Reviewer’s report

Title: Leisure-Time Physical Activity among Nigerians

Version: 1 Date: 13 January 2014

Reviewer: Maria Hagstromer

Reviewer’s report:

This paper reports leisure time physical activity levels and its correlates in an adult Nigerian population. In general the paper is of interest as it reports data from a population that is not so well studied. The study is thoroughly conducted, uses sound methodology and is based on the literature. However, there are issues regarding use of concepts, interpretation of the literature, data handling that should be taken into consideration. Please find detailed comments below.

1. Introduction. The concept inactivity (i.e. not reaching the current recommendations on physical activity) should for clarity be explained/defined as nowadays the area of inactivity/sedentary behavior is also of interest and should not be used synonymous with not reaching the recommendation.

2. Introduction, first paragraph, last sentence. The last statement stating that “the levels of inactivity are rising” need a better reference nor be revised. As far as I know it all depend on how it is measured and few have followed the behavior over time using the same methodology. In many countries the prevalence of being active during leisure time has increased.

3. Introduction, first line page 5. The statement that objective measures are not feasible in large epidemiological studies would benefit from being revised. Nowadays many countries and researchers uses and finds it very feasible to use objective measures. Maybe add something about low-income countries.

4. Introduction, page 5 regarding the IPAQ. Even though the others of the paper referred to (#15) state that IPAQ overestimate I would suggest the authors to be more stringent as the methods used measures different things. Consider use the word higher instead of overestimate.

5. Consider moving the part on specific method and its validity etc to the method section and keep the introduction based upon what type of research that is needed.

6. The choice of using the NHS questionnaire is still not clear for me? Has it been tested in an African population? Are the activities given relevant for the population of interest?

7. Page 6, Physical activity. The authors state on line 5 that also sedentary activities was reported. How was that used and interpreted in this study?

8. Page 6, Physical activity. Last sentence starting with Based on…. Please consider rephrasing, this is not clear for me. Why was not the instruction for the questionnaire, when used in the NHS used? And if a change was done that need
to be justified. Further, if still appropriate to what is actually done, rephrase how the raw data was transformed to MET hours. Furthermore, it is not clear to me how the calculation of reaching the current recommendations was done, especially when the questionnaire asks about average over the year.

9. Page 7, statistical analysis. Please justify why individuals with underweight was excluded + see my comments above on the physical activity measure. I also wonder about how appropriate it is to report mean and SD when the MET-hours/day data are so skewed (this is taken care of by tertiles, but the descriptives should be reported using for example median values.

10. Page 9. Results, para 1, line 12. Avoid using terms like determinant when it is a cross-sectional study. i.e correlate is more appropriate. I also suggest to only report the findings in the result section, not interpret them.

11. The reporting of fulfillment of recommendations does not seem appropriate. Both with regard to the PA measure that is not aimed to measure this, more an overall picture and with regard to the findings. If reported I strongly suggest a more nuanced way of stating and discussing this and also a stronger motivation why and how this can be calculated based upon the PAQ.

12. The discussion and conclusion need to be rewritten in accordance to the comments above.

13. In table to state as a footnote what PR is

Discretionary comments
1. The readability of the paper would benefit from making it more neutral. Some sentences and paragraphs have WE all the time
2. Check the text for missing spaces and full-stop

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

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