

The Effectiveness of Spirituality Therapy on Distress Tolerance and Resilience in Patients with Migraine

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E d i t o r	R e v i e w e r s
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1. Round 1

1.1. Reviewer 1

Reviewer:

In the Introduction, the paragraph beginning with “Migraine is a chronic and recurrent neurological disorder...” provides a useful broad framing, but it would benefit from a sharper transition from neurological burden to the specific psychological variables examined in the study. The manuscript discusses migraine, distress tolerance, resilience, spirituality, and chronic pain, but the conceptual pathway between migraine attacks, emotional distress, distress intolerance, and resilience should be articulated more explicitly. I suggest adding a few sentences explaining how recurrent pain unpredictability may reduce distress tolerance, how low distress tolerance may increase avoidance or catastrophizing, and how resilience may buffer migraine-related disability.

In the Introduction, the sentence “Spirituality therapy may provide a framework for reconstructing meaning, reducing self-blame, strengthening hope, and developing a more compassionate relationship with the body and illness experience” is theoretically strong, but it needs to be connected more directly to the intervention components used in this study. The reader should understand whether the intervention was primarily religious, existential, meaning-centered, compassion-oriented,

cognitive-spiritual, or integrative. Please clarify the theoretical model of spirituality therapy and explain how the core mechanisms of the package are expected to influence distress tolerance and resilience specifically.

In the Introduction, all supplied references appear to have been incorporated, which is commendable; however, some citations are clustered in broad claims without sufficient differentiation between migraine-specific evidence and broader chronic pain or chronic illness evidence. For example, findings from cancer pain, thalassemia, multiple sclerosis, and care leavers are relevant but not equivalent to migraine. I recommend explicitly distinguishing migraine-specific studies from indirect supporting evidence so that the rationale remains scientifically precise and does not overgeneralize findings from heterogeneous clinical populations.

In the Data Collection Tools section, the paragraph on the Connor-Davidson Resilience Scale states that the subscale “perception of personal competence” includes “items 10, 11, 12, 16, 17, 23, 24, and 25.” Please verify the subscale structure and item allocation because different versions and factor structures of the CD-RISC have been reported across populations. If the Iranian validation study used a specific factor structure, that structure should be cited and followed consistently. Otherwise, reporting total score only may be more psychometrically defensible than emphasizing subscale interpretation.

In the Intervention Protocol paragraph, the sentence “The spirituality therapy package had been specifically developed for patients with migraine in another study conducted by the researchers of the present study...” is central to the manuscript but requires more detail. Please provide a concise but sufficient description of the package development process, including qualitative phase procedures, expert panel criteria, content validity assessment, cultural adaptation, and whether a manual was used. Because the intervention is the core independent variable, readers need enough information to evaluate its theoretical coherence, replicability, and treatment fidelity.

In the Intervention Protocol paragraph, the sentence “The sessions were conducted by the first researcher under the supervision of the second researcher” raises potential concerns about therapist allegiance and expectancy effects. Please specify the qualifications, clinical training, and prior experience of the therapist delivering spirituality therapy. It would also be helpful to indicate whether adherence to the protocol was assessed, whether any sessions were observed or audited, and whether participants’ engagement or homework completion was recorded systematically. These details are important for intervention fidelity and internal validity.

Response: Revised and uploaded the manuscript.

1.2. Reviewer 2

Reviewer:

In the Methods section, the sentence “The present study was conducted as a clinical trial with a one-month follow-up period” requires more methodological precision. Please specify whether the study was randomized, parallel-group, controlled, single-blind, assessor-blind, or open-label. Since participants were randomly allocated to intervention and control groups, the manuscript should clearly identify the study as a randomized controlled clinical trial if this is accurate. If blinding was not possible, the absence of blinding should be reported transparently as a methodological limitation.

In the Study Design and Participants paragraph, the sentence “The study population consisted of all patients with migraine who attended two neurology treatment centers and four public and private counseling centers in Bam...” needs clarification regarding recruitment setting and diagnosis confirmation. Counseling centers may not routinely diagnose migraine, so the manuscript should explain whether all diagnoses were confirmed by neurologists before recruitment, whether patients from counseling centers had documented neurological diagnoses, and whether diagnostic criteria were applied consistently across all centers.

In the Study Design and Participants paragraph, the sentence “The final sample consisted of 44 eligible patients who met the inclusion criteria and were selected through cluster sampling” requires reconsideration. The described procedure combines cluster sampling at the center level with random allocation within clusters, but it is not fully clear whether the clusters were sampled randomly or purposively selected based on migraine service provision. Since the manuscript later acknowledges non-

random selection of centers, the sampling method may be more accurately described as cluster-based convenience or purposive cluster sampling followed by random assignment. This distinction is important for external validity.

In the inclusion criteria paragraph, the sentence “having a confirmed diagnosis of chronic migraine by a neurologist based on the criteria of the International Headache Society” is important but incomplete. Chronic migraine should be defined precisely according to ICHD-3 criteria, including headache occurring on 15 or more days per month for more than three months, with migraine features on at least eight days per month. The current wording mentions 15 or more days but does not clearly specify the eight migraine-feature days criterion. Please revise this section to ensure diagnostic accuracy.

In the exclusion criteria paragraph, the sentence “development of an acute psychiatric disorder or medication use based on self-report” is ambiguous. It is unclear whether “medication use” refers to psychiatric medication, migraine medication, analgesic overuse, or any new medication during the trial. Since pharmacotherapy was part of routine treatment, medication use cannot itself be an exclusion criterion unless defined carefully. Please revise this sentence to specify the type of medication, timing, and clinical relevance, and clarify how medication changes were monitored during the intervention and follow-up periods.

In the sample size paragraph, the sentence “With a significance level of 0.05, statistical power of 0.90, a medium effect size of 0.70, and two repeated measurements considered in the sample-size estimation...” is inconsistent with the study design, which includes three measurement points: pretest, posttest, and one-month follow-up. Please clarify why the G*Power calculation was based on two repeated measurements despite the actual repeated-measures design containing three time points. If this was a typographical error, it should be corrected; if intentional, the statistical rationale should be explained.

In the Data Collection Tools section, the Distress Tolerance Scale paragraph states that “Six items are reverse-scored,” but the exact reverse-scored item numbers are not provided. For reproducibility, please specify which items are reverse scored according to the original or Persian validation version. Additionally, the scoring direction should be checked carefully because distress tolerance scales may include items where agreement reflects lower tolerance depending on item wording. The manuscript should ensure that higher scores consistently represent greater distress tolerance after reverse scoring.

Response: Revised and uploaded the manuscript.

2. Revised

Editor’s decision after revisions: Accepted.

Editor in Chief’s decision: Accepted.