Predictors and Significance of Rapid Response to Behaviorally-Based Treatment of Binge-Eating Disorder

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Abstract

Objective.—This study examined baseline predictors of rapid response and its prognostic significance in a clinical trial of behaviorally-based weight-loss treatment (BBWLT) for BED in patients with obesity.

Methods.—191 participants receiving BBWLT were assessed at baseline, throughout treatment, and posttreatment (6 months) by independent assessors. Rapid response was defined as 65% reduction in binge eating by the fourth treatment week. Patients with versus without rapid response were compared on demographic features, a broad range of current/past clinical and psychiatric variables, and treatment attitudes. Rapid response was used to prospectively predict posttreatment outcomes.

Results.—Rapid response, which characterized 63% (N=120) of participants, was not associated significantly with any demographic features or with any current/past clinical and psychiatric variables. Higher ratings (at week one) regarding the logic of BBWLT and greater confidence treatment would help with binge eating and weight loss were associated significantly with rapid response (at week four). Rapid response was prospectively associated with significantly better binge-eating and weight-loss outcomes.

Conclusions.—Our findings indicate that rapid response to BBWLT for BED prospectively predicts superior clinical outcomes in both binge eating and weight loss. Treatment attitudes, rather than patient demographic or clinical severity variables, are prospectively associated with rapid response.

Keywords

obesity; eating disorders; treatment; binge eating; weight loss

Introduction

Binge-eating disorder (BED) is defined by recurrent binge eating, marked distress about binge eating, and the absence of extreme weight-compensatory behaviors (1). BED is

a serious public health problem with high social and economic costs (2). BED is prevalent, associated strongly with obesity, with increased risk for psychiatric and medical comorbidities, and with serious psychosocial impairments (3,4). Despite the public health significance of BED, most people with BED go untreated and those who seek help infrequently receive evidence-based interventions (5).

Treatment research has produced empirical support for specific psychological treatments and certain pharmacological agents (6,7,8). Even with the "best-available" treatments, many patients with BED do not benefit sufficiently; a substantial minority do not achieve abstinence from binge eating (9) and many do not lose weight (6). Research combining treatments has generally not resulted in enhanced outcomes for BED (10). In the hopes of improving outcomes, research has aimed at identifying predictors, moderators, and mediators of treatment response as one avenue to refine treatment approaches (11). To date, few reliable predictors and nearly no significant moderators have been found (12,13).

Although most patient factors have not reliably predicted/moderated treatment outcomes for BED or for other eating disorders (12), a treatment process referred to as early or "rapid response" (RR) to treatment has emerged as a consistent predictor of positive therapeutic benefits (14,15,16). As detailed by Grilo and colleagues (17), following initial observations of clinically meaningful early improvements in depression, research with bulimia nervosa (e.g., 18) applied variants of signal detection methods and studies reported evidence for the specific predictive utility of early rapid response (generally 50–60% reductions by the 4th week of treatment) for favorable treatment outcomes. In a series of studies with BED, Grilo and colleagues found that RR defined as 65%−70% reductions in binge-eating frequency by the 4th week of treatments for BED – identified using receiver operating characteristic (ROC) curves, prospectively predicted important clinical outcomes with a variety of distinct interventions (17,19,20,21,22). Initial studies of RR specifically to behavioral weight loss treatments for BED found RR prospectively predicted good outcomes in both binge eating and weight loss (20,22). Findings that RR is predictive of significant weight losses in BED is particularly important given the strong association between BED and obesity (3) and especially noteworthy given that weight losses with most treatments for BED tend to be minimal (6) and are typically less than those reported in treatment studies for obesity without BED (23).

While RR has predicted positive outcomes to treatments reliably across eating disorders, including BED (14,15,16), very little is known about who will respond rapidly to treatment (15). Contrary to clinical lore that "less complicated patients respond better," studies to date have failed to identify differences in sociodemographic or clinical severity variables associated with RR to treatments for BED (17,19,21,22). Previous studies of BED and critical reviews of RR across the different eating disorders have highlighted the need for further research on RR to specific treatments with a greater focus on identifying *within-treatment* mechanisms associated with a RR (15). An improved understanding of RR is needed as that might prove informative for understanding either predictors of RR or provide clues about the processes or mechanisms involved in RR's associations with treatment responses which, in turn, could refine treatments further.

The current study aimed to examine predictors of RR and the prognostic significance of RRs for predicting outcomes *specifically* to behaviorally-based weight loss treatment (BBWLT) using data from a randomized controlled trial (RCT; 24). As context for the present study of RR to BBWLT, we briefly summarize the design and the primary treatment outcomes previously reported (24). The primary treatment trial evaluated two 6-month BBWLTs: standard behavioral weight-loss versus Stepped-Care treatment beginning with standard behavioral weight-loss. Both BBWLT conditions began with identical BWL delivered for four weeks, at which time RR was asessed; that is, RR to BWL was assessed following the same exact four BWL sessions *prior* to any additional interventions (which followed only in the Stepped Care condition). As context for the present study and analyses, we highlight that the two BBWLT conditions did not differ significantly either in the proportion categorized with RR following one month of treatment (24) or on any primary or secondary outcomes (24), and therefore are combined here in our analyses of RR. Both BBWLTs were associated with significant improvements in binge eating (74.4% and 66.5% abstinence rates, respectively) and weight loss (5.1% and 5.8%, respectively).

The primary aim of the current study (an *a priori* secondary aim) was to examine the significance of RR. The first aim was to explore sociodemographic and clinical variables as predictors of RR specifically for BBWLT for BED by replicating past findings plus testing additional clinical variables. We hypothesized that patient sociodemographic, baseline clinical characteristics, and psychiatric comorbidity would be unrelated to RR. The second aim was to examine whether patients' treatment expectations would predict RR. In the sole study to examine this question to date, RR to dialectical behavior therapy (DBT) for BED was associated with significantly higher treatment expectations for success (25). Accordingly, we hypothesized that patients' positive expectations would be associated with RR. Should this hypothesis be confirmed, we planned to explore for a possible sequential relationship between treatment expectations, RR, and clinical outcomes at post-treatment. The final aim was to test the prognostic significance of RR to BBWLT for BED. We hypothesized that RR would be associated with significantly greater clinical improvements in primary (i.e., reductions in binge eating and in weight) and secondary (i.e., associated eating-disorder psychopathology and depression levels) outcomes.

Methods

Participants

Participants were a consecutive series of 191 patients with BED with co-existing obesity recruited via media advertisements who were randomized to a single-site treatment study testing BBWLT at a medical school program (24). A detailed description of the treatment study and primary outcomes is published (24); the key components are summarized here. Eligibility criteria included meeting *DSM-IV-TR* criteria for BED, having a BMI 30, and being between 18 and 60 years of age. Exclusionary criteria included serious mental illness (e.g., psychosis or bipolar disorder), pregnancy or breastfeeding, medical conditions that impact eating and weight (e.g., uncontrolled diabetes or thyroid problems), and current treatment for eating/weight. The study was approved by Yale Institutional Review Board, and all participants provided written informed consent.

Assessments

Assessment and diagnostic procedures were performed by trained and monitored doctoral clinicians (psychologists) at baseline and post-treatment. BED diagnosis and psychiatric diagnoses (current or lifetime mood, anxiety, substance use, anorexia nervosa, and bulimia nervosa) were assessed using the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-I/P; 26). In addition to the SCID-I/P, a structured clinical interview assessed the age at participants were first overweight, experienced their first binge eating episode, and onset of first meeting BED diagnosis.

Eating Disorder Examination (EDE), a semi-structured interview that assesses current eating-disorder psychopathology (27), was administered at baseline and at post-treatment. The EDE is a well-established assessment with good reliability (28). The EDE assesses binge eating frequency (i.e., an objectively unusually large quantity of food eaten while experiencing a subjective loss of control during a discrete time period). The EDE has four subscales (dietary restraint, eating concern, weight concern, and shape concern) and generates a global total score reflecting eating-disorder psychopathology. Items are rated on a scale of 0 to 6, with higher scores representing greater frequency/severity.

Both height and weight were measured at baseline and post-treatment. Body mass index (BMI) and percent weight decrease were calculated from these measurements.

A battery of self-report measures was completed by participants which included the measures listed below. Emotional Overeating Questionnaire (EOQ) is a 6-item questionnaire that assesses overeating frequency in response to different emotional triggers (29). Fat Phobia Scale (FPS) is a 14-item scale that measures opinions towards people with obesity, with higher scores reflecting more negative views (30). Yale Food Addiction Scale (YFAS) is a 16-item scale that measures the construct of "food addiction" by assessing craving, tolerance, and withdrawal with respect to specific foods (31). Weight Bias Internalization Scale (WBIS) is a 11-item scale developed as a measure to assess self-directed stigma related to beliefs about the implications of weight status, with higher scores reflecting greater internalized bias (32). Beck Depression Inventory (BDI) is a 21-item self-report measure of symptoms of depression, with higher scores representing higher levels (33). Rosenberg Self-Esteem Scale (RSES) is a well-established measure of self-esteem (34). Difficulties in Emotion Regulation Scale (DERS) is a 36-item measure that assesses six dimensions of emotional regulation and generates a global score, with higher scores reflecting greater difficulties in emotional regulation (35). Self-Control Scale – Brief (SCS-B) is a 13-item questionnaire measuring perceived self-control in general, with higher scores indicative of greater perceived self-control (36).

Treatment attitudes were assessed using specific questions rated on Likert-type scales administered *after* the first treatment session during which the BBWLT was described in detail to participants. Participants provided their responses to the questions which were collected in sealed envelopes by independent assessors (i.e., kept separate from the BWL clinicians). Questions included: "How *logical* does this treatment program seem to you?" "How *confident* are you that this treatment program will help you manage your binge eating?" and "How *confident* are you that this treatment program will help you manage

your weight?" Scores were recorded on a 7-point Likert scale ranging from "not at all" to "extremely."

Treatment

Treatments were delivered by trained research-clinicians (doctoral students) monitored for adherence and supervised in the delivery of the manualized treatment protocols. The BBWLTs (standard care and Stepped-Care) followed manualized protocols of empirically supported interventions (6,7) matched in total sessions and time to minimize differences in attention. The standard care comprised 16 BBWLT sessions and the Stepped-Care comprised 15 sessions (either BBWLT or 4 BBWLT sessions followed by 11 guided-self-help-CBT sessions) plus pharmacotherapy with FDA-approved weight-loss agents.

Statistical Analysis

Individuals were considered "rapid responders" (RRs) if they experienced a 65% or greater decrease in binge eating episodes by week 4 of treatment (17). Percent decrease in binge eating episodes was calculated by assessing total episodes at baseline and at week 4. A total of 10 participants dropped out of treatment prior to being assessed for RR, and 61 participants experienced less than a 65% reduction, all of whom were considered non-rapid responders (non-RRs).

Statistical analyses were conducted using SPSS version 26.0. We examined differences between RRs and non-RRs in a series of univariate and multivariate analyses of variance and chi-squared tests. Mediational analyses were completed in a series of logistic regressions: first, we tested the relationship on the predictor on the outcome variable. Then, we tested the relationship of the mediator to the outcome variable. Finally, we included both the predictor and the mediator variable on the outcome variable. If the mediator was significant and the predictor variable was no longer significant, the outcome was interpreted to be fully mediated by RR.

Results

Baseline Participant Characteristics

Table 1 shows the demographic information of rapid (n=120; 62.8%) and non-RRs (n=71; 37.2%). No significant differences between RRs and non-RRs were observed on any sociodemographic variables, including age, race/ethnicity, sex, sexual orientation, and highest level of education (all $ps > .12$). No significant differences between RRs and non-RRs were observed on any of the clinical features, current/lifetime psychiatric comorbidities, or associated psychological variables (all $ps > .05$; Tables 2–3).

Treatment Attitudes

Table 4 summarizes differences between RRs and non-RRs on treatment attitudes. Participants categorized with RR following one month of treatment rated treatment (after one session) as significantly more logical and more likely to help them lose weight and help with binge eating (all $ps < .03$) than participants categorized as non-RRs.

Post-Treatment Outcomes

Table 5 summarizes analyses comparing RR and non-RR groups on clinical outcomes, including weight status, changes in eating disorder symptomology, and other related psychological outcomes. Participants categorized with RR had significantly lower binge eating frequency ($p = .01$) and significantly greater percent decrease in binge eating frequency ($p < .01$) than those without RR. Participants categorized with RR had significantly greater weight loss ($p < .001$) and were significantly more likely to achieve 5% weight loss ($p < .01$) than participants without RR. RR was not associated significantly with eating-disorder psychopathology (EDE global) or depression (BDI-II) scores at post-treatment. Parallel analyses adjusting for baseline levels did not result in changed findings. Furthermore, parallel analyses restricted to the Step Care (N=152) condition revealed nearly identical findings.

Exploratory Analysis: Mediational Model

We conducted an exploratory analysis to assess for a temporal relationship between averaged treatment attitudes (if treatment is logical, will help with binge eating, and will help with weight loss), RR to treatment (yes/no), and whether patients achieved 5% weight loss at post-treatment. RR fully mediated the relationship between treatment attitudes and 5% weight loss at post-treatment. Logistic regression was first used to analyze the relationship between treatment attitudes and 5% weight loss at post. We found that as treatment attitudes increased, the likelihood of losing 5% of weight also increased. ($\chi^2(1)$=7.46, B=0.40, SE=0.15, $Wald$=6.74, p<0.01). Next, we found that as treatment attitudes increased, the likelihood of being a rapid responder also increased ($\chi^2(1)$=7.13, B=−0.39, SE=0.15, $Wald$=6.75, p< 0.01). Finally, when including both treatment attitudes and RR as predictors, treatment attitudes were no longer a significant predictor ($\chi^2(2)$=18.40, B=0.30, SE=0.15, $Wald$=3.84, p=0.50), while RR was ($\chi^2(2)$=18.40, B = −1.24, SE = .39, $Wald$ = 10.23, p < .01), indicating full mediation.

Discussion

This study compared rapid responders to non-rapid responders to behaviorally-based weight loss treatment for BED on a variety of sociodemographic and clinical features at both baseline and post-treatment. The first major finding was that RR was not associated with any patient characteristics, including psychiatric history, examined prior to treatment. These findings replicate and extend previous similar reports (17,19,21,22). We emphasize, however, that this finding was despite our "shotgun" strategy of considering many measures in an attempt to explore broader clinical characteristics than examined in previous studies. Collectively, this finding suggests that RR to BBWLT occurs regardless of the complexity of patients' sociodemographic characteristics, clinical presentations, and BED/weight and psychiatric comorbidity histories. Put differently, RR does not occur just in patients with fewer sociodemographic disadvantages or those with lower levels of psychopathology.

The second main finding was that RR was prospectively associated with significantly better outcomes in binge eating and weight loss at post-treatment. This replicates previous findings for BWL (20,21) and provides further confidence in the specificity of the predictive utility

of RR to BBWLT; this is important as the literature shows that RR differs across different pharmacological versus psychological (17) and between different psychological treatments for BED (21,25).

The third main and novel finding was that RR (determined after 4 weeks of treatment) was associated significantly with treatment attitudes (assessed after the first treatment session). Specifically, participants who had a RR had significantly higher ratings of how logical and how confident they were that the BBWLT would be for their BED and associated excess weight than those who did not attain RR. These findings are consistent with those reported in one previous study of DBT for BED that patients' expectations for success were associated with RR (25). The BWL manualized protocols emphasize the treatment as an active collaboration between the clinician and patient and therefore begin the treatment with a detailed overview of the therapeutic model and the patient's active involvement in the process. This highlights the importance of clinicians fully explaining the treatment rationale and helping the patients understand how their efforts within the treatment model will play a role in helping them achieve their goals. Indeed, research on different psychoeducation approaches and models can result in different perceptions of credibility and expectations for effectiveness, with some evidence favoring certain psychological (cognitive and behavioral) approaches (37). More broadly, research has highlighted the importance of attitudes towards treatment and therapist for enhancing general psychotherapy outcomes (38), and associations with less frequent premature termination from psychotherapy for anorexia nervosa (39) and with higher remission rates for bulimia nervosa (40).

Finally, we found a full mediational model with RR mediating the relationship between treatment attitudes at the start of treatment and 5% weight loss at post-treatment. This finding further emphasizes the importance of providing clear rationale for treatment and explaining the possible benefits (such as decreased binge eating and decreased weight). More favorable attitudes towards treatment (greater logic and confidence) were related to a greater likelihood of being a rapid responder, and being a rapid responder increased the likelihood of achieving 5% weight loss at posttreatment. This finding suggests that that patient's perceptions and confidence in a specific treatment from the outset (in the first week) impacts weight outcomes; this novel finding warrants future research and empirical replication, despite its "clinical commonsense." More broadly, patient's treatment "preferences" have been reported to be associated with treatment outcomes for depression (41), but treatment preferences had yet to be tested in eating disorder trials (42).

We note several strengths and potential limitations of the study to consider as context for the findings. The manualized BBWLT treatments were delivered by highly trained and closely monitoring research clinicians to maintain fidelity and changes throughout the course of treatment and at posttreatment were independently and reliably assessed with psychometrically established measures. RR was assessed using an empirically developed definition supported in previous studies of RR in BED. Our study focused on RR specifically to BBWLT delivered in a carefully monitored research setting; generalizability to other treatments, to different clinical settings and practitioners, and to persons with different sociodemographic and clinical characteristics or to those who do not participate in research studies in uncertain. These findings should be further replicated in patients

who seek alternative treatments in different clinical settings and practitioners. For example, studies of treatment delivery in the community suggests considerable departures from evidence-based and manualized treatments used in this and other studies (43). Relatedly, the careful "informed consent" (IRB protocols) and close adherence to the manualized BBWLT protocol may depart somewhat from how BWL treatments are initiated and explained to patients in some busy clinical settings. Patients' ratings of "logic" and "confidence" in the treatments were assessed using single-item questions, rather than validated questionnaires. While future research should examine treatment attitudes more comprehensively, we note that research has documented advantages to using clear and concrete single-item questions versus multiple measures for complex constructs (44). We also note that, while 5% weight losses appear clinically meaningful (i.e., related to important positive health outcomes, 45), it is possible that some patients with excess weight might nonetheless feel dissatisfied with such weight loss, and this suggests the importance of refining interventions to both promote further weight losses to improve physical health while and enhancing body image and self-evaluation to improve psychological health

Our findings add further to the literature indicating the predictive utility of RR for attaining positive outcomes in both binge eating and weight loss specifically with BBWLT (20,21). Our study yielded new findings suggesting the potentially important role of enhancing patient's beliefs about the "logic" of BBWLT for BED and their "confidence" that this evidence-based behavioral treatment can help them with both their binge eating and weight loss. This suggests the importance of providing patients with a clear rationale for the BBWLT, the patient's active role in the treatment collaboration, and reasonable expectations for what can be achieved. The findings regarding patient's confidence in the treatment suggest that clinicians should be poised to provide additional support and guidance to patients who do not show a rapid response to treatment, and this might be informed by re-assessing their beliefs about the treatments and concerns that it might not help. A related potential related avenue for research to guide interventions concerns patient's confidence (i.e., "self-efficacy") in themselves for achieving lifestyle behavioral changes.

In summary, RR was not predicted by sociodemographic variables, past or present comorbid psychiatric disorders, or current severity of illness or associated clinical variables. In contrast, positive treatment attitudes ("logic" of treatment and "confidence" that the treatment would help binge eating and weight loss) predicted RR – and in turn – was associated with the likelihood of achieving 5% weight loss at post-treatment. These new findings emphasize the importance of beginning treatment with a clear and logical rationale for the treatment and what it can reasonably help to accomplish.

Funding:

Data Sharing:

De-identified data will be provided in response to reasonable written request to achieve goals in an approved written proposal.

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Study Importance

What is already known about this subject?

- Rapid response (RR) is a reliable predictor of treatment response to certain interventions for binge-eating disorder (BED).

- It remains unclear who responds rapidly to behaviorally-based weight loss treatments (BBWLT) for BED and its prognostic significance for broad outcomes is uncertain.

What are the new findings in your manuscript?

- Patient factors, severity of psychopathology, and psychiatric comorbidity are unrelated to RR to BBWLT for BED.

- Patients with RR rated the treatments after the first week as significantly more logical and more confidently that they would help them.

- Rapid response was prospectively associated with significantly better binge-eating and weight-loss outcomes; mediational model suggested positive treatment attitudes lead to rapid response, which in turn, leads to achieving 5% weight loss.

How might your results change the direction of research or the focus of clinical practice?

- Clinicians should provide patients with a clear rationale for the treatment and reasonable expectations for what can be achieved.

- Clinicians should be poised to provide additional support and guidance to patients who do not show an early rapid response to treatment.

Table 1.

Demographic characteristics of participants with a rapid response versus without a rapid response

	Rapid Response n = 120 (62.8%)	No Rapid Response n = 71 (37.2%)	Statistics
Age, mean (S.D.)	48.53 (9.16)	48.21 (10.07)	$F(1,189) = 0.05$; $p = .82$; $\eta_p^2 < .001$
Race/Ethnicity, n (%)			$\chi^2(4) = 3.84$; $p = .43$; $\Phi = .14$
Black	21 (17.5%)	7 (9.9%)	
Hispanic/Latino	6 (5.0%)	2 (2.8%)	
White	91 (75.8%)	59 (83.1%)	
Asian	1 (.8%)	1 (1.4%)	
Other	1 (.8%)	2 (2.8%)	
Sex, n (%)			$\chi^2(1) = 2.27$; $p = .13$; $\Phi = .11$
Female	90 (75.0%)	46 (64.8%)	
Male	30 (25.0%)	25 (35.2%)	
Sexual Orientation, n (%)			$\chi^2(2) = 0.73$; $p = .69$; $\Phi = .06$
Gay	1 (.8%)	1 (1.4%)	
Bisexual	1 (.8%)	0 (0%)	
Heterosexual	116 (98.3%)	68 (98.6%)	
Highest level of education, n (%)			$\chi^2(5) = 6.75$; $p = .24$; $\Phi = .19$
did not complete HS	3 (2.5%)	0 (0%)	
HS diploma	33 (27.7%)	23 (32.9%)	
Associate Degree	19 (16.0%)	13 (18.6%)	
Bachelor's Degree	33 (27.7%)	21 (30.0%)	
Master's Degree	27 (22.7%)	8 (11.4%)	
Doctoral Degree	4 (3.4%)	5 (7.1%)	

Table 2.

Clinical characteristics and psychiatric comorbidities of participants with a rapid response versus without a rapid response

	Rapid Response $n = 120$ (62.8%)	No Rapid Response $n = 71$ (37.2%)	Statistics
Clinical characteristics, mean (S.D.)			
Age first overweight, m (sd)	19.78 (11.34)	17.34 (9.72)	$F(1,169) = 1.99; p = .16; \eta_p^2 = .01$
Age first binge m (sd)	26.00 (14.33)	25.14 (13.21)	$F(1,180) = .17; p = .69; \eta_p^2 < .01$
Age first BED m (sd)	29.71 (15.00)	27.00 (13.93)	$F(1,189) = 1.53; p = .22; \eta_p^2 < .01$
Psychiatric comorbidities, n (%)			
Mood disorder current	24 (20.0)	17 (23.9)	$\chi^2(1) = .41; p = .52; \Phi = .05$
Lifetime mood disorder	65 (54.2)	34 (47.9)	$\chi^2(1) = .70; p = .40; \Phi = .06$
Anxiety disorder current	31 (25.8)	21 (29.6)	$\chi^2(1) = 0.32; p = .57; \Phi = .04$
Lifetime anxiety disorder	41 (34.2)	32 (45.1)	$\chi^2(1) = 2.25; p = .13; \Phi = .11$
Lifetime substance use disorder	36 (30.0)	21 (31.0)	$\chi^2(1) = .02; p = .89; \Phi = .01$
Lifetime AN/BN diagnosis	8 (6.7)	6 (8.5)	$\chi^2(1) = .21; p = .65; \Phi = .03$

Note. BED = binge-eating disorder; AN = anorexia nervosa; BN = bulimia nervosa

Table 3.

Baseline eating disorder and associated psychiatric characteristics of participants with a rapid response versus without a rapid response

	Rapid Response n = 120 (62.8%)	No Rapid Response n = 71 (37.2%)	Statistics
ED characteristics, mean (S.D.)			
OBE frequency	21.26 (15.62)	17.11 (12.64)	$F_{(1,189)}$ = 3.60; p = .06; η_p^2 = .02
BMI	38.52 (5.67)	39.77 (6.42)	$F_{(1,189)}$ = 1.99; p = .16; η_p^2 = .01
EDE Global	2.68 (.91)	2.68 (.92)	$F_{(1,189)}$ < .001; p = .99; η_p^2 < .001
EDE Subscales			$F_{(4,186)}$ = 1.59; p = .18; η_p^2 = .03
Restraint	1.77 (1.21)	1.61 (1.29)	NS
Eating concern	2.20 (1.28)	2.30 (1.35)	NS
Shape concern	3.55 (1.25)	3.69 (1.11)	NS
Weight concern	3.22 (1.11)	3.13 (1.11)	NS
EOQ mean	1.78 (1.18)	1.83 (1.24)	$F_{(1,188)}$ = .07; p = .79; η_p^2 < .001
FPS	3.65 (.71)	3.74 (.73)	$F_{(1,187)}$ = .67; p = .42; η_p^2 < .01
YFAS total	4.76 (1.80)	4.82 (1.80)	$F_{(1,185)}$ = .05; p = .83; η_p^2 < .001
WBIS total	4.46 (1.23)	4.79 (1.31)	$F_{(1,188)}$ = 2.98; p = .09; η_p^2 = .02
Psychiatric characteristics, mean (S.D.)			
BDI total	14.53 (8.46)	15.93 (9.05)	$F_{(1,188)}$ = 1.16; p = .28; η_p^2 < .01
RSES total	30.20 (6.35)	28.89 (7.11)	$F_{(1,188)}$ = 1.72; p = .19; η_p^2 < .01
DERS overall	77.28 (22.73)	82.61 (24.73)	$F_{(1,187)}$ = 2.25; p = .14; η_p^2 = .01
SCS-B	39.64 (7.83)	38.30 (8.61)	$F_{(1,185)}$ = 1.18; p = .28; η_p^2 < .01

Note. ED = eating disorder; OBE = objective bulimic episode; BMI = body mass index; EDE = eating disorder examination interview; EOQ = Emotional Overeating questionnaire; FPS = Fat Phobia Scale; YFAS = Yale Food Addiction Scale; WBIS = Weight Bias Internalization Scale; BDI = Beck Depression Inventory; RSES = Rosenberg's Self-Esteem Scale; DERS = Difficulty in Emotion Regulation Scale; SCS-B = Brief Self-Control Scale

Table 4.

Treatment attitudes of participants with a rapid response versus without a rapid response

	Rapid Response n = 120 (62.8%)	No Rapid Response n = 71 (37.2%)	Statistics
Logical treatment	5.12 (1.12)	4.65 (1.15)	$F(1,152) = 5.88$; $p = .02$; $\eta_p^2 = .04$
Confidence in help BED	4.59 (1.39)	4.00 (1.34)	$F(1,152) = 6.34$; $p = .01$; $\eta_p^2 = .04$
Confidence in decrease weight	4.50 (1.42)	3.92 (1.45)	$F(1,152) = 5.30$; $p = .02$; $\eta_p^2 = .03$

Note. Results presented in mean (S.D.) format. BED = binge-eating disorder

Table 5.

Clinical outcomes at post-treatment of participants with a rapid response versus without a rapid response

	Rapid Response $n = 120$ (62.8%)	No Rapid Response $n = 71$ (37.2%)	Statistics
% weight loss, mean (S.D.)	− 6.93 (6.18)	− 3.01 (7.11)	$F(1,161) = 13.21; p < .001; \eta_p^2 = .08$
5% weight loss n (%)	64 (56.6)	18 (31.0)	$\chi^2(1) = 10.07; p < .01; \Phi = .24$
OBE frequency, mean (S.D.)	1.43 (2.96)	4.42 (11.60)	$F(1,168) = 6.67; p = .01; \eta_p^2 = .04$
%decrease OBE, mean (S.D.)	91.11 (22.64)	74.49 (57.14)	$F(1,168) = 7.32 \ p < .01; \eta_p^2 = .04$
EDE Global, mean (S.D.)	1.75 (.83)	1.81(.95)	$F(1,170) = .17; p = .68; \eta_p^2 < .01$
EDE Subscales, mean (S.D.)			$F(4,165) = 2.22; p = .07; \eta_p^2 = .05$
Restraint	2.01 (1.16)	1.68 (1.19)	*NS*
Eating concern	.76 (.99)	.81 (1.02)	*NS*
Shape concern	2.06 (1.26)	2.39 (1.37)	*NS*
Weight concern	2.17 (.99)	2.36 (1.13)	*NS*
BDI total, mean (S.D.)	8.35 (7.16)	10.71 (9.64)	$F(1,168) = 3.26; p = .07; \eta_p^2 = .02$

Note. OBE = objective bulimic episode; EDE = Eating Disorder Examination interview, BDI = Beck Depression Inventory