Reviewer’s report

Title: Physical Activity and Sedentary Behavior among Chinese Children aged 6–17 years: A Cross-Sectional Analysis of 2010-2012 China National Nutrition and Health Survey

Version: 0 Date: 22 Feb 2019

Reviewer: Eman Alhalal

Reviewer's report:

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The topic is very important and I am sure it adds to the knowledge related to Chinese culture because it is using a national health data. However, I am concerned that the data is from 2010 to 2012, and we might have different aspects of physical activity in 2019? There is a study by Zhu et al., 2017 entitled "Prevalence of physical fitness in Chinese school-aged children: Findings from the 2016 Physical Activity and Fitness in China-The Youth Study" which used data in 2016 to look to school-aged children physical activity.

Abstract: the result section is too long and it needs to be shortening with important results only

Background: the background is well explained.
In line 54, "Engaging in regular PA can reduce the risk of hypertension, coronary heart disease, stroke, diabetes and some types of cancer (breast cancer, colon cancer), are fundamental to energy balance, weight control and emotion" are these consequences occur in childhood or adulthood? The sentence has grammatical issue.
The aim "The study was to describe.." it has grammar problem.
"provide basic information to aid in developing PA intervention strategies" how the author achieved this aim?

Method:
The PA was assessed with school-time PA, transportation PA, leisure-time PA and domestic PA. however, the question is what is the scale that was used to assess these categories. What its reliability and validity?
It also says that "Leisure-time sedentary behaviors included…doing homework in leisure time".
Does homework consider children leisure time?
In line 107, "School-time PA included physical education class, exercise during class breaks, et al." et al. is not appropriate.
Since the author considered school time PA, were there differences between public and private schools?
Under the analysis, "using two-sided tests" it is not clear which type of test. Did the author use t-test?

Result:
"Children in medium and small cities spent most time on school-time PA (64.8 min/day), followed by poor rural areas (61.6 min/day), big cities (60.2 min/day), and ordinary rural areas" how the authors classified the cities as rural, big, and small? 147 poor rural areas (61.6 min/day), big cities (60.2 min/day), and ordinary rural areas (58.0 min/day).

Under the Leisure-time sedentary behavior, it is not clear how much time the children spend on watching television, using computers, playing video games

In line 185, "In the four different areas, the amount of sedentary time and the proportion both presented a descending trend from big cities to poor rural areas". How there are differences? Since the data is coming from larger study, the author can perform more analysis by looking to a relationship between PA with something else such as family socioeconomic status.

Discussion:
It shows the explanation of the findings. However, the discussion lacks of explanation how these findings can be utilized to change the current situations in China.
The discussion

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.

Unable to assess

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 recommend additional statistical review

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