International Journal of Sport Studies for Health

Journal Homepage

Impact of Age, Gender, and Body Composition on Balance, Coordination, and Agility in Children and Adolescents

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Özgür Eken Associate Professor, Inonu University, Malatya, Turkey ozgureken86@gmail.com	**Reviewer 1:** Mohammadreza Zarbakhsh Bahri Associate Professor, Department of Psychology, Tonekabon Branch, Islamic Azad University, Tonekabon, Iran. Email: M.Zarbakhsh@Toniau.ac.ir **Reviewer 2:** Yaghob Badriazarin Associate Professor of Sport Sciences, Tabriz University, Tabriz, Iran. Email: badriazarin@tbzmed.ac.ir

1. Round 1

1.1 Reviewer 1

Reviewer:

Consider citing more contemporary and child-focused studies that differentiate between visceral and subcutaneous fat, especially given the pediatric population.

Please clarify the use of "primary determinant"—the phrasing could be misleading without distinguishing between biological sex and gender identity in modern scientific discourse.

There appears to be a mislabeling: you state “Alternate Hand Wall Toss (AHWT)” and then refer to it as “the Eye-hand coordination test.” Clarify if these are synonymous or if one is an adaptation.

Reporting significance only for individual ages risks inflating importance. Consider using repeated measures or ANCOVA if age was treated as a continuous variable.

The table includes correlation coefficients for two separate gender groups but lacks labels differentiating "1=boys" and "2=girls" clearly across all rows. This may confuse readers.

Provide more detailed interpretation: While correlations are significant, the effect sizes vary; please comment on the practical significance of these values.

Consider elaborating on neurodevelopmental mechanisms or hormonal influences that could explain this divergence post-puberty.

Author revised the manuscript and uploaded the updated document.

1.2 Reviewer 2

Reviewer:

This is somewhat contradictory to your later findings that balance improvement trends vary by gender and age; reconcile or explain this discrepancy more clearly.

This objective sentence should be more specific. Include what hypotheses were tested and whether moderation by gender was expected.

The description of the T-test is overly complex and may confuse readers. Consider simplifying and providing a proper figure caption for Figure 1 that matches the explanation.

The word “strong” is subjective. Provide justification based on correlation thresholds (e.g., Cohen's guidelines) to define what constitutes “strong.”

This paragraph needs citations when discussing puberty and fat mass trends—specifically where you assert gender-specific trends in lean mass accrual.

The sentence is confusing. Earlier, you stated girls had significantly better balance. Clarify whether changes refer to direction (increase or decrease) or significance across age.

Author revised the manuscript and uploaded the updated document.

2. Revised

Editor’s decision after revisions: Accepted.

Editor in Chief’s decision: Accepted.