State Self-Esteem Ratings in Women with Bulimia Nervosa and Bulimia Nervosa in Remission

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ABSTRACT

Objective: Bulimia nervosa (BN) is associated with low self-esteem. This study was designed to assess whether low self-esteem persists in nondepressed individuals who have recovered from BN (BN-R).

Method: Study groups included BN (n = 22), BN-R (n = 20), and healthy controls (n = 42). Participants were medication-free, and none met criteria for current major depression. Assessment instruments included the State Self-Esteem Scale (SSES), a self-rating scale designed to measure state-related changes in self-esteem.

Results: Consistent with previous reports, SSES scores for BN were lower than for controls (p < .001). For BN-R, SSES scores were higher than for BN (p < .001), but lower than for controls (p < .025). For BN-R, scores on the SSES Appearance subscale were inversely correlated with ratings of dietary restraint (p < .005).

Conclusion: This study provides new evidence for persistent low self-esteem following recovery from BN. Follow-up studies are needed to assess whether low self-esteem contributes to recurrent dieting and risk for relapse. © 2007 by Wiley Periodicals, Inc.

Keywords: bulimia nervosa; self-esteem; eating disorders; symptom patterns; depression; remission; SSES

Introduction

Several studies have reported low self-esteem in individuals with bulimia nervosa (BN).1–5 In this patient group, self-esteem is greatly influenced by negative personal perceptions related to body weight and shape, as reflected in the diagnostic criteria for BN.6 Low self-esteem is thought to be a possible important risk factor for the development of BN.7–9

Treatment and follow-up studies of BN showing decreased frequency of binge eating and purging symptoms have generally demonstrated a concomitant improvement in ratings of self-esteem.10–12 Additionally, baseline self-esteem may serve as a predictor of treatment response in BN.13,14 This predictive relationship has not, however, always been apparent,15 perhaps in part due to variability in type and duration of interventions.

Depression is commonly associated with a reduction in self-esteem.5,16,17 This is of particular relevance to the study of patients with BN, who are likely to experience comorbid mood symptoms during active illness.6,18 Thus, an initial study showed that in a mixed group of patients with anorexia nervosa (AN) and BN, self-esteem was significantly lower for 14 patients who met rating scale criteria for depression than for 29 patients who were rated as not depressed. In this preliminary study, self-esteem for the nondepressed patient group was lower than literature values for a normal population.19 In the treatment studies, response has commonly been associated with a substantial decrease in ratings of depression, raising the possibility that improved self-esteem is associated with improved mood.

Recently there has been interest in studying residual symptom patterns in individuals who have achieved stable recovery from an eating disorder. It has been postulated, for example, that residual symptoms of anxiety or obsessive–compulsive
characteristics may increase the risk for relapse. To date, there is little information on the extent to which nondepressed individuals who have recovered from BN have residual deficits in self-esteem in comparison to healthy controls.

Focusing on participants free of current major depression, the goal of the current study was to evaluate self-esteem in individuals who had recovered from BN, based on comparison to patients with active symptoms and to healthy controls. Self-esteem in patients with eating disorders has commonly been measured with the Rosenberg Self-Esteem Scale (RSES), which requests respondents to indicate level of agreement with, “a list of statements dealing with your general feelings about yourself.” Because ratings on the RSES assess a trait-related characteristic, and given our focus on self-esteem ratings associated with discrete clinical states of illness and remission, we utilized the State Self-Esteem Scale (SSES), an instrument designed to focus on current state and to detect change over time.

Method

Participants

State self-esteem ratings were available from women participating in studies of neurotransmitter function reviewed and approved by an Institutional Review Board. Study participants were recruited through local newspaper and bulletin board notices, while patients with BN were also recruited through local psychiatric outpatient programs. All participants gave informed written consent prior to study participation.

During the study screening visit, a trained interviewer administered the Structured Clinical Interview for DSM-III-R or DSM-IV Axis I Disorders, including the eating disorders module. Participants included 22 women who currently met criteria for BN, and 20 women with a history of BN who had no longer met criteria for the disorder for a minimum period of 6 months (BN-R). Two additional participants who met initial criteria for syndromal remission of BN reported sporadic binge eating and purging episodes on up to three occasions over the previous 6 months. Based on more conservative criteria for illness remission, results are reported for the 20 individuals who had complete abstinence from binge eating and purging for at least 6 months prior to study. The patient groups had no history of major depression during the 6 months prior to study. The control group included 42 women who reported no current dieting behaviors and were free of current or past history of an eating disorder, major depressive episode, or other Axis I major psychiatric disorder. All participants were in a normal weight range for 6 months prior to study and were free of psychotropic medications for at least 6 weeks.

Procedure

State self-esteem was measured at baseline using the SSES, a 20-item 5-point Likert scale with three subscales (performance, social, and appearance) derived from ratings obtained from college students. On the SSES, lower scores reflect lower self-esteem. Psychometric characteristics of the SSES and the relationship of subscale scores to other measures of self-esteem have been previously reported. Thus, the performance subscale is associated with measures of global self-esteem, trait anxiety, and depression; the social subscale assesses public image self-consciousness; and the appearance subscale focuses on perceptions body size estimation and physical appearance. Other baseline descriptive measures of eating behavior were obtained using the 26-item Eating Attitudes Test (EAT), and dietary restraint as assessed by the Restraint Scale. Symptoms of depression were assessed using the self-rated Beck Depression Inventory (BDI), and state anxiety was assessed using the Spielberger State-Trait Anxiety Inventory. Average frequencies of binge eating and self-induced vomiting during the previous 4 weeks in the BN group were assessed by interview, and body height and weight were recorded to calculate body mass index (BMI; kilograms/meters²).

Data Analysis

Group results are presented as mean ± standard deviation. Variables not normally distributed (as assessed by the Shapiro Wilk Test) were transformed prior to statistical analyses. Nonparametric tests were used for analyses involving participant age, ratings on the EAT, and depression scores on the BDI. Differences in group means for descriptive and outcome variables were assessed by analysis of variance or by Kruskal–Wallis/Mann-Whitney tests. Post hoc comparisons between participant groups were based on Bonferroni-adjusted p values, which are reported in the text and the tables. A two-tailed significance level of p = .05 was used for groupwise comparisons. Relationships between variables were assessed by Pearson product moment correlation (r) or, for variables not normally distributed, the Spearman rank order correlation (r_s). Because multiple exploratory correlational analyses were performed, significance level of p = .005 was applied to these tests.

Results

Table 1 compares characteristics for study participants. Groups were matched for BMI (F(2,81) = .95, p = ns). The BN and control groups were
TABLE 1. Subject characteristics

<table>
<thead>
<tr>
<th></th>
<th>Bulimia Nervosa</th>
<th>Bulimia Nervosa Remitted</th>
<th>Controls</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n = 22)</td>
<td>(n = 20)</td>
<td>(n = 42)</td>
</tr>
<tr>
<td>Age (years)</td>
<td>23.2 ± 4.5a</td>
<td>27.3 ± 6.1b</td>
<td>22.5 ± 3.2a</td>
</tr>
<tr>
<td>BMI (kg/m²)</td>
<td>22.7 ± 1.5</td>
<td>22.3 ± 1.4</td>
<td>22.3 ± 1.9</td>
</tr>
<tr>
<td>Restraint Scale</td>
<td>25 ± 5.5</td>
<td>16 ± 4.3</td>
<td>8 ± 4.1</td>
</tr>
<tr>
<td>EAT</td>
<td>32 ± 10b</td>
<td>9 ± 10</td>
<td>2 ± 1.5</td>
</tr>
<tr>
<td>BDI</td>
<td>8 ± 8c</td>
<td>2 ± 2.5</td>
<td>0.3 ± 1.4</td>
</tr>
<tr>
<td>STAI-State</td>
<td>36 ± 10d</td>
<td>33 ± 7</td>
<td>29 ± 7b</td>
</tr>
<tr>
<td>Binge eating (episodes per week)</td>
<td>6 ± 5</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Self-induced vomiting (episodes per week)</td>
<td>7 ± 6</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

Note: Mean ± standard deviation.
The difference between results labeled with the same superscript letter reached the following Bonferroni-adjusted levels of statistical significance: *p < .001; †p < .01.

matched for age (U = 457, p = ns). Women in the BN-R group were slightly older than the control group (U = 180, p < .001). Measures of dietary restraint, eating psychopathology, depression, and state anxiety were significantly higher for BN in comparison to controls. All symptom ratings except state anxiety scores were significantly lower for BN-R in comparison to BN (Table 1). As noted earlier, eligibility for the BN-R group included a minimum 6-month period of remission, defined as the time period since participants most recently met diagnostic criteria for BN. The average time interval since these individuals most recently met criteria for BN was 80 ± 48 months. Age was significantly correlated with the duration of remission in BN-R participants (r = .72, p < .001), and BMI was significantly correlated with score on the Restraint Scale for the controls (r = .61, p < .001), but neither age nor BMI was significantly correlated with any other descriptive variable or rating score in any of the three participant groups.

For the BN group, SSES total score and all three subscale scores were significantly lower than values for the controls (Table 2). For the BN-R group, SSES total scores were significantly lower than for controls, but significantly higher than for participants with BN. Analysis of SSES subscale scores showed that for BN-R, the appearance subscale and social subscale were significantly lower than control values. Conversely, the BN-R group demonstrated significantly higher scores on all three SSES subscales in comparison to the BN group.

For the BN group, SSES total score was not significantly correlated with dietary restraint, EAT score, or state anxiety (Table 3). SSES total scores were significantly inversely correlated with scores on the BDI. Exploratory correlational analyses for the SSES subscales revealed a significant inverse correlation between the social subscale and depression. SSES scores were not significantly correlated with frequency of binge episodes or self-induced vomiting.

For the BN-R group, the SSES total score was not significantly correlated with dietary restraint, depression, state anxiety, or EAT score. Exploratory correlational analyses for the SSES subscales revealed that the appearance subscale had a significant inverse correlation with restraint (r = −.62, p < .005) (Fig. 1). SSES scores were not significantly correlated with the duration of remission.

Conclusion

The results of this study are consistent with previous reports showing reduced self-esteem in BN,
and extend the findings to a patient group free of concurrent major depression. As would be anticipated, symptoms of depression on the BDI were still significantly elevated for participants with BN in comparison control values, and showed the expected inverse correlation with self-esteem scores. Self-esteem scores were not significantly correlated with participants’ frequency of binge eating and self-induced vomiting. As previously suggested, low self-esteem in BN may be more directly associated with other variables such as dissatisfaction with body shape and weight.

Most studies of self-esteem in BN have employed the Rosenberg Scale, which provides a global self-rating of trait self-esteem, encompassing such dimensions as personal worth and social competence. State self-esteem scores on the SSES are likely to be particularly useful when evaluating changes associated with treatment interventions or experimental conditions in the study of eating disorders. A previous study of state self-esteem showed low scores on the SSES (47 ± 3) in a mixed group of patients with BN, AN, and eating disorders not otherwise specified. In comparison to this previous report, the current study found slightly higher SSES ratings (59 ± 14) for a sample limited to participants with BN who were free of concurrent major depression. SSES scores for control participants in the current study were comparable to previously reported scores for a college age population and controls characterized as unrestrained eaters.

A notable new finding in the current study is that for individuals who had achieved sustained remission from BN and were free of major depression, self-esteem remained low in comparison to healthy controls. Although not observed in the present data, future studies with larger sample size may show a relationship between duration of remission and improved self-esteem. Consistent with previous studies of patients recovering from BN, self-esteem ratings for the BN-R group were significantly higher than for participants with current symptoms of BN.

Although exploratory, the significant inverse correlation between the SSES appearance subscale and restrained eating in the BN-R group is of note. In a previous study of college women, state self-esteem partially mediated the relationship between externalized self-perception and weight and shape concern, which then mediated the relationship between self-esteem and dietary restraint. Results of a study including participants with BN in remission suggested that psychological symptoms such as disturbed body preoccupation and fear of gaining weight are among the last to abate in the recovery process. Thus, while state self-esteem itself may improve with recovery, the relationship with body preoccupation and fear of weight gain may influence vulnerability for relapse.

Although longitudinal relationships were not examined in this cross-sectional study, results suggest the importance of developing treatment interventions for BN that target specific domains of state self-esteem. Thus, inclusion of the SSES in future longitudinal studies may help to elucidate the possible influence of self-esteem on course of illness and treatment adherence and response. Additionally, persistent low self-esteem following remission of symptoms of binge eating and purging behaviors may play a role in clinical relapse. Yet to be explored is the predictive value of the SSES in risk for the disorder and use for early identification and intervention.

Several limitations of the current study should be noted. While none of the participants met diagnostic criteria for major depression at the time of study, depression ratings in the BN group were substantially elevated in comparison to ratings than for the controls. Additionally, depression ratings in the remitted participants showed a modest but statistically significant elevation in comparison to control values, similar to previous findings. While larger than previous reports evaluating SSES ratings in BN, the study has a relatively small sample size, and the use of a convenience sample of participants recruited to participate in biobehavioral studies may limit the generalizability of findings.
In conclusion, this study demonstrated low state self-esteem ratings in participants recovered from BN who were free of concurrent major depression. Additional cross-sectional and longitudinal follow-up studies are needed to clarify whether low self-esteem contributes to the risk of relapse for individuals who have recovered from BN.

References