

Brief CBT for Binge Eating Disorder in Individuals with Insulin Resistance

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Introduction: Binge eating behaviors have been shown to impede weight loss in individuals with type 2 diabetes mellitus (T2DM). As cognitive behavioral therapy (CBT) is considered a gold standard approach for treating binge eating behavior, the objective of this study was to evaluate the effectiveness of a brief CBT program in reducing bingeing behaviors in individuals with T2DM, prediabetes, or other signs of insulin resistance.

Hypothesis: There will be an effect modification on reduction in bingeing behaviors following a 4-week CBT intervention between individuals with and without signs of insulin resistance.

Methods: A retrospective analysis of patients who completed a 4-week CBT program was performed using a pre-post intervention design. Participants completed the Binge Eating Scale (BES) and reported number of days per week where a binge had occurred prior to starting and at the completion of the program. Medical records were abstracted to obtain information on diabetes status, and individuals were assigned to the diabetes/insulin resistance group (DM/IR) or the non-diabetes group based on a *priori* criteria that included diagnoses, treatments, and HgbA1c levels at time of program enrollment. Data for gender, age, race/ethnicity, BMI, and surgery status were abstracted for covariant adjustment. All data were analyzed using SPSS 26.0.

Results: Of 55 program completers (mean [SD] age, 48.8 [11.7] years; 51 [92.7%] female), 19 were in the DM/IR group and 36 in the non-diabetes group. Overall, there were significant decreases in BES score (-8.25, $P < 0.001$) and self-reported binge frequency (-0.50 days/week, $P = 0.03$). Individuals in the DM/IR group showed a significant decrease in BES score (-8.52, $P < 0.001$), but the decrease in binge frequency did not reach statistical significance. Analysis of the non-DM group showed similar change with a significant decrease in BES score (-7.76, $P < 0.001$) and no significant decrease in weekly binge days. Comparative analysis showed no significant between-group effects for either measure.

Conclusions: A 4-week CBT program can reduce binge eating behaviors in both a statistically significant and clinically meaningful magnitude regardless of an individual's diabetes status. As bingeing behaviors may attenuate weight loss in individuals with diabetes, such patients enrolled in medical weight loss programs could benefit from this targeted intervention.

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