The amount of facial hair I have
22. The amount of hair I have on my legs
25. The amount of pubic hair I have
29. The amount of hair I have on my arms
34. The amount of hair I have on my back
38. The amount of hair I have on my stomach

Item

Penis (4 items)

- 7. The appearance of my penis
- 15. The thickness of my penis
- 27. The length of my flaccid (soft) penis
- 36. The length of my erect (hard) penis

Height (1 item)

- 3. My height
-

Table 4.11 Means, Standard Deviations, and Correlations among the MMBCQ and Other Measures

Measure	MMBCQ					
	Muscularity	Body Fat	Youthfulness	Body Hair	Penis	Height
MMBCQ						
Muscularity	--					
Body Fat	.64*	--				
Youthfulness	.44*	.44*	--			
Body Hair	.40*	.47*	.42*	--		
Penis	.56*	.59*	.38*	.40*	--	
Height	.38*	.35*	.24*	.29*	.38*	--
MBAS						
Muscularity	.62*	.41*	.29*	.26*	.46*	.19
Low Body Fat	.29*	.69*	.24*	.28*	.29*	.14
Height	.26*	.30*	.18	.25*	.36*	.67*
Total Score	.54*	.70*	.34*	.35*	.48*	.29*
MBSRQ-AS						
AE	-.11	-.42*	-.12	-.16	-.22	-.10
AO	.49*	.35*	.34*	.27*	.27*	.20
OP	.29*	.64*	.26*	.33*	.27*	.18
SCW	-.02	.43*	.04	.07	.12	.06
BAS - Muscle Tone	-.22*	-.33*	-.19	-.11	-.18	-.04
BAS - Weight	-.08	-.43*	-.13	-.16	-.15	-.06
BAS - Height	-.19	-.22	-.13	-.19	-.31*	-.59*
RSES	-.16	-.28*	-.21*	-.18	-.28*	-.19
SCS-R						
Private	.27*	.14	.18	.00	.10	.17
Public	.46*	.38*	.33*	.23*	.30*	.16
Social Anxiety	.08	.12	.21	.05	.05	-.01
<i>M</i>	2.16	2.64	1.84	1.53	1.88	1.57
<i>SD</i>	.86	1.02	.75	.64	.97	.97

* $p < .001$

Table 4.12 Summary of Construct Validity Evidence for the MMBCQ

Subscale	Predicted correlations	Actual correlations
Muscularity	<ol style="list-style-type: none"> 1. Strongest positive correlation with the MBAS Muscularity subscale and negative correlation with the MBSRQ-AS BAS muscle tone item 2. Smaller positive correlations with the MBAS Low Body Fat and MBAS Total Score and negative correlation with the MBSRQ-AS AE subscale 3. Even smaller positive correlations with the MBSRQ-AS OP subscale and SCS-R Public Self-Consciousness and Social Anxiety subscales and negative correlation with the RSES 4. Low correlations with the MBAS Height subscale, MBSRQ-AS SCW subscale, and SCS-R Private Self-Consciousness subscale 	MBAS Muscularity = .62 MBSRQ-AS BAS muscle tone item = -.22 MBAS Low Body Fat = .29 MBAS Total Score = .54 MBSRQ-AS AE = -.11 MBSRQ-AS OP = .29 SCS-R Public Self Consciousness = .46 SCS-R Social Anxiety = .08 RSES = -.16 MBAS Height = .26 MBSRQ-AS SCW = -.02 SCS-R Private Self Consciousness = .27
Body Fat	<ol style="list-style-type: none"> 1. Strongest positive correlations with the MBAS Low Body Fat subscale and MBSRQ-AS OP and SCW subscales and negative correlation with the MBSRQ-AS BAS weight item 2. Smaller positive correlations with the MBAS Total Score and Muscularity subscale and negative correlation with MBSRQ-AS AE subscale 3. Even smaller positive correlations with the SCS-R Public Self-Consciousness and Social Anxiety subscales and negative correlation with the RSES 4. Low correlations with the MBAS Height subscale and SCS-R Private Self-Consciousness subscale 	MBAS Low Body Fat = .69 MBSRQ-AS OP = .64 MBSRQ-AS SCW = .43 MBSRQ-AS BAS weight item = -.43 MBAS Total Score = .70 MBAS Muscularity = .41 MBSRQ-AS AE = -.42 SCS-R Public Self Consciousness = .38 SCS-R Social Anxiety = .12 RSES = -.28 MBAS Height = .30 SCS-R Private Self Consciousness = .14
Youthfulness	<ol style="list-style-type: none"> 1. Small positive correlations with the SCS-R Public Self-Consciousness and Social Anxiety subscales and negative correlation with the RSES 2. Low correlations with the Low correlations with the MBAS Height subscale and SCS-R Private Self-Consciousness subscale 	SCS-R Public Self Consciousness = .33 SCS-R Social Anxiety = .21 RSES = -.21 MBAS Height = .18 SCS-R Private Self Consciousness = .18

Subscale	Predicted correlations	Actual correlations
Body Hair	<ol style="list-style-type: none"> 1. Small positive correlations with the SCS-R Public Self-Consciousness and Social Anxiety subscales and negative correlation with the RSES 2. Low correlations with the Low correlations with the MBAS Height subscale, MBSRQ-AS SCW subscale, and SCS-R Private Self-Consciousness subscale 	SCS-R Public Self Consciousness = .23 SCS-R Social Anxiety = .05 RSES = -.18 MBAS Height = .25 SCS-R Private Self Consciousness = .00
Penis	<ol style="list-style-type: none"> 1. Small positive correlations with the SCS-R Public Self-Consciousness and Social Anxiety subscales and negative correlation with the RSES 2. Low correlations with the Low correlations with the MBAS Height subscale, MBSRQ-AS SCW subscale, and SCS-R Private Self-Consciousness subscale 	SCS-R Public Self Consciousness = .30 SCS-R Social Anxiety = .05 RSES = -.28 MBAS Height = .36 SCS-R Private Self Consciousness = .10
Height	<ol style="list-style-type: none"> 1. Strong positive correlation with MBAS Height subscale and negative correlation with MBSRQ-AS BAS height item 2. Low correlations with all other measures 	MBAS Height = .67 MBSRQ-AS BAS height item = -.59 Other correlations = .01 - .29

Table 4.13 Means, Standard Deviations, and ANOVA Results for the Comparison of Gay and Straight Men

MMBCQ	<u>Gay</u>		<u>Straight</u>		<i>F</i>	<i>p</i>	η^2
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Muscularity	2.64	.94	1.96	.71	8.29	.006*	.147
Body Fat	3.10	.98	2.54	.95	4.13	.048*	.079
Youthfulness	2.30	1.01	1.93	.63	2.49	.121	.049
Body Hair	1.84	.75	1.48	.47	4.03	.050*	.077
Penis	2.11	.87	1.79	.84	1.75	.192	.035

* $p < .05$

Table 4.14 Means, Standard Deviations, and ANOVA Results for the Comparison of Men with High and Low BMI

MMBCQ	Bottom 25% BMI		Top 25% BMI		<i>F</i>	<i>p</i>	η^2
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Muscularity	2.18	.92	2.16	.74	.01	.909	.000
Body Fat	2.33	1.06	3.08	1.01	14.04	<.001*	.117
Youthfulness	1.88	.81	1.86	.73	.03	.870	.000
Body Hair	1.50	.64	1.55	.72	.15	.697	.001
Penis	1.93	1.00	2.02	1.10	.18	.676	.002

* $p < .05$

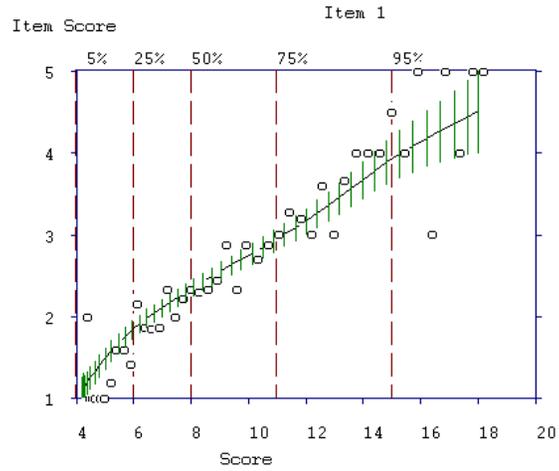
Table 4.15 Means, Standard Deviations, and ANOVA Results for the Comparison of Men Who Do and Do Not Engage in Weight Training

	<u>Weight Training</u>		<u>No Weight Training</u>		<i>F</i>	<i>p</i>	η^2
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
MMBCQ							
Muscularity	2.42	.91	1.98	.78	14.81	<.001*	.064
Body Fat	2.70	.96	2.66	1.08	.10	.757	.000
Youthfulness	1.88	.73	1.85	.77	.06	.803	.000
Body Hair	1.62	.61	1.47	.68	2.77	.097	.013
Penis	1.96	.93	1.85	1.00	.70	.403	.003

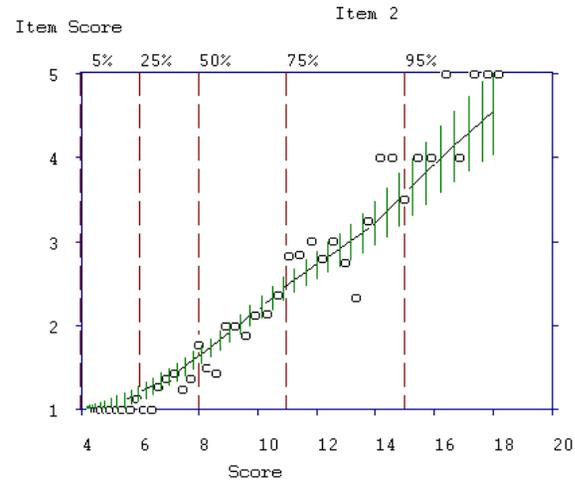
* $p < .05$

Figure 4.1 Item Response Functions for the Four Items of the Muscularity Subscale

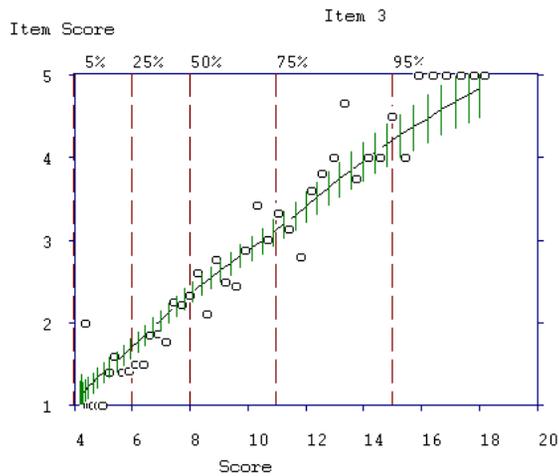
Muscular arms (item 1)



Muscular back (item 14)



Muscular chest (item 18)



Muscular legs (item 37)

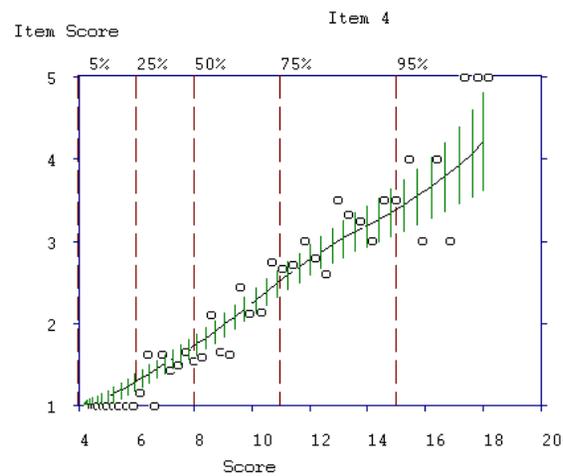
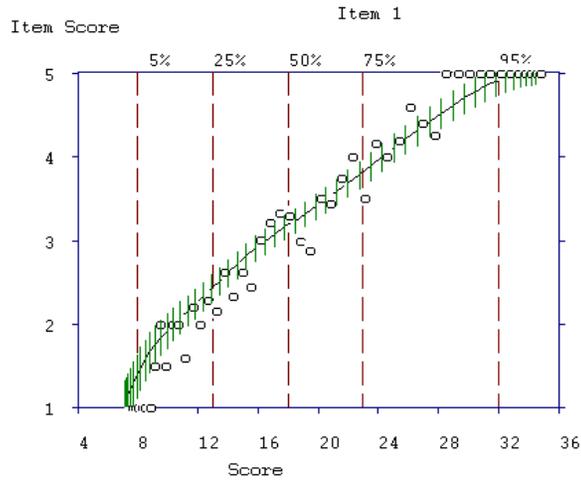
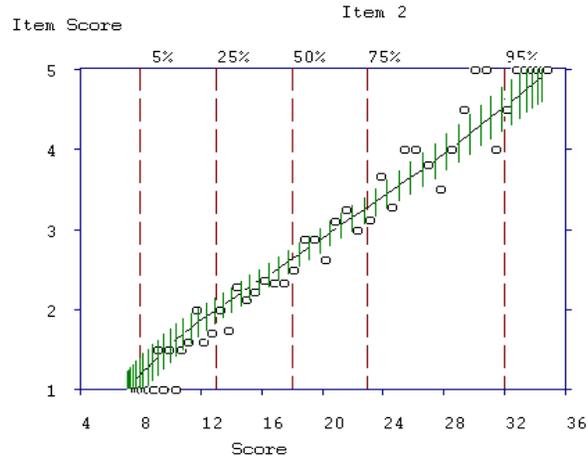


Figure 4.2 Item Response Functions for the Seven Items of the Body Fat Subscale

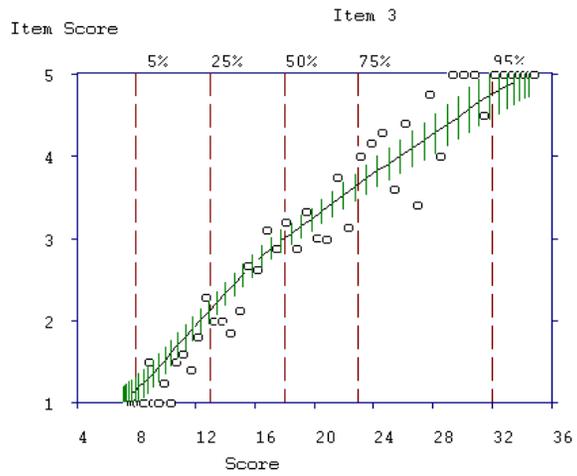
Stomach fat (item 2)



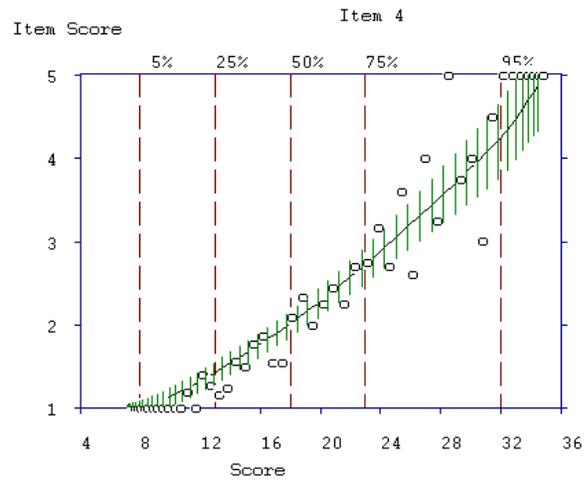
Shape of body (item 9)



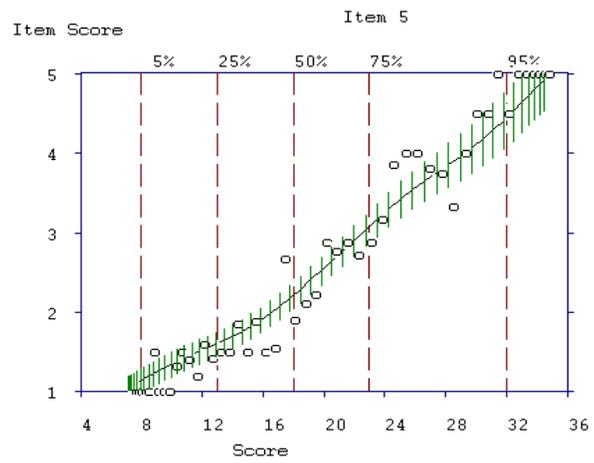
Overall body fat (item 13)



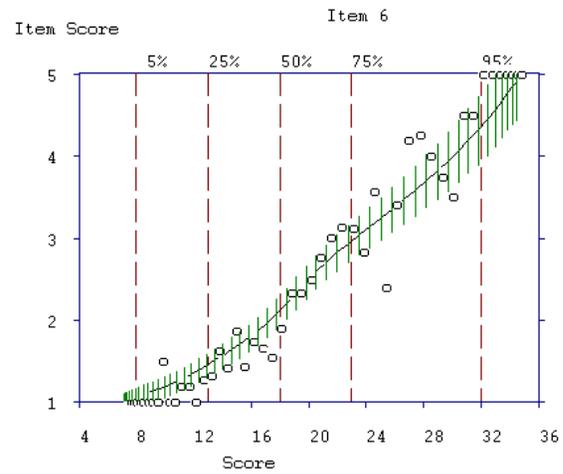
Chubby face (item 19)



Proportional (item 20)



Flabby chest (item 28)



Overweight (item 32)

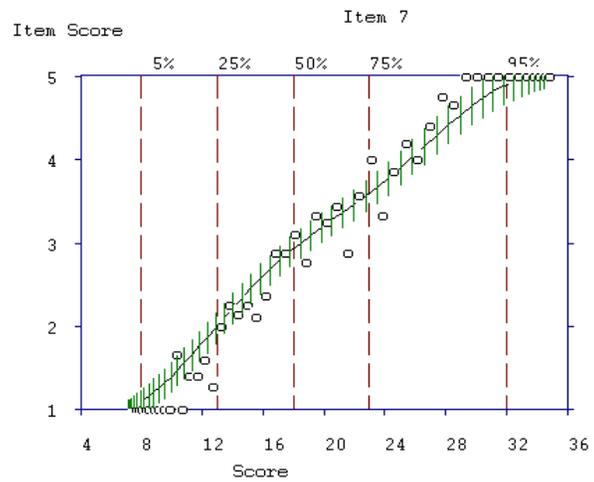
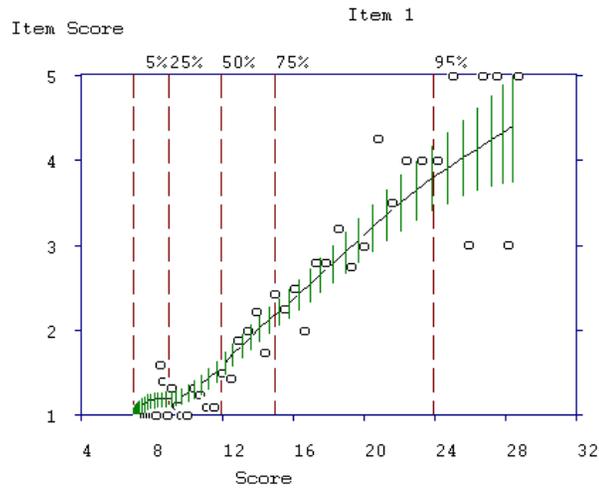
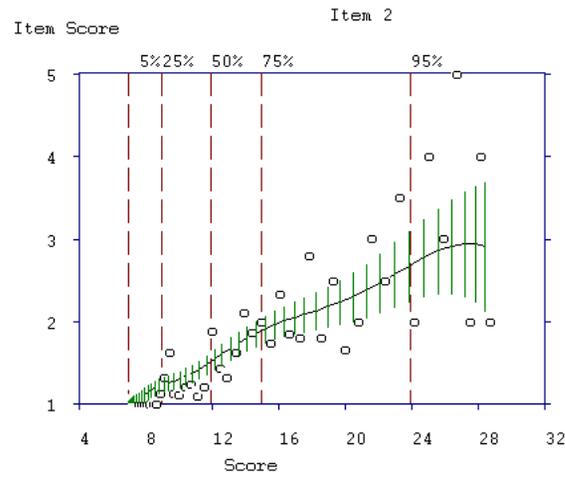


Figure 4.3 Item Response Functions for the Seven Items of the Youthfulness Subscale

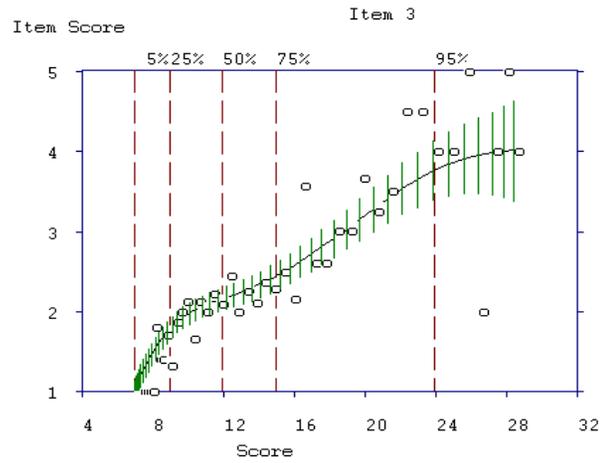
Skin youthful (item 11)



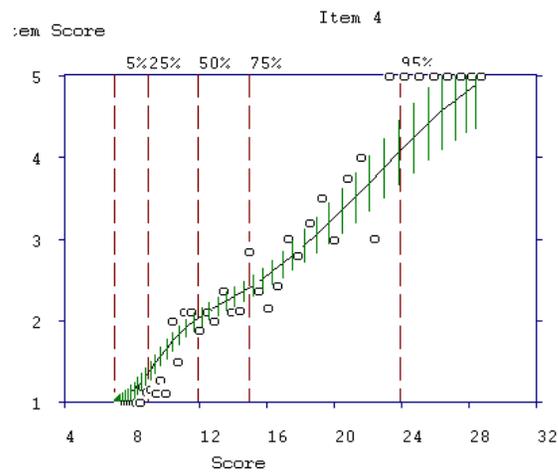
Grey hair (item 12)



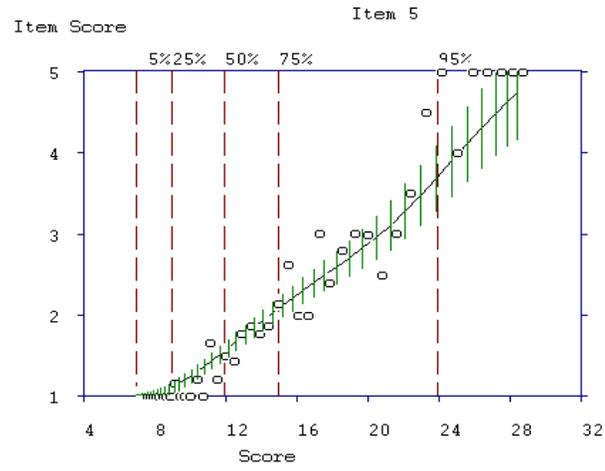
Getting older (item 23)



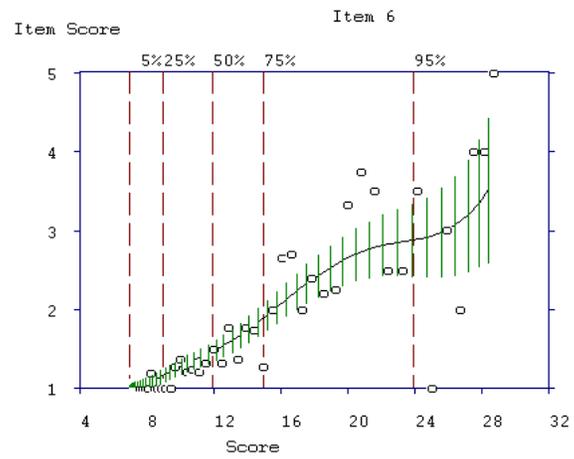
Looking youthful (item 26)



Face youthful (item 30)



Texture of hair (item 31)



Wrinkles (item 35)

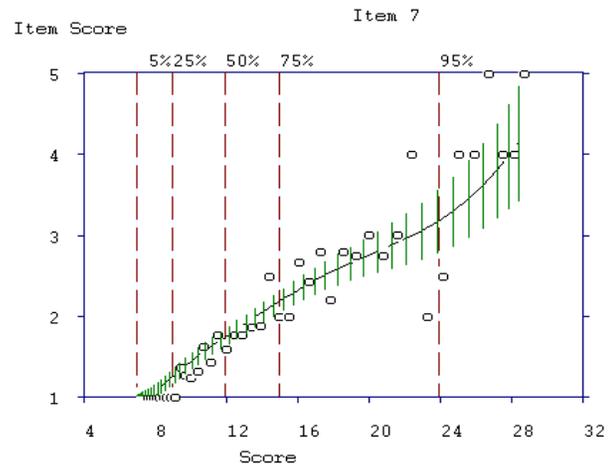
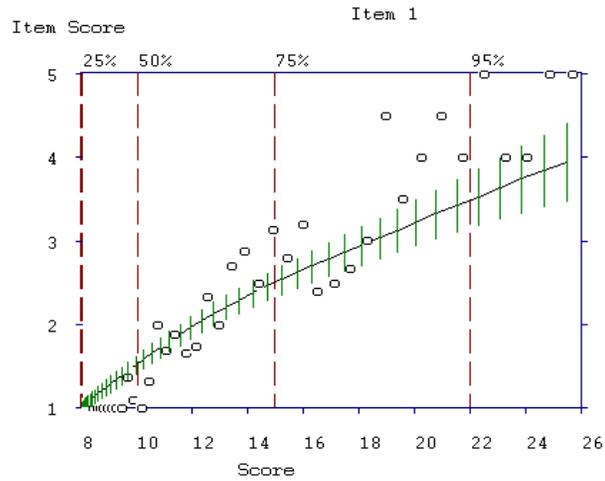
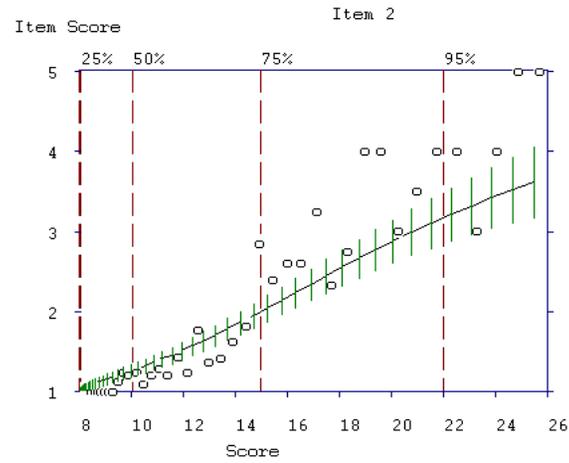


Figure 4.4 Item Response Functions for the Eight Items of the Body Hair Subscale

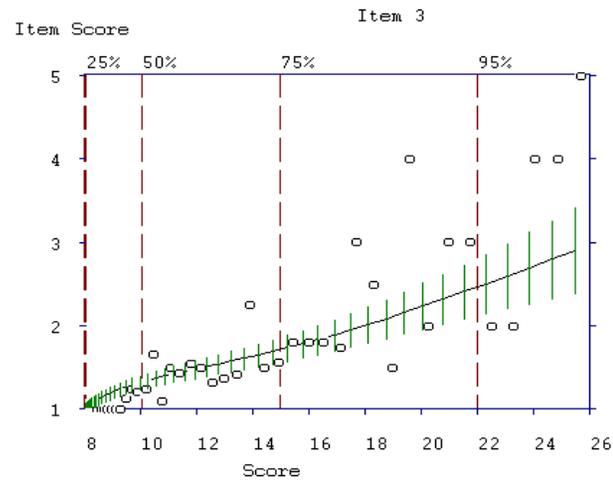
Amount of body hair (item 6)



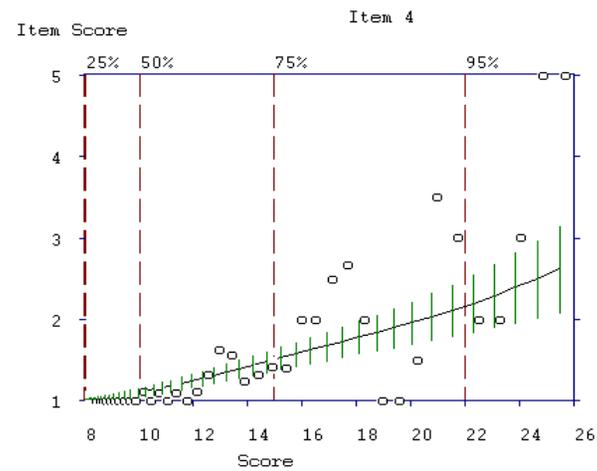
Chest hair (item 10)



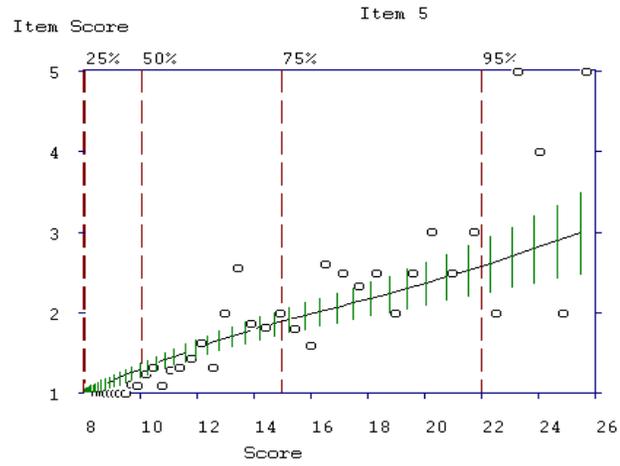
Facial hair (item 16)



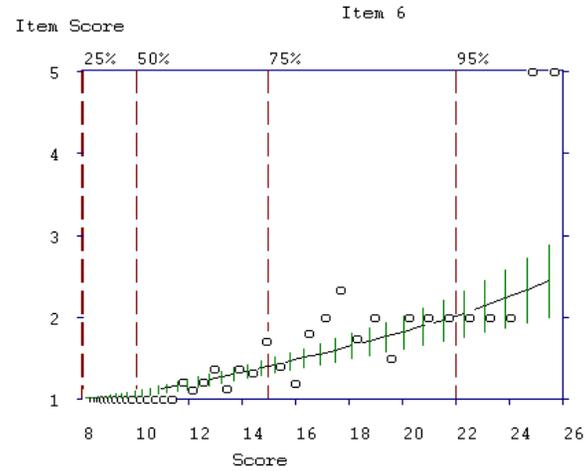
Leg hair (item 22)



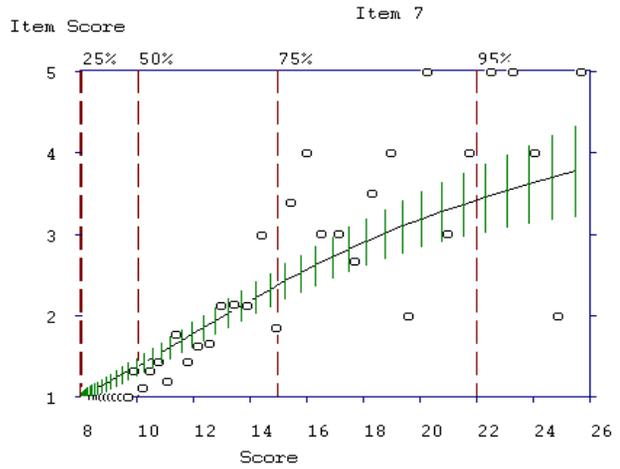
Pubic hair (item 25)



Arm hair (item 29)



Back hair (item 34)



Stomach hair (item 38)

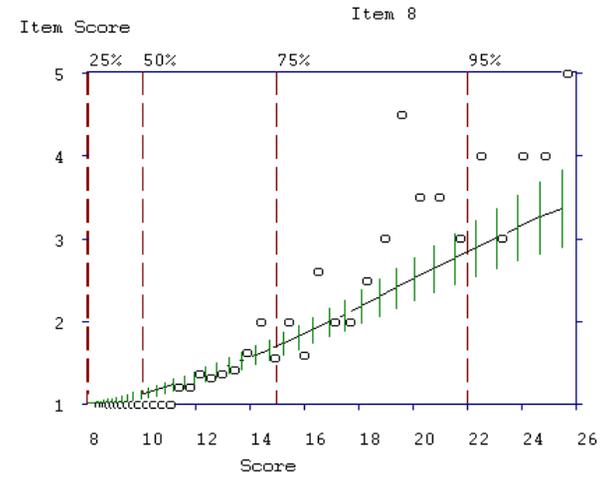
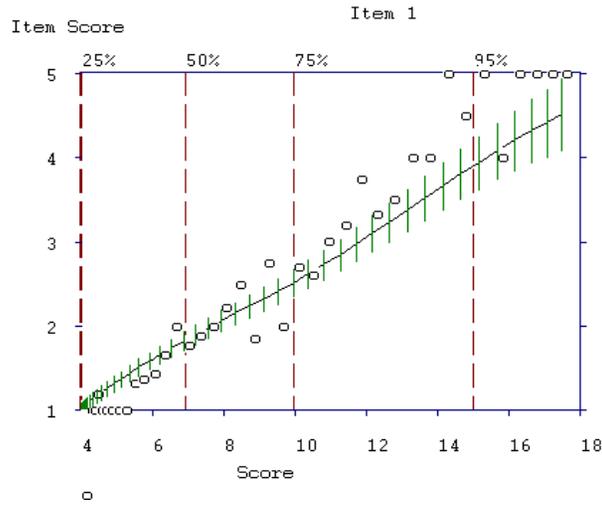
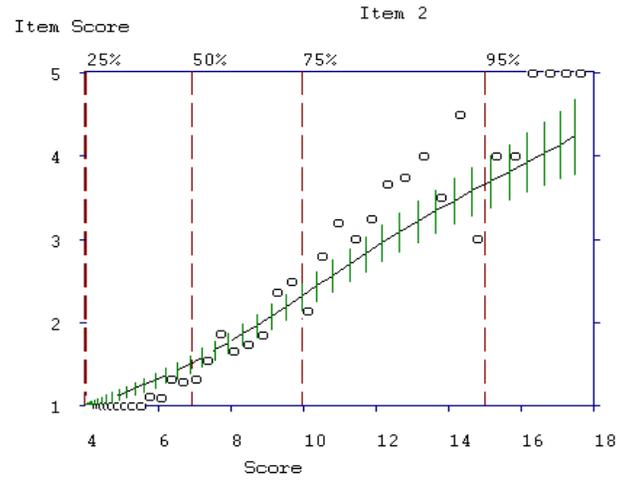


Figure 4.5 Item Response Functions for the Four Items of the Penis Subscale

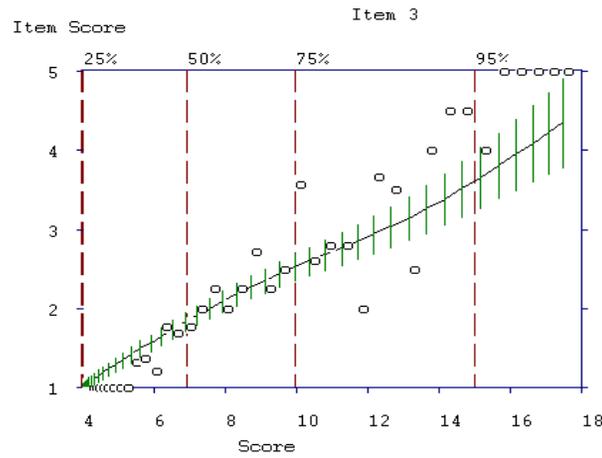
Appearance of penis (item 7)



Thickness of penis (item 15)



Flaccid penis (item 27)



Erect penis (item 36)

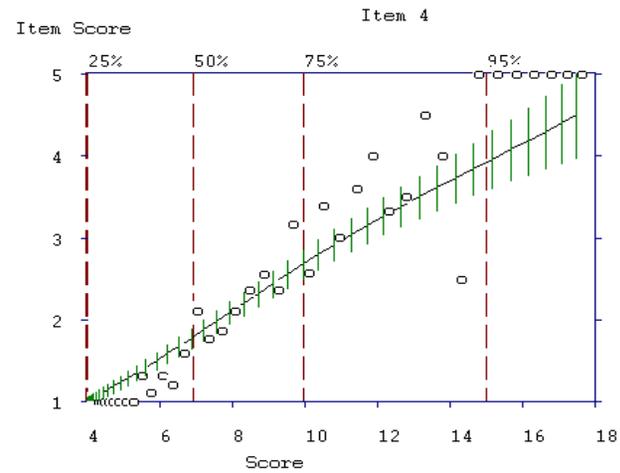
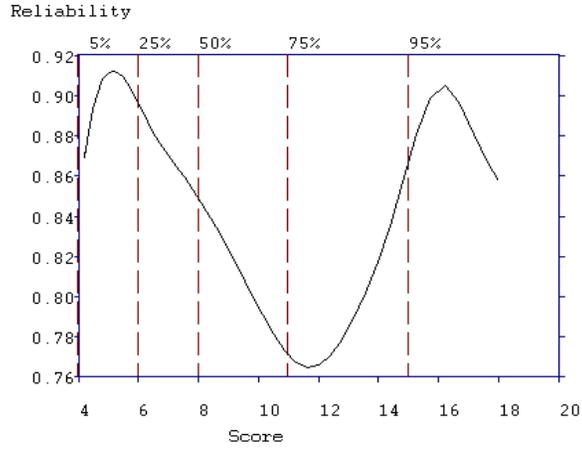
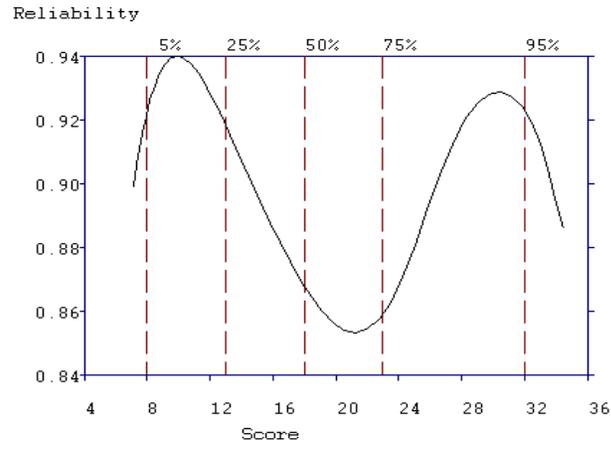


Figure 4.6 Conditional Reliabilities for the Five MMBCQ Subscales

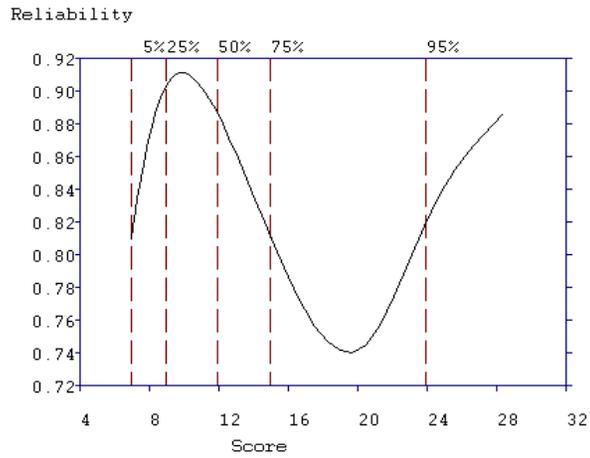
Muscularity subscale



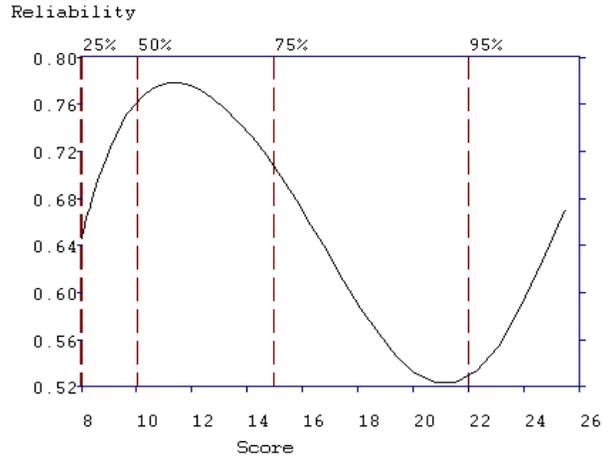
Body Fat subscale



Youthfulness subscale

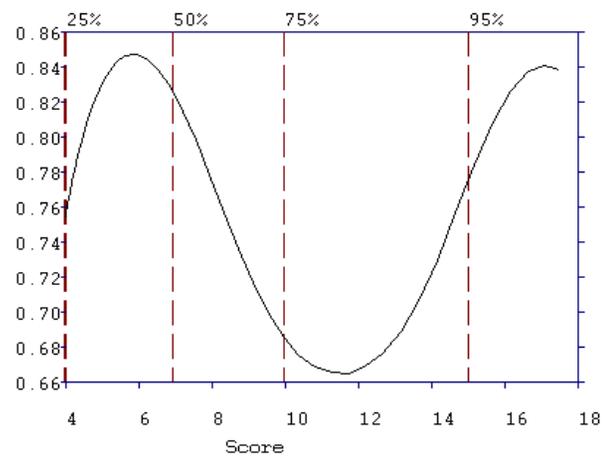


Body Hair subscale



Penis subscale

Reliability



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5 OVERALL DISCUSSION

5.1 Review of the purpose of the dissertation

The study of men's body image has been receiving increasing attention in the last decade. It has been recognized that men too are facing increased pressure to attend to their appearance and, specifically, to conform to a muscular mesomorphic ideal (e.g., Pope, Phillips, & Olivardia, 2000). Because of known differences in perceptions of the ideal body shape between men and women (i.e., women are more focused on thinness, while men are more focused on muscularity), Cafri and Thompson (2004) have advised that many currently available body image measures are inappropriate for men because they focus on assessments relative to a thin body ideal. In response to this, a few researchers have developed measures specifically targeting men and the muscular ideal. However, recent research (e.g., Martins, Tiggemann, & Churchett, 2008; Tiggemann, Martins, & Churchett, 2008; Tylka, Bergeron & Schwartz, 2005) has suggested that the study of men's body image should move beyond just muscularity as there may be further dimensions to men's body image that are important to study. Thus, the overall purpose of this dissertation was to identify the areas of the body that are important to men's body image and to use this information to develop and provide initial validity evidence for a new multidimensional measure of male body image.

The purpose of Study 1 was to qualitatively investigate, in a sample of men varied in sexual orientation, age, and ethnicity, the aspects of the body and appearance that would be identified as being important to men's body image. This information would then be used to guide the development of items for a new, more encompassing, measure of male body image, called the Multidimensional Male Body Concerns Questionnaire (MMBCQ). Potential items were then developed in study 2 and a pilot test was conducted to evaluate these items through

a series of item analyses and exploratory factor analyses. Finally, the purpose of study 3 was to provide further reliability and validity evidence for the newly developed MMBCQ by examining its factor structure, reliability (Cronbach's alpha), and construct validity (i.e., convergent, discriminant, known-groups, item response modelling).

5.2 Review of the Dissertation Results

Study 1 revealed that there were 13 dimensions identified by the men as being potentially important to the understanding of men's body image: muscularity, body fat, youthfulness, penis size, head hair, body hair, facial hair, facial characteristics, height, tanned and clear skin, posture, and ethnicity. Nine of these dimensions (muscularity, body fat, youthfulness, penis size, head hair, body hair, facial hair, facial characteristics, and height) were considered major dimensions (based on how many men indicated these dimensions as being important) and were selected for item development in Study 2.

In Study 2, a total of 55 items were developed to assess these nine dimensions; and in particular, men's concerns with each of these dimensions. The number of items developed for each dimension reflected the depth and breadth of the dimension as identified by the men in Study 1 (e.g., targeted specific areas of the body discussed by the men as important for that dimension) and in previous literature. A pilot test was conducted to examine the quality of these items. Although these items were found to be positively skewed, with the majority of the men scoring at the low end of the scale, the results of the exploratory factor analyses and item analyses (i.e., item-total correlations, inter-item correlations, coefficient alpha) showed promising results for the MMBCQ. Overall, the original 55 items were reduced to a total of 39 items, representing five factors: muscularity, body fat, youthfulness, body hair, and penis.

Study 3 provided further reliability and validity evidence for the MMBCQ. The items

of the MMBCQ were found to load on the same five factors identified in the pilot study; however, four of the original 39 items were deleted because of poor factor loadings and another four items were identified as problematic and removed from the current analysis (but should be examined further in future studies). While the overall classical test theory reliability of the subscales of the MMBCQ were found to be satisfactory, concerns were raised about some of the conditional reliabilities of the subscales, as assessed through nonparametric IRT, particularly for the midpoints of the underlying latent variables and particularly for the Body Hair and Penis subscales. Construct validity evidence provided through correlations with other theoretically relevant constructs was generally strong for each of the subscales, and particularly for the Body Fat subscale. However, convergent validity evidence was not addressed in Study 3 for the Youthfulness, Body Hair, and Penis subscales. With two exceptions, all known group differences assessed in Study 3 were supported. Finally, the item response functions for each of the items indicated that the items were performing well, except for two of the items in the Youthfulness subscale, and six of the eight items in the Body Hair subscale.

5.3 Implications

The findings of this dissertation have the capacity to have a substantial impact on the understanding and assessment of male body image. Given that the majority of previous research on body image has focused on women, the construct of male body image is comparatively understudied. While there are currently a few existing measures of body image that have been developed to specifically address the body image concerns of men, their primary and often only focus is on muscularity. Therefore, a major strength of the present dissertation is the identification of key dimensions of male body image other than just

muscularity. Furthermore, this dissertation has developed and shown preliminary reliability and validity evidence for a new comprehensive measure of male body image - the MMBCQ - that can be used to assess and further study these multiple dimensions.

While this dissertation has begun to provide evidence of the reliability of scores and validity of the inferences that can be drawn from the subscales of the MMBCQ, validation is an ongoing process and validity evidence needs to be gathered on a continuous basis. With this in mind, the importance of also considering the consequences of inferences from test scores should be highlighted (Messick, 1989; Zumbo, 2007). Because the MMBCQ has extended the way in which the construct of male body image can be assessed, it has the potential to impact theory development in this area. Thus, ensuring the validity of the inferences made from these subscales becomes of paramount importance so as not to distort ensuing theory.

A second strength of this dissertation lies in the process by which the items of the MMBCQ were developed. By basing item development largely on the qualitative investigation conducted in Study 1, as well as previous literature, evidence of content validity is being built into the scale right from the beginning. Furthermore, the use of a sample varied in sexual orientation, age, and ethnicity in Study 1 helped to ensure that the areas of the body identified as important to men's body image can be generalized across a diverse sample of men, increasing the potential utility of the findings of Study 1, as well as the MMBCQ.

While it is common and acceptable for new measures to be developed solely based on a thorough reading of the literature, this would have been insufficient for the present study. As stated previously, muscularity is the dominant theme in the male body image literature, with some emphasis also being given to body fat and height. However, there were still

further dimensions identified in Study 1 that have currently not received much, if any, attention in the male body image literature. Thus, developing a new measure of male body image based just on the previous literature would likely not have included as many dimensions as the MMBCQ currently does (e.g., youthfulness). Furthermore, there were also dimensions identified in Study 1 that were not included in the MMBCQ (e.g., facial characteristics, tanned skin), that could be important in the development of further measures of male body image.

A third strength of this dissertation is the contribution it makes to the measurement field as a model for how test development and validation work should be conducted at this point in our history using a mixed methods approach, modern validity theory, and a combination of CTT and IRT. The blending of methodologies and approaches used in this research highlights some of the key aspects of modern validity theory, which promotes a more integrated approach to test development and validation. Using qualitative methods to inform the quantitative development of the MMBCQ and both CTT and IRT to validate the inferences that can be made from the MMBCQ subscales demonstrates how validity evidence can be provided at multiple stages of test development and goes beyond what is found in most typical scale development research. Furthermore, the use of both CTT and IRT in item development and validation proved to be invaluable in providing a fuller picture of how the MMBCQ subscales performed. For instance, on the one hand, for the Body Fat subscale, both approaches demonstrated good support for the validity of the inferences that can be drawn from the subscale, thus strengthening the claim that this subscale can produce valid and reliable scores for a community sample of male adults. On the other hand, for the Body Hair subscale, these two approaches showed differing results. The results of the coefficient

alpha and correlations support the validity of the inferences drawn for the subscale, while the results of the item response functions and conditional reliabilities suggest that there are some problems with the items in this subscale. Failure to use an IRT approach in examining the validity of the items of the MMBCQ would have resulted in the conclusion that this subscale was performing well. However, since IRT methods were used and have indicated problems, steps can now be taken to improve these items which will ultimately improve the inferences that can be drawn from this subscale and will thus help to ensure the validity of conclusions drawn from subsequent research and theory development. Clearly this dissertation demonstrates how these approaches are complementary in building a more complete picture of a construct under study and should play a more prominent role in test development.

5.4 Limitations and Future Directions

This section discusses some possible limitations that are present in this dissertation and uses them to stage some directions for future research. One potential limitation of this dissertation is the sample size that was used in the final validation study. While a sample of 234 men is generally a decent sample size, it was insufficient to conduct a confirmatory factor analysis (CFA). Exploratory factor analysis is used when researchers do not know how many factors are necessary to explain the interrelationships among the items (Gorsuch, 1983; Pedhazur & Schmelkin, 1991) and thus, was an appropriate starting point as the MMBCQ is a new scale. While the results of the pilot study indicated that the interrelationships among the items could be explained by five factors and thus a confirmatory factor analysis could have been conducted in Study 3, I felt that because of the small sample size in the pilot study, and the fact that Study 2 was just a pilot study, that it was appropriate to conduct another exploratory factor analysis in Study 3. An obvious next step for the MMBCQ is to conduct a

confirmatory factor analysis to assess the extent to which the hypothesized five factor structure fits a new sample of data, which will provide a much more rigorous test of factorial validity (Nunnally & Bernstein, 1994; Pedhazur & Schmelkin, 1991). Furthermore, a higher order factor analysis using CFA should also be conducted to assess whether it is appropriate to calculate a total score for the MMBCQ. Because of the small sample size in the present study, the appropriateness of the use of a total score could not be determined.

A second limitation of this dissertation relates to the distribution of participants responses. Most of the respondents were clustered at the low end of each of the items and thus there were very few men who scored at the high end of the items, especially for the Body Hair, Penis, and Youthfulness subscales. This limited variability definitely had an impact on the precision of the item response functions (i.e., large pointwise confidence intervals along the upper half of the expected score continuum) and may have impacted the results of other analyses. I think it would be worthwhile to replicate this study with a larger sample and targeted recruitment strategies to ensure that there would be sufficient variability along the full range of possible scores for the MMBCQ to see the impact this would have on the conclusions drawn - particularly the item response models (item response functions and conditional reliability). If the new findings were consistent with the results of this dissertation it would indicate that it is the items that are problematic.

Another way to potentially improve the variability of the scores obtained with the MMBCQ would be to administer this scale to a sample of men who have been clinically diagnosed with a body image disorder (e.g., muscle dysmorphia, eating disorders). Validating this scale with a clinical sample would serve two purposes. One, I would assume that a clinical sample of men would be more likely to score at the higher end of the MMBCQ,

which would improve the variability of the scores obtained with this measure and could lead to more precise estimates of scale functioning at the higher end of the latent variable continuum. Two, with the proper validity evidence, the MMBCQ could be used as a screening measure for individuals with body image disorders or as a measure assessing change pre- and post-treatment.

Another limitation of the current dissertation is that no measures were included in Study 3 to assess the construct validity of the Youthfulness, Body Hair, and Penis subscales. The main reason for this was because of the length of the survey. There were a total of 129 items administered in Study 3, in addition to a demographics page containing an additional 12 questions. Previous experience collecting data from men has indicated that surveys cannot be too long or men are much less likely to participate or to complete the entire survey. Thus, the measures selected for Study 3 were chosen because of their popularity in the literature and relevance to more than one subscale. For example, the MBSRQ may be the most commonly used measure of body image and the MBAS was used to make predictions with three of the subscales of the MMBCQ. While, for instance, there is a 14-item Male Genital Image Scale (Winter, 1989) that could have been used to examine the construct validity of the Penis subscale, having individualized scales for each of the MMBCQ subscales in Study 3 would have made the total survey length too long. Thus, it is recommended that future research specifically examine the convergent validity of the Youthfulness, Body Hair, and Penis subscales.

Finally, it should be acknowledged that the target population for this instrument was non-patient adult men. However, caution should be used in administering to and interpreting this measure for men over the age of 60. No men over this age participated in the qualitative

study conducted to identify important body image dimensions that should be assessed by the MMBCQ. As men enter their 60s and beyond, it is possible that, because of the process of aging, body image and health concerns may change in their importance and meaning. As a result, this group of older men may identify different areas as being important or not important to their body image. Future research will need to conduct qualitative interviews with this older age group to determine the areas of importance to their body image and/or provide validation evidence for the MMBCQ in this age group.

5.5 Concluding Remarks

The purpose of this dissertation was to identify areas of men's bodies and appearance that are important to their body image, use this information to develop a broad measure of male body image that assesses these relevant dimensions, and conduct a validation study to examine the inferences to be made from this new measure. This new measure, the MMBCQ, has the potential to fill a gap in the current male body image literature, which has predominantly focused on muscularity, by allowing researchers to expand their understanding of the male body image construct through the use of a promising new measure that assesses multiple dimensions of male body image. While there are some areas of the MMBCQ that have been identified as needing improvements, this dissertation offers several recommendations to bring the MMBCQ up to its full potential.

5.6 References

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APPENDICES

Appendix A

Interview Guide

1. Tell me a little bit about yourself.
2. Tell me the history of how your body has changed over time. (Specifically in terms of your appearance)
3. How would you describe the typical man's body that is your age. How would you compare yourself to this?
4. What do you like most about your body? Why? What do you like least? Why?
5. Because I am interviewing men that are gay and men that are straight, do you think there would be any differences in their perceptions of body image or the importance of body image?
6. What is the relationship between your perception of your body and your experience of sexuality? How much of a role does body image play in how attractive you feel to a potential partner?
7. Do you think penis size is an important contributor to your body image? Why or why not?
8. How important is appearance to you?
- 9a. What body or appearance maintenance activities do you do regularly in order to maintain your appearance? (e.g., diet, exercise, grooming)
- 9b. How important are these activities in the maintenance of your body image?
10. How would you describe your clothing style? How important is clothing to your body image? In what ways to does it contribute to your body image?
11. What have you done in order to change your appearance? (e.g., diet, exercise, surgery)

12. What would you be willing to do in order to change your appearance? (e.g., diet, exercise, surgery)
13. What are your thoughts towards men who engage in surgical on non-surgical cosmetic procedures?
14. What is your idea of the ideal male body? Who in your life or the media would you say has the ideal male body? What is it about their body that makes it an example of the ideal male body?
15. What role has the media played in promoting body image ideals for you, if any? For men in general?
16. What does an unattractive man's body look like?
17. How has the importance of appearance changed over your life-time, if at all?
18. What does "masculinity" mean to you?
19. What does "muscularity" mean to you?
20. What does "metrosexual" mean to you?
21. Are there any issues pertaining to body image that we haven't discussed that you think are important? Are there any questions that I haven't asked you that you think I should have asked?

7. Height: _____

8. Weight: _____

9. How often do you exercise:

- Less than once a week
- 1-2 times per week
- 3-4 times per week
- 5 or more times per week

10. On average, for how long do you exercise at a time?

- I don't exercise
- Less than 30 minutes
- 30-60 minutes
- 61-90 minutes
- More than 90 minutes

11. What types of exercise activities do you engage in (check all that apply)?

- weight training
- cardio machines (e.g., stairmaster, elliptical machine, treadmill)
- walking
- jogging/running
- cycling
- swimming
- group sports (e.g., football, baseball, ultimate frisbee, volleyball, karate)
- yoga or pilates
- group cardio exercise classes (excluding yoga and pilates)
- Other (please specify: _____)

12. Have you taken part in a previous version of this study?

- Yes No Don't know

Appendix C



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Vancouver, B.C. V6T 1Z3

CERTIFICATE OF APPROVAL- MINIMAL RISK RENEWAL

PRINCIPAL INVESTIGATOR: Anita M. Hubley	DEPARTMENT: UBC/Education/Educational & Counselling Psychology, and Special Education	UBC BREB NUMBER: H06-80347
INSTITUTION(S) WHERE RESEARCH WILL BE CARRIED OUT:		
Institution		Site
UBC Other locations where the research will be conducted: N/A		Vancouver (excludes UBC Hospital)
CO-INVESTIGATOR(S): Shayna A. Rusticus		
SPONSORING AGENCIES: N/A		
PROJECT TITLE: Understanding the Male Physique through the Voices of Gay and Straight Men		

EXPIRY DATE OF THIS APPROVAL: August 28, 2009

APPROVAL DATE: August 28, 2008

The Annual Renewal for Study have been reviewed and the procedures were found to be acceptable on ethical grounds for research involving human subjects.

Approval is issued on behalf of the Behavioural Research Ethics Board

Dr. M. Judith Lynam, Chair
Dr. Ken Craig, Chair
Dr. Jim Rupert, Associate Chair
Dr. Laurie Ford, Associate Chair
Dr. Daniel Salhani, Associate Chair
Dr. Anita Ho, Associate Chair



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CERTIFICATE OF APPROVAL - MINIMAL RISK

PRINCIPAL INVESTIGATOR: Anita M. Hubley	INSTITUTION / DEPARTMENT: UBC/Education/Educational & Counselling Psychology, and Special Education	UBC BREB NUMBER: H09-00586
INSTITUTION(S) WHERE RESEARCH WILL BE CARRIED OUT:		
Institution	Site	
N/A	N/A	
Other locations where the research will be conducted: Subjects will have the option of completing this study online or in a take home format, so they will complete the study at a location of their choice (e.g., home, work, library).		
CO-INVESTIGATOR(S): Shayna A. Rusticus		
SPONSORING AGENCIES: N/A		
PROJECT TITLE: Development of a Multidimensional Measure of Male Body Image: A Pilot Study		

CERTIFICATE EXPIRY DATE: March 18, 2010

DOCUMENTS INCLUDED IN THIS APPROVAL:	DATE APPROVED: March 18, 2009	
Document Name	Version	Date
<u>Consent Forms:</u>		
Paper Consent	1	March 3, 2009
Online Consent	1	March 3, 2009
<u>Advertisements:</u>		
Poster Recruitment	1	March 3, 2009
Email Recruitment	1	March 3, 2009
<u>Questionnaire, Questionnaire Cover Letter, Tests:</u>		
Scale Items	1	March 3, 2009
Demographics	1	March 3, 2009
<u>Other:</u> A website will be part of the study; however I have not yet created the website so do not have a URL. I am intending to create the survey using SurveyMonkey.		
The application for ethical review and the document(s) listed above have been reviewed and the procedures were found to be acceptable on ethical grounds for research involving human subjects.		

***Approval is issued on behalf of the Behavioural Research Ethics Board
and signed electronically by one of the following:***

Dr. M. Judith Lynam, Chair
Dr. Ken Craig, Chair
Dr. Jim Rupert, Associate Chair
Dr. Laurie Ford, Associate Chair
Dr. Anita Ho, Associate Chair



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CERTIFICATE OF APPROVAL - MINIMAL RISK

PRINCIPAL INVESTIGATOR: Anita M. Hubley	INSTITUTION / DEPARTMENT: UBC/Education/Educational & Counselling Psychology, and Special Education	UBC BREB NUMBER: H09-01062
INSTITUTION(S) WHERE RESEARCH WILL BE CARRIED OUT:		
Institution	Site	
UBC	Vancouver (excludes UBC Hospital)	
Other locations where the research will be conducted: Subjects will have the option of completing this study online or in a take home format, so they will complete the study at a location of their choice (e.g., home, work, library).		
CO-INVESTIGATOR(S): Shayna A. Rusticus		
SPONSORING AGENCIES: N/A		
PROJECT TITLE: Body Concerns Among Men: Psychometric Evaluation of the Male Body Concerns Questionnaire		

CERTIFICATE EXPIRY DATE: June 5, 2010

DOCUMENTS INCLUDED IN THIS APPROVAL:	DATE APPROVED: June 5, 2009	
Document Name	Version	Date
<u>Consent Forms:</u>		
Paper Consent	N/A	May 2, 2009
Online Consent	N/A	May 2, 2009
<u>Advertisements:</u>		
Poster Recruitment	1	May 2, 2009
Email Recruitment	1	May 2, 2009
<u>Questionnaire, Questionnaire Cover Letter, Tests:</u>		
Study Questionnaires	N/A	May 2, 2009
Demographics Form	1	May 2, 2009
<u>Other:</u>		
A website will be part of the study; however I have not yet created the website so do not have a URL. I am intending to create the survey using SurveyMonkey.		
The application for ethical review and the document(s) listed above have been reviewed and the procedures were found to be acceptable on ethical grounds for research involving human subjects.		

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