Beyond Body Image as a Trait: The Development and Validation of the Body Image States Scale

THOMAS F. CASH, EMILY C. FLEMING, JENNY ALINDOGAN, LAURA STEADMAN, and ABIGAIL WHITEHEAD
Old Dominion University

The need exists for a psychometrically sound measure of individuals’ evaluative/affective body image states. In the present investigation with 174 college students, the six-item Body Image States Scale (BISS) was developed and found to be acceptably internally consistent and moderately stable. Evincing its convergent validity, the BISS was appropriately correlated with various trait measures of body image. It was sensitive to reactions in positive versus negative situational contexts. Sex differences reflected those expected from the literature. Construct validity was confirmed by an experiment on persons’ differential reactivity to appearance-related information as a function of level of dysfunctional body-image investment. The BISS is a unique and much-needed measure with potential utility in both research and clinical work.

Body image is a multifaceted construct that refers to individuals’ perceptions of and attitudes toward their own body, especially its appearance. Numerous measures exist to assess various components of this construct (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). Attitudinal body image consists of at least two dimensions (Cash, 1994a)—evaluation/affect (body-image appraisals and satisfaction, as well as discrete emotional experiences vis-à-vis one’s body) and investment (the salience, centrality, or extent of cognitive-behavioral emphasis on one’s appearance, including “appearance schematicity”). Despite the fact that body image experiences vary temporally and in situational contexts, most researchers focus on body image as a cross-situational and stable trait (Cash, 1990, 1994b in press; Tiggemann, 2001).

The scientific investigation of body image often requires the measure-
ment of evaluative or affective body image states in specific contexts or in response to experimental manipulations. One example of a contextual approach to body image assessment is the Situational Inventory of Body Image Dysphoria (SIBID; Cash, 1994b, 2000), on which persons rate the frequency of negative body image emotions in 48 distinct situations (e.g., exercising, eating, being with attractive people, looking in the mirror, trying on clothes, etc.). Another contextual assessment is the Body Exposure during Sexual Activities Questionnaire (BESAQ; Hangen & Cash, 1991), which quantifies one’s physical self-consciousness and body exposure avoidance while having sexual relations. Experimental studies of the effects of informational stimuli, media images, or interpersonal events on body image require dependent measures that capture momentary body image experiences. In the absence of a well-validated assessment of state body image, researchers often adopt or adapt extant trait measures or fashion their own scale to meet a particular study’s needs. Reed, Thompson, Brannick, and Sacco (1991) developed a state body image questionnaire that averages one’s anxiety about 16 body parts (e.g., lips, wrist, feet, forehead, hips, etc.). However, this measure does not assess broader affective experiences concerning one’s overall appearance. This latter domain would seem to better reflect the construct and have greater potential utility, as Tiggemann’s (2001) findings suggest.

The purpose of this research was to develop and validate the Body Image States Scale (BISS), a multi-item measure of momentary evaluative/affective experiences of one’s physical appearance (see Appendix). We constructed a six-item questionnaire and, with a college-student sample, examined its internal consistency, test-retest reliability, relationships with body image traits, responsiveness or sensitivity to situational contexts, and its construct validity in an experiment concerning individual differences in body-image reactivity. Regarding the latter, we tested the hypothesis that people who are dysfunctionally invested in their appearance (i.e., appearance schematic) are especially susceptible to the contextual induction of negative body image states (Cash & Labarge, 1996; Labarge, Cash, & Brown, 1998; Lavin & Cash, 2001).

METHOD

Participants

In exchange for extra credit in psychology classes at a large mid-Atlantic university, 174 college students (116 women and 58 men) volunteered to participate in the research. Their ages ranged from 17 to 54 years (median = 20), and 85% were unmarried. The sample was 55% European American, 30% African American, 8% Asian, and 7% from other minorities. Body Mass Index (BMI: kg weight/m² height) averaged 25.0 (SD = 4.1) for men and 24.7 (SD = 6.3) for women.
The study took place over two sessions. At Time 1, after an informed consent procedure, participants anonymously completed questionnaires in a private room. They were asked to return two to three weeks later for the second (retest) session, for which the compliance rate was 95% ($n = 166$). Materials included the following validated body image measures, the new body image states assessment, and a demographics form.

Two subscales of the 34-item Multidimensional Body-Self Relations Questionnaire—Appearance Scales (MBSRQ-AS; Brown, Cash, & Mikulka, 1990; Cash, 2000) were used. The 9-item Body Areas Satisfaction Scale (BASS) uses 5-point scale ratings of one’s usual dissatisfaction–satisfaction with aspects of one’s body. The 4-item Overweight Preoccupation subscale taps dieting and fat anxiety on a 5-point disagree–agree scale. In this sample, Cronbach’s alphas for the two subscales were .82 and .76, respectively, for women, and .80 and .76 for men.

The Appearance Schemas Inventory (ASI; Cash, 2000; Cash & Labarge, 1996) is a 14-item measure of dysfunctional body image investment (i.e., schemas or assumptions about the salience and meaning of one’s appearance in one’s life), which uses a 5-point disagree–agree response format. The internal consistency of the ASI in this study was .82 and .85, for women and men, respectively.

The Objectified Body Consciousness Scale (OBCS; McKinley & Hyde, 1996) was designed to measure the degree to which women internalize and accept cultural standards of physical attractiveness. The OBCS can be used by men as well and consists of three 8-item subscales, each using a 7-point disagree–agree response format. Body Surveillance refers to the degree to which one monitors one’s physical appearance. Body Shame indirectly taps internalization of cultural appearance standards by measuring the degree of shame felt when one does not meet these standards. Body Control assesses perceived control over one’s weight and appearance. In this study, internal consistencies of the Body Surveillance, Body Shame, and Body Control subscales were .78, .78, and .73, respectively, for women, and .85, .78, and .61 for men.

Developed in this study, the Body Image States Scale (BISS) consists of six items written to tap the following domains of current body experience: (1) dissatisfaction–satisfaction with one’s overall physical appearance; (2) dissatisfaction–satisfaction with one’s body size and shape; (3) dissatisfaction–satisfaction with one’s weight; (4) feelings of physical attractiveness–unattractiveness; (5) current feelings about one’s looks relative to how one usually feels; and (6) evaluation of one’s appearance relative to how the average person looks. Responses to each item were based on 9-point, bipolar, Likert-type scales, semantically anchored at each point. The scale was presented in a negative-to-positive direction for half of the items and a positive-to-negative direction for the other half. The instructions stated: “For each
of the items below, check the box beside the one statement that best describes how you feel **RIGHT NOW, AT THIS VERY MOMENT**. Read the items carefully to be sure the statement you choose accurately and honestly describes how you feel right now” (see Appendix).

In addition to its administration in a neutral context (i.e., presented first in the Time 1 questionnaire packet), we employed a methodology (see Haimovitz, Lansky, & O’Reilly, 1993; Tiggemann, 2001) whereby participants completed the BISS in response to imagined situational contexts. The four contexts, two negative and two positive, were presented in a random order across participants. Participants were asked to imagine that they were in the situation and then to become aware of and indicate (on the six BISS items) how they would feel in the situation:

- It is a day on the beach. You are there with some people you know and some people you don’t know, both men and women. Like everyone else, you are wearing a bathing suit. People are talking and laughing and just doing whatever they want.
- You are alone in your bedroom. You are looking at the latest issue of a magazine about fashion and fitness for persons of your own sex. You are looking at the model on the cover. As you thumb through the magazine, you are looking at the models in the ads for clothing and the ads for exercise and fitness products.
- You are at a party with some friends and casual acquaintances. Over the course of the party, a few of your friends comment on how you look. They compliment you and tell you how nice you look in what you are wearing that evening.
- You step on a scale to weigh yourself. You see that your weight is close to your preferred weight.

Subsequently, in the second session, participants retook the body image trait measures and the BISS (neutral context only). Female participants were randomly assigned to one of two conditions. In the experimental condition, before completing the BISS, participants first answered a demographic form that posed questions about current height and weight, desired weight, highest adult weight, and lowest adult weight. In the control condition, these questions were posed after completion of the BISS. The purpose of this manipulation was to test the hypothesis (Cash & Labarge, 1996; Labarge et al., 1998; Lavin & Cash, 2001) that exposure to these questions would differentially affect the body image states of women who were dysfunctionally invested in their appearance (i.e., schematics versus aschematics, as assessed by the ASI).
RESULTS AND DISCUSSION

Scoring and Internal Consistency of the BISS

At Time 1, Cronbach’s alphas were computed to evaluate the internal consistency of the BISS, both in the neutral context and in the four imagined contexts. In each instance, BISS scores were the mean of the six items after reverse-scoring the three positive-to-negative items. Thus, higher BISS scores on the 9-point dimension indicate more favorable body image states. Table 1 summarizes these reliabilities as well as the scale means and standard deviations for both sexes. The BISS was acceptably internally consistent across the range of contexts. Alphas were somewhat lower in a neutral context than in either positive or negative contexts. This was understandably due to less variability in the neutral context for the fifth item, which entailed a comparison of current feelings relative to usual feelings. At Time 2, the BISS’s internal consistency was .77 for women and .72 for men.

Temporal Stability of the BISS

The test-retest reliability of the neutral-context BISS over the 2- to 3-week period was calculated. The coefficient was .69 for women (including only those in the Time 2 control condition) and .68 for men ($p < .001$). Consistent with the fact that the BISS is a state assessment, its stability was lower than that observed in this study for the BASS ($r = .94$), a trait measure of body image satisfaction.

Correlations of the BISS with Body Image Trait Measures and Body Mass

State body image should be partly predictable from trait body image. Therefore, Pearson correlations were computed to examine the convergence be-

<table>
<thead>
<tr>
<th>BISS Assessments</th>
<th>Women $M$ (SD)</th>
<th>Men $M$ (SD)</th>
<th>Women Cronbach’s alpha</th>
<th>Men Cronbach’s alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neutral context</td>
<td>5.39 (1.38)</td>
<td>6.02 (0.87)</td>
<td>0.77</td>
<td>0.62</td>
</tr>
<tr>
<td>Negative context (Day at the beach)</td>
<td>4.82 (1.88)</td>
<td>6.05 (1.04)</td>
<td>0.90</td>
<td>0.66</td>
</tr>
<tr>
<td>Negative context (Magazine models)</td>
<td>4.83 (1.68)</td>
<td>5.90 (0.99)</td>
<td>0.88</td>
<td>0.78</td>
</tr>
<tr>
<td>Positive context (Party compliments)</td>
<td>6.81 (1.31)</td>
<td>7.03 (0.96)</td>
<td>0.81</td>
<td>0.83</td>
</tr>
<tr>
<td>Positive context (Ideal weight)</td>
<td>7.00 (1.11)</td>
<td>6.72 (1.06)</td>
<td>0.80</td>
<td>0.84</td>
</tr>
</tbody>
</table>
between the neutral context BISS and selected trait measures of body image evaluation and investment. Table 2 shows the correlations between the trait measures from Time 1 and the BISS at Times 1 and 2. At Time 2, only those females in the control condition were included. As expected, significantly less favorable body image states were reported by persons of either sex who had greater trait body image dissatisfaction and body shame, more overweight preoccupation, and more dysfunctional investment in their appearance. For women only, modest but significant correlations with the OBCS indicated less favorable body image states among those who engaged in more body surveillance. Relationships with perceived body control were weaker.

A substantial literature points to more negative body image experiences among overweight or obese persons, especially women (Cash & Roy, 1999; Milkewicz & Cash, 2000). Consistent with the expectation that heavier participants would experience more negative body image states, Table 2 shows that the significant correlations of the BISS with BMI were modest for men and moderate for women.

### Evaluation of Sex Differences on the BISS and Its Sensitivity to Context

A comparison of means for men and women on the neutral context BISS (given in Table 1) indicated that women reported less favorable body image states than men did, \( F(1, 172) = 10.20, \ p < .002 \). To make comparisons as a function of positive versus negative context, we collapsed over the two positive contexts and over the two negative contexts and conducted a 2 (sex) \( \times \) 2 (context type) general linear model analysis of variance (GLM ANOVA). Significant main effects occurred for sex, \( F(1, 172) = 12.64, \ p < .001 \), and for context type, \( F(1, 172) = 168.90, \ p < .0001 \), and the interaction was signifi-
The Body Image States Scale  

The Body Image States Scale (BISS) is a tool designed to assess momentary body image states. Its construct validity was examined through the analysis of experimental data collected from women at Time 2. The experimental group received questions about their body weight prior to completing the BISS, whereas the control group did not. Based on a median split on the ASI, participants were divided into two groups who reported less versus more dysfunctional investment in their appearance. A 2 (ASI Groups) × 2 (Condition) GLM ANOVA was performed on the BISS scores. The predicted Group × Condition interaction was significant, $F(1, 104) = 4.25, p < .042$. Simple-effects analysis indicated that the high ASI group had less favorable BISS scores in the experimental versus the control condition ($M_s = 5.73$ versus $5.33$), whereas the opposite was actually the case for the low ASI group ($M_s = 6.03$ versus $6.58$) ($p_s < .05$). A similar $2 \times 2$ ANOVA on the weight information reported in the manipulated conditions revealed no differences on current, ideal, lowest, or highest weights. Thus, the results cannot be explained by a confounding of the variables. Rather, the findings are consistent with a cognitive perspective on body image that posits mediating and moderating effects of body image investment (or schematicity) on emotional reactions to appearance-related cues or events (Cash & Deagle, 1997; Cash & Labarge, 1996; Labarge et al., 1998; Lavin & Cash, 2001; Tiggemann, 2001; Williamson, 1996).

CONCLUSIONS AND IMPLICATIONS

The literature reveals a dearth of sound and useful assessments of persons' momentary evaluative/affective body image experiences (Cash, in press; Thompson et al., 1999). The scientific study of body image often requires the measurement of such states in specific contexts or in response to experimental variables. This approach is especially important to our understanding the dynamic cognitive and affective processes associated with eating disorders and body image disturbances (Cash & Deagle, 1997; Cash & Strachan, 1999; Williamson, 1996). The current research provided initial psychometric evidence supportive of the reliability and validity of the new Body Image States Scale. Whereas many body image assessments have been validated only for
women, the BISS can be used by both sexes. The value of this measure is further evident in its brevity (i.e., six items), its bipolarity (i.e., both positive and negative experiences), and its item content (i.e., not a specific affect about discrete body parts). As such, the BISS would seem to have applicability to a wide range of contexts. Its items could be particularly useful as a clinical tool for monitoring body image states in targeted situations over the course of treatment.

REFERENCES


**APPENDIX**

**BODY IMAGE STATES SCALE**

For each of the items below, check the box beside the one statement that best describes how you feel **RIGHT NOW AT THIS VERY MOMENT**. Read the items carefully to be sure the statement you choose accurately and honestly describes how you feel right now.

1. Right now I feel . . .
   - [ ] **Extremely dissatisfied** with my physical appearance
   - [ ] **Mostly dissatisfied** with my physical appearance
   - [ ] **Moderately dissatisfied** with my physical appearance
   - [ ] **Slightly dissatisfied** with my physical appearance
   - [ ] **Neither dissatisfied nor satisfied** with my physical appearance
   - [ ] **Slightly satisfied** with my physical appearance
   - [ ] **Moderately satisfied** with my physical appearance
   - [ ] **Mostly satisfied** with my physical appearance
   - [ ] **Extremely satisfied** with my physical appearance
2. Right now I feel . . .
   - **Extremely satisfied** with my body size and shape
   - **Mostly satisfied** with my body size and shape
   - **Moderately satisfied** with my body size and shape
   - **Slightly satisfied** with my body size and shape
   - **Neither dissatisfied nor satisfied** with my body size and shape
   - **Slightly dissatisfied** with my body size and shape
   - **Moderately dissatisfied** with my body size and shape
   - **Mostly dissatisfied** with my body size and shape
   - **Extremely dissatisfied** with my body size and shape

3. Right now I feel . . .
   - **Extremely satisfied** with my weight
   - **Mostly dissatisfied** with my weight
   - **Moderately dissatisfied** with my weight
   - **Slightly dissatisfied** with my weight
   - **Neither dissatisfied nor satisfied** with my weight
   - **Slightly satisfied** with my weight
   - **Moderately satisfied** with my weight
   - **Mostly satisfied** with my weight
   - **Extremely satisfied** with my weight

4. Right now I feel . . .
   - **Extremely physically attractive**
   - **Very physically attractive**
   - **Moderately physically attractive**
   - **Slightly physically attractive**
   - **Neither attractive nor unattractive**
   - **Slightly physically unattractive**
   - **Moderately physically unattractive**
   - **Very physically unattractive**
   - **Extremely physically unattractive**

5. Right now I feel . . .
   - **A great deal worse** about my looks than I usually feel
   - **Much worse** about my looks than I usually feel
   - **Somewhat worse** about my looks than I usually feel
   - **Just slightly worse** about my looks than I usually feel
   - **About the same** about my looks as usual
   - **Just slightly better** about my looks than I usually feel
   - **Somewhat better** about my looks than I usually feel
   - **Much better** about my looks than I usually feel
   - **A great deal better** about my looks than I usually feel
6. Right now I feel that I look . . .

- A great deal better than the average person looks
- Much better than the average person looks
- Somewhat better than the average person looks
- Just slightly better than the average person looks
- About the same as the average person looks
- Just slightly worse than the average person looks
- Somewhat worse than the average person looks
- Much worse than the average person looks
- A great deal worse than the average person looks