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Neurofeedback Training for Sharpening Focus in Precision Sports: A Pilot Study

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1. Round 1

1.1 Reviewer 1

Reviewer:

"This pilot study investigates the efficacy of NFT in enhancing focus among precision sport athletes…" but does not clearly differentiate the novelty of this protocol compared to prior NFT studies. Explicitly highlight what methodological or theoretical advances this study offers.

The inclusion of both laboratory and field measures is commendable; however, the choice of "Coach-rated performance under distraction" requires explanation regarding inter-rater reliability or bias mitigation strategies.

The use of both frequentist and Bayesian approaches is advanced, but readers would benefit from a justification of why Bayesian modeling was particularly appropriate for identifying individual response predictors.

The discussion claims "durable effects observed at follow-up," but the methods do not describe any formal follow-up period. Clarify whether this refers to post-training stability within the 8-week program or actual long-term retention.

Authors revised the manuscript and uploaded the updated document.

1.2 Reviewer 2

Reviewer:

When stating that “Current literature presents conflicting evidence regarding NFT’s efficacy…,” it would strengthen the argument to include a brief comparison table or summary of key conflicting studies and their methodologies.

The Neurovisceral Integration Model is referenced but not deeply connected to the operationalization of the NFT protocols. Consider explaining specifically how SMR and theta/alpha modulation map onto this model’s physiological predictions.

While the manuscript notes “modifications to enhance ecological validity,” it does not fully explain why sport-specific visual displays were selected over standardized feedback paradigms. Clarify the theoretical or empirical basis.

The correlation between SMR amplitude changes and performance improvements (r=0.62) is compelling; however, the risk of over-interpreting causality should be acknowledged here, not solely in the discussion.

Athlete quotes such as “I can now feel when my shoulders start creeping up…” are valuable. Consider systematically linking these qualitative themes to the quantitative findings for stronger mixed-methods integration.

The contrast with Radüntz et al.’s null findings is well-presented, but the manuscript should critically assess whether differences could also stem from sample characteristics rather than only protocol design.

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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