

Comments to the Authors

Dear Authors,

Thank you for submitting your manuscript titled "Motor competence development of children in Singapore: A cross-sectional and longitudinal study." Overall, the study is well-structured and addresses an important topic; however, some sections need to be strengthened with more detailed explanations. It is believed that the manuscript will be stronger and make a more substantial academic contribution once the revisions listed below are made.

Language and Expression: The manuscript is generally written in an academic style, using clear and understandable language. However, in some sections, sentence structures are overly long, and more concise and precise expressions could be preferred to improve readability. Additionally, there are some minor grammatical errors in the text, particularly regarding the use of words such as "effect" and "affect," which should be carefully reviewed.

For example;

- Line 12-15 (Abstract):

"Understanding the motor competence development of young children requires both cross-sectional and longitudinal analyses. This is crucial for identifying relative age effects and tracking individual developmental trajectories. However, data is limited in Southeast Asia, particularly Singapore."

Suggestion: The phrase "However, data is limited" could be improved to "However, there is limited data" for smoother flow.

- Line 42-43 (Introduction):

"As children enter middle childhood, their developing cognitive abilities enable them to evaluate their motor skills, leading actual motor competence to influence perceived competence and, subsequently, physical activity levels (den Uil et al., 2023)."

Suggestion: The phrase "leading actual motor competence to influence perceived competence and, subsequently, physical activity levels" is quite complex. It could be restructured with shorter and clearer expressions.

- Line 221-223 (Discussion - Longitudinal Perspective):

"Significant changes in motor competence were found, with all but one task (BAL3: jumping on mats) improving at least once during the 18-month period."

Suggestion: Instead of "all but one task improving," using "all tasks except one improved" would sound more natural.

In line with these examples, other long and complex expressions in the manuscript can be simplified and made clearer.

The correct usage of "effect" and "affect" in the manuscript should be verified in their respective contexts.

Introduction:

- 1) The Introduction section provides a good context for the topic. However, more references could be added to clearly highlight the gap in the literature. In particular, it would be beneficial to discuss more previous studies on motor skill development in the context of Southeast Asia.
- 2) It appears that the Introduction section is structured under seven different subheadings, including theoretical information and relevant studies. However, rather than using numerous subheadings, presenting the topic under a single heading in a cohesive manner (introduction, development, and conclusion) could help express the rationale and aim of the research more clearly and understandably.
- 3) In the Introduction section, the identified gaps in the existing literature regarding the topic of your research, the contributions this study will make to the field, and the aspects that distinguish your research from the current literature are not sufficiently emphasized.
- 4) In your research text, the terms "motor competence" and "motor skills" are used interchangeably. Although these two terms are closely related, they refer to different constructs. To maintain consistency, it would be beneficial to determine the term that best reflects your measurement and use it consistently throughout the manuscript. Moreover, when both terms need to be included, providing a transition that explains the relationship between them can help the reader follow the text more smoothly and cohesively.

Method:

- 1) *Research Design:* The study's inclusion of both cross-sectional and longitudinal designs is considered a strong point. However, the research design should be clearly stated at the beginning of the "Method" section. It is suggested that this be elaborated under a "Research Model" subheading, placed before the "Participants" section.
- 2) *Participant Selection and Sample Size:* The study was conducted with 75 participants. However, there is a lack of detailed explanation regarding how the sample size was determined. It should be specified whether a G*Power analysis or another statistical method was used. Information on how the adequacy and appropriateness of the sample size were determined should be clearly presented under the "Participants" heading.

Results:

- 1) Appropriate statistical analyses, such as Repeated Measures MANOVA and two-way ANOVA, have been used. However, some effect sizes should be discussed in more detail. For example, the interpretation of Cohen's d or eta-squared values could be added to the text.

For instance, in the statistical analysis results presented in lines 166-178 (Results), instead of simply presenting effect sizes numerically, brief comments on their practical significance should be included. This will help the reader better understand the results.

- 2) The Discussion section addresses each finding separately, and this structure facilitates the reader's understanding of the results. However, stronger comparisons with the existing literature should be made. As it stands, this section seems limited in its connection to the literature.
- 3) The unique aspects of the study are not sufficiently emphasized. The innovations brought by this study to the literature should be more strongly articulated. For example, clear

comparisons could be made, such as "This study used the Y method, which differs from the X study."

References:

The study includes current references, but some sources appear to be quite dated (e.g., Malina, 2004; Brooks-Gunn et al., 2002). It is recommended to include more recent studies published within the last 10 years in the references.

General Comments and Recommendations

- The Introduction section should be reorganized to more clearly highlight the contribution of the research to the literature.
- The research design and sample selection process should be explained in more detail in the Method section.
- Older references should be updated, and recent developments in the literature should be discussed more thoroughly.
- The results of the statistical analyses should be interpreted in more detail, and effect sizes should be explained.
- The Discussion section should be expanded by increasing comparisons with other studies in the literature.

With my best wishes