BRIEF REPORT

Male Body Satisfaction: Factorial and Construct Validity of the Body Parts Satisfaction Scale for Men

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Given the centrality of body dissatisfaction in the manifestation of eating, exercise, and affective disturbances in men, measurement of this construct becomes essential. Across 2 studies with male undergraduates (Ns = 189 and 188), the psychometric properties, including incremental validity and factor structure, of the 25-item Body Parts Satisfaction Scale for Men (BPSS–M) were examined. Three factors—Upper Body, Legs, and Face—that included items measuring both muscularity and leanness were established. The factors were internally consistent and temporally stable (over 6 months), and support was found for their convergent, discriminant, and concurrent validity. Further, we established that, after controlling for social desirability and drive for muscularity, body satisfaction contributes uniquely to men's experience of disordered eating, negative affect and mood, and psychological well-being. The BPSS–M yielded reliable and valid scores with undergraduate men, suggesting that it may be useful for understanding not only body satisfaction but disordered eating and affective disturbances as well.

Keywords: body dysmorphia, body dysmorphic disorder, masculinity, scale development, body objectification

Body dissatisfaction, particularly with leanness (or body fat) and muscularity, has been identified as a key factor in men's psychological health and well-being (e.g., Cafri et al., 2005; McCabe & Ricciardelli, 2004; Ricciardelli & McCabe, 2004; Ridgeway & Tylka, 2005), including the development of muscle dysmorphia, eating disorders, and depression (Olivardia, Pope, Borowiecki, & Cohane, 2004). Developing measures of this construct with evidence of reliability and validity, however, has been more recent and is a necessary step for counseling psychologists to understand, assess, and work effectively with men who may experience such dissatisfaction. In this study, we describe the initial development and validation of a measure of male body satisfaction that is grounded in current body image theory (Cafri & Thompson, 2004).

Society's idealization of a hyper-mesomorphic, hyper-lean male body, in combination with pressures from parents and peers over body size and shape, may adversely influence boys' and men's body image and eating behaviors (e.g., Leit, Gray, & Pope, 2002; Smolak, Murnen, & Thompson, 2005). For example, Ricciardelli, McCabe, Lillis, and Thomas (2006) found that initial

perceived pressures from parents, peers, and the media to increase muscles predicted boys' (aged 8–11 years) subsequent investment in strategies to build muscles and lose weight and the importance they placed on being muscular, whereas Leit et al. (2002) found exposure to images of muscular men led male participants to experience increased dissatisfaction with their own muscularity. Further, men who defined the ideal body as lean and muscular said the upper (e.g., chest) and lower (e.g., calves) body were areas that affect their satisfaction with their appearance (Ridgeway & Tylka, 2005) and indicated that, in general, they fall far short of these societal body ideals (Tiggemann, Martins, & Churchett, 2008). These studies suggest that boys and men do experience pressures regarding the need to be muscular and that these pressures often are internalized, lead to feelings of dissatisfaction with body size and shape, and promote weight loss and muscle gain strategies such as restrictive dieting, weight lifting, and taking weight-gain supplements.

Although there is agreement that muscularity and leanness are central to men's body satisfaction (e.g., Cafri & Thompson, 2004; Ridgeway & Tylka, 2005), the question remains as to whether men really conceptualize their bodies as suggested by the factor structure of recent measures of men's body satisfaction (e.g., Tylka, Bergeron, & Schwartz, 2005). That is, do men really perceive themselves in terms of some overall sense of muscularity or body fatness, or is the evaluation more integrated, focusing on the muscularity *and* leanness of different areas of the body, such as the upper torso and legs? Ridgeway and Tylka (2005) reported that men do identify specific body parts in the upper (e.g., shoulders) and lower (e.g., buttocks) regions as important, but they also elucidated the importance of muscularity with certain body parts

(e.g., arms), leanness with other body parts (e.g., buttocks), and both with a few body parts (e.g., six-pack abdominal muscles). Thus, by focusing primarily on muscularity and leanness, researchers may be overlooking other dimensions that are important in defining men's satisfaction with their body and appearance (e.g., Tiggemann et al., 2008). Perhaps, like for a woman (Petrie, Tripp, & Harvey, 2002), a man's perception of his face as attractive (including hair) may influence his overall satisfaction with appearance, psychological well-being, and use of pathogenic eating and weight control behaviors.

Recent reviews (e.g., Cafri & Thompson, 2007) and our own examination of current measures (e.g., Ochner, Gray, & Brickner, 2009) indicate that, in addition to the issues raised previously, some measures are limited by insufficient data about their psychometric properties, by items that may not represent the construct of interest, and by a lack of completeness in examining the body parts that men identify as key. Further, in their study of heterosexual men's body image, Tiggemann et al. (2008) concluded that "appropriate measures of body image for men still require further development and psychometric investigation" (p. 1170). Thus, our purpose was to develop and test a new measure of male body satisfaction that focused on salient body parts (e.g., Ridgeway & Tylka, 2005), incorporated muscularity and leanness (e.g., Cafri & Thompson, 2004), and extended research that has shown hair to be important to men (Tiggemann et al., 2008) by examining the significance of a man's face.

In Study 1, we tested the scale's initial factor structure and internal consistency reliabilities and examined the factors' relations with key demographic variables (e.g., age, year in school). In Study 2, we confirmed the factor structure and then found evidence for the scale's validity, including incremental validity, through relations with measures of disordered eating, drive for muscularity, negative mood, and psychological well-being, constructs that have been shown to be related to body satisfaction (Bergeron & Tylka, 2007; Ochner et al., 2009; Tylka et al., 2005).

Study 1: Exploratory Factor Analysis and Initial Reliability Estimates

Method

Participants.   Participants were 189 male undergraduates from a large, public university in the southwestern United States; mean age was 20.3 years ($SD = 2.25$); 120 were European American, 25 were Hispanic, 24 were African American, 19 were Asian American/Pacific Islander, and 1 was American Indian. There were 71 freshmen, 49 sophomores, 41 juniors, and 28 seniors.

The men's mean current and desired body mass indices (BMIs) were 25.0 kg/m² ($SD = 4.71$) and 24.4 kg/m² ($SD = 3.05$), respectively; 7 participants could be categorized as underweight, 103 as normal weight, 50 as overweight, and 29 as obese (Centers for Disease Control and Prevention [CDC], 2009). On the demographic questionnaire, 87 men reported being dissatisfied with their current weight; of these, 57 considered themselves overweight and 30 considered themselves underweight. No participant reported having been previously treated for an eating disorder.

Measures.

Body satisfaction.   One counseling psychology faculty member and eight doctoral students (five female and three male), all of

whom were knowledgeable about body image concerns, participated in the item generation and review processes. Their purpose was to identify the most salient body parts for men (e.g., Ridgeway & Tylka, 2005), including items related to the face, that addressed issues of muscularity and leanness. The 30 items that resulted from this process composed the Body Parts Satisfaction Scale for Men (BPSS–M) and included (a) 18 items regarding satisfaction with the leanness *and* the muscularity of each of nine identified body parts (e.g., "leanness of upper legs," "muscularity of chest"); (b) five items regarding satisfaction with face (e.g., "complexion," "overall face"); (c) five items regarding satisfaction with overall body size and shape (e.g., "overall body build"); and (d) two items that addressed height and weight. Participants rate each item using a 6-point scale that ranges from 1 (*extremely dissatisfied*) to 6 (*extremely satisfied*).

Social desirability.   The 12-item Marlowe-Crowne Social Desirability Scale Form B (Reynolds, 1982) was used. Items are answered true or false; the total score can range from 0 (*low*) to 12 (*high*). In a sample of undergraduates, Reynolds (1982) reported a Kuder-Richardson-20 (KR-20) coefficient of .75 and a .92 correlation with the standard version of the Marlowe-Crowne Social Desirability Scale; KR-20 for the current study was .62.

Demographics.   We assessed age, race/ethnicity, year in school, height, and current and ideal weight. We asked about (a) satisfaction with current weight and, if participants reported being not satisfied, if they considered themselves to be overweight/underweight, and (b) if they had been treated for an eating disorder.

Procedure.   After obtaining approval from the university's Institutional Review Board for Human Subjects Research, we obtained consent and administered questionnaires through Survey Monkey, a secure website; men were recruited to participate in a study on "the health behaviors of male college students." They received course extra credit and the chance to win a $50 cash prize.

Data analysis.   Principal axis factoring, with squared multiple correlations as the communality estimates, was used as the method of factor extraction in the exploratory factor analysis (Worthington & Whittaker, 2006). We conducted a parallel analysis (Hayton, Allen, & Scarpello, 2004) to determine the number of factors. Criteria for item deletion included (a) loadings less than .32, (b) cross-loading differences of less than .15, (c) absolute loadings higher than .32 on two or more factors, and (d) low communalities (i.e., less than .40). Alpha was set at .01 for all analyses.

Results

Bartlett's (1950) test of sphericity, $\chi^2(435) = 7,766.34$, $p < .0001$, and the Kaiser–Meyer–Olkin measure of sampling adequacy (.94) both provided evidence that item bivariate correlations were adequate for factorability (Worthington & Whittaker, 2006). Parallel analysis indicated the presence of three factors that explained 75.5% of the variance; we conducted a promax rotation. Height was dropped due to a low communality, as were three other items (i.e., muscularity *and* leanness of buttocks, leanness of neck) due to high cross-factor loadings. The three factors were Face (five items; $\alpha = .85$), Legs (four items; $\alpha = .94$), and Upper Body (17 items; $\alpha = .98$); factor loadings for Face ranged from .50 to .90 ($M = .71$), for Legs from .70 to 1.0 ($M = .86$), and for Upper Body

from .50 to 1.0 ($M = .71$). Factor intercorrelations ranged from .65 to .79.

The factors were unrelated to age (rs = −.02 to .04) but were related to social desirability (Face: $r = .19$, $p < .01$; Legs: $r = .09$, $p = .21$; Upper Body: $r = .14$, $p = .03$) and current BMI (Face: $r = −.21$, $p < .005$; Legs: $r = −.23$, $p < .005$; Upper Body: $r = −.40$, $p < .001$). The factors were also unrelated to year in school, Wilks's λ = .954, $F(9, 555) = 0.98$, $p = .46$, $η_p^2 = .016$. The factors appeared internally stable and not prone to vary in relation to age and school year.

Study 2: Confirmatory Factor Analysis and Construct Validity

Method

Participants. Participants were 188 male undergraduates drawn from the same university, none of whom had participated in Study 1; mean age was 20.3 years ($SD = 2.29$); 123 were European American, 24 were Hispanic, 29 were African American, 11 were Asian American/Pacific Islander, and 1 was American Indian. There were 64 freshmen, 56 sophomores, 38 juniors, and 30 seniors.

Mean current and desired BMIs were 24.8 kg/m² ($SD = 4.11$) and 24.4 kg/m² ($SD = 3.07$), respectively; three men were categorized as underweight, 105 as normal weight, 54 as overweight, and 26 as obese (CDC, 2009). On the demographic questionnaire, 89 men reported being dissatisfied with their current weight; of these, 52 considered themselves overweight and 35 considered themselves underweight; two did not specify. One participant reported having previously received treatment for anorexia nervosa.

Measures.

Body satisfaction. The BPSS–M as described and factor analyzed in Study 1 was used.

Drive for muscularity. The 15-item Drive for Muscularity Scale (DMS; McCreary, Sasse, Saucier, & Dorsch, 2004) assesses Muscularity-Oriented Body Image (MBI; seven items; ideation associated with muscularity, e.g., "I wish I were more muscular") and Muscularity Behavior (MB; seven items; behaviors to increase muscle size and strength, e.g., "I lift weights to build up muscle"). Participants respond on a 6-point scale from 1 (*never*) to 6 (*always*). Total scores are the mean; higher scores represent more of those muscularity attitudes or behaviors. In a sample of male high school students and men, McCreary et al. (2004) reported Cronbach's alphas of .88 (MBI) and .81 (MB); alphas for the current sample were .92 (MBI) and .88 (MB). McCreary and Sasse (2000) provided extensive data regarding the scale's construct validity.

Disordered eating. The 36-item Bulimia Test—Revised (BULIT–R; Thelen, Mintz, & Vander Wal, 1996) assesses bulimic symptomatology. Participants rate items, such as "I am satisfied with my eating patterns," on a 5-point scale from 1 (*absence of disturbance*) to 5 (*severe disturbance*). For the 28 scored items, total scores range from 28 (*low*) to 140 (*high*). Cronbach's alpha was .95 in a community sample of men (Russell & Keel, 2002); alpha for the current sample was .88. Regarding construct validity, Russell and Keel (2002) reported that the scale correlated positively ($r = .67$) with the EAT-26 (Garner, Olmstead, Bohr, & Garfinkel, 1982).

The 26-item Eating Attitudes Test (EAT-26; Garner et al., 1982) assesses disordered eating in terms of dieting, bulimia and food preoccupation, and oral control. Participants respond to each item, such as "Am terrified of being overweight," on a 6-point scale; the three responses that represent the lowest levels of disturbance are scored 0, and the subsequent three responses are scored 1, 2, and 3. Total scores range from 0 (*low*) to 78 (*high*). Cronbach's alphas have been found to be .89 in a sample of men (Russell & Keel, 2002); alpha for the current sample was .74.

The nine-item Dietary Intent Scale (DIS; Stice, 1998b) assesses behavioral intention to restrict eating. Participants rate items, such as "I limit the amount of food I eat in an effort to control my weight," on a 5-point scale that ranges from 1 (*never*) to 5 (*always*). Total score is the mean; higher scores indicate greater restraint. Stice (1998a) reported a Cronbach's alpha of .95 in a sample of male and female high school students; alpha for the current sample was .93. The DIS correlated significantly with the Dutch Restrained Eating Scale ($r = .92$; Stice, 1998b).

Negative affect. The Hostility (six items; e.g., irritable, angry) and Guilt (six items; e.g., blameworthy, guilty) subscales from the Positive and Negative Affect Schedule Expanded Form (PANAS–X; Watson & Clark, 1994) were rated on a 5-point scale from 1 (*very slightly or not at all*) to 5 (*extremely*). Each subscale score is the mean; higher scores represent more negative emotions. Watson and Clark (1994) reported Cronbach's alphas of .86 (Hostility) and .89 (Guilt) among male and female undergraduates; our study's alphas were .87 (Hostility) and .93 (Guilt). They also reported correlations between the PANAS–X and the Profile of Mood States scales.

The 20-item Center for Epidemiologic Studies Depression Scale (CES–D; Radloff, 1977) assesses depressive symptomatology in the general population. Participants rate items, such as "I felt lonely," on a 4-point scale ranging from 0 (*rarely or none of the time [less than 1 day]*) to 3 (*most or all of the time [5–7 days]*), based on the prior week. Total scores can range from 0 (*no symptoms*) to 60 (*high level of symptoms*). McCreary and Sasse (2000) reported a Cronbach's alpha of .87 in a sample of high school boys; alpha for the current study was .88. Shean and Baldwin (2008) found that the CES–D correlated positively ($r = .86$) with the Beck Depression Inventory–II.

Psychological well-being. The five-item Satisfaction With Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985) assesses overall life satisfaction. Items, such as "I am satisfied with my life," are scored using a 7-point Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Total scores can range from 5 (*low*) to 35 (*high*). Diener et al. (1985) reported a Cronbach's alpha of .87 among male and female undergraduates; alpha for the current study was .90. Diener et al. have provided extensive information about the scale's validity.

The 12-item General Esteem subscale of the Self Description Questionnaire–III (SDQ; Marsh & O'Neill, 1984) assesses individuals' effectiveness, pride, and satisfaction in themselves. Items, such as "I have pretty positive feelings about myself," are scored on an 8-point scale that ranges from 1 (*definitely false*) to 8 (*definitely true*). Total score is the mean; higher scores reflect greater self-esteem. Marsh and O'Neill (1984) reported a Cronbach's alpha of .93 among male and female undergraduates; our alpha was .94. The SDQ correlates with the Affective Perception

Inventory ($r = .63$) and the Rosenberg Self-Esteem Scale ($r = .79$; Byrne & Shavelson, 1986).

Social desirability. The 12-item Marlowe-Crowne Social Desirability Scale Form B (Reynolds, 1982) was used. KR-20 for the current study was .71.

Demographics. Participants provided the same demographic information as in Study 1.

Procedure. We used the same procedure described in Study 1. A subset of the men ($n = 59$) completed the BPSS–M 6 months following this data collection.

Data analysis. Confirmatory factor analysis (CFA) was conducted using the robust maximum-likelihood estimation procedure within EQS Version 6.1 (Bentler, 1995). Internal consistency and test–retest reliabilities were examined as well. We initially examined the factors' validity (convergent and concurrent) through their correlations with the BULIT–R, EAT-26, DIS, DMS–MB, DMS–MBI, PANAS–Hostility and Guilt, CES–D, SWLS, and SDQ. Then, we tested the factors' incremental validity, which determined the variance they accounted for in these variables beyond that explained by the men's muscularity attitudes and behaviors. We followed the procedure outlined by Bergeron and Tylka (2007), though we also controlled for social desirability. Using hierarchical regression, we entered social desirability at Step 1, the two DMS factors at Step 2, and the three BPSS–M factors at Step 3. Significant betas and changes in R^2 at Step 3 provide support for their incremental validity. Alpha was set at .01.

Results

Factor structure and reliability. Based on the two-index strategy recommended by Hu and Bentler (1999), the CFA provided support for the three-factor model, Satorra-Bentler $\chi^2(257) = 649.06$; comparative fit index = .93; standardized root-mean-square residual = .06. Due to high residuals, we dropped one item ("size and shape of head") from the Face factor. Standardized factor loadings ranged from .66 to .92 ($M = .79$; Face), .74 to .92 ($M = .86$; Legs), and .69 to .91 ($M = .82$; Upper Body). Cronbach's alphas and 6-month test–retest reliabilities,

respectively, were .87 and .58 (Face), .94 and .70 (Legs), and .97 and .72 (Upper Body). Factor intercorrelations ranged from .60 to .81.

Convergent and concurrent validity. Correlations with the BPSS–M factors are presented in Table 1. Across the three factors, there were small to moderate correlations with the measures of disordered eating, muscularity attitudes and behaviors, negative affect and mood, and psychological well-being.

Further, satisfaction with weight was related significantly to BPSS–M factor scores, Wilks's $\lambda = .83$, $F(3, 184) = 13.02$, $p < .0001$, $\eta_p^2 = .18$. Men who were weight-satisfied had significantly higher BPSS–M factor scores (Upper Body: $M = 4.35$, $SD = 0.97$; Legs: $M = 4.43$, $SD = 1.06$; Face: $M = 4.71$, $SD = 0.89$) than those who were weight-dissatisfied (Upper Body: $M = 3.52$, $SD = 0.96$; Legs: $M = 3.82$, $SD = 1.19$; Face: $M = 4.36$, $SD = 0.95$).

Incremental validity. For the BULIT–R, social desirability accounted for 8% of the variance, $F(1, 186) = 17.01$, $p < .0001$; the inclusion of the DMS factors at Step 2 explained an additional 5% of variance, $F(2, 184) = 5.70$, $p < .01$. Step 3, which included the BPSS–M factors, also was significant, $F(3, 181) = 8.53$, $p < .0001$, $\Delta R^2 = .11$.

For the EAT-26, neither Step 1, $F(1, 186) = 0.78$, $\Delta R^2 = .003$, nor Step 2, $F(2, 184) = 1.12$, $\Delta R^2 = .01$, was significant. The BPSS–M factors, however, explained an additional 7% of the variance, $F(3, 181) = 4.38$, $p < .01$.

For the DIS, neither Step 1, $F(1, 186) = 0.87$, $\Delta R^2 = .005$, nor Step 2, $F(2, 184) = 0.62$, $\Delta R^2 = .007$, was significant. Step 3, $F(3, 181) = 14.63$, $p < .0001$, $\Delta R^2 = .19$, was significant.

For Hostility, social desirability accounted for 22% of the variance, $F(1, 186) = 52.31$, $p < .0001$; Step 2, though, was not significant, $F(2, 184) = 2.94$, $\Delta R^2 = .02$. The BPSS–M factors added significantly to the model, $F(3, 181) = 5.81$, $p < .001$, $\Delta R^2 = .07$.

For Guilt, Step 1 was significant, $F(1, 186) = 26.73$, $p < .0001$, $\Delta R^2 = .07$, though Step 2 was not, $F(2, 184) = 2.82$, $\Delta R^2 = .03$.

Table 1
Study 2 Correlations of the BPSS–M With Selected Variables

Variable/measure	M	SD	Face	Legs	Upper Body
Age	20.30	2.29	.05	.03	−.01
Current BMI	24.74	4.11	−.02	−.04	−.13
Muscularity-Oriented Body Image	23.28	9.16	−.18	−.32**	−.29**
Muscularity Behavior	16.09	7.82	.08	.03	.18
BULIT–R	43.43	11.93	−.27**	−.33**	−.34**
EAT-26	4.32	4.69	−.17	−.12	−.21*
Dietary intent	13.88	6.15	−.25**	−.07	−.26**
PANAS–X Hostility	1.98	0.77	−.23**	−.27**	−.29**
PANAS–X Guilt	1.93	0.91	−.29**	−.23**	−.31**
CES–D	12.83	8.82	−.34**	−.28**	−.35**
Satisfaction With Life Scale	23.07	6.90	.31**	.35**	.39**
SDQ–General Esteem	73.09	15.38	.48**	.38**	.49**

Note. $N = 188$. BPSS–M = Body Parts Satisfaction Scale for Men; BMI = body mass index; BULIT–R = Bulimia Test—Revised; EAT-26 = Eating Attitudes Test; PANAS–X = Positive and Negative Affect Schedule Expanded Form; CES–D = Center for Epidemiologic Studies Depression Scale; SDQ = Self Description Questionnaire–III.
* $p < .01$.   ** $p < .001$.

The BPSS–M factors were significant, $F(3, 181) = 6.90$, $p < .0001$, $\Delta R^2 = .09$.

For depressive symptoms, Step 1 was significant, $F(1, 186) = 22.86$, $p < .0001$, $\Delta R^2 = .11$, but Step 2 was not, $F(2, 184) = 2.00$, $\Delta R^2 = .02$. The BPSS–M factors accounted for an additional 10% of the variance in CES–D scores, $F(3, 181) = 7.39$, $p < .0001$.

For the men's overall satisfaction with their lives, Step 1 was significant, $F(1, 186) = 13.39$, $p < .0001$, $\Delta R^2 = .07$, but Step 2 was not, $F(2, 184) = 3.92$, $\Delta R^2 = .04$. The inclusion of the BPSS–M factors at Step 3 was significant, $F(3, 181) = 7.24$, $p < .0001$, $\Delta R^2 = .10$.

For self-esteem, social desirability explained 12% of the variance, $F(1, 186) = 24.09$, $p < .0001$, DMS factors an additional 5%, $F(2, 184) = 5.80$, $p < .01$, and BPSS–M factors an extra 20%, $F(3, 181) = 18.67$, $p < .0001$, $\Delta R^2 = .20$. See Table 2 for details of the regression analyses.

Summary and Concluding Discussion

Across the two studies, an internally consistent and temporally stable three-factor model was supported, providing information about men's satisfaction with their upper body, legs, and face. These findings suggest that, perhaps, men perceive their bodies not in terms of some overall sense of how fat or muscular they are, as has been determined in past research (e.g., Tylka et al., 2005), but rather with respect to an upper torso that is lean, muscular, and V-shaped; legs that are strong and well-defined; and a face that is defined by nice looking hair and an attractive complexion. Our findings are consistent with those of Tiggemann et al. (2008) in that muscularity and leanness, albeit important, are not the only features that define men's body satisfaction. Although height was dropped from the analyses, past research (e.g., Ridgeway & Tylka, 2005; Tiggemann et al., 2008) has shown it to be salient, so this dimension should be examined further in future studies to test its predictive utility.

Regarding evidence of the scale's convergent and concurrent validity, the BPSS–M factors were related, as expected, with the men's desire to be more muscular, but not to the extent that they were taking actions to increase their strength and muscle mass (see also Bergeron & Tylka, 2007). Body dissatisfaction, particularly with the upper body and face, also was related to higher levels of bulimic symptomatology, intention to engage in dietary restraint, hostility and guilt, and depressive symptomatology, which is consistent with past research and theoretical models that associate dissatisfaction with negative affect, restricting caloric intake, and bulimic symptoms (e.g., Cafri et al., 2005; Olivardia et al., 2004; Ricciardelli & McCabe, 2004). Finally, in line with the idea that specific forms of self-concept underlie one's global sense of self (Marsh & O'Neill, 1984) and previous research (Bergeron & Tylka, 2007), we found that being satisfied with one's body, along all dimensions, was associated with greater psychological well-being in terms of the men's overall satisfaction with their lives and their general self-concept (see also Olivardia et al., 2004).

As expected, the BPSS–M was not related significantly to age or year in school and shared only a small amount of variance (~4%) with a measure of social desirability. There was some variability, however, regarding the relations between the BPSS–M and BMI across the two studies. Unlike with women, where BMI usually is associated with greater body fat and lower satisfaction, for men, a larger BMI could indicate more lean muscle mass *or* higher levels of body fat, so variability would be expected (Ricciardelli & McCabe, 2004). Future research may want to examine the relations between satisfaction and more objective measures of body composition, such as percentage body fat or fat-free muscle.

Regarding evidence of the scale's incremental validity, the three factors of the BPSS–M, in particular satisfaction with upper body, uniquely and significantly explained the extent to which men engaged in disordered eating behaviors (i.e., EAT-26), intended to restrict their food intake, felt angry or guilty, and felt positively about themselves, explaining between 7% and 20% of the variance after controlling for social desirability and drive for muscularity. Bergeron and Tylka (2007) also reported associations (after controlling only for drive for muscularity) between men's body dissatisfaction and self-esteem. Interestingly, the men's satisfaction with their face also was a significant predictor for their level of self-esteem. Like findings regarding men who have rated their hair as important in their self-evaluation (Tiggemann et al., 2008), our findings support the idea that men's self-esteem is determined by more than their muscularity, leanness, or how pleased they are with their upper torso. Additional research is needed to determine the relative predictive utility of these factors in explaining disordered eating attitudes and behaviors versus an individual's general psychological well-being.

Across the two studies, we found support for a three-factor model that defined male body satisfaction along the dimensions of upper body, legs, and face. Within each factor, items reflecting the leanness *and* muscularity of the body parts were present, suggesting that men consider both aspects in determining their level of satisfaction. In addition to individual body parts, two of the factors (i.e., upper body and face) included items reflecting men's overall satisfaction with body, muscularity, and/or leanness. This finding suggests that our factors were not simply a listing of the body parts that composed each area but include overall evaluations of body as well. In fact, we were somewhat surprised by the final factor structure, as we expected the delineation to occur along the lines of muscularity and leanness as has been found in other studies (e.g., Tylka et al., 2005). We also found evidence that the factors were internally consistent and stable over a 6-month time period and were related (and unrelated) as expected to a wide range of psychosocial, demographic, and eating disorder variables, providing support for their validity. Regarding validity, we found evidence that the factors, in particular Upper Body, but also Face, were unique from social desirability and drive for muscularity in explaining the presence of disordered eating, negative affect, and general self-esteem. Thus, the BPSS–M represents a new, and conceptually distinct, way to measure male body satisfaction.

Several clinical implications can be derived from this study. First, given that men do experience body image concerns, counseling psychologists might screen clients for symptoms of body dissatisfaction and, if present, examine whether the men are experiencing eating disturbances, including binge eating, bulimia, and muscle dysmorphia, or are engaging in dangerous body-changing behaviors, such as excessive exercising or taking steroids (Parent & Moradi, 2011). Men presenting with body dissatisfaction also could be assessed for symptoms of general negative affect, depression, low self-esteem, and anxiety, as body dissatisfaction, eating disturbances, and affective disturbances co-occur frequently. Second, counseling psychologists could use a measure

Table 2

Incremental Variance in Disordered Eating and Psychological Well-Being as Explained by Three Factors of the BPSS–M

Variable	B	$SE\ B$	β	t
Bulimic symptomatology (overall adjusted R^2 = .22, F[6, 181] = 9.75***)				
Social desirability	−0.96	0.28	−0.23	−3.42**
DMS–MBI	−0.05	0.11	−0.04	−0.46
DMS–MB	0.43	0.12	0.28	−3.44**
BPSS–M Face	−0.51	1.11	−0.04	−0.46
BPSS–M Legs	−0.34	1.16	−0.03	−0.29
BPSS–M Upper Body	−3.56	1.44	−0.31	−2.47
EAT-26 (overall adjusted R^2 = .05, F[6, 181] = 2.73*)				
Social desirability	−0.08	0.12	−0.05	−0.68
DMS–MBI	−0.03	0.05	−0.05	−0.55
DMS–MB	0.11	0.05	0.18	2.09
BPSS–M Face	−0.23	0.48	−0.05	−0.48
BPSS–M Legs	0.88	0.51	0.22	1.73
BPSS–M Upper Body	−1.80	0.63	−0.40	−2.87**
Dietary intent (overall adjusted R^2 = .18, F[6, 181] = 7.74**)				
Social desirability	−0.21	0.15	−0.10	−1.38
DMS–MBI	−0.15	0.06	−0.23	−2.59*
DMS–MB	0.23	0.07	0.29	3.43**
BPSS–M Face	−0.99	0.59	−0.15	−1.68
BPSS–M Legs	2.66	0.62	0.50	4.29***
BPSS–M Upper Body	−3.96	0.77	−0.67	−5.17***
Hostility (overall adjusted R^2 = .29, F[6, 181] = 13.56***)				
Social desirability	−0.12	0.02	−0.44	−6.77***
DMS–MBI	−0.01	0.01	−0.05	−0.66
DMS–MB	0.02	0.01	0.22	2.86**
BPSS–M Face	−0.01	0.07	−0.01	−0.05
BPSS–M Legs	0.04	0.07	0.06	0.55
BPSS–M Upper Body	−0.25	0.09	−0.34	−2.76*
Guilt (overall adjusted R^2 = .21, F[6, 181] = 9.46***)				
Social desirability	−0.10	0.02	−0.31	−4.60***
DMS–MBI	0.01	0.01	0.03	0.37
DMS–MB	0.02	0.01	0.14	1.73
BPSS–M Face	−0.12	0.09	−0.13	−1.46
BPSS–M Legs	0.16	0.09	0.21	1.86
BPSS–M Upper Body	−0.33	0.11	−0.38	−2.95**
Depressive symptoms (overall adjusted R^2 = .20, F[6, 181] = 8.68***)				
Social desirability	−0.88	0.21	−0.28	−4.14***
DMS–MBI	0.02	0.08	0.02	0.21
DMS–MB	0.03	0.09	0.02	0.28
BPSS–M Face	−1.60	0.84	−0.17	−1.91
BPSS–M Legs	0.82	0.88	0.11	0.93
BPSS–M Upper Body	−2.42	1.09	−0.29	−2.21
Satisfaction with life (overall adjusted R^2 = .18, F[6, 181] = 7.59***)				
Social desirability	0.47	0.17	0.19	2.77*
DMS–MBI	−0.05	0.07	−0.06	−0.71
DMS–MB	0.01	0.07	0.01	0.14
BPSS–M Face	0.54	0.66	0.07	0.82
BPSS–M Legs	0.22	0.69	0.04	0.32
BPSS–M Upper Body	1.74	0.86	0.26	2.02
Self-esteem (overall adjusted R^2 = .34, F[6, 181] = 17.26***)				
Social desirability	1.43	0.33	0.27	4.28***
DMS–MBI	−0.11	0.13	−0.07	−0.85
DMS–MB	0.02	0.15	0.01	0.12
BPSS–M Face	4.74	1.32	0.27	3.39**
BPSS–M Legs	−2.40	1.38	−0.18	−1.74
BPSS–M Upper Body	5.88	1.71	0.40	3.43**

Note. N = 188. The values presented in this table are those at Step 3, when all have been entered. BPSS–M = Body Parts Satisfaction Scale for Men; DMS = Drive for Muscularity Scale; MBI = Muscularity-Oriented Body Image; MB = Muscularity Behavior; EAT-26 = Eating Attitudes Test.
* p < .01.   ** p < .005.   *** p < .0005.

of body satisfaction, such as the BPSS–M, to assess this construct and not rely on visual cues, stereotypes, or personal biases about how men "should" look and whether they should be satisfied if they have a certain physique or body type. Further, it provides a way to determine how satisfied men are with not just their body but also their face, which appears to be related to their general feelings of esteem. Finally, counseling psychologists can keep in mind that potent societal factors (e.g., media images) continually reinforce the desirability of the hyper-mesomorphic and lean ideal body image for boys and men. In response, counseling psychologists could work to counter these messages by normalizing an "average" physique, encouraging a healthy lifestyle of moderate exercise and nutritious eating, and modeling body acceptance (see also Greenberg & Schoen, 2008).

Limitations existed that deserve mention. First, the participants were obtained from one university, the sample sizes were moderate (<200), and we did not specifically assess the participants' sexual orientation. Thus, the BPSS–M should be tested within other populations (e.g., adolescents, older men, athletes, other races/ethnicities) to further establish its psychometric properties. In particular, given the discrepancies that exist between heterosexual and homosexual men in terms of body image concerns (e.g., Morrison, Morrison, & Sager, 2004), researchers may want to focus their energies on this population to determine the etiology of such concerns. Second, despite establishing initial concurrent and incremental validity evidence, the study was cross-sectional, and longitudinal designs are needed to determine the directionality of the associations between body satisfaction and the various health outcomes. Researchers also will want to compare the BPSS–M and other measures of male body image to shed more light on just how men conceptualize their body and which dimensions best predict disordered eating and other aspects of men's psychological well-being. Further, given the high intercorrelations amongst the BPSS–M factors, in future studies, using the 25 items to determine a total score could be considered and examined in relation to these outcomes. Third, we did drop one item during the CFA phase of the study (due to high residuals on the Face factor), so this factor has not been confirmed in an independent sample. Such confirmation will need to be done in future studies. Finally, given the focus of the study, male body image, and the sensitivity of some of the questions, it is possible that participants underreported the extent of their body image and other disordered eating concerns. Although it is possible that this impacted the results, all the associations were in the expected direction and were comparable in size to those from other studies. In addition, correlations of the measures with social desirability were low, suggesting the participants were not trying to present themselves in too favorable a light. In future studies, though, researchers may want to not only use a measure of social desirability but embed validity items in the questionnaire packet to determine accuracy of responding.

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Appendix

Body Parts Satisfaction Scale for Men (BPSS–M)

Instructions: For each of the body parts listed below, indicate your current level of satisfaction using the scale below. There are no right or wrong answers, so please respond honestly based on how you currently feel.

Extremely dissatisfied					Extremely satisfied
1	2	3	4	5	6

1. Hair	1	2	3	4	5	6
2. Complexion	1	2	3	4	5	6
3. Leanness of face	1	2	3	4	5	6
4. Overall face	1	2	3	4	5	6
5. Weight	1	2	3	4	5	6
6. Leanness of shoulders	1	2	3	4	5	6
7. Muscularity of shoulders	1	2	3	4	5	6
8. Leanness of arms (e.g., biceps/triceps)	1	2	3	4	5	6
9. Muscularity of arms (e.g., biceps/triceps)	1	2	3	4	5	6
10. Leanness of stomach/abdomen	1	2	3	4	5	6
11. Muscularity of stomach/abdomen	1	2	3	4	5	6
12. Leanness of chest/upper torso	1	2	3	4	5	6
13. Muscularity of chest/upper torso	1	2	3	4	5	6
14. Leanness of back	1	2	3	4	5	6
15. Muscularity of back	1	2	3	4	5	6
16. Muscularity of neck	1	2	3	4	5	6
17. Overall body build	1	2	3	4	5	6
18. Overall leanness of body	1	2	3	4	5	6
19. Overall level of body's muscularity	1	2	3	4	5	6
20. Overall size and shape of body	1	2	3	4	5	6
21. Overall muscle tone/definition of body	1	2	3	4	5	6
22. Leanness of upper legs (e.g., quadriceps)	1	2	3	4	5	6
23. Muscularity of upper legs (e.g., quadriceps)	1	2	3	4	5	6
24. Leanness of lower legs (e.g., calves)	1	2	3	4	5	6
25. Muscularity of lower legs (e.g., calves)	1	2	3	4	5	6