ABSTRACT

Introduction: An expanding area of research within the realm of body image is its role in human sexual functioning, which denotes people’s overall satisfaction with their performance during a specific sexual encounter. Traditionally, studies investigating the association between body image and sexual functioning have focused on women. The Male Body Image Self-Consciousness Scale (M-BISC) was developed to exclusively assess male body image self-consciousness during sexual activity using a sample consisting primarily of heterosexual men.

Aim: The purpose of the current study is to evaluate the dimensionality, reliability, and validity of the M-BISC with a sample of gay men. Research suggests that sexual difficulties and body image concerns can overlap and interrelate. Therefore, 2 subscales (erectile difficulties and body embarrassment) from the Gay Male Sexual Difficulties Scale (GMSDS) were used to assess the validity of the scale.

Methods: 1,930 men self-identifying as “exclusively gay” completed an online survey consisting of demographics, the M-BISC, and the GMSDS (erectile difficulties and body embarrassment subscales).

Main Outcome Measure: The replicability of the M-BISC factor structure with a gay male sample was determined using an exploratory and confirmatory factor analysis. Additionally, the GMSDS (erectile difficulties and body embarrassment subscales) was used to determine the validity of the M-BISC.

Results: Exploratory and confirmatory factor analyses revealed that, following the removal of 3 items, the M-BISC was unidimensional. Scale score reliability for the 14-item M-BISC was good. Finally, as predicted, scores on the M-BISC correlated with scores on the GMSDS (ie, greater sexual difficulties).

Clinical Implications: The results indicate that assessment scales developed using samples consisting primarily of heterosexual men may not be appropriate for use with gay men in their original form. Thus, limiting the accuracy of the measurement and increasing the risk of misdiagnoses.

Strength & Limitations: Strengths of this study include a large sample of exclusively gay men and the utilization of best-practice statistical analysis for assessing factor structure, validity, and reliability of measures. Limitations include the assumption that the M-BISC should be used in lieu of a novel scale developed exclusively for gay men. Further, the study utilizes an Internet sample consisting primarily of Caucasian gay men.

Conclusion: Results of the current study illustrate that the M-BISC is a valid tool to measure gay men’s body concerns during intimacy. More importantly, it also highlights gay men’s elevated body concerns during intimacy and the need to understand the etiology of these apprehensions. Currently, there is a noticeable gap in the literature regarding the cause of gay male body concerns that have potential clinic implications.


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Key Words: Body Consciousness; Gay Men; Intimacy; Body Image; Psychometrics; Validation

INTRODUCTION

Body image is a multidimensional phenomenon comprised of self-perceptions and attitudes toward one’s physical appearance.¹ The 2 key facets of body image are (i) individuals’ evaluative thoughts about their physiques and (ii) the degree to which individuals are invested in how they look.¹ An expanding area of
research within the realm of body image is its role in human sexual functioning, which denotes people’s overall satisfaction with their performance during a specific sexual encounter.2,5

Traditionally, studies investigating the association between body image and sexual functioning have focused on women.4 Furthermore, certain scales that were created to measure men’s body image concerns in relation to sexual difficulties8 are based on instruments designed for women (eg, Cognitive Distraction and Women’s Sexual Functioning scale).4,5 A small number of studies have measured the construct using scales that were validated for use with men. To illustrate, an investigation of the psychometric properties of the Body Exposure during Sexual Activities Questionnaire (BESAQ)10 found that body mass index correlated positively with anxious self-focus and exposure avoidance during intimacy. Furthermore, men’s scores on the BESAQ were positively associated with being concerned about weight and appearance investment, and negatively correlated with self-reported sexual desire, arousal, and orgasm experience.

Although the BESAQ filled a notable gap in the study of body image and sexual functioning, it has limitations when used with men—whether gay or straight. First, the language contained in the measure is not gendered; thus, none of the scale items employ terminology that particularizes men’s unique body concerns. For example, according to research, men worry about the length and circumference of their penis2–9; however, the BESAQ does not reference men’s genitals. Second, the extent to which men were used to develop BESAQ items is unclear.4 If male participants were omitted from the generation and refinement of scale items, then it is difficult to gauge whether the BESAQ is a content valid measure of male body image and sexual functioning.

MAL E BODY IMAGE SELF-CONSCIOUSNESS SCALE

To address the potential limitations of the BESAQ, McDonagh et al4 created the Male Body Image Self-Consciousness Scale (M-BISC). The M-BISC was developed to exclusively assess male body image self-consciousness during sexual activity. The M-BISC items were generated in consultation with a small group of men (3 students in the final year of their undergraduate degree at a Republic of Ireland university). The following protocol was adopted. Copies of a scale designed to measure female body image self-consciousness during physical intimacy2 were distributed to the group and discussed, with each item assessed individually with regard to whether it was pertinent to men. This discussion led to the creation of a 39-item measure that then was subject to pilot testing. 136 men residing in the Republic of Ireland completed a questionnaire packet consisting of the Body Esteem Scale (BES),10 the Drive for Muscularity Attitudes Questionnaire (DMAQ),11 the Sexual Anxiety Inventory (SAI),12 and the Sexual Esteem Scale (SES).13 Body weight, relationship status, sexual experience, and self-rated bodily attractiveness also were evaluated.

For the M-BISC, corrected item-total correlations were inspected, and 5 items that had correlation coefficients <.30 were deleted. After recalculating corrected item-total correlations, 2 items correlated with each other in excess of .70. To minimize redundancy, the item with the lowest variance was removed. 16 items also were deleted because their inter-item correlations were weak (<.30). Thus, 17 items, in total, were retained. The Cronbach α for the 17-item M-BISC was .92, which suggests good scale score reliability.

To test the M-BISC’s construct validity, the researchers generated 5 hypotheses, all of which were supported. As predicted, (i) men’s body dissatisfaction correlated with their body image self-consciousness during sexual intimacy (BES and M-BISC), (ii) men’s sexual esteem correlated negatively with self-consciousness (SES and M-BISC), (iii) men’s levels of sexual anxiety and self-consciousness correlated moderately (SAI and M-BISC), (iv) men’s self-rated physical attractiveness was negatively related to self-consciousness (self-rated physical attractiveness and M-BISC), and (v) men’s drive for masculinity correlated positively with their self-consciousness (DMAQ and M-BISC). For additional details about the development and validation of the M-BISC, refer to McDonagh et al.4

Although the creation of the M-BISC has provided researchers an opportunity to measure male body image concerns during sexual activity, the scale was validated with a predominately heterosexual sample (ie, >90% of participants reported that they were “exclusively heterosexual” or “more heterosexual than homosexual”).4 Studies targeting non-heterosexual respondents are warranted because previous research suggests that gay and heterosexual men have differing attitudes on body image. Generally, gay men have significantly lower body satisfaction and higher occurrences of eating disorders than do heterosexual men.14–17 Studies also have observed that gay men score significantly higher than heterosexual men on measures of the drive for masculinity, and that their positive self-appraisals are highly dependent on appearance, weight, and masculinity.14,18–20 Thus, distributing the M-BISC to gay male samples may permit researchers to better understand gay men’s body image during physical intimacy and the role that such perceptions may (potentially) play in sexual difficulties.

GAY MEN’S BODY IMAGE AND SEXUAL DIFFICULTIES

Comparable to research pertaining to the broad concept of body image, literature evaluating the potential relationship between sexual difficulties and appearance disproportionately focuses on heterosexual women.21 Furthermore, the few studies assessing body image and sexual difficulties in men choose to isolate men’s genital concerns in relation to sexual functioning
(ie, penis length and girth, circumcision status)\textsuperscript{22,23} rather than explore the entirety of the male body. This field of research tends to prioritize heterosexual men’s body concerns during intimacy and (often) include a small, incidental sample of gay men or collapse men’s sexual preferences into a single group.\textsuperscript{1} However, the scant literature available suggests that there is an observable relationship between body image concerns and sexual difficulties in gay men.

In a study evaluating heterosexual men and women, gay men, and lesbian women’s body image satisfaction and its association with their sexual lives, 42\% of the gay male participants reported that their negative body image had a detrimental effect on the quality of their sex life (in comparison to 22\% of the heterosexual male participants).\textsuperscript{24} Lacefield and Negy\textsuperscript{21} observed that sexual minorities experience significantly more non-erotic cognitive distractions during sexual activity than do heterosexual men and women. Non-erotic cognitive distractions refer to physical performance distractions (eg, anxiety about a partner’s sexual experience), body image concerns, and other cognitive distractions (eg, sexually transmitted infection and emotional concerns) during sexual activity. Moreover, gay men experienced the most body image concerns during intimacy when compared to lesbian women and heterosexual men and women. Last, in a comparative study assessing sexual difficulties in a sample of heterosexual and gay Croatian men, positive body image was inversely associated with self-reported sexual difficulties for gay male participants but not for heterosexual men.\textsuperscript{25} Although the amount of research pertaining to gay men’s sexual difficulties and body image concerns is relatively small, the existing literature implies that the 2 variables may be correlated. Specifically, higher levels of body self-consciousness may be associated with the occurrence of a wide range of sexual difficulties in gay men.

\section*{PURPOSE}

Previously, the psychometric robustness of the M-BISC has been tested with a sample composed of heterosexual men.\textsuperscript{3} The literature suggests that assessing gay men’s sexual attitudes and behaviors with measures that have been validated with heterosexual men can be problematic.\textsuperscript{26} In addition, since the development of the M-BISC, research has yet to be published that analyzes the dimensionality, reliability, and validity of the M-BISC among gay men.\textsuperscript{4} Thus, the purpose of the current study is to evaluate the basic psychometric features of the M-BISC using a large sample of gay men.

\section*{METHODS}

\subsection*{Participants}

1,930 men self-identifying as “exclusively gay” served as participants. They ranged in age from 18–76 years (M = 33.55, SD = 11.23). Most participants were Caucasian (n = 795; 85.5%) and currently resided in the United States (n = 418; 44.9%), Ireland (n = 140; 15.1%), the United Kingdom (n = 116; 12.5%), and Canada (n = 64; 6.9%). In addition, most participants were either employed full-time (n = 573; 61.6%) or enrolled in post-secondary school (n = 192; 20.6%). Finally, with respect to participants’ relationship status, 34.6\% (n = 322) stated that they were single (not dating), 17.8\% (n = 166) indicated that they were dating 1 person exclusively, 15.9\% (n = 148) were living with their partner, and 10.3\% (n = 96) were married or in a civil partnership.

\subsection*{Procedure}

Ethical approval was obtained from the research ethics committee affiliated with the university of the third author (L.K.M.). Using SurveyGizmo (Widgix, Boulder, CO, USA), a questionnaire pack was created that consisted of an information sheet, informed consent, and relevant measures. The participant information sheet, presented on the first page of the survey, clearly stated that only men 18 years and older were eligible to participate. The purpose of the study and ethical requirements for research with human participants were described (ie, participation was anonymous and voluntary). The consent sheet appeared under the information sheet; demographic questions and all scales were presented on the remaining pages. Secure Sockets Layer encryption was used to ensure participant confidentiality.

Participants were recruited through a variety of means. In Ireland, a national campaign was launched seeking participation from all gay men 18 years and older. Advertisements were placed in local and national newspapers, and the research was discussed on local and national radio stations. Posters detailing the study were displayed in gay bars and nightclubs throughout Ireland. Internationally, lesbian, gay, bisexual, and transgender (LGBT) organizations and groups (eg, Pride event organizers) were contacted and asked to forward “an invitation e-mail” to their members. Invitations to participate in a study on sexual difficulties were posted online in several locations (eg, blogs, websites, and discussion forums). The administrators of these blogs, websites, and discussion forums were also asked to forward information about the study to personal contacts. As well, chain-referral sampling was used whereby acquaintances of the authors were asked to inform other men about the study. A Facebook page (“Gay Men’s Sex Survey”) was created, which described the research and provided links to the survey. Other LGBT-related Facebook pages (eg, gay...
choirs) also were contacted and asked to post a link to the survey on their page.

**Measures**

In addition to demographic questions (eg, age, sexual orientation, and ethnicity), participants were required to complete the following scales.

**Male Body Image Self-Consciousness Scale**

The M-BISC is a 17-item measure of male body self-consciousness during sexual activity. Each question is answered using a 5-point Likert scale (1 = strongly disagree; 5 = strongly agree), with total scores ranging from 17–85 (higher scores denote greater body image self-consciousness). McDonagh et al. provided evidence attesting to the scale score validity and reliability of the measure when distributed to heterosexual men.

**Gay Male Sexual Difficulties Scale**

The 25-item Gay Male Sexual Difficulties Scale (GMSDS) utilizes a Likert-type response format (Not Applicable, Never, Once or Twice, Several Times, Most of the Time, All of the Time) and examines difficulties with receptive and insertive anal intercourse (5 items each, 1 = strongly disagree; 5 = strongly agree), erectile difficulties (4 items, 1 = strongly disagree; 5 = strongly agree), foreskin difficulties (4 items, 1 = strongly disagree; 5 = strongly agree), body embarrassment (4 items, 1 = strongly disagree; 5 = strongly agree), and seminal fluid concerns (3 items, 1 = strongly disagree; 5 = strongly agree). For all subscales, higher scores denote more frequent occurrence of the sexual difficulty in question. McDonagh et al. provide evidence suggesting that the GMSDS possesses good psychometric properties. In the current study, the erectile difficulties and body embarrassment subscales were used to furnish strands of evidence in support of the construct validity of the M-BISC. Additionally in the current study, the reliability for the subscales was excellent (erectile difficulties: θ = .90; body embarrassment: θ = .89).

**Data Analytic Plan**

The sample was randomly divided into 2 subsamples (henceforth referred to as Sample A [n = 459] and Sample B [n = 471]). First, to determine if the items loaded similarly for gay men, in comparison to McDonagh et al., an exploratory factor analysis (EFA) was conducted using Sample A. Following this, the results of that analysis were then tested via confirmatory factor analysis (CFA) with Sample B. Scale score reliability and indicators of construct validity (specifically, convergent validation) were tested separately for each sample.

**RESULTS**

**Sample A: Dimensionality**

The M-BISC uses a Likert-type response format and thus should be conceptualized as providing ordinal rather than interval data. Unfortunately, in most commonly used statistical packages (eg, SPSS; SPSS Inc, Chicago, IL, USA), EFAs cannot be conducted using polychoric correlations, which are appropriate when data are ordinal. To address this limitation, R programming language was employed via an SPSS plug-in (refer to Basto and Pereira).

The dimensionality of the M-BISC was examined using principal axis factor analysis, with oblique rotation (direct oblimin). To assist with factor retention, parallel analysis was utilized. This method has been identified as one of the most accurate in identifying the appropriate number of factors to retain (ie, unlike other retention techniques like the eigenvalue >1 “rule,” parallel analysis seldom over- or underextracts).

A host of diagnostic tests revealed that the data were suitable for EFA. Specifically, the Kaiser-Meyer-Olkin measure of sampling adequacy was .92, the determinant was .0001, and the Bartlett test of sphericity was statistically significant (χ² = 5378.392, P < .0001). Inspection of individual measures of sampling adequacy similarly revealed good values (.80+) for all items, with exception of “I would have difficulty taking a shower.

**Table 1. Factor loadings of the M-BISC for gay men items (Sample A, n = 459)**

<table>
<thead>
<tr>
<th>M-BISC Item</th>
<th>Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>During sex, I would worry that my partner would think my chest is not muscular enough.</td>
<td>.671</td>
</tr>
<tr>
<td>During sexual activity, it would be difficult not to think about how unattractive my body is.</td>
<td>.542</td>
</tr>
<tr>
<td>During sex, I would worry that my partner would think my stomach is not muscular enough.</td>
<td>.805</td>
</tr>
<tr>
<td>I would feel anxious receiving a full-body massage from a partner.</td>
<td>.676</td>
</tr>
<tr>
<td>The first time I have sex with a new partner, I would worry that my partner would get turned off by seeing my body without clothes.</td>
<td>.866</td>
</tr>
<tr>
<td>I would feel nervous if a partner were to explore my body before or after having sex.</td>
<td>.813</td>
</tr>
<tr>
<td>During sex, I would prefer to be on the bottom so that my stomach appears flat.</td>
<td>.669</td>
</tr>
<tr>
<td>The worst part of having sex is being nude in front of another person.</td>
<td>.872</td>
</tr>
<tr>
<td>I would feel embarrassed about the size of my testicles if a partner were to see them.</td>
<td>.438</td>
</tr>
<tr>
<td>During sexual activity, I would be concerned about how my body looks to a partner.</td>
<td>.845</td>
</tr>
<tr>
<td>If a partner were to put a hand on my buttocks I would think my partner can feel my fat.</td>
<td>.724</td>
</tr>
<tr>
<td>During sexually intimate situations, I would be concerned that my partner thinks I am too fat.</td>
<td>.820</td>
</tr>
<tr>
<td>I could only feel comfortable enough to have sex if it were dark so that my partner could not clearly see my body.</td>
<td>.782</td>
</tr>
<tr>
<td>The idea of having sex without any covers over my body causes me anxiety.</td>
<td>.758</td>
</tr>
</tbody>
</table>

M-BISC = Male Body Image Self-Consciousness Scale.
were removed. Factor loadings for the remaining 14 items are loadings less than the .40 minimum recommended and thus a 1-factor solution should be retained.

To determine whether the second factor possessed incremental value, the unrotated factor matrix was inspected. Only 1 item related to difficulty taking a shower or a bath with a partner, and being regarded as unattractive to a partner, and being regarded as unattractive to a partner would correlate substantially with the second factor, and thus it was decided that a 1-factor solution should be retained.

A 1-factor solution was then forced. 3 of the 17 items had loadings less than the .40 minimum recommended and thus were removed. Factor loadings for the remaining 14 items are provided in Table 1. Inspection of this table reveals that the retained items had loadings ranging from .44—.87.

Sample B: Dimensionality

The replicability of the 1-factor solution obtained with Sample A was tested with Sample B using CFA. AMOS version 22.0 (SPSS Inc, Chicago, IL, USA) was utilized. Model fit was assessed using multiple criteria: (i) root mean square error of approximation (RMSEA), (ii) the Bentler comparative fit index (CFI), and (iii) the Tucker Lewis Index (TLI). Stringent thresholds were utilized: RMSEA <.08, CFI >.90, and TLI >.90 indicate adequate fit, whereas RMSEA <.06, CFI >.95, and TLI >.95 denote excellent fit. It is important to note that although the χ² is often used to gauge fit, evidence suggests that statistical significance (ie, inadequate model fit) may be owing to a large sample size. The initial CFA suggested that a unidimensional model for the 14-item M-BISC was unacceptable: RMSEA <.100, CFI = .85, TLI = .89. Thus, to achieve acceptable model fit, 4 covariances were introduced (Table 2), and the resulting model suggested satisfactory fit: RMSEA = .078, CFI = .94; TLI = .94. Factor loadings ranged from .46—.78 (Table 3).

### Samples A and B: Scale Score Reliability

For scale score reliability, the most commonly utilized estimate is the Cronbach α, which is the expected correlation between an actual test and a hypothetical alternative form of the same length. However, the Cronbach α has been subject to substantial criticism because it uses a tau-equivalent model that operates in accordance with a specific set of assumptions—ones that are rarely met in psychological data. Thus, other forms of scale score reliability have been recommended in lieu of the Cronbach α, such as theta. Ordinal theta is often used to determine the scale score reliability of ordinal data, which the M-BISC produces. The ordinal theta scores for the current measure were excellent (Sample A, θ = .95; Sample B, θ = .95.)

### Samples A and B: Rates of Endorsement on the M-BISC

8 of the 14 items on the M-BISC had endorsement rates in excess of 25% (Table 4). Specifically, more than half of the participants from both samples reported that they would be “worried that [their] partner would get turned off by seeing [their] body without clothes,” “concerned about how [their] body looks to a partner,” “worrying that [their] partner would think [their] stomach is not muscular enough.” Sizeable proportions (ie, 35—45%) also endorsed items measuring concerns about insufficient masculinity, being perceived as unattractive to a partner, and being regarded as “too fat” when engaging in “sexually intimate situations.” The 2 items that evidenced the lowest rates of endorsement (ie, <10%) were (i) embarrassment (cultures and body embarrassment) would correlate with erectile difficulties and body embarrassment subscales of the GMSDS. Considering that research suggests that sexual difficulties (including but not limited to erectile difficulties and body self-consciousness are frequently related, it was predicted that gay men’s experiences with erectile difficulties and body embarrassment would correlate

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**Table 2. Confirmatory factor analysis models for the M-BISC for gay men (Sample B, n = 471)**

<table>
<thead>
<tr>
<th>Model</th>
<th>χ² (df)</th>
<th>RMSEA (90% CI)</th>
<th>CFI</th>
<th>TLI</th>
<th>AIC</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>M-BISC (Gay Men)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 items</td>
<td>446.66 (77)</td>
<td>.01 (0.92—0.11)</td>
<td>.89</td>
<td>.87</td>
<td>502.66</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Co-vary items 1 &amp; 3</td>
<td>375.30 (76)</td>
<td>.092 (0.82—0.101)</td>
<td>.89</td>
<td>.89</td>
<td>433.30</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Co-vary items 4 &amp; 6</td>
<td>345.54 (75)</td>
<td>.088 (0.78—0.097)</td>
<td>.92</td>
<td>.90</td>
<td>405.54</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Co-vary items 15 &amp; 17</td>
<td>298.93 (74)</td>
<td>.080 (0.71—0.090)</td>
<td>.93</td>
<td>.92</td>
<td>360.93</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Co-vary items 3 &amp; 14</td>
<td>279.26 (73)</td>
<td>.078 (0.68—0.087)</td>
<td>.94</td>
<td>.94</td>
<td>343.26</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

AIC = Akaike information criterion; CFI = comparative fit index; df = degree of freedom; M-BISC = Male Body Image Self-Consciousness Scale; RMSEA = root mean square error of approximation; TLI = Tucker Lewis Index.
positively with their body image self-consciousness during physical intimacy. Support for these 2 predictions would provide 1 strand of evidence attesting to the construct validity of the M-BISC when completed by gay men. As predicted, participants’ level of body self-consciousness during physical intimacy correlated significantly with scores on the erectile difficulties and body embarrassment subscales: Sample A (erectile difficulties: \( r = .457, P < .001 \); body embarrassment: \( r = .436, P < .001 \) and Sample B (erectile difficulties: \( r = .469, P < .001 \); body embarrassment, \( r = .451, P < .001 \)). It should be noted that, although statistically significant, the correlations observed between the M-BISC and the erectile difficulties subscale were weak.

DISCUSSION

The purpose of the current study was to determine whether the M-BISC was a reliable and valid measure of gay men’s body image concern during sexual intimacy. Previously, the psychometric properties of the measure had been tested with a sample that largely consisted of heterosexual men. Research has indicated that assuming measures only validated with heterosexual persons are suitable for use with sexual minorities is problematic and may lead to inaccurate results. Operating from this perspective, we conducted the current study to explicitly test the psychometric properties of the M-BISC when completed by a large number of self-identifying gay men.

We were able to replicate the unidimensional factor structure of the M-BISC noted by McDonagh et al. However, doing so required the deletion of 3 items. The unidimensionality of this measure was corroborated using CFA—a statistical procedure that, to date, has not been conducted with M-BISC data.

A subsidiary goal was to explore the relationship between men’s body image concerns during intimacy and sexual difficulties. We utilized the GMSDS (erectile difficulties and body embarrassment subscales specifically) of McDonagh et al to explore the construct validity of the M-BISC. A strong correlation was observed between the M-BISC and the body embarrassment subscale, thereby attesting to the former’s construct validity. Unfortunately, although statistically significant, the correlation between the M-BISC and the erectile difficulties subscale was of little practical importance (\( r = .10 \) and .10 for Samples A and B, respectively). Although previous research suggests that sexual difficulties and body image dissatisfaction are related (ie, more body image concerns predict higher sexual difficulties), it is important to note that much of this work involves general questions about overall sexual satisfaction and does not particularize specific sexual difficulties. Findings from our study suggest that for gay men, certain types of sexual difficulty (eg, body embarrassment) may be more strongly associated with self-consciousness during physical intimacy than other types (eg, erectile difficulties). However, further research is needed to determine the replicability of these results.

According to the frequencies computed (Table 4), a large proportion of the participants in the current study appear to be dissatisfied with their bodies (eg, leanness, lack of muscularity). These findings are consistent with previous research assessing gay men’s body image satisfaction. For example, in studies evaluating eating behaviors, attitudes toward exercise, and body image in men, gay men were more likely than heterosexual men to evidence distorted cognitions regarding the importance of obtaining and maintaining an ideal physique. In addition, research has found that gay men were dissatisfied with their level of muscularity or reported feeling “pressure” to be more muscular. The factors that contribute to gay men’s apparent dissatisfaction with their muscularity are unclear, although gay male cultural products in the form of pornography and lifestyle media may play a role.

3 items were removed from the M-BISC because they had relatively weak factor loadings (ie, <.40). These items were “I would worry about the length of my erect penis during physically

Table 3. Factor loadings for Sample B (n = 471)

<table>
<thead>
<tr>
<th>M-BISC item</th>
<th>Factor loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>During sex, I would worry that my partner would think my chest is not muscular enough.</td>
<td>.64</td>
</tr>
<tr>
<td>During sexual activity, it would be difficult not to think about how unattractive my body is.</td>
<td>.53</td>
</tr>
<tr>
<td>During sex, I would worry that my partner would think my stomach is not muscular enough.</td>
<td>.69</td>
</tr>
<tr>
<td>I would feel anxious receiving a full-body massage from a partner.</td>
<td>.60</td>
</tr>
<tr>
<td>The first time I have sex with a new partner, I would worry that my partner would get turned off by seeing my body without clothes.</td>
<td>.78</td>
</tr>
<tr>
<td>I would feel nervous if a partner were to explore my body before or after having sex.</td>
<td>.74</td>
</tr>
<tr>
<td>During sex, I would prefer to be on the bottom so that my stomach appears flat.</td>
<td>.62</td>
</tr>
<tr>
<td>The worst part of having sex is being nude in front of another person.</td>
<td>.72</td>
</tr>
<tr>
<td>I would feel embarrassed about the size of my testicles if a partner were to see them.</td>
<td>.46</td>
</tr>
<tr>
<td>During sexual activity, I would be concerned about how my body looks to a partner.</td>
<td>.77</td>
</tr>
<tr>
<td>If a partner were to put a hand on my buttocks I would think my partner can feel my fat.</td>
<td>.67</td>
</tr>
<tr>
<td>During sexually intimate situations, I would be concerned that my partner thinks I am too fat.</td>
<td>.73</td>
</tr>
<tr>
<td>I could only feel comfortable enough to have sex if it were dark so that my partner could not clearly see my body.</td>
<td>.73</td>
</tr>
<tr>
<td>The idea of having sex without any covers over my body causes me anxiety.</td>
<td>.68</td>
</tr>
</tbody>
</table>

M-BISC = Male Body Image Self-Consciousness Scale.
Table 4. Endorsement rates for M-BISC items (Sample A, n = 459; Sample B, n = 471)

<table>
<thead>
<tr>
<th>M-BISC item</th>
<th>% Agreeing</th>
</tr>
</thead>
<tbody>
<tr>
<td>During sex, I would worry that my partner would think my chest is not muscular enough.</td>
<td>42.9</td>
</tr>
<tr>
<td>During sexual activity, it would be difficult not to think about how unattractive my body is.</td>
<td>44.9</td>
</tr>
<tr>
<td>During sex, I would worry that my partner would think my stomach is not muscular enough.</td>
<td>52.1</td>
</tr>
<tr>
<td>I would feel anxious receiving a full-body massage from a partner.</td>
<td>24.4</td>
</tr>
<tr>
<td>The first time I have sex with a new partner, I would worry that my partner would get turned off by seeing my body without clothes.</td>
<td>55.1</td>
</tr>
<tr>
<td>I would feel nervous if a partner were to explore my body before or after having sex.</td>
<td>29.2</td>
</tr>
<tr>
<td>During sex, I would prefer to be on the bottom so that my stomach appears flat.</td>
<td>28.3</td>
</tr>
<tr>
<td>The worst part of having sex is being nude in front of another person.</td>
<td>20.5</td>
</tr>
<tr>
<td>I would feel embarrassed about the size of my testicles if a partner were to see them.</td>
<td>6.3</td>
</tr>
<tr>
<td>During sexual activity, I would be concerned about how my body looks to a partner.</td>
<td>58.0</td>
</tr>
<tr>
<td>If a partner were to put a hand on my buttocks I would think my partner can feel my fat.</td>
<td>19.2</td>
</tr>
<tr>
<td>During sexually intimate situations, I would be concerned that my partner thinks I am too fat.</td>
<td>39.6</td>
</tr>
<tr>
<td>I could only feel comfortable enough to have sex if it were dark so that my partner could not clearly see my body.</td>
<td>16.9</td>
</tr>
<tr>
<td>The idea of having sex without any covers over my body causes me anxiety.</td>
<td>10.6</td>
</tr>
</tbody>
</table>

Items in bold represent endorsement rates of 25%+. Top proportions are for Sample A; bottom proportions are for Sample B. M-BISC = Male Body Image Self-Consciousness Scale.

The current study was not without limitations. First, the M-BISC was developed primarily with a small group of heterosexual men and then validated with a sample consisting of 10% gay men. Therefore, by attempting to validate the M-BISC with a sample of gay men, the following study accepts that heterosexual men’s body concerns are shared by their gay counterparts. It might be worthwhile piloting the 14-item M-BISC with a small sample of gay men to determine if they deem its content sufficiently representative of their corporeal concerns with interacting sexually with another man. If gaps are identified, then additional items should be generated and added to the revised M-BISC. Doing so would underscore the iterative nature of psychometric testing (ie, measures continually need to be refined and improved). Second, because of the sexual nature of the research, our participants might have been more open to discussing sexual topics and expressing sexual concerns (ie, in general, more erotophilic). Erotophilia refers to a person who is open to his or her sexuality and generally has more sex-positive attitudes. Third, although online surveys can be advantageous for measuring sexual function owing to participant anonymity and can be representative of a non-Internet sample, the format also has limitations. For instance, the completion criteria of the study could not be monitored as is possible within a more structured setting. The researchers also could not provide feedback or assistance while participants completed the survey. As well, individuals without computers or Internet access could not be recruited. We recommend that future studies attempt to replicate our findings using more traditional methods of data collection (ie, pen and paper).

The current study attempted to access a wide range of ethnicities and cultures by targeting a worldwide community sample; however, most participants were Caucasian and originated from Western countries. Consequently, it is unknown whether the M-BISC is a valid tool to measure body image concerns during intimacy with gay men of all ethnicities and cultural backgrounds. The current study used a measure of sexual intimacy situations”; “I would have difficulty taking a shower or a bath with a partner”; and “If a partner were to see me nude, I would be concerned about the overall muscularity of my body.” With respect to the first item, it has been noted that gay men are often concerned about the length and circumference of their penis; thus, it may seem peculiar that this statement did not appear to be salient to our sample of gay men. However, the recent systemic review by Simpson and Adams of previous research (N = 26) pertaining to the genital perceptions of heterosexual men and men who have sex with men (MSM; includes gay men) suggests that penis size may not be a source of body dissatisfaction for MSM. Simpson and Adams found that a greater portion of MSM considered their penis “above average” (35%) compared with heterosexual men (22%), whereas a smaller proportion of MSM deemed their penis to be “below average” in length (6% vs 12% for straight men). The second item that did not load involved nudity in the shower or bath. A bath or shower may follow sexual acts, and therefore a certain level of familiarity has been realized during the initial sexual encounter that serves to reduce body shame. The long and the short of it: the sexual partners may have already seen each other nude prior to bathing. In assessing “overall muscularity,” the final item might be too general for gay men and thus better reflected in the more specific statements that pertain to muscularity of the chest and stomach. Thus, it may suggest that gay men’s body image concerns may arise from a lack of muscularity for certain body parts or areas rather than their entire body.
difficulties to validate the M-BISC, and, within this realm of research, differences have been noted between men of different ethnic and cultural backgrounds. For instance, Laumann et al. reported that black individuals were more likely and Hispanic persons less likely to experience sexual difficulties. Therefore, future studies should attempt to capture a more ethnically diverse sample.

Last, the current study utilized a correlational and cross-sectional design to investigate the relationship between the variables of interest. The potential causes and effects of gay men’s sexual difficulties and body image concerns during intimacy cannot be separated. For example, one cannot conclude that sexual difficulties lead to poor levels of body image during intimacy; this relationship may be reversed or reciprocal.

CONCLUSION

The results of the current study suggest that the M-BISC is a valid tool to measure gay men’s body concerns during intimacy. More importantly, it also highlights gay men’s elevated body concerns during physical intimacy, especially in terms of being “insufficiently” muscular and the need to understand the etiology of these apprehensions. Currently, there is a noticeable gap in the literature regarding the cause of gay male body concerns that have potential clinical implications.

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Validating the M-BISC With Gay Men


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