The Social Physique Anxiety Scale: Reliability and Construct Validity

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Hart, Leary, and Rejeski (1989) developed the Social Physique Anxiety Scale (SPAS) to measure the degree to which individuals become anxious when their physiques are observed or evaluated by others. Although related to body image, they suggested that the construct was conceptually distinct and would be useful for understanding individuals’ involvement (or lack thereof) in exercise behaviors. For the scale’s development, Hart et al. used various samples of college undergraduates, and found that the SPAS had acceptable reliability and construct validity. They also examined the scale’s factor structure through exploratory techniques, finding that all 12 items had loadings greater than .50, with a one-factor solution. Consistent with Hart et al.’s original purpose for developing the scale, researchers have used the SPAS to investigate the relationships of physique anxiety to reasons for exercising, involvement in exercise programs, body composition, self-efficacy and other related behaviors with both college-aged women (Crawford & Eklund, 1994; Eklund & Crawford, 1994; Spink, 1992) and middle-aged adults (McAuley, Bane, & Mihalko, 1995; McAuley, Bane, Rudolph, & Lox, 1995).

Although the Hart et al. (1989) study provided substantial information concerning the scale’s psychometric properties, it was important to test the SPAS in new samples to provide additional validity data. McAuley and Burman (1993) examined psychometric properties of the SPAS in elite female adolescent gymnasts and found that the SPAS was an internally consistent and construct-valid measure for this population. Based on their confirmatory factor analyses (CFAs), however, McAuley and Burman suggested that SPAS may not be unidimensional as originally thought, but may be composed of two first-order factors that underlie a single second-order factor. To address this hypothesis, Eklund, Mack, and Hart (1996) tested three possible factor models using CFA: (a) the original one-factor model; (b) an uncorrelated two factor model; and (c) the higher order model explained by McAuley and Burman (1993). Eklund et al. (1996) concluded that the higher order model provided the best fit for the SPAS data. They indicated that while the two factors were highly correlated, Factor 2 (expectations of negative
evaluation of the physique by others) may be conceptually more consistent with social physique anxiety than Factor 1 (feelings of discomfort about the presentation of one’s physique). Thus, researchers might use the two SPAS factors independently (recognizing their high level of intercorrelation) or compute a global scale score to represent physique anxiety.

Given the recent study by Eklund et al. (1996), substantial information exists concerning the SPAS factor structure, particularly for women. Unfortunately, little is known about the scale’s factorial validity with respect to men or about the scale’s construct validity given these newly defined factors. Considering gender when examining a scale’s psychometric properties is important in general, and in particular with the SPAS because studies consistently have demonstrated that women score higher than men (Hart et al., 1989; Isogai, 1995). Thus, the purpose of this study was twofold. First, we wanted to test, using CFA, the higher order factor model supported by Eklund et al. (1996) in independent samples of male and female undergraduates. Second, we wanted to examine the reliability and validity of the scale (total score and the two factors) in each of these samples. The scale’s validity was tested through associations with the constructs of body shape concerns, body mass, and physical self-esteem, variables that are theoretically consistent with those used by Hart et al. in their construct validation.

**Method**

**Participants**

Female \( (n = 168) \) and male \( (n = 120) \) undergraduates enrolled in psychology classes participated in this study. Mean ages were as follows: females, \( M = 21.47 \) years \( (SD = 3.89) \); males, \( M = 22.11 \) years \( (SD = 3.26) \). In terms of race/ethnicity, 127 females and 94 males were Caucasian, 25 females and 15 males were African American, 16 females and 7 males were Hispanic, and 4 males were Asian American. Mean body mass indices were as follows: females, \( M = 22.15 \) kg/m\(^2\) \( (SD = 3.28) \); males, \( M = 24.26 \) kg/m\(^2\) \( (SD = 3.57) \).

**Instruments**

**Social Physique Anxiety.** The 12-item SPAS was used as the measure of social physique anxiety (Hart et al., 1989). Items are presented on a 5-point Likert scale, with total scores ranging from 12 to 60. Factor 1 (feelings of discomfort about the presentation of one’s physique) is comprised of 5 items, and the remaining 7 items load on Factor 2 (expectations of negative evaluation of the physique by others).

**Body Shape Concerns.** The 34-item Body Shape Questionnaire (BSQ; Cooper, Taylor, Cooper, & Fairburn, 1987) was employed as a unidimensional measure of body shape concern. Items, such as “Have you felt ashamed of your body,” are presented on a 6-point Likert scale with total scores ranging from 34 to 204. Evans and Dolan (1993) reported Cronbach’s alpha as .97. Cooper et al. reported that the BSQ correlated with the Body Dissatisfaction subscale of the Eating Disorder Inventory (EDI) \( r = .61 \) and distinguished between women who were concerned and unconcerned about their body shape, providing support for the scale’s validity.

**Physical Self-Esteem.** The 30-item Physical Self-Perception Profile (PSPP; Fox & Corbin, 1989) was used to measure different aspects of physical self-esteem,