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Exploring the Effects of Physical Activity Levels and Sleep Quality on Cognitive Failure in Elderly: A Cross-Sectional Study

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1. Round 1

1.1 Reviewer 1

Reviewer:

Consider aligning the age classification with WHO standards or Iranian national guidelines, especially since different sources may define "elderly" variably (60 vs. 65 years).

Please clarify how cognitive impairments were screened in advance. Was any diagnostic tool or brief cognitive screening used to exclude participants with dementia?

Consider rewording for clarity, as this reverse scoring scheme can be confusing to readers. A brief example illustrating this would help.

You mention seven subscales but do not describe how the "global score" is interpreted beyond the cutoff of 6. Please add a sentence elaborating on the implications of higher global scores for analytical purposes.

Please avoid reiterating methodological procedures here. Focus the discussion on interpreting results and drawing connections to prior research.

Consider specifying the practical implications of the relatively small effect size for the interaction term. For instance, what does $\eta^2 = 0.025$ mean in terms of real-world cognitive benefit?



Author revised the manuscript and uploaded the updated document.

1.2 Reviewer 2

Reviewer:

This sentence should be expanded by briefly referencing recent meta-analytical evidence to contextualize why these two variables were selected over other lifestyle factors like diet or smoking.

Please cite the specific study or systematic review providing these percentages to reinforce the empirical foundation.

It would strengthen your rationale to mention at least one such study by author and year here to demonstrate the research gap.

The percentage cited (6.1%) appears inconsistent with later projections of >10% by 2025. Please reconcile this demographic discrepancy or clarify the difference between historical data and future projections.

The rationale for selecting public parks as recruitment locations should be explained. Were there concerns about selection bias toward more active elderly individuals?

Please add specific reliability coefficients from the Iranian validation study to support this claim.

Please elaborate on how this violation was determined (e.g., Box's M test), and justify the choice of Pillai's Trace over other statistics like Wilks' Lambda.

Author revised the manuscript and uploaded the updated document.

2. Revised

Editor's decision after revisions: Accepted. Editor in Chief's decision: Accepted.

