Reviewer's report

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

Version: 2 Date: 20 March 2011

Reviewer: Phillip Daniel Tomporowski

Reviewer's report:

1. Is the question posed by the authors well defined?
Yes
2. Are the methods appropriate and well described?
Yes
3. Are the data sound?
Yes
4. Does the manuscript adhere to the relevant standards for reporting and data deposition?
Yes
5. Are the discussion and conclusions well balanced and adequately supported by the data?
Yes
6. Are limitations of the work clearly stated?
Yes
7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?
Yes
8. Do the title and abstract accurately convey what has been found?
Yes
9. Is the writing acceptable?
A few minor points

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Major Compulsory Revisions
None

Minor Essential Revisions

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.

Discussion:

1. “relation of baseline… In our cohort, aerobic fitness and different motor skills....” (delete different?)

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)

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

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

5. “In example,...” (For example)

Discretionary Revisions:

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

(Kempermann, 2008)


Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests