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Body weight dissatisfaction: A comparison of women with and without eating disorders☆

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ABSTRACT

Objective: Body dissatisfaction is present in a majority of women without eating disorders (EDs), and almost all women with EDs. We compared body dissatisfaction in women with and without EDs to determine at which BMI women are content with their weight, and to determine if body dissatisfaction is affected by the presence of purging behaviours.
Methods: We assessed women, age 18 to 55 with an ED (N = 431) and without an ED (N = 719) using the discrepancy between their current and desired BMI. This measure of body weight dissatisfaction (BWD) has been validated as being representative of overall body dissatisfaction. We also measured perceptions of (i) Body Appearance and (ii) Body Image to confirm our results.
Results: Women with and without EDs wished to lose weight until very low weights were achieved (BMI 15–16 kg/m^2 and BMI 18–19 kg/m^2 respectively). BWD is higher in women with EDs (median 1.77, IQR 0–4.61) than women without EDs (median 0.85, IQR 0–1.80, $p < 0.001$). Purging behaviours in women with EDs were associated with lower BMIs to achieve body satisfaction (BMI 15–16 kg/m^2) than women who did not purge (16–17 kg/m^2).
Conclusions: Body weight dissatisfaction is highly prevalent amongst women with and without EDs. Understanding body weight dissatisfaction in women with EDs and its association with purging may assist in the prevention, detection and treatment of these disorders. Women with EDs should be informed that body weight dissatisfaction will not resolve with the cessation of their disorder, as it is prevalent within the general population.

1. Introduction

Body image dysfunction relates to a negative evaluation of body size, shape, tone and weight, and usually involves a perceived disparity between current body and desired body (Cash, 2012). Body image dysfunction encompasses two largely separate components: perceptual body-size distortion and cognitive–evaluative dissatisfaction (commonly referred to as body dissatisfaction) (Polivy, Herman, & Pliner, 1990; Thompson, 1990, 1996). Body dissatisfaction includes body weight dissatisfaction (BWD), which is a discrepancy between current and desired weight.

Body dissatisfaction is present in the majority of women in developed countries throughout their lives (Allaz, Bernstein, Rouge, Archinard, & Morabia, 1998; Heatherton, Mahamedi, Striepe, Fields, & Keel, 1997; Kostanski, Fisher, & Gullone, 2004; Lewis & Cachelin, 2001; Matthiasdottir, Jonsson, & Kristjansson, 2012; Wiseman, Gray, Mosimann, & Ahrens, 1992). Most women desire to be thinner, including those at normal weights (Allaz et al., 1998; Benedikt, Wertheim, & Love, 1998; Heatherton et al., 1997; Kostanski et al., 2004; Lee, 1993; Matthiasdottir et al., 2012; Maynard, Serdula, Galuska, Gillespie, & Mokdad, 2006; Tiggemann, 2004; Wiseman et al., 1992). Matthiasdottir (2012) assessed BWD in 5832 women of varying age and found that approximately 50% of women were dissatisfied with their weight, and 64% of women of normal weight believed that they needed to lose weight (Matthiasdottir et al., 2012). Several studies have found that an elevated BMI is associated with increased levels of body dissatisfaction (Allaz et al., 1998; Annis, Cash, & Hrabosky, 2004; Buddeberg-Fischer, Klaghofer, & Reed, 1999; Field et al., 2001; Matthiasdottir et al., 2012; Neighbors & Sobal, 2007; Schwartz, Brownell, Galuska, Gillespie, & Mokdad, 2004; Stice, 2002a; Vogeltanz-Holm et al., 2000). The origins of body dissatisfaction are likely to be multifactorial, with biological, family and sociocultural features predominating (Markham, Thompson, & Bowling, 2005;

Abbreviations: AN, anorexia nervosa; BN, bulimia nervosa; BED, Binge Eating Disorder; BMI, Body Mass Index; BWD, body weight dissatisfaction; DSM, Diagnostic and Statistical Manual of Mental Disorders; ED, eating disorder; EEE, Eating and Exercise Examination; IQR, interquartile range; QOL ED, Quality of Life for Eating Disorders.

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Presnell, Bearman, & Stice, 2004). These countries promote a thin body ideal (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999; Wiseman et al., 1992) despite an ongoing increase in the average size of women (Ogden et al., 2006; World Health Organization, 2006). The pressure to achieve unrealistic body ideals has had a negative effect on women's physical, psychological and social well being (Buddeberg-Fischer et al., 1999; Frederick, Forbes, Grigorian, & Jarcho, 2007; Jackson, 2002; Rodin, Silberstein, & Striegel-Moore, 1984) including increased depressive symptoms, anxiety, and reduced self-esteem (Johnson & Wardle, 2005). Body dissatisfaction is also associated with increased dieting behaviour (Cooley & Toray, 2001; Putterman & Linden, 2004; Stice, 2001), disordered eating (Graber, Brooks-Gunn, Paikoff, & Warren, 1994; Johnson & Wardle, 2005; Ricciardelli, Tate, & Williams, 1997; Shepherd & Ricciardelli, 1998) and unsuccessful attempts at weight control (Stice & Shaw, 2002).

Body image dysfunction is seen as central to the onset and maintenance of eating disorders (EDs) (Jacobi, Hayward, de Zwaan, Kraemer, & Agras, 2004; Stice, 2002b; Stice & Shaw, 2002; Taylor et al., 2006; Thompson et al., 1999; Windauer, Lennerts, Talbot, Touyz, & Beaumont, 1993). Contrary to previous beliefs, analysis of previous research indicates body dissatisfaction to be more prominent than perceptual distortion in anorexia nervosa (AN) and bulimia nervosa (BN) (Cash & Deagle, 1997). Weight and shape concerns are required for the diagnosis of AN and BN in both the International Classification of Diseases, Eleventh Edition (World Health Organization, 2008) and the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) (American Psychiatric Association, 2000). Body dissatisfaction has been shown as the most consistent predictor of dieting and eating problems in longitudinal studies of female adolescents (Heatherton et al., 1997; Johnson & Wardle, 2005; Killen et al., 1994; Stice & Agras, 1998), and elevated body dissatisfaction has been seen to precede the onset of EDs in longitudinal studies of females (Cooley & Toray, 2001; Killen et al., 1994). There is evidence that body dissatisfaction may even predict the severity of problematic eating pathology (Leon, Fulkerson, Perry, & Cudeck, 1993; Rosen; Thompson, Coovert, Richards, Johnson, & Cattarin, 1995).

Purging behaviours such as laxatives, diuretics and self-induced vomiting are common amongst women with eating disorders (Ackard, Cronemeyer, Franzen, Richter, & Norstrom, 2011; Edler, Haedt, & Keel, 2007) and have been associated with increased psychopathology, body weight dissatisfaction and ED severity (Ackard et al., 2011; Edler et al., 2007; Bryant-Waugh, Turner, East, Gamble, & Mehta, 2006; Dalle Grave, Calugi, & Marchesini, 2009; Tozzi et al., 2006). The number of purging behaviours used is associated with poorer self-esteem, higher levels of depression and anxiety, greater dietary restraint and more concerns about eating, shape and weight (Ackard et al., 2011; Bryant-Waugh et al., 2006; Dalle Grave et al., 2009; Tozzi et al., 2006). Purging is an unequivocal behaviour that may identify individual at risk of elevated body dissatisfaction, who may benefit from treatment directed at this entity.

The prevalence and clinical significance of body dissatisfaction have made it the most frequently assessed component of body image attitudes (Thompson et al., 1999). Thompson (1995) reported that there are close to 100 assessment measures of body image currently in use (Thompson et al., 1995). Studies of attitudinal body image have measured cognitive, evaluative, affective and behavioural elements in self-report questionnaires or structured interviews. These include body-part satisfaction inventories (Thompson, 1990; Thompson, 1996; Stice, 2001; Graber et al., 1994; Wardle, Waller, & Rapoport, 2001), body satisfaction evaluations (Johnson & Wardle, 2005; Cash & Henry, 1995), body image surveys (Annis et al., 2004; Buddeberg-Fischer et al., 1999; Frederick et al., 2007; Jacobi & Cash, 1994) and self and ideal discrepancy measures including contour-drawn silhouette scales (Jacobi & Cash, 1994; Cash & Szymanski, 1995; McKenzie, Williamson, & Cubic, 1993; Nelson & Gidcyz, 1993), body weight dissatisfaction (Matthiasdottir et al., 2012; Neighbors & Sobal, 2007) and body shape dissatisfaction (Neighbors & Sobal, 2007). The use of multiple scales measuring slightly different components of the same variable results in 'reduced reliability, ambiguity, confounded effects, untested constraints, and dimensional reduction' (Cafri, van den Berg, & Brannick, 2010; Edwards, 2002). Cafri et al. (2010) suggested that polynomial regression might overcome these limitations in the assessment of body dissatisfaction, however these analyses do not allow us to remove important confounding variables (Cafri et al., 2010).

Body dissatisfaction has been conceptualised as the discrepancy between current and desired BMI. Past studies have validated this measure as highly correlated with measures of body dissatisfaction, and highly reflective of overall body dissatisfaction especially in women (Keeton, Cash, & Brown, 1990; Williamson, Gleaves, Watkins, & Schlundt, 1993; Szymanski & Cash, 1995). The measure of BWD can be used as a simple and reproducible measure indicative of overall body dissatisfaction in women.

Existing research has not provided a comprehensive understanding of the nature or degree of body dissatisfaction amongst women with EDs compared to the general population. Past studies assessed perceptual measures of body image in small numbers of patients usually with either AN, BN or Binge Eating Disorder (BED) (Cash & Deagle, 1997; Fernandez, Probst, Meermann, & Vandereycken, 1994; Eldredge & Agras, 1996; Fernandez, Dahme, & Meerman, 1999). As yet, no studies have examined the effect of purging on body dissatisfaction. Although body dissatisfaction is a multidimensional construct, past research has mainly focussed on single components of the whole. There are no recent studies evaluating body dissatisfaction in large numbers of women with established EDs of varying subtypes and comparing them to controls.

We aim to 1) compare body dissatisfaction in women with EDs to women without EDs, to determine if body weight satisfaction occurs and 2) to assess its association with purging. We will use BWD (current minus desired BMI) as our measure of body dissatisfaction, and correlate it with other body image measures to ensure its accuracy. We hypothesise that BWD will be significantly higher in women with EDs, however it is difficult to predict how BWD might vary with the presence of purging.

Determining the degree of elevation of body dissatisfaction in women with EDs may allow us to understand its importance in the pathogenesis of these disorders. This information may assist in the identification of pathological body dissatisfaction and the development of more effective methods to improve the prevention, detection and treatment of these disorders.

2. Materials and methods

2.1. Participants and procedures

The study was performed in Northern Sydney between 2009 and 2011. Women between 18 and 55 years were selected to represent either women in treatment for a diagnosed ED (ED group) or women without a diagnosed ED (Control group) at the time of participation. The ED group contained women being treated for an ED as outpatients or inpatients at the Northside Clinic or at Royal North Shore Hospital. Clinical diagnoses of the ED group were made by psychiatrists with expertise in EDs. Patients were approached at admission to hospital and asked to participate in the study by research staff.

Women for the Control group were recruited during this period from the University of Sydney (students and staff), or from Royal North Shore Hospital (patients attending routine clinics, and academic, administrative or nursing staff). Laboratory sessions with students from the faculty of Health Sciences were attended and students asked to participate in the study by research staff. Students were given paper questionnaire which was then collected at the end of the class. Routine gynaecological clinics were also attended and all patients and staff present were asked to participate in the study. Paper questionnaires were completed during the clinic and collected upon leaving. Questionnaires were checked prior to submission to ensure completion. Refusal