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Chronic Dieting Among Extremely Obese Bariatric Surgery Candidates

Megan Roehrig,

Department of Psychiatry, Yale University School of Medicine, 301 Cedar St., 2nd Floor, P.O. Box 208098, New Haven, CT 06520, USA, megan.roehrig@yale.edu

Robin M. Masheb,

Department of Psychiatry, Yale University School of Medicine, 301 Cedar St., 2nd Floor, P.O. Box 208098, New Haven, CT 06520, USA

Marney A. White,

Department of Psychiatry, Yale University School of Medicine, 301 Cedar St., 2nd Floor, P.O. Box 208098, New Haven, CT 06520, USA

Bruce S. Rothschild,

Saint Francis Hospital and Medical Center, Hartford, CT, USA

Carolyn H. Burke-Martindale, and

Saint Francis Hospital and Medical Center, Hartford, CT, USA

Carlos M. Grilo

Department of Psychiatry, Yale University School of Medicine, 301 Cedar St., 2nd Floor, P.O. Box 208098, New Haven, CT 06520, USA

Department of Psychology, Yale University, New Haven, CT, USA

Abstract

Background—Extremely obese bariatric surgery candidates report numerous episodes of both successful and unsuccessful dieting attempts, but little is known about the clinical significance of frequent dieting attempts in this patient group.

Methods—The current study examined psychological and weight-related correlates of self-reported dieting frequency in 219 bariatric surgery candidates (29 men and 190 women). Prior to surgery, patients completed a battery of established self-report assessments. Patients were dichotomized into chronic dieters ($n=109$) and intermittent dieters ($n=110$) based on a median split of self-reported percent time spent dieting during adulthood. The two dieting groups were compared on demographics, eating and weight history, eating disorder psychopathology, and global functioning.

Results—Chronic dieters had significantly lower pre-operative body mass indexes (BMIs), lower highest-ever BMIs, more episodes of weight cycling, and earlier ages of onset for overweight and dieting than intermittent dieters. After controlling for differences in BMI, chronic dieters were found to have statistically but not clinically significant elevations in eating concerns, dietary restraint, and body dissatisfaction than infrequent dieters. The two groups, however, did not differ significantly on depressive symptoms, self-esteem, or health-related quality of life; nor did they differ in binge-eating status.

Conclusions—Chronic dieting is commonly reported among extremely obese bariatric candidates and is not associated with poorer psychological functioning or binge eating and may be beneficial in attenuating even greater weight gain. Our findings provide preliminary data to suggest that requiring additional presurgical weight loss attempts may not be warranted for the vast majority of extremely obese bariatric candidates.

Keywords

Dieting; Psychological functioning; Eating pathology; Weight history; Insurance prerequisites

Introduction

Bariatric surgery is the most effective treatment to date for extreme obesity, defined as a body mass index (BMI) ≥ 40 (kg/m²) [1]. It has been consistently shown to produce significant and sustained weight loss and substantive improvements, if not complete reversal, of medical comorbidities, including diabetes, hyperlipidemia, hypertension, and obstructive sleep apnea [2, 3]. Despite its efficacy, bariatric surgery is typically a last resort for the treatment of severe obesity, and current clinical guidelines indicate that numerous behavioral and/or nutritional weight loss efforts be attempted prior to undergoing surgery [4]. Moreover, insurance companies often require documentation of previous failed diet attempts as a prerequisite for surgery. Empirical evidence for this requirement, however, is lacking, and dieting behavior in bariatric candidates is poorly understood.

Previous research suggests that a history of dieting is commonly reported by bariatric candidates. One study found patients reported an average of 4.7 previous successful dieting attempts (defined as 10+ lb weight loss); however, the number of previous dieting attempts rose to almost 15 when short-lived or unsuccessful dieting attempts were also assessed [5]. Gibbons et al. [5] also found that despite numerous successful and unsuccessful past dieting attempts, weight steadily increased with each successive diet attempt. Although bariatric candidates of both genders report spending a significant percentage of their adult life trying to diet, women report spending more time dieting than men [6].

To date, the literature on dieting history among bariatric candidates has been largely descriptive in nature, and little is known about the clinical significance of a history of frequent dieting attempts in bariatric patients. Frequent, chronic dieting has been associated with robust differences on historical, eating disorder psychopathology, and metabolic variables in class II obese patients with binge-eating disorder (BED) [7]. Roehrig et al. [7] found that frequent dieters had an earlier age of onset for binge eating, dieting, and obesity, more episodes of weight cycling, and greater eating disorder psychopathology than infrequent dieters, but no differences emerged between the two groups on global psychological functioning. Whether these findings for class II obese, BED patients are generalizable to other groups of obese individuals is unknown. Accordingly, the current study aims to extend this line of research and to examine the clinical significance of chronic dieting in a sample of bariatric surgery candidates. The goals of the current study are: (1) to explore how self-reported frequency of time spent dieting during adulthood relates to demographics, eating and weight variables, and global psychological functioning, and (2) to examine the degree of overlap between binge eating and chronic dieting in extremely obese, surgery-seeking patients.

Materials and Methods

Participants

Participants were 219 extremely obese adults (29 men; 190 women) who were seeking bariatric surgery at a general medical center. Participants ranged in age from 18 to 66 ($M=42.64$, $SD=10.05$). The participant group was 71.2% Caucasian ($N=156$), 14.2% African-American ($N=31$), 12.8% Hispanic ($N=28$), 0.5% Asian ($N=1$), and 1.4% of other ethnicity ($N=3$). Weight and height were measured and used to calculate BMI, which ranged from 36.59 to 71.76 ($M=51.43$; $SD=7.69$).

Procedure

Institutional review board approval was received for this study, and written informed consent was obtained from all participants. Participants were recruited by clinical staff members at the time of a routine evaluation for surgical candidacy. Patients were informed that they were participating in a research study to learn about the effects of bariatric surgery over time on weight, behaviors, psychological functioning, and quality of life. Participants were informed that taking part in the research would not influence the type of care provided by the surgical team. Participants were told that there would be no direct medical benefit to them, although it was hoped that the knowledge gained might ultimately benefit future bariatric surgery patients. Participants were also informed that the findings would only be shared with the surgical team if they so desired and provided consent. No compensation was provided. Prior to undergoing surgery, patients completed a self-report battery to assess eating and weight history, eating disorder psychopathology, and global psychological functioning. These constructs were assessed with the following measures:

Eating Disorder Examination Questionnaire—The Eating Disorder Examination Questionnaire (EDEQ) [8] assesses the frequency of different forms of overeating, including objective bulimic episodes (i.e., binge eating defined as eating unusually large quantities of food while experiencing a subjective loss of control) and contains four subscales (dietary restraint, eating concerns, weight concerns, and shape concerns). Items are rated on seven-point scales (0 to 6), and higher scores reflect greater severity or frequency. The EDEQ has received psychometric support, including adequate test–retest reliability [9] and good convergence with the EDE interview with diverse patient groups [10]. With bariatric surgery patients, the EDEQ has also been shown to adequately identify binge eaters [11–13].

Questionnaire for Eating and Weight Patterns-Revised—The Questionnaire for Eating and Weight Patterns-Revised (QEWP-R) [14] assesses a range of features associated with obesity and eating disorders and has received psychometric support for use with bariatric surgery candidates [15]. It measures a number of historical variables that are relevant to the present study, including age of onset for overweight and dieting, percent of time spent on a diet, highest adult weight, and previous episodes of weight cycling (defined as an intentional weight loss of 20 lbs or more followed by eventual weight regain).

The QEWP-R measures dieting frequency by inquiring “Since you have been an adult—18 years old—how much of the time have you been on a diet, been trying to follow a diet, or in some way been limiting how much you were eating in order to lose weight or keep from regaining weight you had lost?” Responses are defined on a five-point Likert scale, ranging from “1=None or hardly any of the time” to “5=Nearly all of the time.” Psychometric support for the specific QEWP-R items regarding historical dieting variables is limited; however, a previous study found adequate short-term (1-week) test–retest reliability (Cronbach's $\alpha=0.87$) for the dieting frequency item [7].

Body Shape Questionnaire—The Body Shape Questionnaire (BSQ) [16] is a 34-item measure of body dissatisfaction, including preoccupation with and distress about body size and shape. Items are rated on a scale of 1 (never) to 6 (always), and higher scores reflect greater body dissatisfaction. The BSQ has demonstrated validity and reliability [17] and has been widely used in diverse samples of obese patients, including bariatric surgery candidates [18].

Beck Depression Inventory—The Beck Depression Inventory (BDI) [19] is a widely used 21-item measure of depressive symptoms and, more generally, of negative affect [20]. Since the BDI efficiently predicts elevated psychopathology and psychiatric comorbidity [21], it is a useful marker for broad psychosocial distress. Studies with clinical samples have reported good internal consistency, test–retest reliability, and validity [22]. The BDI has been found to effectively assess depressive symptoms in extremely obese bariatric surgery candidates [23].

Rosenberg Self-Esteem Scale—The Rosenberg Self-Esteem Scale (RSES) [24] is a ten-item measure of global self-esteem. Global self-esteem relates broadly to adaptive functioning in a variety of domains [25]. Studies have noted good internal consistency, test–retest reliability coefficients above 0.85, and good validity [24]. Higher scores on the RSES reflect higher self-esteem.

Medical Outcomes Study: Short-Form Health Survey—The Medical Outcomes Study: Short-Form Health Survey (SF-36) [26] is a 36-item, widely-used, self-report measure to assess health-related quality of life. It has well-established reliability and validity [26, 27] and is a brief yet comprehensive measure of health-related quality of life in obese individuals [28]. The SF-36 assesses eight health domains: Physical Functioning, Physical Role Limitation, Bodily Pain, General Health, Vitality, Social Functioning, Emotional Role Limitation, and Mental Health and generates two summary scores: the Physical Component Summary (PCS) and the Mental Component Summary (MCS) [29]. The PCS and MCS scores were used in the current study and are derived as *T* scores with means of 50 and standard deviations of 10 in the general US population.

Design and Analyses

Dieting group status was determined using the QEWP-R dieting frequency item by examining the descriptive statistics ($M=3.62$, $SD = 1.06$, $Median=3.0$) and distribution characteristics. The frequency of responses to the dieting frequency item were: “None of the time”: 1.4% ($N=3$); “One-quarter of the time”: 12.8% ($N=28$); “Half of the time”: 36.1% ($N=79$); “Three-quarters of the time”: 22.4% ($N=49$); and “Nearly all of the time”: 27.4% ($N=60$). Skewness (-0.11) and kurtosis (-0.95) were within acceptable ranges. Given these characteristics, a median split was used to dichotomize participants into chronic ($n = 109$) and intermittent ($n = 110$) dieters¹. Intermittent dieters were those who dieted less than or equal to half of the time (responses were 3), whereas chronic dieters reportedly dieted three quarters to all of the time (responses of 4 or 5).

Analyses of demographic and historical variables were conducted using chi-square analyses for categorical variables and *t* tests for continuous variables. Controlling for baseline differences in BMI, separate multivariate analyses of covariance (MANCOVAs) were used

¹Alternate grouping methods to the median split were also explored both visually and statistically. Specifically, we conducted exploratory analyses that compared three groups of dieting frequency from low to high frequency. Overall, findings from these exploratory analyses were generally consistent with those found with a median split. These exploratory alternate grouping methods, however, resulted in reduced power because few patients reported no to low-frequency dieting. Thus, in light of greater statistical power and clinical parsimony, we elected to report findings based on a median split of dieting frequency data.

to test between-group differences on eating disorder psychopathology and global functioning variables. Separate chi-square analyses were conducted to examine the associations between dieting frequency group and (1) current binge-eating status and (2) current dieting status. In addition to statistical significance testing, effect size measures were also calculated for chi-square analyses (i.e., phi coefficient, which is interpreted like a correlation coefficient) and for MANCOVAs (i.e., partial eta squared); cutoff conventions for this effect size measure are 0.01–0.09 (for small effects) and 0.10–0.24 (for medium effects). All analyses were conducted using SPSS 15.0.

Results

Demographic and Historical Variables

Table 1 contains means, standard deviations, and test statistics for all demographic and historical variables. As Table 1 indicates, *t* tests and chi-square analyses revealed significant differences between chronic and intermittent dieters on pre-operative BMI and education level. Chronic dieters had significant lower pre-operative BMIs and were more likely to have some college education than infrequent dieters. The two groups did not differ significantly on age or ethnicity. Analyses also revealed significant differences on historical variables between chronic and intermittent dieters. As Table 1 shows, chronic dieters had earlier age of onsets for overweight and dieting, more episodes of weight cycling, and lower highest-ever BMIs than infrequent dieters. Phi coefficients (effect size measure) for these BMI- and diet-related variables ranged 0.30–0.35, suggesting roughly 9%–11% of the variance was accounted for by diet frequency grouping.

Eating Disorder Psychopathology

The omnibus MANCOVA revealed a significant difference on eating disorder psychopathology between chronic and intermittent dieters, Wilks' $\Lambda=0.88$, $F(5, 212)=5.83$, $p<0.001$, partial $\eta^2=0.12$. Follow-up univariate analyses revealed differences on all measures of eating disorder psychopathology between the two dieting groups. As summarized in Table 2, chronic dieters had higher levels of dietary restraint, eating concerns, weight concerns, and shape concerns than intermittent dieters as measured by the EDEQ. A significant difference also emerged between the groups on the BSQ, suggesting that chronic dieters had elevated body dissatisfaction compared to the intermittent dieters. Inspection of the effect size measures for these statistically significant findings, however, suggests that the differences are not clinically meaningful. Partial eta-squared values were all at or below 0.09 which reflect “small effects.”

Global Functioning

Table 2 presents the means, standard deviations, and test statistics for depressive symptoms, self-esteem, and quality of life measures. The MANCOVA revealed no omnibus differences between chronic and intermittent dieters on global functioning, Wilks' $\Lambda=0.99$, $F(4, 208)=0.67$, $p>0.05$. Moreover, none of the follow-up univariate analyses were statistically significant.

Binge-Eating Status

Chi-square analyses were conducted to test the association between chronic dieters and binge eaters. Binge-eating status was categorized based on frequency of objective bulimic episodes (OBEs) reported on the EDEQ using two strategies. First, the patients were dichotomized (Yes/No) according to Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision criteria for binge-eating disorder (≥ 2 OBEs per week) [30] and compared by dieting status (chronic vs. intermittent). This analysis was nonsignificant,

$\chi^2(1)=0.003, p>0.05$ (See Table 3). Because previous research has demonstrated that binge eaters who have OBEs at a lower frequency than twice a week are as impaired as those patients who have them twice a week or more [31], subthreshold binge eating was also examined. Patients were categorized as: not binge eaters (0 OBEs), subclinical binge eaters (1–7 OBEs per month), and clinical binge eaters (8+ OBEs per month). As Table 3 shows, this analysis was also nonsignificant, $\chi^2(2)=0.003, p>0.05$. Taken together, these findings indicate that there is no significant association between chronic dieters and binge eaters and suggest that dieting status is independent of binge-eating status.

Current Dieting Status

Overall, approximately 89% of patients reported they were currently trying to lose weight (see Table 3). A chi-square analysis was conducted to test the degree of association between chronic dieting and current dieting as assessed by the item “I am trying to lose weight” on the BDI. Chronic dieters were significantly more likely than intermittent dieters to report current dieting (91% vs 81%, respectively; $\chi^2(1)=4.72, p<0.05$).

Discussion

This study examined the clinical significance of chronic dieting among extremely obese bariatric surgery patients. Our findings indicate that despite having a longer history of overweight and more episodes of weight cycling, chronic dieters had significantly lower mean pre-operative BMI and highest-ever BMI and were more likely to be currently dieting than intermittent dieters. While we found statistically significant elevations on eating disorder psychopathology variables among chronic dieters, the effect sizes were small, suggesting these differences have little clinical significance. No association was found between dieting frequency and binge-eating status. Taken together, our results suggest that chronic dieting is unrelated to binge-eating behavior, eating disorder psychopathology, or global psychological functioning among extremely obese, bariatric candidates but is associated with clinically significant differences in current and historical BMI values.

Our findings are notable because they provide further evidence that self-reported “dieting” is not associated with binge eating or poorer psychological functioning among extremely obese individuals. Dieting has been the subject of longstanding controversy among researchers [32], and the implications of dieting have been widely debated [33]. A large body of research has identified dietary restraint as an etiological and maintenance factor for eating disorder symptomatology [34, 35] as well as a prospective predictor of weight gain [36], leading some researchers to question whether dieting should be advised at all [37]. Much of this research, however, has been conducted on non-obese, young women, and our findings are consistent with a growing body of literature that has found no meaningful associations between dietary restraint and disinhibition over eating [38–40], weight loss dieting and binge eating [41], or weight cycling history and psychological functioning [42] among obese individuals. Our findings are in contrast to a previous study of treatment-seeking, class II obese patients with BED, which found that frequent dieting was associated with clinically significant levels of eating disorder psychopathology but not global psychological functioning [7]. Future research is needed, but we speculate this discrepancy may be due to differences in psychological status among the individuals studied. Chronic dieting may be associated with significant psychological impairment within the subgroup of obese patients with BED who seek psychological treatments at specialized programs in medical schools. Such within group findings may not generalize to other obese populations [43].

It is noteworthy that, among our sample of bariatric candidates, chronic dieters had significantly lower pre-operative and highest-ever BMIs than intermittent dieters despite having become overweight at an earlier age. These differences were robust with chronic

dieters having highest-ever BMI values roughly three BMI units lower than intermittent dieters. Moreover, the average pre-operative BMIs for chronic dieters was—on average—two points lower in chronic dieters compared with intermittent dieters. Prospective research is needed to clarify our cross-sectional findings, but we cautiously speculate that chronic dieting may have had a small preventative effect against additional weight gain in this group of extremely obese bariatric candidates. Future research on dieting patterns among bariatric surgery candidates and patients should also integrate measures of metabolic functioning as, for example, previously done with class II obese females [7].

The strengths of our study include our recruitment method, which should have minimized biased reporting because the research was separate from the clinical decision-making process, inclusion of both men and women, and the use of well-established measures. There are several limitations, however, that should be noted as context for interpreting the findings and guiding future research. The reliance on self-report measures, particularly for retrospectively assessing dieting behaviors, is a limitation. Dieting groups were established based on one self-report item that assessed the percent time spent dieting as an adult without regard to the type, quality, or intensity of the dieting or the length of time since the most recent dieting attempt, and we do not know how these variables may have affected our findings. Importantly, our findings are based on a median split of the diet frequency data due to the very small number of patients who reported no to low-frequency dieting. Although we explored additional ways of categorizing patients based on dieting frequency, statistical power limited those exploratory analyses mainly because few patients reported no to low-frequency dieting. Larger studies are needed to replicate our findings and to more definitively examine the potential significance of varying dieting frequency (i.e., infrequent vs. moderate vs. chronic) in this population.

While it is possible that patients' reports of dieting frequency could have been influenced by their current functioning, we found no differences in global psychological functioning between the two dieting groups, which argues against this reporting bias. Previous research has demonstrated that dieting history can be reliably reported over time in obese patients [7, 44], although the validity of these methods is uncertain, and psychometric research is needed to improve the measurement of this construct. Additionally, our sample consisted of extremely obese, surgery-seeking patients, and the generalizability of these findings to other groups of obese individuals (i.e., community, nonsurgery seeking) is unknown. We also had a relatively small number of men and ethnic minorities in this study, which prohibited us from examining gender and ethnic differences systematically.

It is standard practice for many insurance companies to require documentation of failed dieting prior to approving surgery; however, our findings indicate that poor success with long-term weight control among bariatric candidates is not due to a lack of a sufficient number of dieting attempts, as the prerequisite may imply. While bariatric surgery is not an appropriate first-line treatment approach for extreme obesity and some patients do achieve long-term success with nonsurgical methods [45], our findings, along with those of Gibbons et al. [5], suggest that a history of multiple failed dieting attempts is normative in this population. In fact, it is striking that almost 89% of our sample reported trying to diet at least half of the time during their adult life while in contrast only 1.4% reported no previous dieting attempts. Although chronic dieting among our extremely obese patients appears to have attenuated even greater excess weight gain, it was ultimately unsuccessful for weight control, and our findings highlight the normative experience for many extremely obese patients who are lifelong “dieters” without success. These findings suggest that it is likely unnecessary for all but a very small minority of bariatric candidates to undergo additional dieting attempts prior to approval for surgery. Moreover, prerequisite documentation of failed dieting may in fact be a time-consuming and financially burdensome obstacle to

patients in obtaining the only effective treatment to date for extreme obesity and its associated health problems.

In summary, we found no meaningful differences between chronic and intermittent dieters on global psychological functioning or specific eating disorder psychopathology, and chronic dieting was not associated with binge-eating status. Although past dieting attempts among bariatric candidates have been largely ineffective at long-term weight control, chronic dieters had lower current and highest-ever BMIs than intermittent dieters and were more likely to be currently trying to lose weight. Our data suggest that clinicians can safely advise extremely obese patients to continue to try to diet as we found no iatrogenic psychological effects associated with chronic dieting, and it may have attenuated additional weight gain. Bariatric surgery, however, is currently the only effective long-term treatment for extreme obesity, and our findings indicate that requiring additional dieting attempts is not indicated for the vast majority of extremely obese bariatric surgery candidates and may further delay access to treatment.

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Table 1

Baseline characteristics of chronic and intermittent dieters among bariatric candidates

	Chronic dieters (n=109)	Intermittent dieters (n=110)	Test statistic ^d , χ^2 or t	p value	Effect size ^b
Gender (number, %)					
Female	99 (90.8%)	91 (82.7%)	3.13	0.08	0.12
Male	10 (9.2%)	19 (17.3%)			
Ethnicity ^c (number, %)					
Nonwhite	35 (32.1%)	28 (25.5%)	1.18	0.28	-0.07
White	74 (67.9%)	82 (74.5%)			
Education (number, %)					
HS or less	30 (27.8%)	48 (44.0%)	6.23	0.01	0.17
Some college or more	78 (72.2%)	61 (56.0%)			
Age	43.08 (10.68)	42.19 (9.40)	0.65	0.52	0.09
Pre-Op BMI (kg/m ²)	50.27 (7.55) ₁	52.58 (7.70) ₂	2.24	0.03	0.30
Highest-ever BMI	51.68 (10.35) ₁	54.62 (8.86) ₂	2.23	0.03	0.31
Age of overweight onset	11.43 (5.85) ₁	13.62 (7.73) ₂	2.26	0.03	0.32
Age of dieting onset	16.99 (6.45) ₁	19.34 (7.11) ₂	2.32	0.02	0.35
Weight cycling	3.38 (.81) ₁	3.09 (1.0) ₂	-2.34	0.02	0.32

Values are means and standard deviations based on t tests for continuous variables and chi-square analyses for categorical variables. Numbers in subscript denote significant mean differences between the dieting groups

^aDegrees of freedom for chi-square analyses (categorical variables) were *df*(1). For t tests (continuous variables), degrees of freedom ranged from *df*(178) to *df*(217) based on available data

^bEffect sizes are reported as Φ for categorical variables and Cohen's *d* for continuous variables

^cEthnicity was collapsed into white and nonwhite due to small numbers of some specific minority groups

Table 2

Means and standard deviations by dieting group for eating disorder psychopathology and general functioning among bariatric candidates

	Chronic dieters (n=109)	Intermittent dieters (n=110)	F value ^a	p value	Effect size ^b
Eating disorder psychopathology					
EDEQ restraint	3.11 (1.25) ₁	2.36 (1.36) ₂	20.53	<0.001	0.09
EDEQ eating concerns	2.27 (1.41) ₁	1.82 (1.35) ₂	5.08	0.03	0.02
EDEQ weight concerns	3.78 (1.14) ₁	3.24 (1.04) ₂	12.68	0.001	0.06
EDEQ shape concerns	4.56 (1.11) ₁	4.05 (1.21) ₂	10.55	<0.001	0.05
BSQ	129.19 (34.13) ₁	112.25 (34.21) ₂	11.96	0.001	0.05
Global functioning					
BDI	13.89 (8.03)	13.40 (8.68)	0.09	0.77	0.000
RSES	29.08 (5.7)	30.06 (5.42)	1.43	0.23	0.007
SF-36 mental health composite	46.20 (11.18)	48.37 (11.58)	0.89	0.35	0.004
SF-36 physical health composite	33.03 (9.8)	32.01 (10.03)	0.03	0.86	0.001

Values are based on findings from separate MANCOVAs that controlled for BMI. Numbers in subscript denote significant differences between the dieting groups

EDEQ Eating Disorder Examination Questionnaire, BSQ Body Shape Questionnaire, BDI Beck Depression Inventory, RSES Rosenberg Self-Esteem Scale, SF-36 Medical Outcome Study Short-Form Health Survey

^aDegrees of freedom are (1,216) for eating disorder psychopathology variables and (1,211) for global functioning variables

^bEffect sizes are reported as partial η^2

Table 3
 Overlap between dieting history, binge eating, and current dieting status among bariatric candidates

	Chronic dieters (n=109)	Intermittent dieters (n=110)	χ^2 value ^a	p value	Effect size ^b
BED diagnostic threshold (number, %)					
Yes (2+ OBEs/week)	47 (43.1%)	47 (42.7%)	0.003	0.95	0.004
No (<2 OBEs/week)	62 (56.9%)	63 (57.3%)			
OBE frequency, number, %					
Clinical BED (8+ OBEs/month)	12 (11.0%)	12 (10.9%)	0.003	0.99	0.004
Sub-Clinical BED (1-7 OBEs/month)	35 (32.1%)	35 (31.8%)			
No binge eating (0 OBEs/month)	62 (56.9%)	63 (57.3%)			
Current Dieting, number, %					
No	9 (8.7%)	20 (19.0%)	4.72	0.03	0.15
Yes	95 (91.3%)	85 (81.0%)			

Values are based on chi-square analyses

BED binge-eating disorder, OBE objective bulimic episodes

^aDegrees of freedom for χ^2 analyses are *df*(1) for BED diagnostic threshold and current dieting and *df*(2) for OBE frequency

^bEffect size is reported as ϕ