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Accepted version. *Sex Roles*, Vol. 78, No. 1-2 (2017): 1-17. DOI. © 2017 Springer International Publishing AG. Part of [Springer Nature](#). Used with permission.
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Revising the Body Esteem Scale with a U.S. College Student Sample: Evaluation, Validation, and Uses for the BES-R

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Abstract

The Body Esteem Scale (BES; Franzoi and Shields [1984](#)) has been a primary research tool for over 30 years, yet its factor structure has not been fully assessed since its creation, so a two-study design examined whether the

BES needed revision. In Study 1, a series of principal components analyses (PCAs) was conducted using the BES responses of 798 undergraduate students, with results indicating that changes were necessary to improve the scale's accuracy. In Study 2, 1237 undergraduate students evaluated each BES item, along with a select set of new body items, while also rating each item's importance to their own body esteem. Body items meeting minimum importance criteria were then utilized in a series of PCAs to develop a revised scale that has strong internal consistency and good convergent and discriminant validity. As with the original BES, the revised BES (BES-R) conceives of body esteem as both gender-specific and multidimensional. Given that the accurate assessment of body esteem is essential in better understanding the link between this construct and mental health, the BES-R can now be used in research to illuminate this link, as well as in prevention and treatment programs for body-image issues. Further implications are discussed.

Keywords

Body esteem, Human sex differences, Body image, Self-esteem, Cultural differences, Sexual attractiveness

Body esteem, an important dimension of self-esteem, refers to self-evaluations of the body. Over the past quarter century, this concept has received considerable research attention due in part to evidence suggesting that both women and men in North America are growing increasingly dissatisfied with their physical selves (Adams et al. [2005](#)). Understanding and accurately assessing body esteem is particularly important because body dissatisfaction is associated with a host of behavioral and psychological problems, including poor self-esteem (Erickson et al. [2009](#)), eating disorders (Mayer et al. [2008](#); Rayner et al. [2013](#)), social anxiety (Strelan and Hargreaves [2005](#)), depression (Jonsdottir et al. [2008](#)), and anabolic steroid abuse (Parent [2013](#)). In such inquiries, it is extremely useful to have easily administered instruments that are valid for nonclinical populations rather than measures employed solely in clinical studies, such as with eating disorder patients.

In the present paper we report the development and validation of a revised version of the Body Esteem Scale (BES; Franzoi and Shields [1984](#)), a self-report instrument that assesses adult body esteem. Due to the importance of body-focused research, it is incumbent that the measures used provide accurate and meaningful assessments. Given that the factor structure of the BES has not been systematically analyzed since its initial publication, and given that cultural body ideals are subject to generational changes, we suspected that item and possibly structural refinements were warranted to maintain the scale's validity and relevance (Pope et al. [2001](#); Spitzer et al. [1999](#)). Therefore, our goals were to first reanalyze the factor structure of the BES following the method of the original scale development and to then revise it, if necessary.

Measuring Body Esteem

Formal body esteem research has been conducted for a little over six decades, with Secord and Jourard ([1953](#)) providing one of the first documented assessments in their Body Cathexis Scale (BCS), a 46-item scale measuring the degree of satisfaction with various body parts and processes. In developing the BCS, Secord and Jourard assumed that body esteem was experienced by people unidimensionally, meaning that their self-evaluation of individual body parts and body functions is best understood as an overall (or total) body attitude. Implicit with this assumption is that women and men assign the same meaning to their body parts and body functions (e.g., women and men assign the same psychological meaning to their weight and to the width of their shoulders or their chest).

Although the BCS served as researchers' primary body esteem measuring instrument for the next three decades, doubts about its unidimensional structure prompted Franzoi and Shields ([1984](#)) to test Secord and

Jourard's original assumption with a young adult sample. A series of principal components analyses (PCAs) of the BCS items indicated that it was not a unidimensional measure, nor were the multiple factors identified in the PCAs the same for women and men. In other words, these findings indicated that (a) when people evaluate their body parts and body functions, they organize their evaluations into more than one category and (b) these evaluative categories, or dimensions, are different for women and men. For example, whereas Franzoi and Shields (1984) found that women organize certain body self-evaluations around weight, men organize certain body self-evaluations around muscle strength. Faced with the evidence that body esteem was both multidimensional and gender-specific, Franzoi and Shields collected additional data and conducted additional PCAs using 23 original BCS items and 16 new body items, which ultimately yielded a new 35-item questionnaire: the Body Esteem Scale (BES).

BES respondents rate their degree of satisfaction or dissatisfaction with body parts and functions using a 5-point Likert scale, making the BES a concise and easily administered assessment of body esteem. Three dimensions for women measure attitudes toward their sexual attractiveness, weight concern, and physical condition. Three dimensions for men measure attitudes toward their physical attractiveness, upper body strength, and physical condition. A number of studies have established the internal consistency and test-retest reliability of the BES (Franzoi 1994; Franzoi and Shields 1984), as well as its construct, convergent, and divergent validity (Franzoi and Herzog 1986; Franzoi and Shields 1984; Thomas and Freeman 1990).

Contributions of the BES to the Behavioral Sciences

Over the past three decades researchers have utilized the BES to enhance our understanding of the relationships between body esteem and numerous constructs in the behavioral sciences. Topics within social psychology include race/ethnicity (Franzoi and Chang 2002; Henriques and Calhoun 1999; Miller et al. 2000; Wade 2003), sexual orientation (Striegel-Moore et al. 1990), socioeconomic status (Kornblau et al. 2007), age and generational trends (Franzoi and Koehler 1998), cultural sexism (Franzoi 2001; Franzoi et al. 2012; Oswald et al. 2012), mating preferences (Wade 2000), sexual desire (Seal et al. 2009), social comparison tendencies (Franzoi and Klaiber 2007; Irving 1990; Powell et al. 2001; Wade and Abetz 1997), media body depictions (Henderson-King et al. 2001; Hobza et al. 2007), and body objectification (McKinley and Hyde 1996). Topics within clinical psychology include eating attitudes (Ata et al. 2007; McKinley 1999), dieting behavior (Furnham and Boughton 1995), disordered eating (Davis 1997; Franko et al. 2012; Kaminski and McNamara 1996; Martz and Bazzini 1999; Mayer et al. 2008; Rieder and Ruderman 2001; Striegel-Moore et al. 1993; Tassava and Ruderman 1999), anabolic steroid abuse (Schwerin et al. 1997), depression and anxiety (Davis et al. 1993; Parent 2013), chronic disease (Barak et al. 1999; Barak et al. 1998), and mindfulness (Fink et al. 2009).

The BES has also been used to enhance our understanding of body esteem in cultures outside North America, such as Australia (Monteath and McCabe 1997), Israel (Barak et al. 1994), Japan (Kowner 2002), Malaysia (Tan et al. 2015), and South Korea (Forbes and Jung 2008). The BES has also been translated into various languages, including German (Swami et al. 2008b), Polish (Bak-Sosnowska et al. 2014; Lipowska and Lipowski 2013), and Spanish (Jorquera et al. 2005).

It is clear that the BES has become a primary multidimensional and gender-specific body assessment measure for a host of clinically and socially relevant studies over the past 30 years. However, body esteem is a culturally-sensitive construct, meaning that the body parts and body functions that men and women consider important when evaluating themselves are likely to change based on cultural shifts in the standards that define attractive and healthy gender-typed bodies (Pope et al. 2001; Spitzer et al. 1999). Given the likelihood

of such cultural shifts since the construction of the BES, a reassessment—and even possible revision—of the scale was deemed warranted to maintain its scientific relevance in the twenty-first century.

Study 1

The first step in reassessing the BES was to use contemporary data to explore whether there was evidence that the item composition of the BES subscales had changed. The second step was to determine whether any item deletion or replacement was warranted.

Method

Participants

This sample consisted of 798 adults (448, 56% women, $M_{\text{age}} = 18.78$, $SD = 1.12$, range = 18–22; 350, 44% men, $M_{\text{age}} = 19.20$, $SD = 1.64$, range = 18–38) enrolled in psychology courses at a midsize U.S. Midwestern university. They participated in this study for extra credit in their respective courses. Regarding race/ethnicity, the majority of participants identified as White/Caucasian (women = 376, 84.3%; men = 294, 84.7%), with the remaining participants identifying as Asian American/Asian descent (women = 22, 4.9%; men = 26, 7.4%), Hispanic/Latina(o) (women = 21, 4.5%; men = 10, 2.9%), African American/Black (women = 15, 3.4%; men = 9, 2.6%), Biracial (women = 8, 1.8%; men = 3, .6%), Native Hawaiian/ Pacific Islander (women = .0; men = .0), American Indian/ Alaska native (women = 3, .7%; men = 1, .3%), and “Other” (women = 2, .4%; men = 5, 1.4%). Regarding sexual orientation, the majority of participants identified as Straight/Heterosexual (women = 440, 98.2%; men = 339, 96.3%), with the remaining participants identifying as Lesbian/Gay (women = 1, .2%; men = 5, 1.4%), Bisexual (women = 4, .7%; men = 5, 1.4%), “Don’t know” (women = 3, .7%; men = 3, .9%), and “Other” (women = 1, .2%; men = 0). The only significant difference between women and men on these demographic variables was found regarding the age of participants, such that male participants were significantly older than female participants were, $t(798) = 3.33$, $p = .001$, $d = .24$. However, the effect size was small.

Materials and Procedure

The BES consists of 35 body parts and functions rated on a 5-point Likert scale from 1 (*have strong negative feelings*), 2 (*have moderate negative feelings*), 3 (*have no feeling one way or the other*), 4 (*have moderate positive feelings*), to 5 (*have strong positive feelings*). Body esteem subscales for women (Sexual Attractiveness, Weight Concern, and Physical Condition) and men (Physical Attractiveness, Upper Body Strength, and Physical Condition) are computed so that higher scores indicate more positive body evaluation. Participants were asked to assess themselves on the 35 original body parts and functions as well as on four additional items: head hair, skin condition, neck, and calves. These new items were chosen following a focus group of approximately 15 undergraduate students in which body parts and functions were discussed and voted on (majority needed) regarding their hypothesized relevance to contemporary adults’ body evaluations. The items for discussion were chosen based on literature reviews of body-focused scientific articles published within the past 10 years (e.g., Braun et al. [2013](#); Daniel and Bridges [2010](#)).

Participants completed the BES along with demographic information through the Survey Monkey website (www.surveymonkey.com) in a classroom setting with a research assistant present to answer any questions from the assembled participants. Upon entering the website, participants read a brief description of the study, signed the consent form, and completed the anonymous survey.

Results and Discussion

Principal Components Analyses for Women

Consistent with the 1984 analyses, we implemented PCAs for the original BES items with a three-component structure using an oblique rotation that permits correlated components. Similar to the minimum-loading criterion of .35 in the 1984 BES data analysis, the minimum-loading criterion in the analysis of the contemporary women's data was set at .34. Relaxing the criterion in this minimal manner allowed the body hair item to load on the component most closely resembling the Sexual Attractiveness subscale, as it did in 1984. Total variance accounted for by this model was 42.44%. (Specific loadings can be found in an [online supplement](#).) The analysis revealed a component composition that was similar to the original BES subscales. Two items (arms and feet) that failed to meet the minimum-loading criterion in 1984 met the current criterion.

Principal Components Analyses for Men

To remain consistent with the data from women, the minimum-loading criterion was set at .34 (specific loadings can be found in the [online supplement](#)). The total variance accounted for by this model was 46.67%. PCA of the men's data revealed that each component contained item additions as well as items that no longer met the minimum-loading criterion. Additionally, one body item (sex drive), associated with the Upper Body Strength subscale in 1984, and another BES item (sex activities), not associated with any of the three men's subscales in 1984, now met the minimum-loading criterion on the component most closely resembling the Physical Attractiveness subscale.

Preliminary Analysis for the Addition of New Items

We conducted a second round of PCAs for women and men after adding the four potential new items. Specific loadings for the data from women can be found in the [online supplements](#). The model accounted for a total variance of 41.16%. Specific loadings for the data from men can be found in the [online supplements](#), with the model accounting for a total variance of 45.06%. All new items met the minimum-loading criterion on BES components in the expected manner. For example, skin condition and head hair met the minimum-loading criterion on the components most closely resembling the Physical/Sexual Attractiveness subscales for both men and women. Overall, these analyses suggest that men appear to be evaluating themselves somewhat differently than they were 30 years ago, such that men's sense of sexuality and sexual virility is associated more closely to physical attractiveness than in the past. For women, although the three body esteem dimensions still appear relevant, the results overall suggest that a closer assessment of BES items is warranted.

Study 2

The dual goals of Study 2 were to revise BES items and then to validate the revised instrument as a measure of contemporary body esteem. In this revision, we added an importance screening test that was not included in the original BES construction, namely, having respondents judge the importance of each individual body item in evaluating their own body esteem. In subsequent PCAs we included only those body items that obtained a mean rating at or above a midpoint of importance. This initial step ensured that the revised scale would contain a relevant and meaningful collection of body items associated with contemporary body esteem. To assess convergent and discriminant validity of the revised scale, we analyzed the correlations between the new subscales for women and for men with five established body-related scales. Two additional measures were also created to more specifically assess the revised scale's construct validity.

Method

Participants

This sample consisted of 1237 adults (747, 60% women, $M_{\text{age}} = 18.79$, $SD = 1.97$, range = 18–59; and 490, 40% men, $M_{\text{age}} = 19.36$, $SD = 1.99$, range = 18–40) enrolled in psychology courses at two U.S. universities (one private midsize university in the Midwest and one large public university in the mid-Atlantic region). Participants completed our study for extra credit in their respective courses. The majority of participants identified as White/Caucasian (women = 611, 81.9%; men = 392, 80.0%), with the remaining participants identifying as Asian American/Asian descent (women = 41, 5.5%; men = 39, 8.0%), Hispanic/Latina(o) (women = 30, 4.0%; men = 25, 5.1%), African American/Black (women = 30, 4.0%; men = 7, 1.4%), Biracial (women = 26, 3.5%; men = 13, 2.7%), Native Hawaiian/ Pacific Islander (women = 2, .3%; men = 3, .6%), American Indian/ Alaska native (women = 1, .1%; men = 2, .4%), and “Other” (women = 5, .7%; men = 6, 1.2%). Regarding sexual orientation, the vast majority of participants identified as Straight/Heterosexual (women = 720, 96.6%; men = 476, 97.3%), with the remaining participants identifying as Gay/Lesbian (women = 1, .1%; men = 7, 1.4%), Bisexual (women = 17, 2.3%; men = 2, .4%), “Don’t know” (women = 3, .4%; men = 3, .5%), and “Other” (women = 4, .4%; men = 2, .4%).

The only significant difference found between women and men on these demographic variables involved the age of participants, such that male participants were significantly older than female participants were, $t(1234) = 4.91$, $p < .001$, $d = .29$. However, the effect size was small. Participants also reported their height and weight. Their BMI was calculated by converting weight from pounds to kilograms and height from inches to centimeters and using the equation weight divided by height squared (Mayo Foundation for Medical Education and Research [2017](#)). The majority of participants reported measurements that resulted in a BMI in the “healthy range” 19–25 (women: $M_{\text{BMI}} = 23.02$, $SD = 4.19$, range = 14–52; men: $M_{\text{BMI}} = 23.94$, $SD = 3.92$, range = 16–40).

To determine whether respondents from these two universities differed significantly in their body evaluations, two separate one-way between group multivariate analyses of variance (MANOVA) were conducted with women’s and men’s data according to geographic location. Although the results (which can be found as an [online supplement](#)) indicated some minor differences in body evaluations on the Physical Attractiveness component for men and the Sexual Attractiveness component for women, the effect sizes were small, as were the actual differences in evaluation (no items differed more than four-tenths of one point on a 5-point Likert scale), and therefore, it does not appear likely that the geographic location affected the outcome of the analyses that determined the revised BES.

Body Item Evaluations

The 35 items contained in the BES (Franzoi and Shields [1984](#)), along with 12 body parts and functions being considered for inclusion on the BES-R (head hair, facial hair, eyelashes/eyebrows, forehead, neck, hands, calves, ankles, skin condition, skin color, fingernails, and back) were used to measure evaluations of the physical self. The new items were chosen based on both Study 1’s results and a focus group session, in a similar format to Study 1, of faculty and students which identified body parts and functions that were either not adequately represented in the original BES and/or had been highlighted in contemporary media outlets. Instructions read:

Below are listed a number of body parts and functions. Please read each item and indicate how you feel about this part or function of your own body, using the following scale: 1 = Have strong negative

feelings; 2 = Have moderate negative feelings; 3 = Have no feeling one way or the other; 4 = Have moderate positive feelings; 5 = Have strong positive feelings.

Body Item Importance Ratings

Participants also rated the 47 body items, using a 5-point Likert scale from 1 (*not at all important*) to 5 (*very important*), in terms of determining their personal body esteem. These data served as a necessary first-step filter in determining which body items were sufficiently important in young adults' body evaluations to warrant inclusion in subsequent analyses.

Rosenberg Self-Esteem Scale

The Rosenberg Self-Esteem Scale (RSE; Rosenberg [1965](#)) is a measure of overall self-esteem and consists of ten items (e.g., "On the whole, I am satisfied with myself"), rated on a 5-point Likert scale from 1 (*extremely uncharacteristic*) to 5 (*extremely characteristic*), with higher summed scores indicating higher self-esteem. The RSE has good test-retest reliability and construct validity (Robinson and Shaver [1973](#); Silbert and Tippett [1965](#)), and in our study the coefficient alphas were .75 for women and .74 for men. Correlations from the RSE and all of the following scales were used as measures of validity with the revised body esteem subscales. Because body esteem is viewed as one component of overall self-esteem, moderate positive correlations were expected between this measure and all BES-R subscales for men and women.

Sexual Esteem Scale of the Sexuality Scale

The 10-item Sexual Esteem Scale (Snell and Papini [1989](#)) is a measure of participants' evaluations of their sexual competence and is rated on a 5-point Likert scale from 1 (*agree*) to 5 (*disagree*), with higher summed scores indicating higher sexual esteem (e.g., "I am a good sexual partner"). The Sexual Esteem Scale has adequate internal consistency ($\alpha = .92$ for women; $\alpha = .93$ for men), test-retest reliability ranging from .69 (4 weeks) to .74 (4 weeks), and discriminant validity when correlated with other measures of sexuality (Snell et al. [1992](#); Snell et al. [1993](#)). In our study, the coefficient alphas were .91 for women and .93 for men. Moderate positive correlations were anticipated between this measure and the BES-R subscales evaluating sexual body parts and functions for both men and women.

Drive for Thinness Subscale on the Eating Disorders Inventory–2

The Drive for Thinness subscale of the Eating Disorders Inventory–2 (Garner [1991](#)) was used to assess negative eating and weight attitudes. Past research indicates that this measure is appropriate for nonclinical samples (Garner et al. [1983](#)). Respondents indicated whether each item applied to them using a 6-point Likert scale from 1 (*always*) to 6 (*never*), with higher summed scores indicating more distorted eating and body attitudes and behaviors (e.g., "I think about dieting"). In our study, the coefficient alphas were .93 for women and .89 for men. Moderate negative correlations were anticipated between this subscale and the BES-R subscales evaluating body size, weight, and shape (e.g., Weight Concern for women and Physical Condition for men).

Measures of Aerobic and Anaerobic Activity Satisfaction

Two separate four-item measures of aerobic and anaerobic activity satisfaction were developed in which participants indicated the degree to which each statement was characteristic of him/her using a 5-point Likert scale from 1 (*extremely uncharacteristic*) to 5 (*extremely characteristic*) with higher summed scores indicating more positive body esteem. For each measure, a PCA was conducted on the responses. The aerobic activity satisfaction data yielded a one-factor solution, with the model accounting for 56.67% of the total variance. Item loadings are noted after the items: "I enjoy participating in exercises that improve my cardiovascular

health (e.g., running, biking, walking, swimming)" (.82); "It is important that my body is healthy" (.84); "I think about my body in terms of the way it moves (i.e. agility, speed)" (.73); and "I am satisfied with my current physical condition" (.59). This measure demonstrated adequate internal consistency reliability ($\alpha = .72$ for women; $\alpha = .61$ for men).

The anaerobic activity satisfaction measure also yielded a one-factor solution, with the model accounting for 69.02% of the total variance and adequate item loadings: "I enjoy participating in exercises that improve my body strength and muscle mass (i.e. weight lifting, hill climbing)" (.86); "The appearance of my muscles is important to me" (.84); "I am proud of my muscular body build" (.76); and "I work toward achieving/maintaining a toned and muscular physique" (.86). This measure demonstrated good internal consistency reliability ($\alpha = .85$ for women; $\alpha = .81$ for men). Strong positive correlations were expected between the measure of aerobic activity satisfaction and the BES-R subscales assessing physical condition for both men and women. Possible weak correlations were anticipated between this measure and subscales assessing muscularity for men (i.e., Upper Body Strength) and body weight and shape for women (i.e., Weight Concern). Strong positive correlations were expected between the measure of anaerobic activity satisfaction and the BES-R subscale assessing strength and muscularity for men (i.e., Upper Body Strength). Weak to moderate correlations between this measure and subscales assessing physical fitness and condition for men and women (e.g., Physical Condition) were also anticipated.

Body Shame subscale of the Objectified Body Consciousness Scale

The eight-item Body Shame subscale of the Objectified Body Consciousness Scale (McKinley and Hyde [1996](#)) assesses the degree to which women experience body shame (e.g., "I feel ashamed of myself when I haven't made the effort to look my best") and uses a 7-point Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*) with higher summed scores indicating higher body shame. The coefficient alpha for this subscale was $\alpha = .81$ for women. Because the Objectified Body Consciousness Scale was specifically developed and validated using data from only women, this subscale was used as a measure of validity only for the BES-R subscales for women. A Strong negative correlation was anticipated between this measure and the BES-R subscale(s) assessing body size, weight, and shape for women (i.e., Weight Concern).

Low Body Fat Subscale of the Male Body Attitudes Scale

The Low Body Fat (11 items) subscale of the Male Body Attitudes Scale (Tylka et al. [2005](#)) assesses the degree of satisfaction and preoccupation with attitudes toward body fat (e.g., "I think my body should be leaner") using a 6-point Likert scale from 1 (*never*) to 6 (*always*) with higher averaged scores indicating negative body attitudes. The coefficient alpha was $\alpha = .94$ for men. Because the Male Body Attitudes Scale was specifically developed and validated using data from men, this subscale was used as a measure of validity only for the BES-R subscales for men. Moderate-to-strong negative correlations were anticipated between this measure and the BES-R subscales assessing body shape, fitness, and muscularity for men (e.g., Physical Condition and Upper Body Strength).

Procedure and Data Analysis Plan

Measures were given in the following order: Demographic information (gender, ethnic background, sexual orientation, age, height, weight), Rosenberg Self-Esteem Scale, Body Esteem Scale with new items, body item importance ratings, Sexual Esteem Scale of the Sexuality Scale, measures of aerobic and anaerobic activity satisfaction, Drive for Thinness subscale on the Eating Disorders Inventory-2, Body Shame subscale of the Objectified Body Consciousness Scale, and Low Body Fat subscale of the Male Body Attitudes Scale. The majority of data collection occurred in a classroom setting with a research assistant present using an online

survey ($n = 677$) or at times a hard-copy survey ($n = 78$). However, some participants completed the survey online remotely ($n = 482$).

Data for women and men were analyzed separately, with both sets of analyses completed in four stages. In the first stage, we deleted body-focused items that failed to reach an average importance rating of 3.5 on the 5-point importance scale. Parallel analyses, as well as examination of the Scree test, were used as guides for component retention (Hayton et al. 2004; Velicer et al. 2000). Next, a series of PCAs was conducted. An oblique method was employed given that we expected the factors to be correlated. A promax method of rotation with Kaiser normalization was implemented for PCAs in order to obtain the most distinctive set of components. In the third stage, norms and subscale correlations were computed for the BES-R, as were reliability measures (coefficient alphas). In the final stage of analysis, we assessed correlations between the BES-R and validity measures described previously.

Results and Discussion

Principal Components Analyses for Women

Fully 21 of the original 35 items and two new items met the 3.5 importance criterion and were included in the subsequent analyses (see Table 1). Parallel analysis and a Scree Test of the retained body items suggested a three-component retention, with this PCA model accounting for 46.85% of the total variance. All parallel analyses utilized 500 random datasets with 95th percentile retention. To make the revised BES components as strong and theoretically meaningful as possible, a more conservative minimum-loading criterion was implemented in the current analyses (.37) than in the 1984 analyses (.35). All items were retained (see Table 2).

Table 1. Descriptive statistics for BES importance ratings for women and men

Women			Men		
Items	<i>M</i>	<i>SD</i>	Items	<i>M</i>	<i>SD</i>
Health	4.56	.78	Health	4.54	.76
Face	4.42	.77	Physical condition	4.39	.78
Physical condition	4.38	.70	Figure/Physique	4.23	.82
Figure/Physique	4.36	.82	Body build	4.18	.79
Weight	4.35	.83	Energy level	4.17	.81
^a Skin condition	4.29	.91	Physical stamina	4.13	.80
Appearance of stomach	4.24	.92	Face	4.13	.86
Body scent	4.13	.92	Muscular strength	4.10	.88
Energy level	4.11	.89	Physical coordination	4.08	.95

Women			Men		
Items	<i>M</i>	<i>SD</i>	Items	<i>M</i>	<i>SD</i>
Appearance of eyes	4.09	1.05	Weight	4.04	.93
^a Head hair	4.05	.98	Body scent	3.96	.93
Waist	4.02	.92	Appearance of stomach	3.92	.93
Legs	4.00	.98	Sex organs	3.86	.93
Buttocks	3.97	1.45	^a Skin condition	3.86	1.01
Body build	3.90	.96	^a Head hair	3.82	1.01
Chest/breasts	3.89	1.00	Biceps	3.78	.90
Thighs	3.86	.89	Chest/breasts	3.77	1.00
Physical stamina	3.81	1.01	Sex drive	3.76	1.01
Physical coordination	3.74	1.09	Agility	3.74	1.02
Hips	3.74	1.05	Reflexes	3.69	1.06
Muscular strength	3.63	1.00	Appearance of eyes	3.69	1.13
Sex drive	3.58	1.08	Sex activities	3.69	1.05
Sex activities	3.55	1.16	Arms	3.68	.98
Appetite	3.48	1.06	Legs	3.36	1.02
^a Eyelashes/eyebrows	3.47	1.12	Waist	3.34	.99
Agility	3.42	1.06	Appetite	3.28	1.09
Lips	3.39	1.00	^a Facial hair	3.21	1.11
Arms	3.39	.98	Buttocks	3.18	1.07
Body hair	3.28	1.19	Thighs	3.17	.96
Reflexes	3.27	1.11	Width of shoulders	3.17	1.50
Cheeks/cheekbones	3.27	1.12	^a Back	3.15	1.14
Sex organs	3.21	1.14	Body hair	3.11	.98

Women			Men		
Items	<i>M</i>	<i>SD</i>	Items	<i>M</i>	<i>SD</i>
^a Calves	3.19	1.11	Lips	3.05	1.00
^a Facial hair	3.17	1.14	^a Calves	3.02	1.10
Nose	3.14	.99	Nose	2.97	.96
^a Back	3.12	1.17	^a Skin color	2.97	1.26
^a Skin color	3.08	1.29	Cheeks/cheekbones	2.89	1.05
Biceps	3.06	1.00	Chin	2.87	1.02
^a Hands	2.93	1.08	Hips	2.82	1.01
^a Fingernails	2.85	1.20	^a Hands	2.79	1.10
Width of shoulders	2.80	1.09	Ears	2.78	1.03
Chin	2.76	1.05	^a Eyelashes/eyebrows	2.76	1.03
^a Forehead	2.70	1.01	^a Fingernails	2.72	1.11
^a Ankles	2.69	1.06	^a Forehead	2.60	1.02
Ears	2.67	1.06	Feet	2.57	1.04
^a Neck	2.67	1.08	^a Neck	2.55	1.04
Feet	2.61	1.13	^a Ankles	2.53	1.06

^apotential item addition to the scale

Table 2. BES-R component loadings for women

Item	Weight concern	Physical condition	Sexual attractiveness
Waist	.73	.14	-.17
Thighs	.79	-.16	.03
Body build	.69	.15	-.03
Hips	.72	-.14	.13
Legs	.70	-.18	.14

Item	Weight concern	Physical condition	Sexual attractiveness
Figure/physique	.77	.06	.09
Appearance of stomach	.64	.21	-.10
Weight	.88	-.02	-.17
Physical stamina	-.01	.79	-.07
Muscular strength	-.13	.76	-.09
Energy level	.04	.56	.12
Physical coordination	-.09	.71	.05
Health	.09	.68	.04
Physical condition	.10	.68	.11
Body scent	-.25	.09	.49
Buttocks	.21	-.03	.46
Chest/breasts	-.04	.06	.45
Appearance of eyes	.02	-.11	.56
Sex drive	.01	.00	.70
Sex activities	-.02	-.01	.74
Face	.16	.13	.55
Head hair ^a	-.08	-.03	.57
Skin condition ^a	.07	.09	.42

Loadings at or above .37 are in bold

^anew items

The first component contained eight of the ten items from the original BES Weight Concern subscale for women. The two dropped items either did not meet the minimum importance criterion (appetite) or now loaded on another subscale (buttocks). As with the original Weight Concern subscale, this revised subscale contains items directly associated with body weight and shape; therefore, this revised subscale retained its label of Weight Concern.

The second component contained six of the nine items from the original BES Physical Condition subscale for women, with three dropped items (reflexes, biceps, agility) failing to meet the minimum importance criterion.

Because this revised subscale continued to consist of body parts and functions associated with movement, health, and the overall physical condition of the body, it retained the label Physical Condition.

The third component contained nine items, six of which were on the original BES Sexual Attractiveness subscale for women. Two items (head hair, skin condition) were new, and one item (buttocks) was previously on women’s BES Weight Concern subscale. This revised component continued to contain items evaluating facial characteristics, as well as body parts and functions related to sexuality and sexual attractiveness; all are body parts not typically altered through diet or exercise. Based on these results, it makes sense to continue labeling this revised scale Sexual Attractiveness.

Principal Components Analyses for Men

Based on our importance inclusion criterion, 21 of the original 35 BES items and two of the 12 new items were retained for further analysis (see Table 1). Using those items, both parallel analysis and a Scree Test suggested a three-component retention, with this PCA model accounting for 54.48% of the total variance (see Table 3). A minimum-loading criterion of .37 was implemented to maintain consistency with women’s BES data. All items were retained.

Table 3. BES-R component loadings for men

Item	Physical condition	Sexual attractiveness	Upper body strength
Physical stamina	.74	-.06	.10
Reflexes	.58	.20	-.09
Energy level	.83	-.04	-.10
Physical coordination	.63	.04	.04
Agility	.78	.01	-.06
Figure/physique	.61	.08	.24
Appearance of stomach	.76	.02	-.11
Health	.87	-.06	-.13
Physical condition	.83	-.11	.13
Weight	.62	.04	.10
Body scent	-.11	.51	.09
Appearance of eyes	-.07	.61	.12
Sex drive	-.01	.71	-.02
Sex organs	.01	.78	-.15

Item	Physical condition	Sexual attractiveness	Upper body strength
Sex activities	.06	.78	-.16
Face	.15	.54	.16
Head hair ^a	-.05	.56	.16
Skin condition ^a	.07	.51	-.02
Muscular strength	-.10	-.04	.96
Biceps	.00	-.16	.93
Body build	.35	-.01	.54
Arms	-.13	.16	.86
Chest/breasts	.15	.13	.57

Loadings at or above .37 are in bold

^anew items

The first component contained ten items, all of which were on the original BES Physical Condition subscale for men. Because this revised subscale continued to consist of body parts and functions that measure physical activity, exercise, and fitness, we retained the original label, Physical Condition.

The second component contained three items from the original men's BES Physical Attractiveness subscale (appearance of eyes, sex organs, and face), one item (sex drive) from the original men's BES Upper Body Strength subscale, and one item (body scent) that had not met the minimum-loading criterion for any original BES subscale for men. Interestingly, all of these items were contained in the original BES Sexual Attractiveness subscale for women. Two new items (head hair, skin condition) also met the minimum-loading criterion on this subscale, just as they had on women's Sexual Attractiveness subscale. As with the revised Sexual Attractiveness subscale for women, this revised subscale consists of body items associated with facial attractiveness and sexuality. Therefore, it was renamed Sexual Attractiveness. Although the two subscales share the same name and seven items, this subscale for men does not contain two items (buttocks and chest/breasts) that are on the women's subscale and it has one item (sex organs) not on the women's subscale. These changes appear to be reflective of the gendered nature of sexual attractiveness.

The third component contained five of the nine items from the original Upper Body Strength subscale for men, and therefore, this revised subscale retained the label Upper Body Strength. Of the four original items not retained, one (width of shoulders) failed to meet the minimum importance criterion, and the three other items were now on either the revised Sexual Attractiveness subscale (sex drive) or the Physical Condition subscale (figure or physique and physical coordination). In the original BES, these latter two items had dual loadings on both the Upper Body Strength and Physical Condition subscales. As in the original subscale, the revised subscale continues to consist of body parts and functions associated with strength and muscularity of the upper body.

Subscale Internal Consistencies and Intercorrelations

Internal consistency ratings, subscale means, and standard deviations for the revised BES subscales can be found in Table 4. Correlations among BES-R subscales can be found in Table 4. As with the original BES findings (see Franzoi and Shields 1984), the subscale correlations are somewhat higher for men than they are for women.

Table 4. Descriptive statistics, alphas, and correlations for BES-R subscales for women and men

Subscales	<i>M</i>	<i>SD</i>	Correlations		
			1	2	3
(a) Women					
1. Sexual attractiveness	32.67	5.18	(.72)		
2. Weight concern	23.31	6.95	.38	(.89)	
3. Physical condition	20.56	4.67	.33	.43	(.81)
(b) Men					
1. Sexual attractiveness	28.79	4.97	(.80)		
2. Upper body strength	16.63	4.46	.46	(.88)	
3. Physical condition	35.47	7.76	.52	.59	(.90)

Alphas are in parentheses along the diagonal

Convergent and Discriminant Validity

Correlations between the BES-R's subscales and other relevant measures are found in Table 5. Because body esteem is one component of global self-esteem, as expected, and consistent with Franzoi and Shields' (1984) original BES findings, the Rosenberg Self-esteem Scale (Rosenberg 1965) correlated significantly with all BES-R subscales for both women and men.

Table 5. Correlations between BES-R subscales and validity measures

	Women's BES-R subscales with:			Men's BES-R Subscales with:		
	Sexual attractiveness	Weight concern	Physical condition	Sexual attractiveness	Upper body strength	Physical condition
	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>
Rosenberg Self-esteem Scale	.32***	.30***	.33***	.46***	.32***	.41***

	Women's BES-R subscales with:			Men's BES-R Subscales with:		
	Sexual attractiveness	Weight concern	Physical condition	Sexual attractiveness	Upper body strength	Physical condition
	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>
Body Mass Index (BMI)	.02	-.35***	-.07	-.03	.10	-.33***
Sexual Esteem Scale	.39***	.15*	.11	.52***	.15	.29**
Eating Disorders Inventory – 2: Drive for Thinness subscale	-.07	-.45***	-.03	-.09	-.01	-.37***
Measure of aerobic activity satisfaction	.07	.23**	.55***	.24*	.41***	.63***
Measure of anaerobic activity satisfaction	.08	-.01	.48***	.16	.62***	.40***
Objectified Body Consciousness Scale: Body Shame subscale	-.15*	-.40***	-.11	–	–	–
Male Body Attitudes Scale: Low Body Fat subscale	–	–	–	-.20*	-.21*	-.52***

* $p < .05$. ** $p < .01$. *** $p < .001$

We also anticipated that participants' BMI would be negatively correlated with the women' and men's subscales most directly associated with body weight issues, namely the Weight Concern subscale for women and the Physical Condition subscale for men (both of which contain the "weight" and "appearance of stomach" body items). Consistent with these predictions, for women, BMI correlated significantly with Weight Concern, but was not significantly correlated with Sexual Attractiveness or Physical Condition (see Table 5). Similarly, for men, BMI correlated significantly with Physical Condition, but was not significantly correlated with Sexual Attractiveness or Upper Body Strength.

Consistent with our hypotheses, we observed significant positive correlations between the Sexual Esteem Scale (Snell and Papini [1989](#)) and BES-R components assessing sexuality, namely, the revised Sexual Attractiveness subscales for both women and men (see Table [5](#)). Steiger's z-test for correlated correlations using Fisher's z transformations indicated that the Sexual Esteem Scale had significantly weaker correlations with men's Physical Condition subscale ($z = 2.98, p = .002$) and women's Weight Concern subscale ($z = 3.02, p = .002$). Also, as hypothesized, the Eating Disorders Inventory-2 (Garner [1991](#)) Drive for Thinness subscale correlated significantly with women's Weight Concern subscale and with men's Physical Condition subscale (see Table [5](#)).

The measure of aerobic activity satisfaction, as expected, was positively correlated with both women's and men's BES-R Physical Condition subscales (see Table [5](#)). Because aerobic exercise contributes to both muscular strength and healthy body weight, we also anticipated and observed small but significant correlations between this satisfaction measure and men's Upper Body Strength subscale and women's Weight Concern subscale. These correlations, however, were significantly weaker than were the correlations with the Physical Condition subscales ($z_{\text{women}} = 3.29, p < .001$; $z_{\text{men}} = 4.55, p < .001$). Unexpectedly, aerobic activity satisfaction also significantly correlated with men's Sexual Attractiveness subscale, although this correlation was significantly weaker than the correlations between it and men's Physical Condition subscale ($z = 5.46, p < .001$) and men's Upper Body Strength subscale ($z = 1.96, p = .05$).

Due to the contributions of anaerobic exercises to muscular strength and upper body appearance, we expected and found a positive correlation between the measure of anaerobic activity satisfaction and men's Upper Body strength subscale (see Table [5](#)). For similar reasons, a significant correlation was also expected and found between anaerobic satisfaction and men's Physical Condition subscale, although it was significantly weaker than the Upper Body Strength correlation ($z = 3.38, p < .001$).

Based on the nature of the questions assessing diet and exercise within the Body Shame subscale of the Objectified Body Consciousness Scale (McKinley and Hyde [1996](#)), we anticipated and found a strong correlation between it and women's Weight Concern subscale (see Table [5](#)). A significant correlation was also found between this subscale and women's Sexual Attractiveness subscale, however, this correlation was significantly weaker than was the Weight Concern subscale correlation ($z = 3.14, p < .001$).

For the Low Body Fat subscale of the Male Body Attitudes Scale (Tylka et al. [2005](#)), we expected and found significant correlations with men's BES-R subscales that assess weight-related physical conditioning (Physical Condition) and muscularity and strength (Upper Body Strength) (see Table [5](#)). Interestingly, a significant correlation was also observed between this subscale and men's Sexual Attractiveness subscale. The correlation between the Low Body Fat subscale and Physical Condition was significantly stronger than the correlation between the Low Body Fat subscale and Upper Body Strength ($z = 4.24, p < .001$) as well as the correlation between the Low Body Fat subscale and Sexual Attractiveness ($z = 4.28, p < .001$).

General Discussion

The current investigation had a two-fold purpose: (a) analyze the BES factor structure using contemporary young adults as respondents to determine whether its gender-specific and multidimensional structure was still relevant and meaningful and (b) if necessary, revise the existing BES so that it continues to accurately represent young adults' physical self-evaluations. Through a two-study design using a series of principal components analyses and a review of body-item importance ratings, we reconfirmed that body esteem is gender-specific and that both women's and men's body esteem is best conceptualized in terms of three

distinct components. We also determined that the original BES was in need of revision. The importance ratings gathered in Study 2, which were not part of the process in creating the original 35 BES items, provided a useful and efficient means of determining which body items were most relevant in shaping body esteem today. Once final items were set for women's and men's revised subscales, the now 28-item BES-R was validated by correlating it with measures similar to those used for original BES scale validation.

It is worth noting that, as with the original BES findings (see Franzoi and Shields [1984](#)), the BES-R subscale intercorrelations are somewhat higher for men than they are for women, suggesting that men's body esteem, while multidimensional, is not as differentiated as women's body esteem. This gender difference may be due to the longstanding cultural tendency to objectify women's bodies more than men's bodies, resulting in women being more likely than men are to evaluate their bodies on a part-by-part basis (Fredrickson and Roberts [1997](#)), yielding lower subscale intercorrelations among women.

The final BES-R and its instructions are contained in the [Appendix](#) (and as a downloadable [online supplement](#)). As shown there, readers wishing to use the BES-R should present the items in the order listed. The authors grant permission to use this scale. However, anyone using this scale in research should understand that our findings indicate, both in the original BES and in the BES-R, that body esteem is multidimensional and gender-specific, which means that this scale provides subscale scores only (no overall body esteem score) and that women's and men's scores cannot be compared.

Women's Body Esteem

The labels for women's BES-R subscales are identical to the original BES subscales, and only minor changes occurred due to item deletion in the Weight Concern (appetite, buttocks) and Physical Condition (reflexes, biceps, agility) subscales. The three items deleted from the Physical Condition subscale perhaps reflect the fact that most women's assessments of their physical conditioning tend to focus more on maintaining a healthy, conditioned body with good overall muscular strength and tone rather than on performance in competitive sports (Hausenblas and Fallon [2006](#); Thompson et al. [1999](#)).

The most significant item changes occurred in the Sexual Attractiveness subscale, with a number of items that met the minimum-loading criterion in the 1984 analyses not included in the current analyses (nose, lips, ears, chin, cheeks, sex organs, body hair). However, it should be noted that the original BES item, face, was retained and encompasses the five specific facial parts deleted from the BES-R. The loading of the items chest/breasts and buttocks on the Sexual Attractiveness subscale suggests that these two body parts provide a more meaningful personal representation of sexual attractiveness for women today than do the deleted sex organs and body hair items. The shift of the buttocks item from the Weight Concern dimension to the Sexual Attractiveness dimension suggests that its meaning for contemporary women has less to do with weight concern and more to do with sexuality. Although it is undeniable that women's weight concern negatively impacts sexuality self-perceptions, there is evidence that the strength of this association has diminished.

Over the past decade a number of female celebrities (e.g., Kim Kardashian; Nicki Minaj) have garnered considerable media attention because of their larger or curvier buttocks that reflect African American beauty standards, where weight related to certain body parts is less stigmatized (Overstreet et al. [2010](#)). Similarly, in other areas of popular culture, there has been considerable attention to female buttocks that are toned and part of the "yoga body" phenomenon, which has, in part, emphasized a health-focused and athletic aesthetic for women rather than weight restriction (Webb et al. [2017](#)). Perhaps popular culture's relabeling of larger-sized buttocks as being more socially desirable, along with an accompanying highlighting of female

athleticism, has rendered this female body part less susceptible to hyper-vigilant weight concern by young adult women (Polonijo and Carpiano [2008](#)). Finally, two other noteworthy changes in the Sexual Attractiveness subscale were the additions of the skin condition and head hair items, which is consistent with research indicating that these two body items signify youthfulness and health, which are characteristics indicative of physical attractiveness (Buss [2003](#); Cunningham et al. [1995](#); Fink et al. [2001](#); Schuster et al. [2013](#)).

Regarding measures of the BES-R's validity with women, as expected, the Sexual Esteem Scale was significantly correlated with the Sexual Attractiveness subscale but not with the Physical Condition subscale. Interestingly, there was also a weak but significant correlation between this sexual esteem measure and the Weight Concern subscale, which may reflect the cultural connection between possessing a specific weight-related body shape and perceptions of one's own sexual desirability (Seal et al. [2009](#)). Also as predicted, female respondents' BMI and EDI scores were significantly correlated with the Weight Concern subscale but not with the other two subscales. Similarly, the Body Shame subscale was significantly correlated with the Weight Concern subscale, and there also was a weak but significant correlation with the Sexual Attractiveness subscale. This small significant correlation is likely due to the fact that the Sexual Attractiveness subscale contains body parts contributing to perceptions of facial and overall appearance and beauty, which can contribute to feelings of shame toward one's body (Fink et al. [2001](#); McKinley and Hyde [1996](#); Swami et al. [2008a](#)). Finally, as predicted, the measures of aerobic and anaerobic activity satisfaction were significantly correlated with the Physical Condition subscale, and, not unexpectedly, the aerobic activity measure also had a significant—though smaller—correlation with the Weight Concern subscale. Overall, these findings provide solid evidence for both the convergent and discriminant validity of the BES-R subscales for women.

Men's Body Esteem

The most noteworthy change to the BES-R for men was relabeling the original Physical Attractiveness subscale Sexual Attractiveness based on several item-level changes observed in the current analyses. First, the item of sex drive shifted from the Upper Body Strength subscale to here, and the sex activities and body scent items, which both failed to meet minimum loading criterion on any male subscale in the 1984 analyses, did so now on the new Sexual Attractiveness subscale. Further, as with women, two new body items (skin complexion and head hair) signifying youthfulness and health (Muscarella and Cunningham [1996](#); Schuster et al. [2013](#)), loaded on this subscale. These alterations suggest that men's current perceptions of their sexual attractiveness are more related to self-perceptions of facial attractiveness and head hair than self-perceptions of upper-body strength. There are a host of studies indicating that portrayals of men as physical objects to be desired have become more pronounced and influential in mainstream culture over the past quarter century, with men being more likely than in the past to perceive their bodies as sexual objects, similar to women's longstanding self-perceptions (Hobza et al. [2007](#); Manago et al. [2015](#); Spitzer et al. [1999](#)). Such a cultural shift appears to be reflected in our findings, and it warrants the relabeling of this subscale as Sexual Attractiveness, thereby providing a more accurate descriptor of this dimension of body esteem for twenty-first century men.

Another substantial change in men's BES-R is that there are no longer any body items (physical coordination, figure or physique) that load on more than one subscale, namely, Upper Body Strength and Physical Condition, which means that these subscales are now more distinct from one another. The removal of four items (physical coordination, figure or physique, sex drive, width of shoulders) from the Upper Body Strength subscale results in it being a purer evaluation of strength and muscularity of the upper body. In this sense, the retained body build item may better capture the unique muscularity element to this dimension than

figure/physique or width of shoulders. Additionally, because physical coordination does not specifically contribute to evaluations of muscularity and upper body strength, this item provides more meaning to the Physical Condition subscale, where it met the minimum-loading criterion. Finally, regarding the Physical Condition subscale, the only changes were the deletion of the body items appetite, waist, and thighs. Changes to the Physical Condition subscale also led to increased specificity of evaluations of physical condition, highlighting the items figure/physique and appearance of stomach in lieu of items, thighs, and waist. An explanation for why these items did not meet the importance criterion may be gleaned from Swami and Tovee's (2005) study, which indicated that when women judge the appeal of the male body, they place more emphasis on men's chest-to-waist ratio than on their waist-to-hip ratio.

Regarding measures of the BES-R's validity for men, as expected, the Sexual Esteem Scale was significantly correlated with the Sexual Attractiveness subscale and not significantly correlated with the Upper Body Strength subscale. Unexpectedly, a small but significant correlation was found between the sexual esteem measure and the Physical Condition subscale, which is perhaps explained by the fact that people who are physically fit tend to experience greater sexual drive, sexual activity, and sexual satisfaction (Penhollow and Young 2004; White et al. 1990). Correlations were as predicted regarding the BES-R subscales for men and measures of aerobic and anaerobic activity satisfaction as well as male respondents' BMI and EDI scores. The Low Body Fat subscale was significantly correlated with the Physical Condition subscale, but somewhat surprisingly, it also had small—and significantly weaker—correlations with the Upper Body Strength and Sexual Attractiveness subscales. Perhaps these weak associations are due to men today being aware that body fat can negatively impact others' judgments of not only their physical conditioning, but also their general attractiveness (Fink et al. 2001; Pope et al. 2001). Overall, these results provide solid evidence for both the convergent and discriminant validity of the BES-R subscales for men.

Limitations and Future Research Directions

The data used in creating the original BES was collected on a mid-sized West Coast college campus, whereas the data used in revising the BES was collected on two college campuses in the Midwest and mid-Atlantic regions of the United States. Despite broadening the geographic range in the current data collection, a limitation in the process of creating both of these scales was that samples consisted primarily of college-aged, White students who identified as heterosexual. Therefore, it is possible that the BES-R—like the original BES—may not ideally reflect what would be found with a sample that is more heterogeneous in terms of racial ethnicity, sexual orientation, and socioeconomic status. Although this is certainly an area for future research, we would not expect radically different BES subscales to emerge for two reasons. First, the BES and BES-R ask respondents to evaluate their satisfaction with specific body parts, avoiding the presumption that the same criteria for satisfaction, appearance, sexual attractiveness, or health will hold across cultures or across diverse groups within a culture. Second, the 1984 BES sample was also restricted to mainly White college student samples and, as previously stated, it has been shown to be reliable and valid across adult populations (Franzoi 1994; Franzoi and Herzog 1986; Jorquera et al. 2005) and has been used successfully in various adult age and racial/ethnic groups in North America (e.g., Franzoi and Chang 2002; Miller et al. 2000; Wade 2003), as well as in cultures beyond the continent (e.g., Barak et al. 1994; Lipowska and Lipowski 2013; Tan et al. 2015).

Another possible, though rather unlikely, limitation of the present study is that in trying to obtain as large a sample size as possible, multiple methods of survey administration were used in our study, with the vast majority of surveys collected online and others collected in large group settings using a paper-and pencil-

format. Although these differences in administration should be noted, there is no evidence to suggest that different administration formats have significantly affected the results. Furthermore, a literature search found no evidence that paper-and-pencil surveys yield different reliabilities or response sets than internet-based surveys (Mangunkusumo et al. [2005](#); Steenhuis et al. [2009](#)).

Finally, as with any new measurement scale, the ultimate utility of the BES-R will be determined by whether it accurately measures both women's and men's body esteem in the full range of its complexity. Unlike any other existing body-esteem measure, the BES-R and its predecessor, the BES, recognize in their construction both the gendered nature of people's body assessments and its multidimensionality. Accompanying this new measure is evidence of its convergent and discriminant validity. Although not exhaustive, our initial validity check suggests that the BES-R will provide accurate and meaningful assessments of both women's and men's body esteem in the twenty-first century. Future research should explore both the validity and reliability of this scale in more detail, especially how the BES-R correlates with other more established body-image measures.

Practice Implications

Over the past 30 years, the BES has demonstrated its usefulness as a tool for facilitating research on the negative impact of the media and other sources on body image (Daniel and Bridges [2010](#); Henderson-King et al. [2001](#); McKinley and Hyde [1996](#); Strelan and Hargreaves [2005](#)) as well as the relationship between body esteem and self-esteem (Franzoi and Klaiber [2007](#)) and objectification and body-shame (McKinley and Hyde [1996](#)). This research is imperative for understanding the negative impact of these factors on the health and wellness of adult men and women.

Further knowledge and insight on these topics has provided direct implications for clinical providers in the identification of eating attitudes (Ata et al. [2007](#); McKinley [1999](#)) and disordered eating behaviors (Davis [1997](#); Mayer et al. [2008](#); Rieder and Ruderman [2001](#); Striegel-Moore et al. [1993](#); Tassava and Ruderman [1999](#)). The BES has also served as a useful measure in facilitating research related to the treatment of mental illness including depression and anxiety (Davis et al. [1993](#); Jonsdottir et al. [2008](#)) in which self-esteem and body-evaluations play a part. Continuing this research is essential for designing more effective clinical interventions and also for the development of detection and prevention strategies for women and men at risk for experiencing disordered eating patterns (Kaminski and McNamara [1996](#); Martz and Bazzini [1999](#); Parent [2013](#)). These prevention strategies have been used both within mental health settings and on college campuses, making the BES valuable to researchers, clinicians, and those in college administration (Kaminski and McNamara [1996](#); Tassava and Ruderman [1999](#)).

Although the BES-R is not in itself a clinically diagnostic tool, the subscale means provided in Table [4](#) can be used for comparison purposes by researchers wishing to determine how specific samples of adult women and men compare in body esteem to the norms calculated here. We believe that continued assessment of the evaluations of men and women toward their physical selves will facilitate understanding of physical ideals as driven by the media within our ever-changing North American culture. This gender-based research, in turn, will continue to guide ways to support, protect, and improve areas of mental health shaped by physical self-evaluations.

Conclusion

The Body Esteem Scale has been a primary tool for body image researchers for the past four decades but our research indicated that its factor structure and item composition was in need of adjustment to more accurately reflect the body esteem of young adults in contemporary society. The subsequent revision retains

the gender-specific and multidimensional structure of the original scale, but the items composing the new BES-R were selected based on respondents' importance ratings, which was not part of the original scale construction. It appeared that changes in North American culture over this time have altered some perceptions of beauty, attractiveness, and fitness, and these changes were reflected in BES item and structural changes. Measures of internal consistency, subscale intercorrelations, and convergent and discriminant validity suggest that the BES-R provides a unique and accurate assessment of both women's and men's body-evaluations, as did its predecessor. This is particularly important given the history of the scale's use in examining the relationship between body esteem and numerous areas within the social sciences. In summary, the BES-R can be considered a psychometrically sound measure of body esteem for many years to come.

Notes

Compliance with Ethical Standards

These authors would like to address compliance with ethical standards regarding this research.

Conflict of Interest

The authors declare that they have no conflict of interest.

Ethical Approval

This research has been approved by both the Institutional Review Boards of Marquette University and Pennsylvania State University and reviewed/reapproved every year of data collection.

Informed Consent

Informed consent documents were provided to every participant outlining the purpose of the study, procedures, duration, risks, benefits, confidentiality, compensation, voluntary nature of participation and contact information.

Human and Animal Rights

The welfare and care of all human participants was highly considered and highlighted in the training of research assistants given the sensitive nature of this psychological research.

Appendix

The Body Esteem Scale-Revised

Instructions: Below are listed a number of body parts and functions. Please read each item and indicate how you feel about this part or function of your own body, using the following response categories:

1 = Have strong negative feelings

2 = Have moderate negative feelings

3 = Have no feeling one way or the other

4 = Have moderate positive feelings

5 = Have strong positive feelings

1. body scent	11. skin condition	21. appearance of eyes
2. head hair	12. biceps	22. face
3. hips	13. weight	23. physical condition
4. physical stamina	14. body build	24. legs
5. reflexes	15. figure/physique	25. sex drive
6. arms	16. buttocks	26. appearance of stomach
7. muscular strength	17. agility	27. sex organs
8. waist	18. health	28. physical coordination
9. energy level	19. sex activities	
10. thighs	20. chest or breasts	

Note. Subscale scores are calculated by summing responses for the items corresponding to each subscale

Women

Sexual attractiveness: body scent, buttocks, chest or breasts, appearance of eyes, sex drive, sex activities, face, head hair, skin condition.

Weight concern: waist, thighs, body build, hips, legs, figure or physique, appearance of stomach, weight.

Physical condition: physical stamina, muscular strength, energy level, physical coordination, health, physical condition.

Men

Sexual attractiveness: body scent, appearance of eyes, sex drive, sex organs, sex activities, face, head hair, skin condition.

Upper body strength: muscular strength, biceps, body build, arms, chest or breasts.

Physical condition: physical stamina, reflexes, energy level, physical coordination, agility, figure or physique, appearance of stomach, health, physical condition, weight.

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