The Effect of Prior Learning on Table Tennis Instruction in Young Women with Disabilities in Tehran

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1. Round 1

1.1 Reviewer 1

Date: 20 February 2025

Reviewer:

The statement, "Despite the proven health advantages of engaging in physical activity, women with physical disabilities often lead sedentary lifestyles (5)," would benefit from more current regional data or statistics specific to Tehran or Iran to strengthen the contextual relevance.

The paragraph describing Table 1 states, "it can be concluded that the performance of the components... demonstrated a noticeable improvement." However, the control group performed better. Please clarify this point and reflect on possible implications of control group outperforming the experimental group.

The paragraph uses multivariate significance tests but lacks justification for choosing MANCOVA. Clarify why MANCOVA was selected instead of repeated measures ANOVA or other suitable models, especially considering the small sample size.

The sentence, "incorrect instruction at the beginning... may negatively impact subsequent learning," introduces a valuable insight but needs empirical support. Provide references to prior learning interference theory or cite studies on motor learning disruption.

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The phrase, "diminished their awareness of adaptive sports... and did not foster motivation" is speculative unless supported by qualitative feedback or survey data. Please revise or provide evidence for such psychosocial conclusions.

The statement, "our study confirms that prior learning... can also be useful for training even elite professional athletes," overstates the findings. The sample was not composed of elite athletes; revise for accuracy.

Authors revised the manuscript and uploaded the updated document.

1.2 Reviewer 2

Date: 24 February 2025

Reviewer:

The authors mention benefits of table tennis for individuals with ADHD and ASD (9), but these are neurodevelopmental conditions. It would be more appropriate to focus on research specifically targeting motor or physical disabilities, as this better aligns with the sample population.

The discussion on neuromuscular training is informative, but the authors claim, "no study has assessed its effectiveness in professional table tennis players who face unique physical demands (19)." This statement should be supported with a systematic review citation or clarified as a gap in the literature.

The claim, "no research has yet examined the impact of table tennis instruction on young women with physical disabilities," is quite broad. The authors should clarify whether this gap refers to the combination of prior learning methods and disability context or table tennis training in general.

"Compared to traditional training methods..." — The study did not include a traditional training arm, so comparisons to such methods should be avoided or clearly identified as theoretical/hypothetical.

"Considerable effort must be invested to overwrite incorrect patterns..." — This is a critical conclusion. Cite motor relearning literature or neuroplasticity research in populations with motor disabilities to reinforce this statement.

The authors note "the similarity between the target skill and intervening activities." Please elaborate on what these "intervening activities" were in your study — were incorrect instructions mimicking plausible but flawed styles?

Authors revised the manuscript and uploaded the updated document.

2. Revised

Editor's decision after revisions: Accepted.

Editor in Chief's decision: Accepted.

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