Reviewer's report

Title: ASSOCIATIONS OF OUT OF SCHOOL PHYSICAL ACTIVITY, SEDENTARY LIFESTYLE AND SOCIOECONOMIC STATUS WITH WEIGHT STATUS AND ADIPOSITY OF CAMEROON CHILDREN

Version: 0 Date: 01 Jun 2017

Reviewer: Leopold Fezeu

Reviewer's report:

Navti LK et al used data collected among 5 - 12 years old school children in a Cameroon city to assess the cross-sectional association between sedentary or physical activity levels, parents' socio-economic status and obesity. Here are my comments.

1. The authors used a complex sampling method (two stages) to constitute the studied population. This method has to be taken into account during statistical analyses. It modifies the computation of standard deviations, and may have an impact on the statistical significations.

2. The reference category to which overweight/obese children are compared seem to include thin and severely thin children. This modifies the interpretation of the Odds ratios. The category of reference should be children with a z score between -2SD and + 1SD.

3. The authors failed to use the two-step analysis in interpreting association between overweight (including obesity) and physical activities or socio-economic variables with more than two modalities. A p value for global variable significance is lacking in tables 2 and 3. The authors should also be cautious when interpreting the results of the Kruskal-Wallis test. The alternative hypothesis is that there is at least one median different from others. A two by two comparison (taking into account the inflation of the type 1 error) is mandatory.

4. Analyses regarding triceps skinfold should also be adjusted on age and gender (table 2) using quantile regression.

5. It is not clear in table 3 that potential predictors of adiposity are adjusted each one to the others.
6. It seems that overweight / obesity is associated both to the type or school (private versus public) and to the area of residence (urban versus rural). Both variables should be present independently in table 2. In table 2 also, the odds ratios are age and gender adjusted, and that is not "univariate".

7. Descriptive characteristics of children in Table 1 should be given stratified by gender also. The authors should add in that table the following variables: type of school (private versus public), area of residence (rural versus urban), BMI categories (severe thinness, thinness, normal weight, overweight, obese)

8. Examples of professions in categories A, B and C should be given to allow the reader to have an idea of what is included in these categories of occupation.

9. The authors may update the references of their manuscript: ¾ of cited references are < 2010 and almost half are before 2005. For example, Biddle SJ, Int J Behav Nutr Phys Act. 2017 Mar 28;14(1):43 is more up to date than refs 14 or 15 which were published in 2005.

10. Tables 4a and 4b can be merged if occupation levels are presented as columns instead of rows.

11. The second and the third columns are not necessary in table 3.

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.

Yes

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

No
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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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