

Comparison of the Effectiveness of Cognitive Therapy and Schema Therapy in Weight Reduction among Women with Bulimia Nervosa

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R e v i e w e r s

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1. Round 1

1.1. Reviewer 1

Reviewer:

In the participant-selection paragraph, the manuscript states that “the initial sample size was estimated at 51 participants based on Cochran's sample size formula.” Cochran's formula is primarily designed for estimating sample size for prevalence or proportion estimates in large populations and is not an appropriate primary method for determining sample size in a three-arm repeated-measures intervention study. Sample-size estimation should instead be based on an a priori power analysis incorporating the expected effect size, alpha level, statistical power, number of groups, number of repeated measurements, and anticipated correlation among repeated observations. The authors should either provide an appropriate power analysis, preferably using the Time × Group interaction as the principal effect of interest, or explicitly acknowledge that no prospective statistical power calculation was conducted. The justification that experimental studies generally require “at least 15 participants per group” is insufficient for establishing adequate power.

The manuscript should substantially strengthen the diagnostic procedure described in the sentence “the presence of bulimia nervosa was established as part of the participant screening procedure.” At present, it is unclear how bulimia nervosa was diagnosed. The authors mention evaluation by psychologists and psychiatrists and refer generally to a “bulimia nervosa assessment,” but neither the diagnostic criteria nor the instrument is identified. The manuscript should report whether diagnosis was based on DSM-5/DSM-5-TR criteria, a structured or semi-structured diagnostic interview, a validated questionnaire, or

routine clinical judgment. The name of the instrument, developer, number of items, scoring method, cutoff score, validity and reliability evidence, and Persian-language psychometric properties should be provided. Without a reproducible diagnostic procedure, readers cannot determine whether the sample genuinely represented women meeting established criteria for bulimia nervosa.

The primary outcome requires fundamental clarification. In Table 1, values such as “28.80, 24.80, and 23.90” are presented under the variable “Weight,” yet these values appear much more consistent with BMI values than body weight in kilograms. The Methods section also states that BMI greater than 25 kg/m² was an eligibility criterion. If the reported outcome is BMI, the variable should be consistently labeled “Body Mass Index (BMI)” throughout the abstract, methods, results, tables, discussion, and title-related interpretations; if the outcome is actual body weight, the unit must be reported and the apparent values require explanation. Referring to reductions in BMI as “weight loss” without specifying whether actual body mass was measured can lead to clinically and statistically misleading conclusions. The authors should report the measurement method, units, equipment used to assess height and weight, measurement conditions, and whether the same standardized procedure was applied at all three assessments.

Table 1 raises a potentially serious baseline-comparability issue. The reported pretest means were “29.27 for cognitive therapy, 28.80 for schema therapy, and 27.12 for the control group.” These differences may be clinically meaningful, particularly given the extremely small reported standard deviations. Because treatment effectiveness is inferred from differential change, baseline imbalance can influence the interpretation of post-intervention differences. The authors should formally test baseline comparability and consider an analysis that appropriately accounts for baseline values. Depending on the distribution and study design, a linear mixed-effects model or ANCOVA-based approach may offer more robust estimation. At minimum, baseline differences should be reported with effect sizes and confidence intervals rather than assumed to be negligible.

The standard deviations reported in Table 1 should be carefully checked for data-entry or decimal-place errors. For example, the manuscript reports values such as “M = 29.27, SD = 0.419” and “M = 27.12, SD = 0.345.” Such extremely small dispersion in BMI across groups of 15 clinical participants would imply a highly homogeneous sample, which appears unusual for an overweight population with bulimia nervosa. The original Persian material also contained malformed values such as “423/4200,” increasing concern about transcription accuracy. The authors should verify all descriptive statistics from the SPSS output, specify the units, and preferably report 95% confidence intervals. Accurate descriptive data are essential because all subsequent interpretation of treatment effects depends on these values.

Authors revised the manuscript and uploaded the document.

1.2. Reviewer 2

Reviewer:

The manuscript should reconsider and more carefully justify the framing of “weight reduction among women with bulimia nervosa” as the primary therapeutic objective. Bulimia nervosa is an eating disorder in which excessive preoccupation with weight and shape and maladaptive weight-control behaviors are central psychopathological features. Therefore, emphasizing weight loss as the principal outcome may be clinically problematic unless the participants had medically verified overweight/obesity and the intervention incorporated safeguards against restrictive dieting and compensatory behaviors. The authors should explain why weight reduction was selected as the primary endpoint rather than reduction in binge-eating frequency, compensatory behaviors, eating-disorder psychopathology, or clinically validated measures of bulimia severity. The manuscript should also state whether participants were medically monitored and whether adverse events, increased dietary restraint, purging, or worsening eating-disorder symptoms were assessed during treatment.

In the description of participant eligibility, the manuscript states that women were included if they “had a body mass index greater than 25 kg/m², met the criteria for bulimia nervosa, expressed willingness to participate, and agreed to receive the assigned intervention.” The inclusion and exclusion criteria need greater clinical specificity. The authors should state the eligible age range, minimum duration or severity of bulimia nervosa, whether participants with binge-eating disorder, anorexia

nervosa, or other eating disorders were excluded, and how psychiatric comorbidities were handled. The exclusion criterion involving “psychiatric or psychotropic medications” also requires clarification because excluding all medication users may substantially limit representativeness, while abrupt medication discontinuation would raise ethical concerns. The manuscript should specify whether participants were excluded because they were currently receiving pharmacotherapy, whether medication stability was considered, and whether concurrent psychotherapy, nutritional interventions, or weight-loss programs were permitted.

The intervention descriptions reveal an important treatment-dose imbalance that should be addressed explicitly. The manuscript states that “participants assigned to the schema therapy group received a ten-session intervention,” whereas “participants in the cognitive therapy group received an eight-session group-based cognitive therapy program.” Consequently, the two treatments were not matched for number of sessions, and apparently not for total therapist contact time. This creates a potential confound because any difference—or absence of difference—between interventions may reflect treatment exposure rather than therapeutic modality. The authors should report the duration and frequency of each session, total treatment hours, group size, therapist-to-participant ratio, and whether session length was equivalent. This limitation should also be discussed when interpreting the conclusion that neither therapy was superior.

The intervention section requires additional information regarding treatment fidelity. For example, the schema therapy paragraph states that participants received techniques such as “guided imagery of distressing or problematic situations” and “role-playing techniques to explore and modify dysfunctional interpersonal patterns,” while the cognitive therapy protocol included cognitive restructuring, relaxation, assertiveness, and problem solving. The manuscript should identify who delivered each intervention, therapists’ professional qualifications, clinical experience, specific training in cognitive therapy or schema therapy, whether the same therapist delivered both interventions, and whether treatment manuals were followed. It should also explain whether sessions were recorded or independently rated, whether checklists were used to assess adherence, and whether supervision was provided. Without fidelity monitoring, it is difficult to determine whether the observed effects reflect the intended treatment models.

The authors should provide a clearer account of participant flow. The Methods section reports that “six participants were excluded because of repeated absences or insufficient cooperation, resulting in a final sample of 45 women.” It is unclear whether these six participants withdrew before randomization, were randomized and subsequently dropped out, or were excluded after receiving part of an intervention. This distinction is essential for evaluating attrition bias. The manuscript should report the number assessed for eligibility, excluded before enrollment and reasons for exclusion, randomized to each condition, treatment starters, treatment completers, participants providing posttest data, and participants completing the two-month follow-up. If participants were removed after randomization, the authors should explain whether the statistical analyses followed intention-to-treat or per-protocol principles and how missing data were handled.

The demographic reporting requires correction and verification against the original dataset. The Findings section currently notes that “educational information for one participant in this group was not reported in the source data.” In the control group, the supplied frequencies for diploma, bachelor's degree, and master's degree or higher sum to only 14 rather than 15, and several percentages in the original table are inconsistent with their corresponding frequencies. The authors must return to the raw data and correct this table rather than retaining a missing-value inference based solely on an apparent transcription error. All demographic frequencies and percentages should be recalculated directly from the dataset, and each category should sum correctly to the group total. Additionally, inferential baseline comparisons of age, education, BMI, and other clinically relevant characteristics would help demonstrate whether the three groups were reasonably comparable before treatment.

Authors revised the manuscript and uploaded the document.

2. Revised

Editor’s decision: Accepted.

Editor in Chief’s decision: Accepted.