*Supplementary Material:*

*Glossary of Acronyms:*

BED = Binge-eating disorder

BMI = Body Mass Index

BN = Bulimia nervosa

CBT = Cognitive-behavior therapy

cGSH = GSH then continued Guided self-help for early strong responders

CBT+ = GSH then Cognitive-Behavior Therapy for early weak responders

DBT = GSH then Dialectical Behavior Therapy for early weak responders

EDE = Eating Disorders Examination-16

GSH = Initial four sessions of Guided self-help administered to the full sample N= 109

OBD = Objective binge-eating days

RR= Rate Ratio

%ile CI= Percentile confidence interval

*Method Supplementary*

*Reasons for treatment dropout or failure to engage*. For early strong responders in cGSH: 1) uninterested in further treatment (*n*=9), 2) starting a different treatment (*n*=1), and 3) moving (*n*=1). For DBT: 1) difficulties managing commitments (*n*=6), 2) experiencing improvement (*n*=2), 3) uninterested in further treatment (*n*=2), and 4) moving (*n*=1). In CBT+: 1) starting a new antidepressant (*n*=1) or changing dose (*n*=1), 2) seeking bariatric surgery (*n*=1), 3) difficulties managing commitments (*n*=5), 4) travel expense (*n*=1), or 5) uninterested in further treatment (*n*=5).

*Differences between treatment groups.* There were no differences in the rates of current and past antidepressant use between groups. There was no significant difference in the number of group therapy sessions attended among the three interventions, but early weak responders attended more individual therapy sessions than early strong responders in cGSH (*M*=14, *SD*=9 vs. *M*=11, *SD*=7, *t(107)*= -2.34, *p*=0.02).

*Psychotherapy Adherence.* The tapes of 10% of clients in cGSH, DBT, or CBT+ (11/109) were randomly selected and coded by separate blind raters using the CBT adherence scale (Chen et al., 2003) and DBT adherence scale (Linehan & Korslund, 2003, unpublished manual). Using the CBT adherence scale, independent coders were able to match 100% of the tapes to their correct treatment and using the DBT adherence scale were able to match 91% of tapes to their correct treatment. Scores on the DBT Adherence Scale were higher for DBT than cGSH and CBT+ (*t*(9)= -2.46, *p*= 0.045) with DBT scores *M*=4.00 (*SD*=0.08). Scores on the DBT adherence scale ≥ 4 (ranging from 1 to 5) reflect greater adherence to DBT.

*Results Supplementary*

*Pattern Mixture Model Approach findings for OBD frequency*

*Differential Hypothesis:* An evaluation of whether assessment completion biased this intervention effect was assessed using a pattern-mixture model approach (Hedeker and Gibbons, 1997), which examines whether the intervention contrast varies substantially as a function of completion. This yielded a non-significant effect (*t*(104)=0.62, *p*=0.54). Assessment completion status did not have an informative effect on the intervention contrast. Sensitivity analysis based on Markov Chain Monte Carlo imputation for missing data yielding a complete data set produced consistent findings in the observed data reported. For instance, OBD frequency was significantly greater in DBT relative to cGSH (*t*(106)=2.72, *p*=.008, *RR* =1.64) and CBT+ relative to cGSH (*t(*106)=3.16, *p*=.002*, RR* =1.80) at the end of treatment.

*Follow-up Hypothesis:* An evaluation of whether assessment completion biased this intervention effect was assessed using a pattern-mixture model approach (Hedeker and Gibbons, 1997), which examines whether the intervention contrast varies substantially as a function of completion, which yielded a non-significant effect (*t*(172)=0.03, *p*=0.97). Results indicated that the assessment completion status did not have an informative effect on the intervention contrasts. Sensitivity analysis based on Markov Chain Monte Carlo imputation for missing data produced a complete data set that yielded consistent findings with the observed data. The gradual increase in OBD frequency during follow-up was significantly less in DBT compared to cGSH (*RR*=0.76,p<.001 *d*= -0.66) and there were no differences in OBD frequency in CBT+ compared to cGSH at the end of treatment or over follow-up.