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Perceived current and ideal body size in female undergraduates

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ABSTRACT

Body image dissatisfaction and disordered eating attitudes and behaviors are pervasive problems in Western society, particularly for females. The female "thin-ideal" is a potent contributor to the growing discontent with the female body and research has shown that even females who are normal or underweight, perceive themselves as overweight. The goal of the current study was to examine correlates of body image satisfaction and the perception of the female body. One hundred and sixty six female undergraduates (Mean Age = 21.40 years) completed self-report measures pertaining to disordered eating (EAT-26) and body dissatisfaction (BIQ and ABS). Body image perception and satisfaction were measured using ratings of female bodies on a weight perception scale (PFRS). Overall, disordered eating was related to a lower ideal body size and greater body dissatisfaction. In support of previous research, the most common ideal female body had a BMI categorized as underweight. Although females in the current sample reported an ideal that was smaller than their current size, participants underestimated their current body size, which, given the amount of dieting and weight pressure in present Western society, seems counterintuitive. It is possible that thin ideal portrayed in the media is increasingly different from and at odds with the average female body.

1. Introduction

The female "thin-ideal" of Western society has become a potent contributor to the high levels of disordered eating and body image disturbance in the female population (Stice, 2002; Striegel-Moore, McAvay, & Rodin, 1986), and research suggests that women are more influenced by appearance pressures and experience more body dissatisfaction than males (i.e. Frederick, Forbes, Grigorian, & Jarcho, 2007; Hoyt & Kogan, 2002; Lokken, Ferraro, Kirchner, & Bowling, 2003; McDonald & Thompson, 1992; Mellor, Fuller-Tyszkiewicz, McCabe, & Ricciardelli, 2010; Muth & Cash, 1997; Paxton & Phythian, 1999; Stanford & McCabe, 2002). Women who internalize the "thin-ideal" of Western society develop a cognitive schema that connects thinness with positive attitudes (Tiggemann, 2002), and these cognitive schemas have been shown to be associated with greater eating disturbances and body dissatisfaction (Ahern, Bennet, & Hetherington, 2008). Body dissatisfaction is so prevalent among the Western female population, that researchers have long identified body dissatisfaction among women as a "normative discontent" (Rodin, Silberstein, & Striegel-Moore, 1985).

An abundance of research has shown that, despite being normal or underweight, many women perceive themselves to be overweight (i.e. Anstine & Grinenko, 2000; Bellisle, Monneuse, Steptoe, & Wardle, 1995; Monneuse, Bellisle, & Koppert, 1997; Stock, Kücük, Miseviciene, Petkeviciene, & Krämer, 2004; Wardle, Haase, & Steptoe, 2006), and it has been shown that this inaccurate perception extends to the bodies of others. Ahern et al. (2008) found that females rated a significant number of underweight female bodies as "normal-weight" and two normal-weight female bodies were consistently labeled as "overweight". It is possible that with the increasing focus on the female body and an emphasis on thinness in Western society, women's perception of a "normal" female body may be shifting.

Individuals who experience body dissatisfaction and concerns about their appearance frequently experience co-morbid psychological and health-related problems. Negative body image is a common precursor to disordered eating behaviors and the development of eating disorders (Cash & Deagle, 1997; Stice & Shaw, 2002). Anorexia nervosa (AN) and bulimia nervosa (BN) are both eating disorders characterized by abnormal eating behaviors, weight regulation, and distorted attitudes and perceptions about body weight and shape (American Psychiatric Association [DSM-5], 2013). Although AN and BN differ in their diagnostic criteria and prevalence rates, both disorders are based on a preoccupation with, and a fear of, weight gain (American Psychiatric Association [DSM-5], 2013). Research has shown that both AN and BN are more common in females than in males. For example, males are reported to account for 5–10% of patients with AN and 10–15% of patients with BN (i.e. Fernández-Aranda et al., 2004; Støving, Andries, Brixen, Bilenberg, & Hørder, 2011; Striegel-Moore et al., 2009).

In studying body dissatisfaction, researchers often find that females report that their ideal body that is both smaller than their current body and, in general, unhealthy. For example, Swami, Salem, Furnham, and Tovee (2008) examined differences between the current,

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acceptable, and ideal body types and reported that the most common ideal body was underweight, with a BMI ranging from 15 to 18.5 kg/m^2. Further, research has indicated that normal weight females perceive themselves as being overweight (i.e. Anstine & Grinenko, 2000; Bellisle et al., 1995; Monneuse et al., 1997; Stock et al., 2004; Wardle et al., 2006), broadening the gap between the perceived ideal and perceived current body. In spite of the small ideal body size and the overestimation of current body size, Fryar, Carroll, and Ogden (2012) reported that the incidence of obesity among adolescents has increased from 5% (1976–1980) to 18.1% (2007–2008). Given the increase in the incidence of obesity, it is important to examine if the perceptions of the ideal and current body size has shifted.

The current paper discusses the relationship between disordered eating, body image disturbances, and the perception of the female body. Although the link between body image and eating disorders has been largely addressed, less information exists concerning the perceptual and cognitive factors that affect body assessment. Using only female participants, we examined the relationship between eating attitudes and the ratings of female bodies on a weight perception scale. We hypothesized that: 1) Using a numerical scale, females presenting disordered eating symptoms would rate female bodies as larger than non-eating disordered females; 2) Females presenting disordered eating symptoms would report a smaller ideal body size than non-eating disordered females; and, 3) Females presenting eating disordered symptoms would overestimate their current body size to a greater extent than non-eating disordered females.

2. Method

2.1. Participants

One hundred and sixty six female undergraduate students, ranging in age from 18 to 54 years ($M = 21.40$ years, $SD = 5.9$), were recruited from introductory psychology classes at the University of New Brunswick, Saint John Campus. Participants received one bonus point towards their final grade in Introductory Psychology for participating in the study. All students had an alternative project made available to them by their instructor if they did not wish to participate in the study.

2.2. Materials

2.2.1. Eating Attitudes Test-26 (EAT-26; Garner, Olmsted, Bohr, & Garfinkel, 1982)

The EAT-26 contains 26 items on a self-report scale that measure atypical behaviors and attitudes about eating. The test is divided into three subscale scores: dieting, which focuses on monitoring food intake and activity; oral control, which focused on restricting eating; and bulimia, which focuses on food preoccupation. The EAT-26 maintains internal consistency reliability with a reliability coefficient of $r = 0.90$, and is an adequate screening tool in non-clinical settings (Garner et al., 1982).

2.2.2. Attention to Body Shape Scale (ABS; Beebe, 1995)

The Attention to Body Shape Scale is a 7-item self-report questionnaire with a 5-point scale ranging from 1 (*definitely agree*) to 5 (*definitely agree*). The test measures the degree of body focus for each participant. The ABS has demonstrated convergent and discriminant validity as well as internal consistency, ranging from 0.70 to 0.82, that is within acceptable limits for research (Beebe, 1995).

2.2.3. Photographic Figure Rating Scale (PFRS; Swami et al., 2008)

The Photographic Figure Rating Scale contains ten photographic images of real women facing forward. The images range in BMI from 12.51 to 41.23 kg/m^2, and consist of two images from each of the five established BMI categories: emaciated (<15 kg/m^2), underweight (15–18.5 kg/m^2), normal (18.5–24.9 kg/m^2), overweight (25.0–29.9 kg/m^2), and obese (>30 kg/m^2). The PFRS has greater ecological validity and re-test reliability than previous scales, with reliability coefficients ranging from 0.80 to 0.90 (Swami et al., 2008).

2.2.4. Demographics

A demographic questionnaire was used to collect information about age and race.

2.3. Procedure

Participants completed the study individually or in small groups of approximately 30 individuals. Each participant was first presented with, and asked to sign, an informed consent form explaining the study. The participant then completed the series of questionnaires in random order. The questionnaire package included the *Eating Attitudes Test-26 (EAT-26)*, *Attention to Body Shape Scale (ABS)*, and a paper copy of the *Photographic Figure Rating Scale (PFRS)*. There were 30 photos presented in the PFRS, three copies of each photo in random order. The participants were asked to rate each photo on a scale from 1 to 10, with one being emaciated and 10 being extremely obese. Participants then identified their ideal body and the body that they thought most accurately resembled themselves from the paper photographs.

3. Results

3.1. Descriptive statistics

For all participants, self-reported height in centimetres ($M = 164.79$, $SD = 6.90$) and weight in pounds ($M = 139.00$, $SD = 30.04$) were used to calculate Body Mass Index (BMI), resulting in an average BMI of 23.11 kg/m^2 ($SD = 4.81$). Participants also reported their ideal weight ($M = 127.16$, $SD = 17.19$). Based on BMI, the participants were categorized as emaciated ($N = 2$), underweight ($N = 15$), normal weight ($N = 106$), overweight ($N = 23$) and obese ($N = 15$).

3.2. Eating attitudes and Body Mass Index

Based on the clinical cut-off of 21 for EAT-26 scores ($M = 12.49$, $SD = 12.36$), participants were divided into symptomatic and non-symptomatic groups. Of the 166 participants, 132 were non-symptomatic and 34 were classified as symptomatic. EAT-26 scores were correlated with each participant's BMI and a statistically significant positive correlation was found between BMI and the dieting subscale of the EAT-26, $r(166) = 0.229$, $p = 0.003$. A significant negative correlation was found between BMI and the oral control subscale of the EAT-26, $r(166) = -0.261$, $p = 0.002$, indicating that participants scoring higher on the dieting subscale had *higher* BMIs than participants scoring lower on the dieting subscale and participants scoring higher on the oral control subscale had *lower* BMIs than participants scoring lower on the oral control subscale.

3.3. Eating attitudes and PFRS ratings

It was hypothesized that females presenting disordered eating symptoms would rate female bodies as larger than non-eating disordered females on the numerical scale. An independent samples t-test showed no significant difference between symptomatic and non-symptomatic females in the numerical ratings of female body size. Correlational analysis revealed a statistically significant negative correlation between bulimia subscale scores and body ratings. Individuals scoring higher on the bulimia subscale of the EAT-26 rated the most obese female body as less overweight ($r = -.183$, $p = 0.018$) than those scoring lower on the bulimia scale; however, no significant correlations were found between figure ratings and total EAT-26 scores or either of the remaining subscales.