Reviewer’s report

Title: Reliability and validity of a sedentary behavior questionnaire for South American pediatric population: SAYCARE Study.

Version: 0 Date: 17 Jul 2018

Reviewer: Wendy Yajun Huang

Reviewer's report:

This study investigated the reliability and validity (using accelerometry) of a sedentary behavior questionnaire for South American children and youth. The merit of this study is the under-researched target users of this questionnaire although there have been quite a number of sedentary behavior questionnaires available in the literature. As a result, stronger rationale is needed to justify how this questionnaire was developed taking into considerations of the cultural difference. Another major concern of this study is the limited domains of sedentary behavior measured in the questionnaire. It is not surprising to see the obvious difference between questionnaire-assessed and accelerometer-determined sedentary time (shown in table 3) because these two methods do not measure the same metric.

Abstract: it should be made clear in the abstract that for children, their parent responded to the questionnaire. Consequently, the results and discussion should be presented for parent-report and youth-report questionnaires separately.

Page 4, line 93: what do the authors mean when saying "a cross-cultural sedentary behavior questionnaire"? As said, more justifications should be provided here, e.g. what might be the cultural difference? How this difference might affect the development of a sedentary behavior questionnaire?

Page 4, power calculation: although the authors have provided detailed power calculation, they haven't considered the parents' sample and youth sample separately. It is inappropriate to combine parent-report and youth-report questionnaire in data analyses and interpretation of the data.

Page 5, line 133: it is not until this part that the readers understand that parents respond to the questionnaire for children. It should be mentioned in the abstract.

Page 5, lines 145-150: why only limited number of sedentary behaviors is included in the questionnaire? Any questions reflect the cross-cultural differences?

Page 6, calculation of weekly sedentary behavior: how to handle missing data? What happens if the respondent only responded to partial questions, e.g. only have data on weekdays?

Page 6, lines 166-167: provide reference to support the decision of using 20 minutes of 0 counts as non-wear time.

Page 6, line 168: how the accelerometer data was corrected by wearing time?

Page 6, lines 157-159 and lines 174-175: the sedentary behavior guidelines (no more than 2 hours per day) refer to screen-based behaviors only. Not appropriate to use this cut off for total sedentary
behaviors measured by the questionnaire and accelerometer.

Page 7, line 197: what does 'the quartile agreement' mean? I do not see any results relevant to this.

Discussion should be organized for parent-report and self-report questionnaire separately. Interestingly, there were obvious differences between first and second administration of the questionnaire for adolescents, but not for parents/children (shown in table 2). Any explanation?
It seems not convincing that the authors conclude that the questionnaire is feasible and reliable. How can the questionnaire be used without acceptable validity?

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

Yes

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

Yes

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

No

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

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Please indicate the quality of language in the manuscript:

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