Measuring Masculine Body Ideal Distress: Development of a Measure

SARA B. KIMMEL and JAMES R. MAHALIK
Boston College

This paper describes the construction of the Masculine Body Ideal Distress Scale (MBIDS) and an initial study examining its psychometric properties. For the study, 154 mostly Caucasian and heterosexual college males completed the MBIDS along with a measure of body dissatisfaction and a measure of conformity to masculinity norms. Results indicated that the Masculine Body Ideal Distress Scale consisted of one factor, had very high internal consistency, and related to both higher levels of body dissatisfaction and conformity to masculine norms. The discussion focuses on future research using the MBIDS and limitations to the study.

Keywords: body dissatisfaction, conformity to masculinity norms, psychometric measures

There is increasing evidence that body image concerns pose significant health risks for males in terms of their use of anabolic steroids and the development of eating disorders and poorer psychological functioning (Cafri, Strauss, & Thompson, 2002; Connan, 1998; Kanayama, Pope, Cohane, & Hudson, 2003). Although men usually report higher levels of body satisfaction than women, research shows that boys and men are increasingly presented with more muscular and unattainable masculine ideal body images than 10 or 20 years ago (Pope, Olivardia, Gruber, & Borowiecki, 1999). For example, analysis of toy action figures (e.g., GI Joe) showed dramatic increases in muscularity with the body proportions of the most recent action figures being unattainable (Pope et al., 1999). Some suggest that the increasingly unattainable body proportions presented to men account for the fact that adult males’ body

Correspondence concerning this article should be sent either to Sara B. Kimmel, Harvard University, University Health Services, Mental Health Services, 75 Mount Auburn Street, Cambridge MA 02138 or James R. Mahalik, Campion Hall 312, Boston College, Chestnut Hill, MA 02467. Electronic mail: Mahalik@bc.edu.

ideals have also grown increasingly muscular in recent years (Leit, Pope, & Gray, 2001).

These trends are particularly problematic when viewed from a social comparison framework. The specific source of concern is that, because negative self-perceptions occur when people see themselves as worse than others on a specific dimension (Festinger, 1954), boys and men are comparing themselves to increasingly unattainable masculine body images and are thus increasingly likely to evaluate their body image negatively. Support for this idea has been found in research examining boys’ dissatisfaction with their bodies (Jones, 2001) and findings that men’s body satisfaction decreases when they view muscular sociocultural ideals (Leit, Gray, & Pope, 2002).

Summarizing both the trend of males’ increasing body dissatisfaction and its negative health effects, a recent review concluded that “the male body ideal is becoming more muscular; and adolescent males are increasingly experiencing body dissatisfaction, engaging in disordered eating, and using anabolic steroids and untested dietary supplements to control their weight and gain muscle” (Labre, 2002, p. 233). In studying these issues, researchers have relied primarily on indices of body dissatisfaction typically assessed by determining the discrepancy between an individual’s ideal body type and his perceived body type. As an illustration, the Body Image Assessment measure calculates the discrepancy between one’s current and ideal body size (see Williamson, Davis, Bennett, Goreczny, & Gleaves, 1989), and the Body Ideal Questionnaire (Cash & Szymanski, 1995) assesses the discrepancy between an individual’s ideal and self-perceived image while accounting for how important the ideals are to the individual.

However, these measures do not directly assess distress arising from men’s concerns about not having a muscular masculine body, which may be the source of their problematic health behaviors (e.g., anabolic steroid use). We believe that such distress is important to examine for two reasons. First, a person may experience a large discrepancy between his real and ideal body image, but the discrepancy is not a cause of worry or source of distress. Second, distress is strongly associated with poor health outcomes (e.g., Wyshak, 2003) and, as such, may be a better indicator of body-image related health risk than body dissatisfaction. Given these two reasons, we were interested in developing an instrument to assess masculine body ideal distress to measure directly the stress males experience from failing to live up to masculine body ideals.

**DEVELOPMENT OF THE MASCULINE BODY IDEAL DISTRESS SCALE**

Several steps were used to develop the inventory. To begin with, the first author met with a focus group of six young adult men [five White, one bi-racial who averaged 26.5 years of age ($SD = 3.75$)] and asked them to describe “what is important about an ideal masculine body?” Participants’ responses were recorded and examined for redundancies. For example, multiple responses regarding the importance of “six-pack abs,” a flat stomach, and strong abdomen were all considered to reflect the importance of good abdominal muscles. After identifying seven general areas that participants’ responses fell into (i.e., arms, legs, pectorals, abdominals, weight, mus-
To assess distress from failing to live up to these masculine body ideals, the scale’s instructions asked participants to indicate, “How distressing would it be for you if the following statements were true of your physical appearance?” Respondents to the *Masculine Body Ideal Distress Scale* (MBIDS) then indicate their expected level of distress to items (e.g., “having a weak body) on a four-point scale (i.e., 1 = “not distressing at all,” 2 = “mildly distressing,” 3 = “moderately distressing,” and 4 = “very distressing”).

The purpose of this study, therefore, was to examine the psychometric properties of the MBIDS. Specifically, we examined the factor structure of the scale and the internal consistency of items and hypothesized that scale scores should relate positively to indicators of body dissatisfaction and conformity to masculinity.
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METHOD

PARTICIPANTS

Participants were recruited in undergraduate introduction to biology classes at a northeastern university and received extra credit from the class instructor. One hundred fifty-four college-aged men participated in the study. They averaged 19.33 years of age (SD = 1.00) and were predominantly White (129 Caucasian, 12 African American, six Asian or Asian American, four Hispanic/Latino, one bi-racial, and two who described themselves as “other”). All men were single and attending a university in the northeast, and almost all self-reported as heterosexual (150 heterosexual, three homosexual, and one bi-sexual). We do not have demographic information on non-participants in the class. As this course (i.e., Introduction to Biology) is a required course, the male students in the study should be representative of the larger university population of freshman and sophomore male students. In addition, the demographic characteristics of our sample were very similar to previous samples of male students drawn from the university in other studies.

MEASURES

The Body Image Ideals Questionnaire (BIQ; Cash & Szymanski, 1995) was used to measure body dissatisfaction rating 11 physical attributes (e.g., weight, facial features, muscle tone/definition, physical strength, overall appearance, etc.) on a four-point scale ranging from 0 to 3. Specifically, the BIQ assesses a person’s degree of body-image dissatisfaction by first measuring the degree of discrepancy between the person’s self-perceived physical attributes and their idealized physical attributes, then asking the person to evaluate how important each of the physical ideals are to the person. Thus, both one’s closeness to the physical ideal and how important it is to meet the physical ideal are considered when computing the BIQ score. To illustrate, participants are asked to respond to a statement such as “My ideal height is” with one of four choices ranging from “0 = Exactly As I Am” to “3 = Very Unlike Me.” Then they are asked to indicate “How important to you is your ideal height?” and respond with one of four choices ranging from “0 = Not Important” to “3 = Very Important.” Scores for each pair of the 11 sets of items (i.e., 1A and 1B to 11A and 11B) are multiplied together, the 11 products are then summed, and the total sum is divided by 11 to obtain the BIQ score.

The BIQ has demonstrated strong validity in several studies through its significant correlation with the Body Areas Satisfaction Scale, the Situational Inventory of Body-Image Dysphoria, the Appearance Schemas Inventory, the Bulimia Test Revised, and the Eating Attitudes Test (Cash & Szymanski, 1995; Szymanski & Cash, 1995). In addition, the BIQ significantly predicted public self-consciousness, perfectionism, social-evaluative anxiety, depression, and eating disturbance. Previous studies reported the BIQ had a coefficient \( \eta = .81 \) for males (Cash & Szymanski, 1995). In the current study, internal consistency estimate on the BIQ total score was \( \eta = .87 \).

The Conformity to Masculinity Norms Inventory (CMNI; Mahalik, Locke, Ludlow, Diemer, Scott, Gottfried, & Freitas, 2003) was used to assess conformity to
masculine norms in the dominant culture in U.S. society. The inventory consists of 94-items answered on a four-point scale (0 = “Strongly Disagree” to 3 = “Strongly Agree”) with factor analysis indicating that the CMNI consists of 11 distinct factors labeled Winning, Emotional Control, Risk-Taking, Violence, Dominance, Playboy, Self-Reliance, Primacy of Work, Power Over Women, Disdain for Homosexuals, and Pursuit of Status (Mahalik et al., 2003).

Regarding validity, Mahalik et al. (2003) reported that CMNI scores significantly related to other masculinity-related measures including the Brannon Masculinity Scale (Brannon & Juni, 1984), the Gender Role Conflict Scale (O’Neil et al., 1986), and the Masculine Gender Role Stress Scale (Eisler & Skidmore, 1987). Additionally, CMNI scores were found to relate significantly and positively to psychological distress, social dominance, aggression, and the drive for masculinity and significantly and negatively to attitudes toward psychological help-seeking (Mahalik et al., 2003).

Addressing reliability, Mahalik et al. (2003) reported that internal consistency estimates ranged from .73 to .91 for the 11 Masculinity Norms with a coefficient alpha of .94 for the CMNI total score. Test-retest over a two to three week period ranged from .51 to .96 for the 11 Masculinity Norms with a test-retest coefficient of .96 for the CMNI Total Score. In the current study, r's ranged from .73 to .90 for 10 of the 11 Masculinity Norms (r = .59 for Dominance) and was .93 for the CMNI Total score.

Mean substitution was used for missing data on all measures. Specifically, the mean was calculated for each item, and any missing data received the mean value for that item.

PROCEDURES

All participants were provided with an Internet address that directed them to the informed-consent page where they indicated their willingness to participate by clicking on a hyperlink at the bottom of the page. They were then directed to the survey, which took approximately 30 minutes to complete. Following completion of the survey, participants were then directed to a debriefing page.

RESULTS

PRELIMINARY ANALYSES

Prior to the main analyses in the study, the Body Image Ideals Questionnaire scores (BIQ), the 11 Masculinity Norms scores, and CMNI Total score were examined to determine if they met the assumptions of normality. As each variable’s skewness score was less than 1.00, this indicated that the scores were normally distributed. However, four of the masculinity variables had kurtosis scores greater than 1.00 (i.e., Risk-Taking = 2.41, Violence = 1.14, Power Over Women = 1.64, and CMNI Total = 1.05). Thus, we attempted to transform these four scores to meet kurtosis assumptions (e.g., using logarithm, square root, square root of a constant minus the value, inverse) but our transformations failed to improve the kurtosis values below 1.00.
Examining the means and standard deviations of the BIQ and CMNI indicated that men in our sample scored similarly to comparison samples on these measures. Specifically, men in our sample scored within half a standard deviation of Cash and Szymanski’s (1995) sample mean on the BIQ and also half a standard deviation of Mahalik et al.’s (2003) sample on all 11 Masculinity Norms and the CMNI Total score (see Table 2 for means and standard deviations).

Table 2

<table>
<thead>
<tr>
<th>MBIDS</th>
<th>20.32</th>
<th>SD 5.32</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIQ</td>
<td>1.09</td>
<td>1.10</td>
</tr>
<tr>
<td>CMNI Total</td>
<td>132.71</td>
<td>23.96</td>
</tr>
<tr>
<td>Winning</td>
<td>16.64</td>
<td>4.80</td>
</tr>
<tr>
<td>Emotional Control</td>
<td>14.54</td>
<td>5.50</td>
</tr>
<tr>
<td>Risk-Taking</td>
<td>15.70</td>
<td>4.24</td>
</tr>
<tr>
<td>Violence</td>
<td>12.58</td>
<td>3.69</td>
</tr>
<tr>
<td>Power Over Women</td>
<td>9.33</td>
<td>4.00</td>
</tr>
<tr>
<td>Dominance</td>
<td>6.43</td>
<td>1.68</td>
</tr>
<tr>
<td>Playboy</td>
<td>13.05</td>
<td>6.83</td>
</tr>
<tr>
<td>Self-Reliance</td>
<td>7.25</td>
<td>3.33</td>
</tr>
<tr>
<td>Primacy of Work</td>
<td>8.87</td>
<td>3.44</td>
</tr>
<tr>
<td>Disdain for Homosexuals</td>
<td>16.41</td>
<td>5.84</td>
</tr>
<tr>
<td>Pursuit of Status</td>
<td>11.92</td>
<td>2.63</td>
</tr>
</tbody>
</table>

Note. N = 154. MBIDS = Masculine Body Ideal Distress Scale; BIQ = Body Image Ideals Questionnaire; CMNI Total = Total Score for the Conformity to Masculine Norms Inventory.

Factor Structure of MBIDS

The dimensions underlying the eight items of the Masculine Body Ideal Distress Scale were investigated using a principal components analysis. The Kaiser-Meyer-Olkin measure of sampling adequacy (Kaiser, 1974) was computed as .88, indicating that factor analysis was appropriate for the data set. Results from the principal components analysis using oblique rotation indicated that the MBIDS contained one factor with an eigenvalue greater than 1.0 (i.e., 4.55) and that all eight items loaded on that factor higher than .5 (see Table 1).

Internal Consistency of the MBIDS

To examine the internal consistency of the MBIDS, coefficient alpha was calculated. Results indicated the coefficient for the 8-item MBIDS was .89 with item-total correlations all exceeding .42 (see Table 1 for corrected item-total correlations).
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RELATIONSHIP OF MBIDS SCORES TO OTHER CONSTRUCTS

As the MBIDS was designed to measure distress arising from not meeting the masculine body ideal, we examined MBIDS scores in relation to body satisfaction and conformity to masculinity norms. Pearson correlations indicated that MBIDS scores were positively and significantly related to BIQ scores ($r = .23, p < .01$), the CMNI Total score ($r = .23, p < .01$), and conformity to Winning ($r = .31, p < .001$), Playboy ($r = .16, p < .05$), Primacy of Work ($r = .15, p < .05$), Disdain for Homosexuals ($r = .17, p < .05$), and Pursuit of Status ($r = .14, p < .001$) at the one-tail level.

DISCUSSION

Results indicated that the Masculine Body Ideal Distress Scale consisted of one factor and had very high internal consistency and scores related to both higher levels of body dissatisfaction and conformity to masculinity norms. In particular, masculine body ideal distress appears to be most related to the masculine dimensions of being a winner and significantly, but at lower levels, to pursuing status, putting work ahead of everything else, being a playboy, and disdaining homosexuality.

We note several limitations for the study. Specifically, the participants were young adults who were mostly White, mostly heterosexual, and of sufficient economic means to be attending a private college, thus limiting generalizability of the findings. In addition, our development process led to items that focused on masculinity and strength. However, the construct of “the ideal masculine body” may be a broader construct including facial features, attractiveness, and sexual potency and not necessarily limited to the masculinity and strength items we identified in this study. In addition, we did not replicate the factor structure with a second sample and recognize that our factor structure solution may be sample-dependent. As such, future research should attempt to cross-validate the single-factor structure we identified in this study.

In addition, future research needs to explore psychometric information about the MBIDS with other groups of men from diverse racial, sexual-orientation, economic, and age backgrounds to determine if the same characteristics reported in this study extend to other samples with other groups. This is particularly important because masculinity is culturally constructed such that masculine body ideals may differ in different cultural contexts such as socioeconomic or sexual orientation. For example, scholars examining the gay community have speculated that some gay men may develop a hypermasculine persona that presents itself in the desire for a powerful masculine physique as a defensive reaction to the dominant societal belief that they are not real men because of their sexual orientation (Pope, Phillips, & Olivardia, 2000; Signorile, 1997).

As this study did not test the convergent validity of the MBIDS, future research must also examine the relationship of the MBIDS to other measures that assess masculine body-related constructs (e.g., the Drive for Masculinity Scale, McCrery & Sasse, 2000). In addition to determining whether the MBIDS relates to such constructs, it needs to be determined whether the measure explains additional variance beyond these current measures. For example, McCrery and Sasse (2000) report that
the Drive for Muscularity Scale significantly predicted higher levels of men’s depression and lower levels of self-esteem. However, we believe that masculine body ideal distress is likely to be a better predictor of these types of psychological and health outcome variables because the MBIDS items reflect distress about one’s body rather than the masculinity oriented body image and masculinity behavior constructs that the DMS assesses (McCreary, Sasse, Saucier, & Dorsch, 2004). Our point is that, although the Drive for Muscularity Scale should be able to predict whether men work out, diet, or take anabolic steroids, the Masculine Body Ideal Distress Scale should be a better predictor of reasons why they do so (e.g., to boost their self-esteem, to manage the anxiety associated with perceiving their body as small or weak). Specifically, we are suggesting that masculine body ideal distress may contribute the motivation that gives rise to risky behaviors such as trying to reduce mass in some regions of the body through eating-disordered behavior and increase mass in other regions of the body through steroid use. Thus, future research should determine whether the MBIDS accounts for variance in these types of phenomena beyond other body-related measures not assessing distress.

In addition, research should examine the temporal stability of the measure through test-retest reliability studies and the temporal changes that may occur through longitudinal research of males through critical periods such as adolescence. It would also be important to examine the MBIDS in relation to other constructs contained in its nomological net such as masculine gender-role stress (Eisler, 1995). Specifically, distress associated with perceived failure to meet societal expectations of the male body image are likely to be associated with masculine gender-role stress as it reflects stress associated with failure to meet societal expectations for men and masculinity. Finally, to establish that the MBIDS scores reflect masculine body-ideal distress and not general body-ideal distress, research should examine men and women on their respective levels of masculine body-ideal distress to determine if men actually score higher than women on the MBIDS.

Although these are only the initial findings for the measure, this study offers evidence supporting the reliability and validity of the eight-item MBIDS. As such, the MBIDS might be a useful tool to assess males’ distress connected to concerns about not meeting a masculine body ideal rather than only assessing their more general body dissatisfaction. The MBIDS may also be a useful tool alongside other measures assessing masculine body-related constructs such as the Drive for Muscularity Scale (McCreary & Sasse, 2000) that measure attitudes and behaviors associated with becoming more muscular. Such a battery of instruments may be particularly useful to understand the actions, attitudes, and motivation of males who engage in disordered eating or anabolic steroid use.

We also believe that developing a measure of masculine body-ideal distress is important as it helps to focus research efforts in an area that has typically examined mostly women’s body-image concerns. Although research seems to suggest that males and females are both susceptible to social comparison effects in the development of body-image concerns (Jones, 2001), the meaning and consequences of body-related concerns are likely to be different for males and females.

In conclusion, we were interested in developing an instrument to assess masculine body-ideal distress to provide a tool to examine questions related to the gen-
ordered context of men’s body-image concerns. We believe that such a tool may be useful to examine a number of theoretical questions and address some increasingly common clinical problems in men such as eating-disordered behavior, steroid use, and body-related concerns that might range from a drive for masculinity to muscle dysphoria problems.

REFERENCES


