Author's response to reviews

Title: Relationship of aerobic fitness and motor skills with memory and attention in preschoolers (Ballabeina): A cross-sectional and longitudinal study

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Author's response to reviews: see over
Submission of a revision

Dear Editor, dear Editorial Board,

we would like to thank you for the thorough and helpful review of our paper “Relationship of aerobic fitness and motor skills with memory and attention in preschoolers: A cross-sectional and longitudinal study” (MS: 1613956967487532). Enclosed you find the revised version according to the reviewers’ comments with changes marked in yellow. The specific point-by-point responses are mentioned below.

Hoping that this revised version will now be acceptable for publication in the BMC Pediatrics, we thank you in advance for your consideration.

With kind regards on behalf of all the co-authors,

Iris Niederer
Reviewer I (Phillip Daniel Tomporowski)

General Comments
The authors have done an excellent job of responding to the reviewers’ suggestions. In particular, the authors’ separation of physical fitness and motor skill leads to a much more informative paper. As a side note, I agree with the authors’ hypothesis concerning spatial working memory. Indeed, spatial (as opposed to declarative memory) may be very important during development and for academic achievement in areas that require spatial abilities.

We thank the reviewer for his positive comments.

Minor Essential Revisions
1. “relation of baseline… In our cohort, aerobic fitness and different motor skills….” (delete different?)
   We changed this.

2. “We did not find a consistent relationship between aerobic fitness and memory.” Comment to the authors. Data from controlled experiments rarely find fitness changes are related to memory in adults (there are a few studies, but weak results/interpretation).
   We thank the reviewer for this comment.

3. “In accordance…., we conclude that influence factors…” (factors that influence?)
   We adapted this.

4. “This lack of … adds to understand…” (adds to our understanding?)
   We changed this.

5. “In example,….” (For example)
   We changed this.

Based on the authors’ interest in neurophysiological explanations, I recommend they evaluate and perhaps site: (Kempermann, 2008)


We thank the reviewer for the reference of this very interesting article. We cite it now in the background.
Reviewer II (Keita Kamijo)

General Comments
The authors have improved the description of their work.

_We thank the reviewer for his positive comments. We had tried to implement the reviewer's comments in the study._

Minor comment
This reviewer still cannot follow the IDS. How did the participants respond? What was the IDS score? The children's limit?

_We thank the reviewer for this comment. We now added these two aspects in the description of the IDS score, page 9._
Reviewer III (Jeremy Miles)

Minor essential revisions

1. I would prefer that the paper does not present +/- in the abstract or in table 1 – it is unclear to the reader if this refers to standard deviation, standard error or confidence limit.

   We adapted this. As there are different ways to present the standard deviations in the BMC Pediatrics, we hope it is now in a layout that is acceptable for the reviewer and the editorial board.

2. P10: Binomial, rather than binominal?

   We thank the reviewer for this comment, we changed it throughout.

3. P11: “All confounder variables that are hypothesized to influence aerobic fitness.” Use of the word ‘all’ implies to me that every confounder variable that could possibly affect fitness has been included, rather than those that have been measured.

   We changed it into “the measured confounder variables”.