Reviewer’s report

Title: Gender and grade differences in objectively measured physical activity and sedentary behavior patterns among Japanese children and adolescents: A cross-sectional study

Version: 0 Date: 16 Sep 2015

Reviewer: Luis Lopes

Reviewer's report:

General Comments:

This paper provides information on objectively measured physical activity and sedentary behavior in Japanese children, a very important topic for the promotion of public health.

This reviewer understands how difficult is to write a manuscript in another language, but there are some awkward sentences and grammatical errors. It is suggested a proof read for future drafts of this manuscript.

The manuscript suffers from some issues relative to the written style, methods and results description and presentation. These issues are described below. Therefore, the manuscript needs major revisions before it can be considered for publication.

Abstract

The aim of the study misses the reference to sedentary behavior and should be in concordance with that stated in the introduction section. In the methods authors stated "Two-way analysis of covariance and logistic regression analyses, adjusted for weight..". Authors should added "weight status".

Introduction
Although the introduction is reasonably well written it may be improved to re-writing the sentences in lines: 71-74;

Methods

The methods should be in detail and should be written in order to allow the replication of the study. There is much information that misses in methods section:

- Authors stated in lines 99-102 that the study was performed in Okayama city in 2010 and 2011 in 2815 children aged 3 to 15 years; however this study has 691 participants. Authors should describe here in detail the study designed and the sampling.

- In lines 120-122 authors cited an article that validated the Lifecorder, but they should include in the text the coefficients obtained in that study.

- In lines 130-131 authors should added how many zero count period is recognized as invalid.

- In lines 131-132 authors should added information on the participants inclusion criteria. It is mandatory to have a weekend thay to meet the inclusion criteria? Or participants with 3 or more days can be included eventhough the didn´t have 1 weekend valid day? And how many hours were considered a complete day?

Results

The results section should be improved to characterize the participants in order to a better understanding of the results and to answer properly to the aims of the study. Therefore, in the results section authors should change the following:

- In lines 150-152, this information should be in the methods sections.

- Table 1 does not characterize properly the participants. For example, when looking to the table I don't know how many participants from Preschool met the criteria to be considered Healthy weigh or Overweight or obese. And if they are all in the Healthy weigh this could explain why they are more active than those in the higher grades.
- Furthermore, in Table 1 I don't know the participants characteristics regarding their gender.

- Additionally, in Table 1 why authors did not included in the weight status the underweight category?

Discussion

Although the English style should be improved, the discussion section of the manuscript is reasonably well written.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

No

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

Yes

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

**Quality of written English**
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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