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Effectiveness of Choice Theory–Based Group Therapy on Somatoform Problems Among Nurses

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1. Round 1

1.1. Reviewer 1

Reviewer:

The Methods indicate that measurements were obtained at “pretest, posttest, and follow-up,” yet the timing of the follow-up assessment is never specified. The interval between treatment completion and follow-up is essential for interpreting the claimed maintenance of therapeutic effects. The authors should state precisely whether follow-up occurred, for example, one month, two months, or three months after the final session and explain whether any additional therapeutic contact occurred between posttest and follow-up.

In the Data Collection Tool paragraph, the PHQ-15 is appropriately introduced, but the manuscript refers repeatedly to the outcome as “somatoform problems.” This terminology requires reconsideration because contemporary diagnostic systems no longer conceptualize somatic symptom disorders primarily according to the older “somatoform disorder” framework. Given that the PHQ-15 assesses somatic symptom severity/burden rather than independently diagnosing a somatic symptom disorder, the authors should consistently use terminology such as “somatic symptoms” or “somatic symptom burden” unless formal diagnostic assessment was conducted.

The manuscript reports separate outcomes for “gastrointestinal symptoms,” “cardiovascular and respiratory symptoms,” and “musculoskeletal and general symptoms,” yet the Methods describe only the total PHQ-15 score and do not establish validated

subscale scoring for these components. The authors should provide a psychometric and methodological justification for dividing the PHQ-15 into these specific domains. If these domains were created specifically for the present study without prior validation, that procedure should be clearly disclosed and interpreted cautiously; otherwise, analysis of the validated total PHQ-15 score should remain the principal outcome.

The Findings state that significant differences existed between groups for all three symptom components, but adjusted means and confidence intervals are not presented. Reporting only F , p , and effect size limits clinical interpretation. The authors should provide estimated marginal means or appropriately adjusted post-intervention means with standard errors or 95% confidence intervals, particularly if ANCOVA was used. Confidence intervals for effect estimates would allow readers to evaluate precision rather than relying solely on statistical significance.

The discussion paragraph beginning with “The largest effect size in the present study was observed for musculoskeletal and general symptoms” interprets an effect size of .27 as evidence of a particularly strong therapeutic effect. The manuscript should explicitly identify the effect-size statistic, presumably partial eta squared, rather than simply calling it “effect size.” Interpretation should also follow accepted conventions cautiously and should avoid implying clinical significance solely from statistical magnitude, especially given the small sample size and the unresolved statistical inconsistencies in the analysis.

Response: Revised and uploaded the manuscript.

1.2. Reviewer 2

Reviewer:

The PHQ-15 description states that total scores range from 0 to 30, yet Table 1 reports pretest means of 36.80 and 37.25, which are mathematically impossible for this instrument. This is a major measurement inconsistency that must be resolved before the findings can be interpreted. The authors should verify whether a different questionnaire or scoring method was actually used, whether the reported values contain transcription errors, or whether the PHQ-15 description is incorrect. All descriptive and inferential analyses should subsequently be rechecked against the verified scoring system.

The descriptive findings contain an additional variable labeled “body image” in the original results table, with means of 74.65 and 75.10 at pretest, although body image is neither introduced as a study outcome nor described in the Methods. The authors should determine whether this variable belongs to another study, represents an accidental carryover during manuscript preparation, or was genuinely measured. If it is unrelated to the current research question, it should be removed completely; if it is an intended outcome, its theoretical rationale, instrument, hypotheses, analysis, and discussion must be added.

The Intervention Protocol is conceptually detailed, but the manuscript does not identify who delivered the treatment. Information should be added regarding the therapist’s professional qualifications, academic degree, training in choice theory/reality therapy, clinical experience, and whether one or multiple therapists conducted the sessions. Because therapist competence can materially influence treatment outcomes, the authors should also indicate whether the intervention was delivered according to a standardized manual and whether supervision was provided.

In the intervention paragraph, the manuscript describes specific therapeutic components such as the five basic needs, total behavior, external versus internal control, WDEP, and SAMIC principles. However, no information is provided regarding treatment fidelity. The authors should explain whether session checklists, therapist adherence ratings, supervision records, audio recordings, or independent evaluations were used to ensure that each session followed the intended protocol. Without fidelity assessment, it is difficult to determine whether observed effects can reliably be attributed to the specified intervention.

The control condition is described only as receiving “no intervention.” This creates the possibility that treatment effects partly reflect nonspecific factors such as therapist attention, social interaction, expectancy, and group support rather than the specific mechanisms of choice theory. The authors should acknowledge this design limitation and clearly identify the condition as a no-treatment or wait-list control, if applicable. Future work would be strengthened by an active control condition involving supportive group meetings, stress education, or another credible psychological intervention.

The Data Analysis paragraph states that “repeated-measures analysis of covariance (ANCOVA) was employed,” but the statistical specification remains unclear. Repeated-measures ANCOVA requires a clearly defined within-subject factor, between-subject factor, and covariate structure. The authors should specify whether time had two or three levels, what variable was entered as the covariate, and whether the primary test was the group effect, time effect, or group $\times$ time interaction. If baseline scores were used as covariates, a conventional ANCOVA of posttest/follow-up scores may be methodologically different from a repeated-measures model and should be described accurately.

The assumptions for ANCOVA are mentioned only generically as “normality of score distributions, homogeneity of variances, and other assumptions.” This is insufficient for a scientific report. The authors should report the specific diagnostic tests used and their results, including normality assessment, Levene’s test for homogeneity of variance, homogeneity of regression slopes, and, if a repeated-measures analysis with three time points was performed, Mauchly’s test of sphericity and any Greenhouse–Geisser or Huynh–Feldt correction applied when sphericity was violated.

Table 2 contains substantial internal statistical inconsistencies. For example, the reported sum of squares, degrees of freedom, and mean square values do not consistently satisfy the relationship $MS = SS/df$, and the presented error mean squares do not appear compatible with the reported F statistics. Furthermore, with only two study groups, a between-group effect would ordinarily have 1 degree of freedom rather than 2. The complete ANCOVA output should therefore be re-examined directly from SPSS, and the table should be reconstructed using verified sums of squares, degrees of freedom, mean squares, F values, exact p values, and partial eta squared.

Response: Revised and uploaded the manuscript.

2. Revised

Editor’s decision after revisions: Accepted.

Editor in Chief’s decision: Accepted.