WebLog Journal of Physical Therapy and Rehabilitation

Letter to Editor
Published: 25 Apr, 2026

Letter to the Editor- "Correlation Between Core Muscle Endurance and Dynamic Balance in Silambam Practitioners"

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WebLog Open Access Publications
Article ID : wjptr.2026.d2502
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Received Date: *03 Apr 2026*
Accepted Date: *23 Apr 2026*
Published Date: *25 Apr 2026*

Citation:
Nikita Vaid. Letter to the Editor- "Correlation Between Core Muscle Endurance and Dynamic Balance in Silambam Practitioners". WebLog J Phys Ther Rehabil. wjptr.2026.d2502. https://doi.org/10.5281/zenodo.19947980

ISSN 3071-401X

Dear Editor,

We read with great interest the recently published article by Muthu and Nisarudeen titled "Correlation Between Core Muscle Endurance and Dynamic Balance in Silambam Practitioners" [1]. The authors should be applauded for addressing an important and relevant topic in sports physiotherapy, particularly within traditional martial arts. However, we would like to highlight several methodological and statistical aspects that require clarification to improve the validity and clinical applicability of the findings.

A cross-sectional correlational study design was used to examine the relationship between core muscle endurance and dynamic balance. While this design is appropriate for identifying associations, it does not allow causal interpretation, and conclusions suggesting improvement in balance or reduction in injury risk should be interpreted cautiously [2].

The study included a relatively small sample size of 30 participants selected through convenience sampling. Although statistically significant results were reported, the absence of an a priori sample size calculation or power analysis makes it difficult to determine whether the study was adequately powered, which may affect the reliability and generalizability of the findings [3].

The authors reported normality testing using the Shapiro–Wilk test ($p = 0.657$, 0.524, and 0.897), suggesting normally distributed data. However, additional assumptions required for Pearson's correlation, such as linearity and absence of outliers, were not reported, which may influence the validity of the statistical results [4].

The correlation values reported ($r = 0.989$ and $r = 0.991$) are extremely high for physiological variables. Such values are uncommon in human performance research and may indicate shared measurement factors or methodological issues rather than a true relationship [5].

The use of plank and side plank tests to assess core muscle endurance primarily reflects global muscular endurance, while the Y-Balance Test is influenced by multiple factors such as strength, flexibility, limb length, and neuromuscular coordination, which may limit its specificity as a measure of dynamic balance [6].

Potential confounding factors such as training load, fatigue, motivation, and anthropometric characteristics were not controlled or adjusted for in the analysis. This may affect the observed associations and interpretation of the results [7].

Observational studies are expected to follow reporting guidelines such as the STROBE statement to ensure clarity and completeness in reporting. Important elements such as handling of confounders, bias assessment, and justification of analytical methods are not clearly described in the manuscript [8].

In conclusion, while the study provides useful initial findings, these methodological and statistical considerations suggest that the results should be interpreted with caution. Addressing these aspects in future research would enhance the strength and clinical relevance of the evidence.

Author Contribution

The Author contributed to the conceptualization, drafting and final approval of this letter.

Ethical Statement

Ethical approval not required, as this letter is based on an appraisal of previously published literature and did not involve human participants.

Conflicts of Interest

The author declares no conflicts of interest.

Funding

No funding was received for the preparation of this manuscript.

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