

Women's Body Image Self-Consciousness During Physical Intimacy With a Partner

Michael W. Wiederman
Columbia College

In Western cultures, women's bodies are objectified more so than men's, and other writers have noted the multiple ways that such objectification may negatively impact women's lives. As women's sexual desirability is often equated with physical attractiveness and thinness, it is surprising that previous investigations have not included women's body image self-consciousness during physical intimacy with a partner. In the current set of studies, a 15-item measure of the construct was developed and shown to have excellent psychometric properties. Approximately one third of college student women indicated experiencing body image self-consciousness during physical intimacy with a heterosexual partner at least some of the time. Even after statistically controlling for actual body size, measures of general body image, general sexual anxiety, and general well-being, scores on the new measure were predictive of heterosexual experience, sexual esteem, sexual assertiveness, and avoidance of sexual activity. Results are discussed with regard to implications and directions for future research.

Others have well documented that women in Western cultures are objectified to a greater degree than are men, in that women's bodies are looked at, evaluated, and sexualized with greater frequency (Fredrickson & Roberts, 1997; Wolf, 1991). Previous authors have proposed that this cultural objectification of women's bodies is problematic for individual women to the extent that it is internalized and the woman is consequently prone to heightened awareness of how her own body appears to others, particularly men (Fredrickson & Roberts, 1997; McKinley & Hyde, 1996). One potential negative ramification of internalized objectification is sexual dysfunction (Dove & Wiederman, 2000). That is, to the extent that one is cognitively removed from one's sensual experience during sexual interaction, one is vulnerable to problematic sexual functioning (Masters & Johnson, 1970; Walen, 1980).

Despite the fact that links between women's sexuality and body image make conceptual sense and are supported by everyday observation (Daniluk, 1993; Wolf, 1991), this has been a topic infrequently studied. The purpose of the current set of studies was to examine the extent to which young, heterosexual women in this culture are self-conscious of their own bodily appearance during physical intimacy with a partner, and how this body image self-consciousness is related to sexual experience. I conceptualized body image self-consciousness during physical intimacy with a partner to be based on concerns over appearing fat. Although there exists a small minority of men who prefer large women (Goode & Preissler, 1983), males in the United States generally find thin women most sexually desirable (Harris, Walters, & Washull, 1991; Spillman

& Everington, 1989). Larger women are stigmatized (Crandall, 1994; Harris, 1990), especially with regard to sexuality and courtship (Sobal, Nicolopoulos, & Lee, 1995; Regan, 1996). Indeed, women's general body dissatisfaction is typically measured according to perceptions of being too heavy or having particular body parts that are "too large" (e.g., Garner, 1991).

Unfortunately, to my knowledge, there is not an extant measure of women's body image self-consciousness during physically intimate interactions. Creating such a measure then became an initial focus of the current research. A subsequent focus was investigation of relationships between women's body image self-consciousness during physical intimacy with a partner and women's basic heterosexual experience and self-views as a heterosexual partner. I hypothesized that such body image self-consciousness would be related to less heterosexual experience and more problematic experiences regarding sexual interaction with males.

STUDY 1

In developing a scale of women's body image self-consciousness during physical intimacy with a partner, I needed to demonstrate key psychometric properties (Wiederman, in press). For example, I needed to show that the new measure was internally consistent and that scores on the measure were related to scores on previously established measures of body image (i.e., demonstrate *convergent validity*), yet not to such a degree that the new measure was redundant with existent measures. Specifically, women's body image self-consciousness during physical intimacy with a partner should be moderately related to actual body size as well as general body dissatisfaction, self-perceived bodily attractiveness, and degree of social avoidance due to body image concerns. At the same time, scores on the new measure should not be substantially

Address correspondence to Michael W. Wiederman, Ph.D., Department of Human Relations, Columbia College, 1301 Columbia College Drive, Columbia, SC 29203; e-mail: mwiederman@colacol.edu.

related to scores on measures of unrelated constructs (i.e., demonstrate *discriminant validity*), such as self-monitoring of expressive behavior (Snyder, 1987).

Scores on the new measure also should be predictive of heterosexual experience and self-views as a sexual partner, or sexual esteem, above and beyond any effects related to actual body size or other more general measures of body image (i.e., demonstrate *incremental validity*). Otherwise, the new measure would be of little use and the concept of body image self-consciousness during physical intimacy with a partner would add little to our understanding of relationships between women's body image and their sexual experience. Specifically, I expected body image self-consciousness with a heterosexual partner to be greater among women not currently in a partnered relationship with a man as well as among those who have not had heterosexual experience. The reasoning is that such self-consciousness might prohibit women from entering into dating and sexual relationships with men and, without such experience, they would not have the opportunity to become desensitized to their body image concerns in this arena. Similarly, I expected those women with the greatest body image self-consciousness during physical intimacy with a partner to view themselves most negatively as a sexual partner (i.e., have low sexual esteem), given that many young women in this culture have internalized their objectification as sexual objects (Fredrickson & Roberts, 1997; McKinley & Hyde, 1996) and may view their sexual desirability as synonymous with their bodily thinness.

METHOD

Participants

Research participants were initially 232 women recruited from introductory psychology classes at a mid-sized public university in the Midwest (annual enrollment about 19,000) who received research credit toward partial completion of their psychology course. Two women were excluded from analyses due to current pregnancy. Because the nature of the sexual experience measures used in the current study was heterosexual, 5 women who identified themselves as exclusively or primarily lesbian were excluded from further analysis. To reduce measurement error by ensuring a rather homogeneous sample with regard to age (sexual experience and body size are positively related to age; Andres, 1995), women ages 22 and older ($n = 27$) were also excluded from further analysis. The final sample consisted of 198 young women who ranged in age from 18 to 21 years ($M = 18.89$, $SD = .90$). The large majority (89.9%) were White, non-Hispanic; 7.6% were Black, and the remaining women (2.5%) were Latina.

Measures

Participants completed a questionnaire packet containing the proposed body image self-consciousness scale and several previously published measures of body image, self-monitoring of expressive behavior, and sexual esteem.

Additionally, several questions about current relationship status and heterosexual experience were written for use in the current study.

Self-monitoring. Self-monitoring refers to the degree to which individuals tend to regulate self-presentation for the sake of desired public appearances (Snyder, 1987). Participants completed the 18-item revised Self-Monitoring Scale (Snyder & Gangestad, 1986), with higher scores indicating greater tendencies toward self-monitoring of expressive behavior. In the current study, the internal consistency coefficient (alpha) was .75.

Body size. Participants were asked to report current height and weight, and current height and weight were subsequently measured by research assistants (see Procedure section). Height and weight were converted into body mass index (BMI) according to Quetelet's index (kg/m^2 ; Garrow & Webster, 1985). BMI takes into account the individual's height as well as weight and has been shown to be a convenient and accurate measure of overall adiposity (Brodie & Slade, 1988; Hanna, Wrate, Cowen, & Freeman, 1995).

Body dissatisfaction and self-rated bodily attractiveness. General body dissatisfaction was measured with the corresponding subscale from the Eating Disorders Inventory (EDI; Garner, Olmsted, & Polivy, 1983), a widely used self-report measure of eating-related attitudes and traits that is reliable and has been extensively validated (see Garner, 1991). Higher scores indicate greater body dissatisfaction. In the current study, the internal consistency coefficient (alpha) was .90.

As has been the case in several previous studies, self-rated bodily attractiveness was assessed by asking respondents to use a 7-point scale to indicate their response to the statement, "Overall, I would rate the attractiveness of my body as . . ." The response scale was anchored with 1 = *Well Below Average*, 4 = *Average*, and 7 = *Well Above Average*.

Social avoidance due to negative body image. Respondents completed the Social Activities subscale of the Body Image Avoidance Questionnaire (Rosen, Srebnik, Saltzberg, & Wendt, 1991), with higher scores indicating a greater tendency to avoid social activities in which body weight and appearance may be a focus. In the current study, the internal consistency coefficient (alpha) was .82.

Body image self-consciousness. I wrote 15 face-valid items to describe self-consciousness over one's bodily appearance and concern that one would appear fat to an intimate partner (see Appendix). None of the items were redundant with those from previously published measures, and none of the other measures used in the current set of studies contained items referring specifically to body image concerns during physical intimacy with a partner. The items were written such that women with and without any sexual experience involving a partner could respond, as could those with male or female sexual partners. Responses to all items were recoded so that 0 = *Never*, 1 = *Rarely*, 2 = *Sometimes*, 3 = *Often*, 4 = *Usually*, and 5 =

Always. In this way higher scores indicate greater body image self-consciousness. By summing across items, scores could range from 0-75.

Heterosexual experience. Participants indicated their current relationship status using six categories: not dating anyone currently, casually dating one or more people, dating one person exclusively, living with romantic partner, engaged or planning to marry, and married. Responses to this item were used to categorize respondents into two groups: (a) those not currently involved in an exclusive relationship, and (b) those currently dating one person exclusively, living with a partner, engaged, or married. With regard to heterosexual experience, each respondent was asked to indicate whether she had ever experienced "sexual intercourse with a male (penis in vagina)," "oral stimulation of your genitals by a male," and whether she had "ever orally stimulated a male's genitals."

Sexual esteem. Sexual esteem, or the tendency to evaluate oneself positively as a sexual partner, was measured with the short form (Wiederman & Allgeier, 1993) of the sexual esteem scale from Snell and Papini (1989). In the current study, the internal consistency coefficient (alpha) was .92.

Procedure

It is important to note that, at the point of signing up for potential participation in the study, respondents were only aware that participation was worth one hour of research credit. The nature of the study was not disclosed until arrival at the testing site. All of the potential participants agreed to participate after learning of the nature of the study. Participants completed the anonymous survey in small groups ranging from 5 to 20 women and all participants did so in the presence of the same pair of male and female research assistants.

Because past research has suggested that college women may distort their weight in self-report (e.g., Betz, Mintz, & Speakmon, 1994), respondents were also weighed. Upon completing the questionnaire, respondents deposited it in a box and walked to a separate room nearby wherein two female graduate students weighed participants and measured their height.

RESULTS

Body Image Self-Consciousness (BISC) Scale

A principal components factor analysis was conducted on the 15 items meant to comprise the BISC Scale. Two factors emerged exhibiting eigenvalues greater than one. However, as Briggs and Cheek (1986) noted, retaining all factors with an eigenvalue of at least one "generally seems to overestimate the number of underlying factors" and so "many factor analysts currently spurn this procedure" (p. 119; also see Zwick & Velicer, 1982). An alternative involves examining the proportion of variance accounted for by each factor to determine where a large discrepancy exists (factors falling below that point are ignored). In the current case, the first factor had an eigenvalue of 8.39 and accounted for 56.0% of

the variance. The second factor had an eigenvalue of 1.06, accounting for only 7.1% of the variance.

Further evidence for considering all items of the BISC Scale as measuring the same construct came from the mean interitem correlation, which was .52. Briggs and Cheek (1986) cautioned that, as the mean interitem correlation exceeds .50, one runs the risk that "the items on a scale tend to be overly redundant and the construct measured too specific" (p. 115). Consequently, the internal consistency coefficient (Cronbach's alpha) was .94. The actual scores on the BISC Scale ranged from 0-75, with a mean of 25.17 ($SD = 17.54$). The mean score of approximately 25 indicates that the typical response to the scale items was *Rarely to Sometimes*.

Correlates of Scores on the BISC Scale

Pearson correlation coefficients demonstrating relationships between scores on the BISC Scale and scores on the other continuous measures are presented in Table 1. Given the restriction in age of participants, it is not surprising that scores on the BISC Scale were unrelated to respondent age. Also, as there is no theoretical reason for scores on the BISC scale to be related to scores on the measure of self-monitoring propensity, it is important to note that the corresponding correlations were trivial. As expected, scores on the BISC Scale were moderately related to current body size and body image as well as scores on the measure of sexual esteem.

What about relationships between scores on the BISC Scale and current relationship status and heterosexual experience? Comparisons between those respondents involved in a relationship ($n = 98$) and those not involved ($n = 100$) are presented in Table 2, as are comparisons between those women with particular heterosexual experience and those without. Of the 198 heterosexual women, 52 (26.3%) had not experienced vaginal intercourse, 37 (18.7%) had not received oral sex from a male, and 43 (21.7%) had not performed oral sex on a male. Note that BISC Scale scores were significantly higher among women not currently involved in a relationship, and among those without vaginal intercourse or oral sex experience. The effect sizes associated with these group differences were moderate (current relationship status, virginity, fellatio experience) to large (cunnilingus experience).

Table 1. Pearson Correlations Between Scores on the BISC Scale and Other Variables

	BISC Scale
Respondent age	-.12
Self-monitoring of expressive behavior	.07
Measured Body Mass Index (BMI)	.23*
Self-reported BMI	.34*
Self-rated attractiveness of body	-.57*
Body dissatisfaction (EDI score)	.51*
Social avoidance due to negative body image	.45*
Sexual esteem	-.45*

Note. BISC = Body Image Self-Consciousness, EDI = Eating Disorders Inventory.

* $p < .01$.

Table 2. One-Way Analyses of Variance for Differences in Mean BISC Scale Scores Between Women With and Without Heterosexual Experience

	Yes		No		<i>F</i>	<i>p</i> <	<i>d</i>
	Mean	(<i>SD</i>)	Mean	(<i>SD</i>)			
Currently in a dating relationship?	20.40	(15.65)	29.84	(18.10)	15.39	.0001	.54
Ever had vaginal intercourse?	23.07	(16.58)	31.06	(18.95)	8.25	.005	.46
Ever received oral sex from a male?	22.81	(16.86)	35.41	(17.00)	16.74	.0001	.72
Ever performed oral sex for a male?	23.02	(17.14)	32.86	(16.99)	11.11	.001	.56

Note. BISC = Body Image Self-Consciousness, $df = 1, 196$ for *F* tests.

These relationships were mirrored by a moderate correlation between scores on the measure of sexual esteem and scores on the BISC Scale, $r = -.45, p < .01$.

Last, I examined whether scores on the BISC Scale were predictive of heterosexual experience and sexual esteem beyond effects due to actual body size and scores on more general measures of body image. For current relationship status and sexual experience, four separate logistic regression analyses were performed in which current BMI, general body dissatisfaction (EDI scores), self-rated bodily attractiveness, and social avoidance due to negative body image were entered as predictor variables at step one. Although BMI based on self-reported data correlated .96 with BMI based on actual measurements, the latter form of BMI was used in these analyses. BISC Scale scores were added to the analyses at step two. Even after controlling for the other variables, BISC Scale scores added significantly to the prediction of relationship status [$X^2(1) = 7.15, p < .01$], as well as experience of vaginal intercourse [$X^2(1) = 11.40, p < .001$], fellatio [$X^2(1) = 15.52, p < .001$], and cunnilingus [$X^2(1) = 9.58, p < .01$].

With regard to sexual esteem, a multiple regression analysis was performed in which current BMI, general body dissatisfaction (EDI scores), self-rated bodily attractiveness, and social avoidance due to negative body image were simultaneously entered at step one [adjusted $R^2 = .13, F(4,193) = 8.14, p < .0001$]. Adding BISC Scale scores at step two resulted in a significant incremental increase in the proportion of variance accounted for in sexual esteem scores (Incremental $R^2 = .14, F$ Change = 35.16, $p < .0001$).

Although scores on the BISC Scale are internally consistent, it remains to be seen whether scores are stable over time. As the BISC Scale was meant to measure general, somewhat enduring tendencies, scores on the measure should remain stable over short periods of time. Accordingly, I also investigated test-retest reliability of the BISC Scale among women volunteers enrolled in an Applied Behavioral Analysis course at the same university. Women students were asked to volunteer to remain after class to complete "a very brief, anonymous measure of their attitudes about themselves." I explained that such participation was sought as part of the process of developing a new scale and I emphasized that the questionnaire was anonymous, participation was voluntary, and there would be no compensation for completing the scale. At the end of

class, 32 women remained to complete the measure.

I subsequently explained that it was necessary to link responses on the questionnaire to "another very brief questionnaire" that would be administered in a few weeks. Because the questionnaire was anonymous and no identifying information was to be provided, each participant was asked to generate a multi-digit number that would have some significance for her but would be meaningless to others. I distributed the BISC Scale and left the room to allow respondents to complete the scale and return it by leaving it in a box at the front of the room.

Exactly 21 days after initial administration of the BISC Scale, I made an announcement in class asking those women who participated earlier to remain after class one more time for "a very brief, anonymous measure." Twenty-five of the initial 32 women did so (it is unknown how many of the 7 missing women were not in class to hear the announcement). Upon administration of the BISC Scale the second time, no mention was made of the reason participants were being asked to complete the same scale again. Questionnaires from both administrations were matched according to the identification numbers generated by respondents.

The internal consistency coefficients (alphas) were .96 at the first administration ($N = 32$) and .97 at the second administration ($N = 25$). The 21-day test-retest correlation was .92. For the 25 women present at both administrations, the mean scores were 22.84 ($SD = 17.22$) at Time 1 and 22.52 ($SD = 17.89$) at Time 2, and the scores did not differ [Pairwise $t(24) = .22, p < .83$].

STUDY 2

The BISC Scale demonstrated good psychometric properties and holds promise as a self-report measure. As expected, scores were moderately related to actual body size and to scores on more general measures of body image, and were unrelated to age and scores on a widely used measure of self-monitoring of expressive behavior. The BISC Scale also demonstrated incremental validity with regard to heterosexual experience and sexual esteem.

Despite the initially promising findings from Study 1, the current results need to be replicated and important questions remain unanswered. For example, do scores on the BISC Scale add incremental predictive power with regard to a variety of sexuality constructs, including *extent and frequency* of heterosexual experience? Also, the

apparent links between body image self-consciousness during physical intimacy with a male partner and less heterosexual experience imply that the former causes the latter. However, it is possible that women with relatively high BISC Scale scores are equally as comfortable in sexual interactions as their peers with lower BISC Scale scores, but that they have had less heterosexual experience for some other reason.

If body image self-consciousness has a negative impact on women's sexuality, it should be predictive of low levels of sexual assertiveness (e.g., expression of desires to one's intimate partner) and high levels of sexual avoidance (i.e., intentionally avoiding possible sexual interaction). However, apparent links between body image self-consciousness and heterosexual experience, sexual esteem, sexual assertiveness, and sexual avoidance might simply be due to the common relationship all of these variables have with general sexual anxiety (i.e., the expectation that sexual interaction will be negative). Exploration of these possibilities was the primary focus of Study 2.

What about dysphoria? Theoretically, scores on the BISC Scale should be related to negative affect (Fredrickson & Roberts, 1997). Does accounting for such dysphoria eliminate the predictive power of BISC Scale scores with regard to sexuality constructs such as heterosexual experience? This question was also investigated in Study 2. Last, discriminant validity was demonstrated in Study 1 by the lack of relationship between scores on the BISC Scale and a measure of self-monitoring. Additional evidence of discriminant validity is needed, such as demonstration that BISC Scale scores are unrelated to general control/impulsivity.

METHOD

Participants

Research participants were initially 227 women recruited from introductory psychology classes at the same university as in Study 1. Similar to Study 1, 4 women who identified themselves as exclusively or primarily lesbian were excluded from further analysis, as were women ages 22 and older ($n = 14$). The final sample consisted of 209 young women who ranged in age from 18 to 21 years ($M = 18.36$, $SD = .65$). The large majority (90.9%) were White, non-Hispanic; 7.7% were Black, and the remaining women (1.5%) indicated Latina or Other for ethnicity.

Measures

As in Study 1, participants completed a questionnaire packet containing the BISC Scale, the body dissatisfaction scale from the EDI (current $\alpha = .93$), the self-rating of bodily attractiveness, the measure of social avoidance due to negative body image (current $\alpha = .88$), the questions regarding relationship status and basic heterosexual experience, and the sexual esteem scale (current $\alpha = .93$). As self-reported and measured BMI were highly related in Study 1 and measurement by research assistants is more

labor intensive and potentially embarrassing to research participants, BMI was calculated based on self-reported height and weight. In addition to the measures that had been used in Study 1, measures of well-being, control (versus impulsivity), sexual anxiety, sexual assertiveness, and sexual avoidance were included, as was a measure of extent and frequency of heterosexual experience.

Well-being and control. These constructs were measured with the respective subscales from the Multidimensional Personality Questionnaire (MPQ; Tellegen, 1982, 1985). Higher scores on the Well-Being scale indicate a general tendency to experience optimism, self-esteem, and pleasure in life, whereas higher scores on the Control scale indicate a general tendency to be cautious and planning rather than spontaneous and impulsive. In the current study, the internal consistency coefficients (alphas) were .88 for Well-Being and .84 for Control.

Sexual anxiety. Sexual anxiety was measured with the Sex Anxiety Inventory (Janda & O'Grady, 1980), with higher scores indicating a generalized expectancy for non-specific punishment for the violation of perceived normative sexual standards. In the current study, the internal consistency coefficient (alpha) was .81.

Sexual assertiveness. Participants completed the Hurlbert Index of Sexual Assertiveness (Hurlbert, 1991), with higher scores indicating a tendency to be assertive with sexual partners. In the current study, the internal consistency coefficient (alpha) was .91.

Sexual avoidance. Participants completed the Sexual Avoidance subscale of the Sexual Aversion Scale (Katz, Gipson, & Turner, 1992), with higher scores indicating a general tendency to avoid sexual situations and sexual interaction with a partner because of fear and anxiety. In the current study, the internal consistency coefficient (alpha) was .87.

Heterosexual experience. To measure extent and frequency of heterosexual experience, participants were presented with a list of 14 sexual activities involving a male partner (e.g., kissing without tongue contact; sexual intercourse, woman on top). For each activity, respondents were asked to indicate their degree of experience using a 5-point scale (ranging from 0 = *Never* to 4 = *Ten times or more*). An overall score was generated by summing across items, with higher scores indicating more varied and more frequent heterosexual experience. The internal consistency coefficient (alpha) was .96.

Procedure

As in Study 1, at the point of signing up for potential participation in the study respondents were only aware that participation was worth one hour of research credit. The nature of the study was not disclosed until arrival at the testing site. All of the potential participants agreed to participate after learning of the nature of the study. Participants completed the anonymous questionnaire booklet in small groups ranging from 5 to 20 women, and all participants did so in the presence of a female research assistant.

Table 3. Pearson Correlations Between Scores on the BISC Scale and Other Variables

	BISC Scale
Respondent age	-.06
Control	.13
Well-being	-.27*
Self-reported Body Mass Index (BMI)	.31*
Self-rated attractiveness of body	-.54*
Body dissatisfaction (EDI score)	.50*
Social avoidance due to negative body image	.38*
Sexual esteem	-.52*
Extent and frequency of heterosexual experience	-.56*
Sexual anxiety	.48*
Sexual assertiveness	-.56*
Sexual avoidance	.46*

Note. BISC = Body Image Self-Consciousness, EDI = Eating Disorders Inventory.

* $p < .01$.

RESULTS

Body Image Self-Consciousness (BISC) Scale

Similar to Study 1, two factors with eigenvalues greater than one emerged from the principal components factor analysis. However, whereas the first factor had an eigenvalue of 7.85 and accounted for 52.4% of the variance, the second factor had an eigenvalue of 1.21, accounting for only 8.1% of the variance. The mean interitem correlation was .48, again demonstrating that the items were measuring the same construct. Consequently, the internal consistency coefficient (alpha) was .93. Actual scores on the BISC Scale ranged from 0-73, with a mean of 26.89 ($SD = 16.08$). This mean score indicates that the typical response to the scale items was *Sometimes*.

Correlates of Scores on the BISC Scale

Pearson correlation coefficients demonstrating relationships between scores on the BISC Scale and scores on the other continuous measures are presented in Table 3. As expected, scores on the BISC Scale were unrelated to respondent age or scores on the measure of control/impulsivity. Similar to Study 1, scores on the BISC Scale were moderately related to current body size and body image.

In considering relationships between scores on the BISC Scale and current relationship status and heterosexual experience, the sample was again dichotomized according to respondents involved in a relationship ($n =$

94) versus those not involved ($n = 115$). Comparisons in BISC Scale scores are presented in Table 4, as are comparisons between those women with particular heterosexual experience and those without. Of the 209 women, 66 (31.6%) had not experienced vaginal intercourse, 52 (24.9%) had not received oral sex from a male, and 62 (29.7%) had not performed oral sex on a male. Note that BISC Scale scores were significantly higher among women not currently involved in a heterosexual relationship, and among those without vaginal intercourse or oral sex experience. The effect sizes associated with these differences were consistently large.

Last, I examined incremental validity of the BISC Scale. For current relationship status and basic heterosexual experience, four separate logistic regression analyses were performed in which current BMI, general body dissatisfaction, self-rated bodily attractiveness, social avoidance due to negative body image, well-being, and general sexual anxiety were entered as predictor variables at step one. BISC Scale scores were entered at step two. Even after statistically controlling for the other variables in the equation, BISC Scale scores added significantly to the prediction of current relationship status [$X^2(1) = 11.06, p < .001$], as well as experience with vaginal intercourse [$X^2(1) = 8.36, p < .01$], fellatio [$X^2(1) = 14.13, p < .001$], and cunnilingus [$X^2(1) = 20.08, p < .001$].

With regard to the sexuality constructs that were measured as continuous variables, a series of four multiple regression analyses was performed in which current BMI, general body dissatisfaction, self-rated bodily attractiveness, social avoidance due to negative body image, well-being, and sexual anxiety were simultaneously entered at step one in each analysis. Adding BISC Scale scores at step two in each analysis resulted in a significant incremental increase in the proportion of variance accounted for in extent and frequency of heterosexual experience (Incremental $R^2 = .09, F$ Change = 34.21, $p < .0001$), sexual esteem (Incremental $R^2 = .08, F$ Change = 29.95, $p < .0001$), sexual assertiveness (Incremental $R^2 = .11, F$ Change = 48.30, $p < .0001$), and sexual avoidance (Incremental $R^2 = .05, F$ Change = 16.34, $p < .0001$).

GENERAL DISCUSSION

Across three samples of young women, the BISC Scale was shown to be highly internally consistent, and the 21-day

Table 4. One-Way Analyses of Variance for Differences in Mean BISC Scale Scores Between Women With and Without Heterosexual Experience

	Yes		No		<i>F</i>	<i>p</i> <	<i>d</i>
	Mean	(SD)	Mean	(SD)			
Currently in a dating relationship?	20.28	(11.61)	32.29	(17.22)	33.33	.0001	.75
Ever had vaginal intercourse?	22.32	(13.52)	36.77	(16.83)	44.00	.0001	.90
Ever received oral sex from a male?	22.18	(13.22)	41.08	(15.71)	72.41	.0001	1.17
Ever performed oral sex for a male?	22.34	(13.18)	37.66	(17.27)	48.64	.0001	.95

Note. BISC = Body Image Self-Consciousness, $df = 1, 207$ for *F* tests.

test-retest correlation in the one sample was equally as high. Importantly, convergent validity for the BISC Scale was demonstrated with moderate relationships to actual body size, general body dissatisfaction, and self-rated bodily attractiveness, and discriminant validity was demonstrated with a lack of statistically significant relationship to self-monitoring and control/impulsivity. Incremental validity was demonstrated by showing that scores on the BISC Scale were related to heterosexual experience and several other sexuality constructs, even after statistically controlling for body size, general body image, and general expectancy that sexual interaction will be negative. The psychometric properties of the BISC Scale appear exceptionally strong.

Beyond the demonstrated psychometric properties of the BISC Scale, what are the implications for the current findings? Endorsing each scale item as experienced *Sometimes* results in a score of 30. If one considers scores of 30 or greater indicative of experiencing body image self-consciousness during physical intimacy with a partner at least some of the time, then such self-consciousness was reported by 35.4% of the women in Study 1 and 34.9% of the women in Study 2. Interestingly, only 12.1% of the total sample in Study 1 and 7.2% of the total sample in Study 2 were obese according to criteria set by the National Center for Health Statistics ($BMI \geq 27.3$; Najjar & Rowland, 1987). Apparently there were many young women who were not oversized according to national statistics but for whom bodily appearance during physical intimacy was a concern. What distinguishes these women from their less self-conscious but similarly sized peers remains a question for future investigation. It may be that these women have incorporated the unrealistic cultural standards for female beauty and sex appeal to a greater degree, and the increased body image self-consciousness during physical intimacy is a result of such internalization of these standards (Fredrickson & Roberts, 1997; McKinley & Hyde, 1996).

In addition to documenting that approximately 35% of college women may experience body image self-consciousness during physical intimacy with a male partner at least some of the time, the current findings have implications for the understanding of women's sexual esteem. The measure of sexual esteem used in the current studies simply assessed each respondent's self-evaluation regarding how "good" she is as a sex partner. Accordingly, it is interesting that BISC Scale scores were moderately correlated with scores on the sexual esteem measure. Previous writers have speculated that young women in this culture base their self-views as sex partners at least partially on their perception of their physical appearance. For example, Zeanah and Schwarz (1996), in constructing a measure of sexual self-esteem for women, included a subscale measuring self-perceived physical attractiveness in a global sense. The findings of the current research suggest, however, that there is a facet of women's sexual esteem that is uniquely related to the more specific experience of body image self-consciousness during physical intimacy with a

partner. That is, even after statistically controlling for general body dissatisfaction and self-rated bodily attractiveness, BISC Scale scores were predictive of sexual esteem scores. The young women who viewed themselves as good sex partners were least concerned about their bodily appearance during physical intimacy, even when holding body size and body dissatisfaction constant.

As implied throughout this report, an important aspect of the current research involved statistically controlling for actual body size when examining relationships between body image self-consciousness and sexual experience. Doing so is important as women's bodily size and physical attractiveness are apparently important to potential male partners. Heavier women are less likely than their lighter peers to get married (Gortmaker, Must, Perrin, Sobol, & Dietz, 1993) and, once married, it appears that increases in wives' body weight result in decreased sexual interest by husbands. Margolin and White (1987), in a three-year longitudinal study of a nationally representative sample of married couples, found that weight gain in women resulted in decreased sexual interest and sexual satisfaction among their husbands, but such was not the case with regard to men's weight gain and wives' sexual interest.

A potentially fruitful avenue for future research involves examination of possible interactions between body size, body image self-consciousness, and particular characteristics of women's intimate relationship partners, such as a partner's critical view toward the woman's body (Margolin & White, 1987; Stuart & Jacobson, 1987). For example, does having (or having had) sexual partners who are critical of one's body size or appearance lead to increased body image self-consciousness during subsequent physical intimacy with that partner or with other partners? Conversely, what characteristics of women's heterosexual partners or experiences act as protective factors against such body image self-consciousness?

The current results suggest that body image self-consciousness during physical intimacy with a male partner may have detrimental effects on young women's sexuality. Specifically, even after statistically controlling for actual body size, general body dissatisfaction, and general sexual anxiety (negative expectations regarding sexual interaction), women who experienced the greatest degree of body image self-consciousness during physical intimacy with a partner had less heterosexual experience, were less sexually assertive with partners, and reported more avoidance of sexual activity with a partner. What about other possible correlates of women's body image self-consciousness during sexual activity?

In nonclinical samples of women it appears that anxiety and inhibition during sexual activity are the most common forms of sexual dysfunction (Rosen, Taylor, Leiblum, & Bachmann, 1993). Although Andersen and LeGrand (1991) concluded that women's body image was not predictive of sexual dysfunction in their sample, their measure of body image involved global assessment of satisfaction with one's appearance. To what extent sexual dysfunction

among women is related to body image self-consciousness during physical intimacy remains a question for future investigation. It is probable that women with greater body image self-consciousness are less likely to experience orgasm or satisfaction with sexual activity (Dove & Wiederman, 2000; Fredrickson & Roberts, 1997). To the extent that any form of cognitive distraction results in sexual dysfunction (Masters & Johnson, 1970; Walen, 1980), one can expect that increased body image self-consciousness will result in problematic sexual interactions.

Although intriguing, I should note that the results of the current study are not definitive. As many of the variables in the current study were self-report in nature, the extent of response bias due to social desirability and other factors remains unknown. Also, the results of the current study (which are based on young, White college students from a single university in the Midwest) may not generalize to more mature women or to those who differ with regard to ethnicity, educational level, geographical region, and socioeconomic background. Indeed, college women may represent a restricted range in the body size spectrum, even when compared to the greater population of women their own age. That is, higher body weight is related to lower socioeconomic status (Sobal & Stunkard, 1989) and, compared to parents of daughters who are not clinically obese, parents of obese daughters are less likely to financially support college attendance (Crandall, 1995). For these reasons, further research is needed involving more mature samples drawn from the general community.

Additional questions also remain for future research. For example, is body image self-consciousness during physical intimacy experienced less by lesbian women given that they apparently place less emphasis on body size and shape than do heterosexual women (Heffernan, 1994; Siever, 1994)? What about the potentially mediating effect of adherence to traditional gender roles? Once women are engaged in sexual activity, does increased body image self-consciousness place them at risk for unwanted sexual practices or unprotected sex due to decreased assertiveness? Although these questions are currently unanswered, it appears that, to fully understand women's sexuality, body image self-consciousness during physical intimacy must be considered.

REFERENCES

- Andersen, B. L., & LeGrand, J. (1991). Body image for women: Conceptualization, assessment, and a test of its importance to sexual dysfunction and medical illness. *The Journal of Sex Research, 28*, 457-477.
- Andres, R. (1995). Body weight and age. In K. D. Brownell & C. G. Fairburn (Eds.), *Eating disorders and obesity: A comprehensive handbook* (pp. 65-72). New York: Guilford.
- Betz, N. E., Mintz, L., & Speakmon, G. (1994). Gender differences in the accuracy of self-reported weight. *Sex Roles, 30*, 543-552.
- Briggs, S. R., & Cheek, J. M. (1986). The role of factor analysis in the development and evaluation of personality scales. *Journal of Personality, 54*, 106-148.
- Brodie, D. A., & Slade, P. D. (1988). The relationship between body image and body-fat in adult women. *Psychological Medicine, 18*, 623-631.
- Crandall, C. S. (1994). Prejudice against fat people: Ideology and self-interest. *Journal of Personality and Social Psychology, 66*, 882-894.
- Crandall, C. S. (1995). Do parents discriminate against their heavyweight daughters? *Personality and Social Psychology Bulletin, 21*, 724-735.
- Daniluk, J. C. (1993). The meaning and experience of female sexuality: A phenomenological analysis. *Psychology of Women Quarterly, 17*, 53-69.
- Dove, N., & Wiederman, M. W. (2000). Cognitive distraction and women's sexual functioning. *Journal of Sex & Marital Therapy, 26*, 67-78.
- Fredrickson, B. L., & Roberts, T. (1997). Objectification theory: Toward understanding women's lived experiences and mental health risks. *Psychology of Women Quarterly, 21*, 173-206.
- Garner, D. M. (1991). *Eating Disorders Inventory-2: Professional manual*. Odessa, FL: Psychological Assessment Resources.
- Garner, D. M., Olmsted, M. P., & Polivy, J. (1983). Development and validation of a multidimensional eating disorder inventory for anorexia nervosa and bulimia. *International Journal of Eating Disorders, 2*, 15-34.
- Garrow, J. S., & Webster, J. (1985). Quetelet's index (W/H²) as a measure of fatness. *International Journal of Obesity, 9*, 147-153.
- Goode, E., & Preissler, J. (1983). The fat admirer. *Deviant Behavior, 4*, 175-202.
- Gortmaker, S. L., Must, A., Perrin, J. M., Sobol, A. M., & Dietz, W. H. (1993). Social and economic consequences of overweight in adolescence and young adulthood. *New England Journal of Medicine, 329*, 1008-1012.
- Hanna, W. J., Wrate, R. M., Cowen, S. J., & Freeman, C. P. L. (1995). Body mass index as an estimate of body fat. *International Journal of Eating Disorders, 18*, 91-97.
- Harris, M. B. (1990). Is love seen as different for the obese? *Journal of Applied Social Psychology, 20*, 1209-1224.
- Harris, M. B., Walters, L. C., & Washull, S. (1991). Gender and ethnic differences in obesity-related behaviors and attitudes in a college sample. *Journal of Applied Social Psychology, 21*, 1545-1566.
- Heffernan, K. (1994). Sexual orientation as a factor in risk for binge eating and bulimia nervosa: A review. *International Journal of Eating Disorders, 16*, 335-347.
- Hurlbert, D. H. (1991). The role of assertiveness in female sexuality: A comparative study between sexually assertive and sexually nonassertive women. *Journal of Sex & Marital Therapy, 17*, 183-190.
- Janda, L. H., & O'Grady, K. E. (1980). Development of a Sex Anxiety Inventory. *Journal of Consulting and Clinical Psychology, 48*, 169-175.
- Katz, R. C., Gipson, M., & Turner, S. (1992). Brief report: Recent findings on the Sexual Aversion Scale. *Journal of Sex & Marital Therapy, 18*, 141-146.
- Margolin, L., & White, L. (1987). The continuing role of physical attractiveness in marriage. *Journal of Marriage and the Family, 49*, 21-27.
- Masters, W. H., & Johnson, V. E. (1970). *Human sexual inadequacy*. Boston: Little, Brown, and Co.
- McKinley, N. M., & Hyde, J. S. (1996). The Objectified Body Consciousness Scale: Development and validation. *Psychology of Women Quarterly, 20*, 181-215.
- Najjar, M. F., & Rowland, M. (1987). *Anthropometric reference data and prevalence of overweight: United States, 1976-1980*. (Vital & Health Statistics, series 11, no. 238, PHS Publication No. 87-1688). Hyattsville, MD: U.S. Department of Health and Human Services.
- Regan, P. C. (1996). Sexual outcasts: The perceived impact of body weight and gender on sexuality. *Journal of Applied Social Psychology, 26*, 1803-1815.
- Rosen, J. C., Srebnik, D., Saltzberg, E., & Wendt, S. (1991). Development of a Body Image Avoidance Questionnaire. *Psychological Assessment, 3*, 32-37.
- Rosen, R. C., Taylor, J. F., Leiblum, S. R., & Bachmann, G. A. (1993). Prevalence of sexual dysfunction in women: Results of a survey study of 329 women in an outpatient gynecological clinic. *Journal of Sex & Marital Therapy, 19*, 171-188.
- Siever, M. D. (1994). Sexual orientation and gender as factors in socioculturally acquired vulnerability to body dissatisfaction and eating disorders. *Journal of Consulting and Clinical Psychology, 62*, 252-260.
- Snell, W. E., & Papini, D. R. (1989). The Sexuality Scale: An instrument to measure sexual-esteem, sexual-depression, and sexual-preoccupation. *The Journal of Sex Research, 26*, 256-263.
- Snyder, M. (1987). *Public appearance/private realities: The psychology of self-monitoring*. New York: Freeman.
- Snyder, M., & Gangestad, S. (1986). On the nature of self-monitoring:

- Matters of assessment, matters of validity. *Journal of Personality and Social Psychology*, 51, 125-139.
- Sobal, J., Nicolopoulos, V., & Lee, J. (1995). Attitudes about overweight and dating among secondary school students. *International Journal of Obesity*, 19, 376-381.
- Sobal, J., & Stunkard, A. J. (1989). Socioeconomic status and obesity: A review of the literature. *Psychological Bulletin*, 105, 260-275.
- Spillman, D. M., & Everington, C. (1989). Somatotypes revisited: Have the media changed our perception of the female body image? *Psychological Reports*, 64, 887-890.
- Stuart, R. B., & Jacobson, B. (1987). *Weight, sex, and marriage: A delicate balance*. New York: W. W. Norton & Company.
- Tellegen, A. (1982). *Brief manual for the Multidimensional Personality Questionnaire*. Unpublished manuscript. University of Minnesota.
- Tellegen, A. (1985). Structure of mood and personality and their relevance to assessing anxiety, with an emphasis on self-report. In A. H. Tuma & J. D. Maser (Eds.), *Anxiety and the anxiety disorders* (pp. 681-706). Hillsdale, NJ: Erlbaum.
- Walen, S. R. (1980). Cognitive factors in sexual behavior. *Journal of Sex & Marital Therapy*, 6, 87-101.
- Wiederman, M. W. (in press). Reliability and validity of measurement. In M. W. Wiederman & B. E. Whitely, Jr. (Eds.), *Handbook for conducting research on human sexuality*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Wiederman, M. W., & Allgeier, E. R. (1993). The measurement of sexual-esteem: Investigation of Snell and Papini's (1989) Sexuality Scale. *Journal of Research in Personality*, 27, 88-102.
- Wolf, N. (1991). *The beauty myth: How images of beauty are used against women*. New York: Anchor Books.
- Zeanah, P. D., & Schwarz, J. C. (1996). Reliability and validity of the sexual self-esteem inventory for women. *Assessment*, 3, 1-15.
- Zwick, W. R., & Velicer, W. F. (1982). Factors influencing four rules for determining the number of components to retain. *Multivariate Behavioral Research*, 17, 253-269.

Manuscript accepted October 6, 1999

APPENDIX

BODY IMAGE SELF-CONSCIOUSNESS SCALE

Please use the following scale to indicate how often you agree with each statement or how often you think it would be true for you. The term *partner* refers to someone with whom you are romantically or sexually intimate.

0	1	2	3	4	5
Never	Rarely	Sometimes	Often	Usually	Always

1. I would feel very nervous if a partner were to explore my body before or after having sex.
2. The idea of having sex without any covers over my body causes me anxiety.
3. While having sex I am (would be) concerned that my hips and thighs would flatten out and appear larger than they actually are.
4. During sexual activity, I am (would be) concerned about how my body looks to my partner.
5. The worst part of having sex is being nude in front of another person.
6. If a partner were to put a hand on my buttocks I would think, "My partner can feel my fat."
7. During sexual activity it is (would be) difficult not to think about how unattractive my body is.
8. During sex, I (would) prefer to be on the bottom so that my stomach appears flat.
9. I (would) feel very uncomfortable walking around the bedroom, in front of my partner, completely nude.
10. The first time I have sex with a new partner, I (would) worry that my partner will get turned off by seeing my body without clothes.
11. If a partner were to put an arm around my waist, I would think, "My partner can tell how fat I am."
12. I (could) only feel comfortable enough to have sex if it were dark so that my partner could not clearly see my body.
13. I (would) prefer having sex with my partner on top so that my partner is less likely to see my body.
14. I (would) have a difficult time taking a shower or bath with a partner.
15. I (would) feel anxious receiving a full-body massage from a partner.

