

Peer Review File

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Reviewer A

Comment 1: The significance of this research isn't clear, and the paper is not written in a clear and concise way.

Reply 1: Comments are highly appreciated. We have rewritten the results, discussion and conclusion sections in order to clarify the significance of the manuscript. (See Pages 13-19)

Comment 2: Some sentences don't make sense – e.g. line 110 – “to collect the data, a cross sectional study was carried out “

Reply 2: We have reviewed the manuscript and have corrected the errors. We apologize for the inconvenience.

Changes in the text: “Data was collected between February and June 2019.” (see Page 8, line 109)

Comment 3: I have some concerns about the measurements taken only twice. What did you do if the measurements were > 0.5cm/0.5kg apart? Did you take a third measurement? Thus, the validity of your results becomes questionable. Why was triceps skinfold measured 3 times, but the other measures only twice? Which skinfold measure did you use? Eg the mean of the first 2?

Reply 3: Thank you for your question. Any difference greater than 0.5cm/0.5 kg in measurement didn't occur. If there has been any difference greater, we would have taken a third measurement and calculated the mean of the three measurements.

Triceps skinfold was measured three times because it is measured with a manual caliper instead of a digital instrument. So, there may be a greater variation between measurements. Thus, we use the mean of the three measurements to do statistical analysis.

Comment 4: Why was underweight included with healthy weight – suggest conducting analyses separately for underweight children or remove underweight from analyses if there were not enough.

Reply 4: The reviewer's comment has been considered. Thus, we have conducted analyses separately for underweight children.

Changes in the text: “An analysis of variance was used to analyze means differences between underweight, normal-weight and overweight/obese children”. (see Page 12, line 195-197)

Comment 5: There are a lot of different measures of fitness, fatness and PA used – could some of your associations be observed by chance? Also, with so many variables the results and discussion become confusing to read.

Reply 5: The reviewer's comment has been considered. We removed BMI from the analyses to reduce the number of variables. We have decided to remove BMI because previous research (Henriksson P, Leppänen MH, Henriksson H, et al. Physical fitness in relation to later body composition in pre-school children. *J Sci Med Sport* 2019;22:574-79); suggested that BMI could not detect any associations between fatness and physical fitness in preschool children. For this reason, (Leppänen MH, Henriksson P, Nyström CD, et al. Longitudinal physical activity, body composition, and physical fitness in

preschoolers. *Med Sci Sports Exerc* 2017;49:2078-85); stated that future research should include different fitness variables instead of just BMI.

Moreover, we have rewritten the results, discussion and conclusion sections to make the manuscript easier to understand. (See Pages 13-19)

Reviewer B

Comment 1: The paper is not clearly written because it uses different terms for the three variables, uses differences, significant associations etc. but not the directions (higher, lower, positive, negative).

Reply 1: Comments are highly appreciated. We have changed different terms we had used to define fitness. So, there is only one term (fitness) now. Moreover, we added the directions of significant associations in the results section. (see Pages 13-14)

Comment 2: The paper uses two populations (total and subpopulation with also PA data). I advise to restrict to the subpopulation.

Reply 2: The reviewer's comment has been considered. Thus, we have restricted the data analysis to the subpopulation. (see Page 6, line 85-87).

Changes in the text: Of the 230 participants included in this study, only 150 participants (65.22%) who had data that met the PA inclusion criteria were included in the statistical analyses.

Comment 3: Title, abstract and conclusion are not enough precise

Reply 3: Thank you for your comment. We have reviewed the title, abstract and conclusion and changed them to be more precise. (see Pages 1, 3-4 and 19)

Comment 4: Results are confusing and discussion not to the point. The most important variable (PA) first and then fitness and sex thereafter.

Reply 4: We appreciate your comment. We have reviewed results and discussion sections again to clarify the information presented. (see Pages 13-18)

Comment 5: small questions on page 346: cpm? and page 353 :1=one abbreviations such as PREFIT and MPVA explained the first time used.

Reply 5: Thank you for your question. We have explained all abbreviations such as cpm (see Page 11, line 176), PREFIT (see Page 9, line 135) and MPVA (see Page 5, line 61) the first time used.

Reference

1. Ayán C, Álvarez S, González S, et al. Influence of the Box Dimensions on the Reliability and Validity of the Sit and Reach in Preschoolers. *J Strength Cond Res* 2020;34(9):2683-92.
2. Nielsen-Rodríguez A, Romance R, Dobado-Castañeda JC. Teaching Methodologies and School Organization in Early Childhood Education and Its Association with Physical Activity. *Int J Environ Res Public Health* 2021;18(7):3836.

3. Nilsen AKO, Anderssen SA, Ylvisaaker E, et al. Physical activity among Norwegian preschoolers varies by sex, age, and season. *Scand J Med Sci Sports* 2019;29(6):862-73.
4. Kim TV, Pham TND, Nguyen CLD, et al. Prevalence of Physical Activity, Screen Time, and Sleep, and Associations with Adiposity and Motor Development among Preschool-Age Children in Vietnam: The SUNRISE Vietnam Pilot Study. *Indian J Pediatr* 2022;89(2):148-53.