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Multidimensional body image comparisons among patients with eating disorders, body dysmorphic disorder, and clinical controls: A multisite study☆

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ABSTRACT

Body image disturbance is considered a core characteristic of eating disorders and body dysmorphic disorder (BDD), however its definition has been unclear within the literature. This study examined the multidimensional nature of body image functioning among individuals with either anorexia nervosa (AN; $n = 35$), bulimia nervosa (BN; $n = 26$), or BDD ($n = 56$), relative to female ($n = 34$) and male ($n = 36$) psychiatric controls. Participants were recruited from 10 treatment centers in the United States and England and completed psychometrically validated and standardized self-report measures of body image. Overall, the AN, BN, and BDD groups were characterized by significantly elevated disturbances in most body image dimensions relative to their gender-matched clinical controls. There was variability, however, in the comparisons among the three groups of interest, including foci of body dissatisfaction and body image coping patterns. On omnibus indices of body image disturbance and body image quality of life, patients with BDD reported more body image impairment than those with eating disorders. Although AN, BN, and BDD are characterized by body image disturbances, similar and partially distinctive cognitive, behavioral, and emotional elements of body image functioning exist among these groups. The study's empirical and clinical implications are considered.

Introduction

Body image is a "multifaceted psychological experience of embodiment" that encompasses evaluative thoughts, beliefs, feelings, and behaviors related to one's own physical appearance (Cash, 2004, p. 1). Based on cognitive-behavioral theory (Cash, 2002a), the degree to which individuals are invested in their appearance depends greatly on the core self-schemas related to their appearance (Cash, Melnyk, & Hrabosky, 2004; Markus, 1977). These body image self-schemas serve as a cognitive template for one's appearance evaluation and body image emotions. When triggered by contextual events, body image thoughts and emotions prompt adjustive, self-regulatory activities, or coping strategies (Cash, Santos, & Williams, 2005). Disturbances in these cognitive, behavioral, and emotional elements of body image are considered core to the psychopathology of anorexia nervosa (AN), bulimia nervosa (BN), and body dysmorphic disorder (BDD; Cash & Deagle, 1997; Fairburn & Harrison, 2003; Phillips, 1991). However, the existing research has not permitted a comprehensive understanding of the relative degree of disturbance of such aspects of body image among these clinical groups. The purpose of the present study was to compare and elucidate more fully the specific body image disturbances of individuals with AN, BN, and BDD.

Although body image is a multidimensional construct (i.e., consisting of the aforementioned cognitive, behavioral, and emotional elements; Cash & Pruzinsky, 2002), research, especially with eating disorder populations (Cash & Deagle, 1997), has

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focused primarily on the assessment of body image evaluation (i.e., satisfaction–dissatisfaction with body attributes or overall appearance) and perception (i.e., size or shape estimation). Despite the DSM-IV criterion of an "undue influence of body weight or shape on self-evaluation" for AN and BN (American Psychiatric Association APA, 1994, p. 545), past research has relied heavily upon broad measures of body shape/weight *concern* or *dissatisfaction* (Rosen, 1996). Although such instruments offer insight into how individuals experience their bodies, they are limited in their scope of understanding the various aspects of body image. More recently, eating disorder research has targeted other body image dimensions beyond body dissatisfaction, such as shape/weight overvaluation (Geller et al., 1998; Goldfein, Walsh, & Midlarsky, 2000; Hrabosky, Masheb, White, & Grilo, 2007).

Past studies that have directly compared AN and BN groups on measures of body image have produced equivocal results. For example, using silhouettes to assess ideal body size, Williamson, Cubic, and Gleaves (1993) found that women with AN and BN did not differ even when controlling for perceived current body size. Ben-Tovim and Walker (1992) also found no significant differences between AN and BN patients on weight-related and global appearance evaluation. On the other hand, using a more advanced method of assessing ideal body image (i.e., a software image warping system using biometric data based on real body shapes), Tovée, Benson, Emery, Mason, and Cohen-Tovée (2003) found that while individuals with BN did not differ from normal controls in their ideal body shape, patients with AN reported a significantly smaller ideal body shape than both groups. Yet, two studies using the Body Dissatisfaction subscale of the Eating Disorder Inventory (EDI; Garner, Olmsted, & Polivy, 1983) found greater body image dissatisfaction among patients with BN compared to those with AN (Garner, Garfinkel, & O'Shaughnessy, 1985; Ruuska, Kaltiala-Heino, Rantanen, & Koivisto, 2005). On the other hand, Benninghoven, Raykowski, Solzbacher, Kunzendorf, and Jantschek (2007) found no significant difference between patients with AN and BN on the Body Dissatisfaction subscale of the EDI. However, when comparing these groups on the somatomorphic matrix, an assessment of muscularity and body fat of men and women's body image, Benninghoven et al. found significant differences among the two eating disorder groups and normal controls. Patients with AN displayed little discrepancy between perceived and ideal body images, while those with BN reported significantly greater self-ideal discrepancies than both the AN and normal control groups. In their meta-analysis, Cash and Deagle (1997) concluded that individuals with BN reported substantially greater body dissatisfaction relative to clinical and nonclinical controls on both weight-related and global evaluative measures than did those with AN.

BDD, a less studied disorder characterized by a distressing or impairing preoccupation with an imagined or slight defect in one's physical appearance (APA, 1994), is an often chronic condition associated with considerable disturbances in psychosocial functioning and quality of life (Grant, Kim, & Eckert, 2002; Phillips, Menard, Fay, & Pagano, 2005; Phillips, Pagano, Menard, & Stout, 2006), as well as psychiatric comorbidity (Phillips, McElroy, Keck, Pope, & Hudson, 1993). Several instruments have been validated for the screening or diagnosis of BDD, assessing numerous body image dimensions. However, little empirical research has delineated the multidimensionality of body image in BDD, particularly in comparison to eating disorders. In fact, to our knowledge, Rosen and Ramirez (1998) performed the only direct comparison of BDD and eating disorder (AN and BN) samples on multiple facets of body image. The researchers found no differences between the two groups in body dissatisfaction, preoccupation, and body checking. However, participants with BDD reported more avoidant behaviors and, on a single item, more negative overall self-evaluation due to physical appearance.

The purpose of the present study was to determine the presence, specificity, and severity of body image disturbances within and among individuals with AN, BN, and BDD, as well as relative to psychiatric controls. Specifically, we aimed to identify the problem areas that distinguish these clinical groups, as well as the degree to which they differ on the assessed body image constructs. As both eating disorders and BDD are characterized by body dissatisfaction and excessive concerns about physical appearance, comparing these groups will permit for a better understanding of each disorder's pathogenesis. Reflecting a cognitive-behavioral model of body image (Cash, 2002a), our research included measurements of body image evaluation and overweight preoccupation, contextual body image emotions, appearance investment, and strategies for coping with body image threats and challenges. Also included were omnibus measures of body image disturbance and the impact of body image on quality of life.

Method

Participants

We recruited participants with *primary* diagnoses of AN, BN, and BDD, as well as individuals for the clinical control groups upon entry into treatment programs (i.e., individual psychotherapy, group psychotherapy, psychopharmacology, and/or an alternative form of treatment). A diagnosis was considered *primary* if it was the reason for seeking treatment (APA, 1994). Programs from which participants were recruited included 6 outpatient, 1 inpatient, 1 day treatment, 1 residential, and 1 partial hospital program. Programs were located in the Northeastern, Midwestern, and Atlantic Coastal regions of the United States, as well as in London, England. There was no significant difference in the distributions of AN and BN patients across types of treatment programs, $\chi^2(3) = 3.93$, *ns*. On the other hand, substantially more BDD patients and clinical controls were recruited from outpatient (95% and 71%, respectively) than from inpatient, residential, and day treatment programs (5% and 29%, respectively), $\chi^2(2) = 11.95$, $p < .01$, Cramer's $V = .31$.

To be eligible for the study, participants had to be at least 18 years old and have diagnoses based on DSM-IV (APA, 1994) diagnostic criteria. Psychiatric diagnoses were obtained using non-standardized clinical interviews and consultation with the DSM-IV in seven treatment programs, and DSM-based structured clinical interviews (e.g., Structured Clinical Interview for DSM Axis I Disorders; First, Spitzer, Gibbon, & Williams, 1996) in three programs. Clinical controls required a diagnosis of an Axis I psychological disorder other than those with body image impairment as a diagnostic criterion. Excluded were patients diagnosed with a cognitive disorder (e.g., delirium, dementia, or amnesia), primary substance-related disorder, schizophrenia or other psychotic disorder, dissociative disorder, or factitious disorder due to the complexity of these disorders, as well as, in the case of some patient groups (e.g., cognitive disorder), the level of difficulty of completing the questionnaires. History of AN, BN, or BDD was not an exclusion criterion for clinical controls. Patients with a diagnosis of an eating disorder not otherwise specified or with comorbid BDD and eating disorder diagnoses were ineligible. Finally, patients were excluded if they had received more than three outpatient sessions of ongoing treatment or 10 days of inpatient, residential, or day treatment at the time of assessment. While not a standard exclusion criterion, these cutoffs aimed to reduce the confounding influence of psychological or psychopharmacological interventions on patients' body image. Participants were included in the study regardless of whether or not they had been treated for their current primary diagnosis prior to seeking treatment through the recruitment site.

Data from 187 (93%) of the 201 eligible participants recruited were used in the analyses. Thirteen individuals did not return the