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The significance of overvaluation of shape and weight in binge eating disorder

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ABSTRACT

As publication of DSM-V draws near, research is needed to validate the diagnostic scheme for binge eating disorder (BED). Shape and weight overvaluation has stimulated considerable debate in this regard, given associations with psychosocial impairment and poor treatment outcome in BED. This study sought to further explore the convergent validity and diagnostic specificity of shape and weight overvaluation in BED. A total of 160 women with BED, and 108 women with non-eating disordered psychiatric disorders were recruited from the community. Women with BED were classified as more or less severe based on a global measure of eating-related psychopathology; subsequent receiver operating characteristics analysis determined that a threshold of at least "moderate" overvaluation best predicted membership into a more severe group. BED participants with threshold overvaluation exhibited poorer psychosocial functioning than those with subthreshold overvaluation, as well as participants with other psychiatric disorders. Discriminant function analysis revealed that threshold overvaluation predicted a diagnosis of BED versus other psychiatric disorder with 67.7% accuracy. Results suggest that shape and weight overvaluation is a useful diagnostic specifier in BED. Continued research is warranted to examine its predictive validity in natural course and treatment outcome studies.

Binge eating disorder (BED) is currently included in the DSM-IV-TR as a provisional diagnosis requiring further study (American Psychiatric Association, 2000). With the impending publication of DSM-V, several questions regarding the validity of BED and its diagnostic criteria remain (Latner & Clyne, 2008; Wilfley, Bishop, Wilson, & Agras, 2007; Wonderlich, Gordon, Mitchell, Crosby, & Engel, in press). In particular, it has been suggested that overvaluation of shape and weight be included in BED's diagnostic scheme in DSM-V, given evidence that it reliably predicts elevated levels of psychosocial impairment (Grilo et al., 2008, 2009, Grilo, Masheb, & White, in press; Hrabosky, Masheb, White, & Grilo, 2007; Latner & Clyne, 2008; Mond, Hay, Rodgers, & Owen, 2007). Further research is needed to establish the clinical utility of this construct in adults with BED.

Overvaluation of shape and weight denotes the undue importance of shape and weight in one's scheme for self-evaluation (Fairburn, 2008). According to schema theory (Waller, Ohanian, Meyer, & Osman, 2000) and the cognitive behavioral model of eating disorders (Fairburn, 2008), shape and weight overvaluation refers to higher-order cognitive content reflecting core negative beliefs about the self (e.g., low self-esteem) that may manifest itself through automatic negative thoughts or dysfunctional assumptions regarding shape and weight. In contrast to body dissatisfaction, which may be contingent upon mood or current body size, and shape and weight concerns, which broadly encompass many aspects of shape- and weight-related attitudes, overvaluation of shape and weight represents a stable construct that is resistant to change (Cooper & Fairburn, 1993; Fairburn, 2008). Indeed, shape and weight overvaluation appears to be more closely related to changes in self-esteem over time, as compared to fluctuations in depressive symptoms (Cooper & Fairburn, 1993; Masheb & Grilo, 2003), and is at least partially responsible for persistence in bulimic

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symptoms over time (Fairburn et al., 2003). Given evidence that it is typically present in individuals with eating disorders, regardless of diagnostic group (Fairburn, Cooper, & Shafran, 2003), and appears to be of critical importance in maintaining these disorders (Fairburn, Peveler, Jones, Hope, & Doll, 1993; Fairburn et al., 2003), shape and weight overvaluation is considered by some, but not all (Slade, 1982; Waller, 2008), investigators to mark the "core psychopathology" of eating disorders (Cooper & Fairburn, 1993; Fairburn, 2008; Fairburn & Garner, 1986). As such, shape and weight overvaluation is currently a diagnostic criterion for both AN (i.e., "undue influence of body shape and weight on self-evaluation") and BN (i.e., "self-evaluation [that is] unduly influence by body shape and weight"; American Psychiatric Association, 2000).

While recognized as a feature of BN even before the publication of DSM-III (Russell, 1979), it was not until DSM-III-R that a construct approximating overvaluation of shape and weight (i.e., "persistent overconcern with body shape and weight") was included as a diagnostic criterion for BN (American Psychiatric Association, 1987). DSM-IV's later refinement of this criterion to the more stringent overvaluation of shape and weight criterion purportedly reflects that the "critical disturbance is the undue influence of body shape and weight *on self-esteem*" (Walsh, 1992). Indeed, this distinction is supported by evidence that overvaluation of shape and weight discriminates individuals with eating disorders from healthy controls (Goldfein, Walsh, & Midlarsky, 2000; McFarlane, McCabe, Jarry, Olmsted, & Polivy, 2001), whereas body dissatisfaction and shape and weight concerns are less discriminating (Garfinkel et al., 1992; Hadigan & Walsh, 1991).

Although BED is a relatively new diagnostic entity, a great deal of empirical work has already focused on the nature of body image disturbance in BED. Individuals with BED report levels of shape and weight concerns that are commensurate to individuals with AN and BN, and significantly higher than both normal-weight and overweight individuals without eating disorders (Eldredge & Agras, 1996; Masheb & Grilo, 2000; Striegel-Moore et al., 2001; Striegel-Moore, Dohm, et al., 2000; Striegel-Moore, Wilfley, Pike, Dohm, & Fairburn, 2000; Wilfley, Schwartz, Spurrell, & Fairburn, 1997). These findings have stimulated research into the utility of including overvaluation of shape and weight in the diagnostic scheme for BED, either as an individual criterion or as a diagnostic specifier (i.e., a sub-category within a diagnosis that assists with treatment matching and/or prediction of treatment outcome). Several studies have documented that overvaluation of shape and weight among individuals with BED is associated with increased psychosocial impairment, including eating-related and general psychopathology, functional impairments, and decrements in quality of life (Grilo et al., 2008, 2009, in press; Hrabosky et al., 2007; Mond et al., 2007), as well as treatment-seeking behavior and poorer treatment response on some measures of outcome (Masheb & Grilo, 2008). Taken together, these findings suggest that overvaluation of shape and weight is a clinically relevant construct associated with elevated impairment and distress in BED.

According to research convention, overvaluation of shape and weight is considered to be clinically significant when shape and weight are at least moderately important in one's scheme for self-evaluation (Fairburn & Cooper, 1993). However, no research to date has validated the use of this threshold value, relative to other threshold values, among individuals with eating disorders. Several studies have demonstrated that individuals with full-syndrome and subclinical eating disorders are indistinguishable on measures of impairment and distress (Crow, Agras, Halmi, Mitchell, & Kraemer, 2002; Fairburn et al., 2007; Striegel-Moore, Dohm, et al., 2000; Striegel-Moore, Wilson, Wilfley, Elder, & Brownell, 1998); expounding on these findings, it is possible that even less extreme overvaluation of shape and weight may nevertheless be associated with psychopathology and decrements in quality of life. If shape and weight overvaluation is to be included among BED's diagnostic criteria, it will be necessary to establish a threshold rating on this construct that is clinically meaningful and provides useful diagnostic information.

The purpose of the current study is to further examine the utility of including overvaluation of shape and weight in the diagnostic scheme for BED. Specific aims are to: 1) determine a threshold value of shape and weight overvaluation that is predictive of a more severe psychological profile in BED; 2) compare BED participants with threshold shape and weight overvaluation, BED participants with subthreshold overvaluation, and participants with other psychiatric disorders on measures of psychosocial and interpersonal functioning, and healthcare usage; and 3) examine how well the threshold value discriminates between women with BED and those with other psychiatric disorders.

Method

Participants

Participants were 268 Caucasian or African–American women (69.8% Caucasian, 30.2% African–American), aged 18–40 ($M = 30.61$; $SD = 6.16$). Participants were recruited from Connecticut, the Boston area, New York City, and Los Angeles to participate in the New England Women's Health Project (Striegel-Moore, Wilfley, et al., 2000), a community-based study examining risk factors for BED. The sample consisted of 160 women diagnosed with BED, and 108 women diagnosed with a psychiatric disorder other than an eating disorder (psychiatric controls; PC). Eight participants (4 from the BED group and 4 from the PC group) did not respond to questionnaire items assessing overvaluation of shape and weight, and thus were excluded from all analyses. The final sample included 156 women with BED, and 104 PC women. For full sample characteristics, see Table 1.

Procedures

Participants were recruited through community and media advertisements, and the use of consumer databases. Individuals interested in participating were administered a brief telephone screen and those who met basic eligibility criteria (i.e., age between 18 and 40; absence of medical conditions influencing eating behavior or body weight; absence of a psychotic disorder; being female, of black or white race, and born in the United States) were invited to complete an in-person assessment. Written informed consent was obtained from all participants. The study was approved by the IRBs at Wesleyan University and Columbia University. Detailed descriptions of recruitment and screening procedures are provided elsewhere (Pike, Dohm, Striegel-Moore, Wilfley, & Fairburn, 2001; Striegel-Moore, Dohm, Pike, Wilfley, & Fairburn, 2002; Striegel-Moore et al., 2005).

Measures

Structured Clinical Interview for DSM-IV Axis I Disorders

All participants were given the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID; First, Spitzer, Gibbon, & Williams, 1997) to ascertain psychiatric diagnoses. The SCID (First et al., 1997) is a well-established semi-structured interview assessing the full range of psychiatric disorders. Presence of a comorbid SCID diagnosis was used as a validator in analyses comparing women with BED reporting threshold and subthreshold overvaluation.