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LETTER

Effectiveness of Electromagnetic Field Therapy in Mechanical Low Back Pain: A Randomized Controlled Trial [Letter]

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Dear editor

We read the article with great interest by Koura et al titled "Effectiveness of Electromagnetic Field Therapy in Mechanical Low Back Pain: A Randomized Controlled Trial",[1] recently published in your esteemed journal "Journal of Pain Research". We applaud the authors' unique endeavor in carrying out this experimental investigation on working-age individuals with mechanical low back pain. We would appreciate it if the authors could address some of the issues raised by the study's Materials and Methods, Statistical Analysis, and Results.

Firstly, in the "Procedure and Outcome Measures" section, the authors state that participants exhibiting active myofascial trigger points were recruited for the study. However, the article does not specify which outcome measure or diagnostic criteria were used to identify and confirm the presence of active trigger points. Authors could kindly elaborate on the method or tool employed for this assessment, along with the lower back muscles tested for trigger points, as it is critical for the reproducibility and validity of the study.

Furthermore, in the "Statistical Analysis" section, the authors have mentioned the use of a two-way mixed-design repeated-measures analysis of variance to compare variables across groups and time points. However, the manuscript does not include any tables or results pertaining to the 2×2 MANOVA analysis. A clarification on whether the MANOVA results were omitted or presented differently would be appreciated for a more comprehensive understanding of the statistical approach and findings.

In the Results section, a potential inconsistency is present in the reporting of pain severity outcomes. According to the description in Table 3, the pain severity in the control group decreased from 7.66 (pretest) to 41.13 (posttest). However, in the description accompanying Table 4, it is stated that pain severity increased significantly from 8.05 to 52.4. This discrepancy between the numerical data in Table 3 and the description in Table 4, along with the unit of measurement used for VAS (mm or cm), may lead to confusion and requires clarification to ensure the accurate interpretation of the study findings.

Furthermore, the authors mention in the description of Table 4 that a paired *t*-test was used to assess differences between groups following treatment. However, according to standard statistical conventions, the paired *t*-test is typically used to evaluate within-group differences (ie, pretest vs posttest for the same group), rather than between-group comparisons. Additionally, the type of *t*-test used has not been explicitly stated in the table. It would be greatly appreciated if the authors could kindly clarify the rationale for using the paired *t*-test in this context for between-group analysis and specify which *t*-test was actually employed.[2]

Additionally, it has been observed that the mean difference values in Table 3 do not align with the formula used to calculate the mean difference (Posttest Mean − Pretest Mean). The reported figures do not correspond with this calculation method. A brief explanation or clarification regarding the computation of the reported mean differences would be helpful for better understanding and interpretation of the findings.[2]

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Disclosure

The authors declare no conflicts of interest regarding this communication.

References

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2. Portney LG. *Foundations of Clinical Research: Applications to Evidence-Based Practice*. FA Davis; 2020.

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