The Clinical Features of Binge Eating Disorder and Bulimia Nervosa: What are the differences?

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ABSTRACT

This study compared the clinical characteristics of binge eating disorder (BED) and the related syndrome bulimia nervosa (BN) in a community sample of women. Diagnostic assessment was established by using the Eating Disorder Examination (EDE) interview. Findings suggest individuals with BED are distinguishable from those with BN on a number of traits, including higher rates of obesity and lower levels of eating concern and dietary restraint. Individuals with these different diagnoses share some important psychological and behavioural features, such as shape and weight concern. Findings are discussed in terms of the diagnostic utility of the BED category as well as treatment implications for the BED individual.

RÉSUMÉ

Cette étude compare les caractéristiques cliniques du trouble de l'alimentation excessive à celles du syndrome connexe de la boulimie telles qu'elles ont été observées chez des femmes sélectionnées dans un échantillon communautaire. Des entretiens au cours desquels a pu être utilisé l'examen des troubles alimentaires 'Eating Disorder Examination' (EDE) ont permis de parvenir à une évaluation diagnostique. Les résultats suggèrent que les individus sujets à des épisodes d'alimentation excessive sont différents, à plusieurs égards, de ceux souffrant de boulimie, notamment en ce qui concerne des niveaux plus élevés d'obésité et des niveaux inférieurs de restrictions alimentaires et d'inquiétude vis-à-vis de l'alimentation. Cependant, tous les individus, même si leursdiagnostics sont différents, partagent certains traits psychologiques et certains comportements importants, à savoir une inquiétude vis-à-vis de l'apparence et du poids. Les résultats sont présentés parl'auteur en fonction de la valeur diagnostique de la catégorie du trouble de l'alimentation excessive. L'auteur examine également les implications au point de vue du traitement des individus souffrant de ce trouble.

The relationship between bulimia nervosa (BN) and the newly proposed binge eating disorder (BED) is, as yet, not well described in the literature. This problem can be attributed partly to a lack of understanding regarding the clinical features that distinguish individuals with BED from those with BN. This problem, in turn, has implications for diagnosis, with BED currently listed as a provisional category in the Fourth Edition of the Diagnostic and Statistical Manual of Mental Disorders (*DSM-IV*) (American Psychiatric Association, 1994).

Research (Marcus, Smith, Santelli, & Kaye, 1992; Wilfley, Schwartz, Spurrell, & Fairburn, 2000) points to a crucial difference between the two groups in dietary restraint (i.e., restriction of food intake for the purpose of losing weight), with clinical bulimics reporting significantly higher levels of dietary restraint than recurrent binge eaters. With respect to similarities, preliminary data (Marcus et al., 1992; Wilfley et al., 2000) suggest comparable levels of shape and weight

concern between the two groups. In these studies, shape and weight concern refers to the degree of preoccupation or dissatisfaction with body size and weight.

To date, the few studies (e.g., Marcus et al., 1992) that have directly compared the clinical characteristics of recurrent binge eaters and bulimics tended to predate the development of the BED criteria. However, they do point to a crucial difference in dietary restraint between the two groups. Using the Eating Disorder Examination-Questionnaire (EDE-Q) (Masheb & Grilo, 2000; Wilson, Nonas, & Rosenblum, 1993) and the EDE Interview (Marcus et al., 1992; Wilfley et al., 2000), researchers have consistently found that clinical bulimics report significantly higher levels of dietary restraint than recurrent binge eaters do. These findings suggest that extreme dietary restraint is specific to the eating profile of BN when compared to BED.

One area where the above researchers have found agreement is in body image concern. Accumulating evidence suggests that women with BED are as concerned with their shape and weight as those with BN are. Comparing recurrent binge eaters to those with BN, Wilfley et al. (2000) found comparable levels of weight and shape concern in the two groups. In addition, they found that BED individuals showed higher levels of body image concern than those with anorexia nervosa (AN). In a recent investigation comparing the clinical features of sub-threshold and full syndrome BED, 68.2% of women with subthreshold BED and 79.5% of those with BED placed extreme importance on weight and shape in their self-evaluation (Striegel-Moore, Dohm, Solomon, Fairburn, Pike, & Wilfley, 2000). Studies using self-report data have also found comparable levels of shape and weight concern in obese and non-obese BED individuals, compared to bulimics, (Marcus et al., 1992; Masheb & Grilo, 2000) and in obese binge eaters as compared to obese controls (Eldredge & Agras, 1996; Wilson et al., 1993). Although the influence of weight on shape concerns is still unclear (i.e., most individuals with BED are over weight; Striegel-Moore et al., 2000), preliminary evidence suggests that having BED is partly the result of excessive focusing on eating and weight (Masheb & Grilo, 2000; Wilfley et al., 2000). Currently, the diagnostic taxonomy of DSM-IV (American Psychiatric Association, 1994) BED does not speak to extreme body image concerns, but this concern may, as in AN and BN, be a core characteristic of BED.

The results of past research comparing levels of eating concern (i.e., the degree of preoccupation with food, eating, and calories) between BED and BN groups are more variable and too few in number to draw firm conclusions. For example, while Wilfley et al. (2000) found BED individuals exhibited lower scores in eating concern than bulimic clients, Marcus et al. (1992) and Masheb and Grilo (2000) failed to differentiate those with BED from bulimic eaters on this variable. However, the self-report data from the latter two studies, and the relatively small number of participants (n = 17) in Marcus et al's. (1992) study may have prevented identification of a meaningful difference in eating concern between the groups. The three teams of researchers recommend further exploration of possible differences in eating concern, dietary restraint, and other clinical features between BED and BN groups.

The incidence of psychological symptoms in women with BN and those with BED is well documented in the literature (e.g., Ardovini, Caputo, Todisco, & Dalle Grave, 1999; Telch & Stice, 1998). However, differential rates of these symptoms between the two groups is yet undetermined. Using different versions of the Symptom CheckList (SCL - 90; Derogatis, 1977), some studies have found higher rates of psychological problems among bulimics (Ardovini et al., 1999; Brody, Walsh, & Devlin, 1994), while others have found similar levels of distress between BN and BED groups (Santonastaso, Ferrara, & Favaro, 1999). The discrepant findings may result from differences between clinical and community-based samples or from inconsistencies in the criteria used to define BN and BED. Differences in symptom severity may also explain some of the discrepancies in past findings. Clearly, more data is needed.

This study replicates and extends previous research in two important ways. First, past research has focused almost exclusively on clinical samples from hospital or weight-loss settings, even though the majority of individuals with eating disorders do not seek treatment (Striegel-Moore et al., 2000). Thus, it is unclear whether individuals from the general population differ in presentation from those seeking treatment. A contribution of the current study was to compare a community-based sample of individuals with BED, BN, and a control group on a wide range of clinical features and behaviours. Secondly, past research has used surveys to define cases, though this method has been shown to have limited reliability and validity in identifying key eating disorder behaviours such as binge eating (Wilfley, Schwartz, Spurrell, & Fairburn, 1997). Consequently, in the present study, all eating disorder classifications were established using the EDE interview, the current "gold-standard" diagnostic instrument for eating disorders (Wilson, 1993).

In summary, this study had four main aims: (a) to contribute empirical data regarding the clinical features of a community-sample of women with BED, (b) to differentiate the clinical features especially common among individuals with BED from those of individuals with BN, (c) to use the collected information to assess whether BED should be recognized as a distinct eating disorder, and (d) to suggest effective treatments.

An exploration of treatment seeking history (past and present) was also undertaken, since little is known about treatment utilization among those with BED. Thus, in this study, participants were asked if they were currently receiving, or had ever sought, treatment for their eating disorder.

METHOD

Recruitment and Procedure

Participants were recruited by printed advertisements in notices posted throughout the community, local newspapers, and on a televison channel. The ads invited women aged 18 and over, who may or may not have a problem with overeating or binge eating, to participate in a study on eating and weight control

behaviours. Respondents phoned the researcher and were mailed a demographic questionnaire and the EDE-Q (Fairburn & Beglin, 1994).

Those whose responses on the EDE-Q indicated that they might have BN or BED were invited to a diagnostic interview within two months of returning the EDE-Q. All eating disorder diagnoses were established using the EDE interview (Fairburn & Cooper, 1993) given by a graduate student trained extensively in its use. Following the interview, participants completed the Brief Symptom Inventory (BSI). The non-eating disordered controls were similarly recruited based on their EDE-Q responses, and then completed the EDE and BSI.

Exclusion criteria for all three participant groups were the following: failure to complete both the questionnaire set and EDE interview; current physical or medical condition that could affect eating or weight (pregnancy, diabetes, or thyroid dysfunction); use of medication known to affect eating or weight such as appetite suppressants (only participants stable on antidepressants for at least one month were eligible); and being 17 years of age or younger.

Participants

In the DSM-IV (American Psychiatric Association, 1994), the diagnostic cutoff point for BN and BED is two binge eating episodes per week for the preceding three and six months, respectively. These cutoff points are arbitrary. Analyses comparing BN and BED individuals who binge eat a minimum of twice per week versus once per week indicate that the groups are not qualitatively different (Garfinkel, Lin, Goering, Spegg, & Goldbloom,1995; Kruger, Shugar, & Cooke, 1996; Streigel-Moore et al., 2000; Sullivan, Bulik, & Kendler, 1998; Wilson et al., 1993). Consequently, a minimum cutoff point of one binge eating episode a week (preceding three or six months) was used.

Of the final sample of 95 participants who met eligibility criteria, 30 were diagnosed with BN, 35 with BED, and 30 as controls. An individual was defined as bulimic if she reported engaging in objective binge eating, coupled with purgative behaviours, at least once a week for the past 3 months. Objective binge eating was characterized by both of the following: (a) the consumption of a large amount of food, given the circumstances, within any two-hour period, and (b) a sense of lack of control or feeling that one cannot either refrain from eating, or stop once started (DSM-IV, American Psychiatric Association, 1994). Compensatory behaviours could include self-induced vomiting, laxative or diuretic abuse, fasting, excessive exercise, or extreme dietary restraint. Exercise was defined as excessive if it significantly interfered with daily activities, was done at inappropriate times of the day (e.g., middle of the night), or done despite injury (DSM-IV, American Psychiatric Association, 1994). Dietary restraint was extreme if food consumption amounted to less than 600 calories per day.

An individual was classified as binge-eating disordered (BED) if she exhibited episodes of objective binge eating, without recurrent compensatory behaviours, at least once a week over the past 6 months. An individual was not excluded if she reported infrequent (i.e., less than once a week) compensatory behaviours.

Women in the control group had no past or current sub-threshold or full eating disorder. Currently suicidal or thought disordered women were also excluded. Women who occasionally diet or overeat, or have some concern with their body shape and weight were not excluded from the control group since it is common for women in Western society to have these concerns (Brown & Jasper, 1993).

Instruments

Demographic variables included age, level of education, and marital status. For data analyses, three education levels were used: high school or less; college graduate; and university graduate or more. Marital status was collapsed into three categories: unmarried; married; and no longer married, which included those who were separated, divorced, or widowed.

Body mass index (BMI) was calculated based on self-reported height and weight [weight(kg)/height(meters squared)]. Research has shown that self-reported heights and weights in women with BN and BED are valid for use in studies (Doll & Fairburn, 1998; Masheb & Grilo, 2001). A BMI of 30 was used as a cutoff for obesity (NHLBI Obesity Taskforce, 1998).

The EDE-Q is a 38-item questionnaire for screening eating disorder cases in community samples (Fairburn & Beglin, 1994). It focuses on eating behaviour and attitudes toward body shape and weight for the previous four weeks and has been shown to have good reliability and validity (Fairburn & Beglin, 1994; Wilfley et al., 1997).

The EDE interview (Fairburn & Cooper, 1993), which as been established as reliable and valid (for a review see Fairburn & Cooper, 1993; Williamson, Anderson, Jackman, & Jackson, 1995) provides a detailed description of eating habits and attitudes over the last 3 months. It consists of four subscales (Dietary Restraint, and Eating, Weight, and Shape Concern) and identifies any features or history of an eating disorder to allow control classification. Questions were added to allow a BED diagnosis (requiring information for the preceding 6 months, *DSM-IV*, American Psychiatric Association, 1994).

The Brief Symptom Inventory (BSI, Derogatis, 1975) was administered as a general index of psychological functioning. The empirically validated (Derogatis, 1975), 53-item self-report inventory, examines the extent to which the respondent was bothered by various symptoms during the past seven days. Each item is scored on a 5-point scale from 0 (not at all) to 4 (extremely). The nine subscales of the Inventory are somatization, obsessive-compulsiveness, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid tendencies, and psychoticism.

RESULTS

Data Analysis

Categorical data were compared using the Chi-Square statistic, and multiple group comparisons were performed using an analysis of variance (ANOVA) pro-

cedure followed by post hoc t tests for mean differences between groups. Threshold for statistical significance was set at p < 0.01 due to the numerous analyses conducted.

Demographic Variables

The BED individuals were significantly older (M = 38.27, SD = 9.95) than the bulimics (M = 26.55, SD = 7.89) and controls (M = 30.53, SD = 11.66), F(2,89) = 11.18, p < .001. There were no significant differences in age between the BN and control groups. The three groups did not differ in educational attainment, $\chi^2(4) = 9.02$. p = .061, or marital status, $\chi^2(4) = 8.47$, p = .076. The sample ethnicity identifications were Caucasian (93.7%), Asian (4.2%), and East Indian (2.1%).

Body Weight and Percent Overweight

Significant group differences were found for BMI, F(2,90) = 16.08, p < .001. Planned univariate comparisons indicated that the BN women (M = 24.97, SD = 6.02) and controls (M = 24.48, SD = 5.42) did not differ in mean BMI; both groups fell within the normal range (20 - 25) (Garrow, 1983). In contrast, BED individuals had significantly higher BMI's (M = 32.10, SD = 6.58) than women with BN or controls. Their mean BMI fell within the obese range (BMI > 30; Garrow, 1983).

An association between binge eating and obesity was supported. Obesity was found to be significantly more common among women with BED (n = 23, 67.6%) than among bulimics (n = 5, 17.2%) and controls (n = 7, 23.3%), χ^2 (1) = 16.11, p < .001; χ^2 (1) = 12.57, p < .001, respectively. Bulimics and controls did not differ in rates of obesity. One-fifth of the BED sample was of average weight (20 - 25) (Garrow, 1983).

Desired Body Weight

All groups desired to weigh less than they currently did. The BN group wanted to weigh significantly less (M = 20.49), SD = 2.10), F(2,89) = 9.22, p < .001, than both the BED cases (M = 22.96, SD = 2.18) and controls (M = 21.94, SD = 2.46), who did not differ from one another in desired weights. All group's desired weight was within the normal range, though the bulimic's bordered on below normal.

Key Eating Disorder Behaviours

The BN group reported a mean number of 13.83 (SD = 13.54) objective binge episodes a month over the three-month period preceding the interview. In comparison, women with BED reported a mean number of 10.16 (SD = 5.99) episodes per month. The nonsignificant difference between the groups indicates that they demonstrate comparable symptom severity. Thirty women with BED

(85.7%) reported extreme concern with weight and shape (a rating of 4 or more on the EDE items addressing the importance of shape and weight in the individual's self-evaluation) a diagnostic criterion for BN.

The BN group had significantly more episodes of compensatory behaviors (vomiting, laxative abuse, excessive exercise, fasting, or extreme dietary restraint) per month (M = 15.62, SD = 12.97) than the BED group. Compensating for binge eating was virtually absent (M = 0.26, SD = 0.80), t (61) = 6.90, p < .001, in the BED group.

In view of the large standard deviation values found for the bulimic's mean number of binging and purging episodes, a Mann Witney U test was conducted to see if the median would be more useful. No significant differences between the BN and BED groups were found in binging severity whether the mean or median was used, indicating that the mean was an approriate measure to use.

Comparison of EDE Interview Subscale Scores Across Groups

Table 1 presents the means and standard deviations for the four subscales of the Eating Disorder Examination Interview across groups. A series of analyses of variance (ANOVAs) were conducted to examine potential group differences in EDE subscale scores. Significant F values for the four subscales were the following: Restraint, F(2,92) = 32.42, p < .001; Eating Concern, F(2,92) = 41.75, p < .001, Weight Concern, F(2,92) = 50.22, p < .001; and Shape Concern, F(2,92) = 58.89, p < .001. Planned univariate comparisons revealed two notable group differences. First, both the BN and BED groups evidenced significantly more eating disturbance on all four EDE subscales than did the controls. Second, in comparison to BN participants, BED individuals displayed significantly lower scores on the Restraint and Eating Concern subscales, but comparable scores of Weight and Shape Concern.

TABLE 1

Means and Standard Deviations for the Eating Disorder Examination Interview Subscale Scores

| Subscale | BN M(SD) | BED M(SD) | Controls <i>M(SD)</i> | P |
|-------------------|-------------|--------------|--------------------------|-------|
| Dietary Restraint | 2.92 (1.67) | 1.65 (1.48) | .178 (.43 | <.001 |
| Eating Concern | 2.78 (1.46) | 1.69 (1.21) | .167 (.27) | <.001 |
| Weight Concern | 3.64 (1.4) | 3.32 (1.39) | .783 (.72) | <.001 |
| Shape Concern | 4.11 (1.01) | 3.45 (1.4) | 1.10 (.88) | <.001 |

Note: BN=Bulimia Nervosa; BED=Binge Eating Disorder.

The multivariate analysis was then repeated, with BMI as a covariate. The results remained unchanged, indicating that the group differences in eating

disturbance were not due to differences in BMI. Four analyses of covariance (ANCOVA's) were performed on the three participant groups (BN, BED, controls) using the subscales of the EDE as the dependent variables and BMI as the covariate. The hypothesis of equal slopes was accepted for all four analyses, ensuring ANCOVA was an appropriate model for the current data.

History of an Eating Disorder

Individuals in the BN group were significantly more likely to have a history of AN (5 of 30; 16.7%) than individuals in the BED group (none or 0%), χ^2 (1) = 6.32, p = .012). Although more than half of the BED participants (n = 19 of 35; 54%) had induced vomiting or abused laxatives in the past, only 6 (17%) had purged at a frequency to warrant a past diagnosis of BN (as defined in *DSM-IV*, American Psychiatric Association, 1994). Of these individuals, four met criteria for purging and two for nonpurging BN. Three (10%) BN participants had a history of BED.

Associated Psychological Symptoms

Significant group differences in level of psychological symptoms were found, F(2,92) = 14.82, p < .001. As expected, women with bulimia and those with BED both showed significantly more psychological symptoms (M = 1.32, SD = 0.83; M = 1.03, SD = 0.67) than did the controls (M = 0.42, SD = 0.37).

Table 2 illustrates the BSI subscale scores for the three subject groups. The mean values for BN individuals were significantly greater than controls on every subscale. Participants with BED obtained significantly greater mean values than controls on six of the nine subscales (obsessive-compulsiveness, interpersonal-sensitivity, depression, anxiety, paranoid ideation, and psychoticism). The BN individuals showed higher values on six of the nine subscales than those with BED, however the differences were not significant. Women with BED appear to be at similar risk for psychological symptoms as women with BN.

Treatment for an Eating Disorder

No significant differences in the use of anti-depressant medication were found between the three subject groups.

Currently receiving psychotherapy for an eating disorder was uncommon in both clinical groups, but particularly so for the BED cohort: only one (of 35; 2.9%) woman with BED and four (of 30; 23.3%)with BN were currently in psychotherapy for an eating disorder. Consistent with this pattern, 40% of the remaining bulimics and 5.7% of those with BED had received treatment for their eating disorder in the past. Bulimics were more likely to have been in treatment (past or present) than BEDs, χ^2 (1) = 11.81, p = .001.

TABLE 2

Means and Standard Deviations for the Brief Symptom Inventory Subscale Scores
Across Groups

| Subscale | BN M(SD) | BED M(SD) | Controls M(SD) | p |
|-------------------|-------------|--------------|-------------------|-------|
| Somatization | 0.97 (.82) | 0.62 (.65) | 0.37 (.40) | .002 |
| Obsessive- | | | | |
| Compulsiveness | 1.65(1.12) | 1.50 (.99) | 0.71 (.60) | <.001 |
| Interpersonal- | | | | |
| Sensitivity | 1.89(1.16) | 1.45 (.87) | 0.47 (.65) | <.001 |
| Depression | 1.72(1.05) | 1.42 (.94) | 0.43 (.63) | <.001 |
| Anxiety | 1.24 (.84) | 0.98 (.73) | 0.44(.48) | <.001 |
| Hostility | 1.11 (.74) | 0.89 (.87) | 0.53 (.63) | .015 |
| Phobic Anxiety | 0.79 (.92) | 0.52 (.81) | 0.14 (.22) | .003 |
| Paranoid Ideation | 1.10 (.96) | 1.05 (.88) | 0.35 (.53) | .001 |
| Psychoticism | 1.36(1.09) | 0.98 (.79) | 0.26 (.44) | <.001 |
| | | | | |

Note: BN=Bulimia Nervosa; BED=Binge Eating Disorder.

DISCUSSION

The main purpose of the study was to provide insight into the specific behaviours and cognitions of BED, as compared to BN, in order to gain a better understanding of the essence of the disorder. A second aim was to use the collected information to support (or refute) BED's differential diagnosis, as well as to improve available treatment modalities for recurrent binge eating. The results are consistent with the idea that individuals with BED are distinguishable from those with BN by a number of central traits, but that the two different diagnoses do share important psychological and behavioral features. Further, the results suggest that individuals with BED are distinguished from individuals with BN in age, comorbid obesity, desired weight, dietary restraint, and eating concern. Also, recurrent binge eaters appear to share with bulimics their current levels of psychological symptoms and shape and weight concern. These clinical characteristics are remarkably similar to those reported in studies using clinical samples (e.g., Wilfley et al., 2000), and thus extend previous findings to include community cases. Together, these results support identifying BED as a distinct eating disorder.

The eating disorder pattern data place BED individuals in a middle position between BN and controls, but closer to BN than to the controls. BED individuals displayed significantly higher scores on all four EDE subscales than controls

and exhibited significantly lower scores on two of the four subscales than those with BN did. These findings are consistent with those in the literature using clinical samples (e.g, Wilfley et al., 2000). Again, differences previously observed in the eating profiles between BED and BN are likely to be accurate.

The two areas of eating disorder symptomology that differentiated women with BED from those with BN were dietary restraint and eating concern, with bulimics showing higher scores in both areas. This finding provides additional support for the hypothesis that extreme dietary restraint is specific to the eating disorder profile of BN individuals when compared to BED. Replication in other community samples may provide further support that this trait is an important discriminating factor between the two diagnoses. Notably, the BED group, and the controls, reported a desired BMI within the normal range, whereas the bulimic's desired weight was on the cusp of below normal. These results are consistent with research data that show that bulimics have a thin body ideal, and provide support for Raymond, Mussell, Mitchell, deZwaan, and Crosby's (1995) finding that BED individuals are better able to determine a realistic, healthy body size than bulimics are.

In conjunction with prior findings, the current results suggest that extreme shape and weight concern are salient aspects of cognitions in BED as well as in BN, and are experienced to the same extent in both groups. In those with BED, self-evaluation appears to be unduly influenced by body shape and weight, a diagnostic criteria for BN. Although these results should be interpreted with caution until they can be replicated in other community samples, they may have important implications for the *DSM-IV* (American Psychiatric Association, 1994) model of BED. They show that, consistent with past research (Marcus et al., 1992; Masheb & Grilo, 2000; Striegel-Moore et al., 2000; Wilfley et al., 2000; Wilson et al., 1993) preoccupation with body image should be included as a diagnostic criterion for BED.

Although significant group differences in binge eating severity were not found, it is important to note that the standard deviation values for the bulimics were quite large. This pattern suggests there was considerable individual variability among the BN participants in binge eating and purging frequency. The binge frequency data was not as dispersed for the BED group. The BN individuals appear to form a heterogeneous group, including individuals with binge and purging behaviours of varying severity.

When group differences in body weight were examined, the link between obesity and binge eating was supported. Obesity was significantly more common among women with BED than among BN and control women. This pattern is well documented in clinical samples (e.g., Wilfley et al., 2000). The current study extends this association to include BED individuals who are not in treatment, suggesting that the link is not a reflection of referral bias but a valid trait of the disorder.

The extent to which being over weight influences eating disorder traits is not easily determined. The comparable levels of shape and weight concerns among

the two eating disorder groups (after adjusting for differences in BMI) suggest that these preoccupations among BED individuals are at least partly due to having BED, and not solely due to increased weight. This finding supports the recent research of Eldredge and Agras (1996) and Wilfley et al. (2000) who found overconcern with body shape and weight among those with BED to partially reflect unhealthy attitudes towards eating, shape, and weight. Past research includes few attempts to study an average-weight BED group. An exception is the study by Masheb and Grilo (2000), which found that obese and non-obese BED individuals demonstrated comparable levels of eating, shape, and weight concern. However, conclusions draw from this study are tentative, since a self-report inventory was used to study the clinical features of the participants. Future studies that compare obese and average weight binge eaters are needed to clarify the influence of weight status on unhealthy eating behaviours, since a significant minority (roughly 20%) of the BED sample had never been over weight. Where recruitment in other studies was not limited to obese BED individuals, a significant proportion are not overweight. For example, as Streigel-Moore et al. (2000) note, as much as 39% of their sample were not obese. Are there, then, important differences in clinical profiles between obese and non-obese BED individuals? Similarly, how do these average weight binge eaters differ from those with BN? Clinical evaluation of a large number of average-weight BED individuals using structured interviews is necessary to answer such questions.

Individuals with BED and BN demonstrated higher levels of additional psychological symptoms than those who are not eating-disordered in this study. However, associated symptoms failed to distinguish between the two eating disorder groups; whether a woman binges or binges along with purging is not associated with different levels of current psychological distress. This lack of difference may reflect a true similarity in psychological features between the two groups, but could also be due to the sample size, which may have lacked sufficient statistical power to detect meaningful differences between the groups. A closer examination of the psychological symptom patterns indicated that the BN group scored higher on all BSI subscales than the BED group, though this difference was not statistically significant. Some past comparisons of BED groups with BN clients have found higher rates of symptoms among bulimics (Brody et al., 1994) while others have found similar levels of psychological distress (Santonastaso et al., 1999). As it stands, the question of whether BN and BED individuals differ in concurrent symptoms is left unanswered. Future studies should examine the associated psychological profiles of BED and BN groups with larger samples and structured interviews.

Consistent with previous research (e.g., Striegel-Moore, Leslie, Petrill, Garvin, & Rosenheck, 2000), many individuals in the current study, especially those with BED, had not received treatment. Why this is so also needs further study. The difference may reflect a lack of knowledge among binge eaters and their belief that their eating behaviours are more than a weight problem. Also,

while BN has become generally well-known in both the cultural and medical arenas, comparatively few individuals (both lay and professionals) may be aware of the newly proposed BED diagnosis and its clinical profile. A recent investigation of prognostic variables for BN indicated that early treatment was essential in preventing a chronic disorder (Reas, Williamson, Martin, & Zucker, 2000). This finding may also be true for BED. Disseminating knowledge to lay and professional persons about BED may be one way to reduce the obstacles to appropriate, timely treatment.

Counselling Implications

The results from the present investigation suggest implications for the assessment and treatment of overweight BED individuals.

Assessment. It will be important for the counsellor to assess the presence and nature of dieting habits (past and current), concerns over eating and food, and beliefs about the importance of weight and shape in self-worth. Self-monitoring in the form of daily food intake records is one way for the counsellor to gather detailed information on the client's eating behaviour and attitudes. Self-monitoring may also provide insight into the emotional and behavioural factors that trigger and maintain binge eating. Also, given the high rate of BED among obese individuals, it would seem fitting for the counsellor to assess for the presence of binge eating whenever a client expresses weight-related concerns.

Treatment. As Wilfley et al. (2000) emphasize, in addition to weight reduction, treatment should be directed toward decreasing concern with body size and weight. This is very different from the treatment of normal-weight BN, where one outcome is to help the client recognize and accept a realistic, healthy body size, and at the same time to eliminate dietary restraint behaviours. Treatment suggestions for the counsellor to help the BED client develop a healthy and positive attitude toward her body include: (a) identifying and challenging beliefs about the importance of body size and weight in self-worth, (b) exploring society's view, and the individual's, of the ideal female body and accompanying prejudices against obesity, (c) identifying the emotional uses of food, (d) elimiating behaviours and situations that foster body-disparaging thoughts, such as repeated weighing, and (e) improving self-esteem by focusing on abilities not associated with body size.

BED counselling also needs to address the client's overweight status. The present findings and previous research (Striegel-Moore et al., 2000; Wilfley et al., 2000), suggest women with BED are highly concerned about, yet ineffective in controlling, their weight. Providing nutritional counselling, helping the client be more tolerant of moderate weight-loss, encouraging the development of an exercise routine, and identifying hunger and satiety cues may help the client lose weight and develop healthier eating habits.

Due to the elevated rates of psychological symptoms among BED individuals, therapeutic interventions aimed at reducing these symptoms, such as depression

and anxiety, may be advisable. Understanding how these problems are associated with binge eating, and whether they are a major problem on their own, may be important to arriving at the best approach for counselling.

Limitations

Limitations of the study should be noted. The results and conclusions drawn from this study are first limited by the relatively small sample size (n = 95). The resulting decrease in statistical power limited the ability to detect small, but potentially meaningful, differences between the participant groups. A second methodological limitation existed in the BED group being significantly older than the BN participants. A case-control design with participants matched for age would be preferable. Third, because the BED group had a significantly higher BMI than the control and BN groups, the ability to assess the impact of overweight on BED eating disturbance was limited. Future studies must compare overweight and average weight BED individuals with an overweight control group.

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