






Guidelines for Applying Psychometrics in Sports Science: Transitioning from Traditional Methods to the AI Era

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1. Round 1

1.1 Reviewer 1

Date: 23 December 2023

The paper is an extensive and detailed guide focusing on the application of psychometrics in sports sciences. It covers a wide range of topics, including understanding psychometrics in the sports context, choosing appropriate psychometric instruments, various types of validity, the development and validation process of measurement instruments, the role of artificial intelligence in psychometrics, and ethical considerations. However, to fully meet our publication standards and to enhance the overall impact and accessibility of your work, we require the following revisions:

Clarity and Structure: Simplify complex sentences and improve the flow of information. Ensure that each section logically leads to the next and that key points are highlighted.

Updating Methodologies: Incorporate any new advancements or methodologies in psychometrics since the document was written, especially those relevant to sports sciences.



AI Integration: Expand on the role of artificial intelligence in psychometrics, particularly in data analysis, pattern recognition, and test development.

Ethical Considerations: Ensure the latest ethical guidelines and considerations in sports science research are discussed, especially concerning data privacy, consent, and non-discrimination.

Real-world Applications: Include more examples of how psychometrics is applied in sports contexts, possibly adding case studies or recent research findings.

Accessibility and Inclusion: Address how psychometric tools and methods can be adapted for diverse populations, ensuring inclusivity and fairness.

Visual Elements: Add charts, graphs, or other visual aids to enhance understanding, especially in sections dealing with statistical concepts or data analysis.

References and Citations: Update references to include the most recent and relevant studies, ensuring all sources are accurately cited.

Practical Guidelines: Offer practical advice for sports psychologists, coaches, and organizations on implementing psychometric tools effectively.

Summary and Conclusions: Ensure the concluding section succinctly summarizes the key points and implications for future research and practice in the field.

Upon completion of these revisions, I believe the manuscript will provide significant value to the readers of *Tunisian Journal of Sports Science and Medicine*. The author's expertise in this niche area of sports science is a valuable asset, and the paper, once revised, will undoubtedly be a noteworthy contribution to the field.

1.2 Reviewer 2

Date: 23 December 2023

The topic of the manuscript, "Guidelines for Applying Psychometrics in Sports Science: Transitioning from Traditional Methods to the AI Era," holds significant importance. However, I found the initial 25 pages dense, particularly with the extensive referencing to statistical journals. Given that this paper aims to serve as a practical guide, it might benefit from being more accessible, especially to younger researchers.

The sheer volume of references presented can be overwhelming. I'd recommend focusing on the most pertinent references, particularly those directly related to sports science, to ensure clarity and relevance.

Additionally, the graphic abstract appears disconnected from the core subject matter of the manuscript. It might be beneficial to align it more closely with the primary theme.

In light of readability and comprehension, I'd encourage the authors to streamline the content, ensuring conciseness without compromising essential details.

In light of readability and comprehension, I'd encourage the authors to streamline the content, ensuring conciseness without compromising essential details.

Line 80: Psychometrics discipline parameters included all physical activity effects in psychometrics parameters not only athlete's performance. Please consider for all text

Line 93: Please use the term Questionnaires or surveys to avoid confusion

Line 102: Preliminary

Line 130: Small is 5, 10 or 30 Please identify

Line 134: You have a section for content validity in Line 110 – 119 reduplications

1.3 Authors' Response

We would like to express our sincere gratitude for your invaluable time and effort in reviewing our article titled "*Guidelines for Applying Psychometrics in Sports Science: Transitioning from Traditional Methods to the AI Era*". Your constructive feedback and insightful comments have been instrumental in enhancing the quality and rigor of our work.

We are pleased to inform you that we have diligently incorporated the recommended changes into the manuscript. Each modification has been carefully considered, and we have made an effort to address all your concerns. To facilitate a transparent review process, we have tracked and documented each adjustment in the manuscript. This will allow you to easily identify and review the changes made in response to your feedback.

We believe that the revisions made will significantly improve the overall coherence and quality of the article. We are confident that your rigorous evaluation and our commitment to incorporating your suggestions will contribute to the advancement of the research presented in the manuscript.

Best regards,

Mohamed Ben Aissa

2. Revised

Editor's decision after revisions: Accepted.

Editor in Chief's decision: Accepted.