**Reviewer’s report**

**Title:** Risk factors and morbidities associated with childhood obesity in sub-Saharan Africa: a systematic scoping review

**Version:** 0  **Date:** 05 May 2020

**Reviewer's report:**

This systematic review brings together studies on an under-studied area of health - obesity in children in sub Saharan Africa. This review contributes to the growing worldwide literature on the increasing problem of obesity in children, and importantly sheds light on key differences between this region and other regions, such as the United States. As shown in this review, some of the patterns we observe in obesity in children in developed countries (e.g. higher obesity with lower SES) are reversed in SSA countries, highlighting the importance of context for combating this growing health issue and related non-communicable diseases. Overall, this is a strong manuscript, and my suggestions are primarily regarding clarity and succinctness of the writing, which will make the manuscript more readable. Overall, the manuscript could use editing for minor language issues, particularly in the discussion section. The results section in particular could be shortened and written more clearly. Below I have made a number of other specific suggestions:

1) This review follows another, by Fruhstofer et al. published in 2016. It is important that the authors demonstrate in the introduction the unique contributions of their new review.

2) Lines 45-56: Countries are listed with numbers in a way that is awkward to understand.

3) Lines 102-106: This section, "Identifying the research question" seems to belong in the introduction, not in the methods, and seems to repeat lines 84-89 in the introduction. Also, Table 1 does not seem necessary and could be folded into the text at the end of the introduction for easier reading.

4) Lines 112-115: Here you list the search terms used, and you state that "AND/OR were used to separate the keywords." Is there a way to be more specific about how you composed your search terms? You have given a much more thorough explanation in the Supplementary Table 2, but the main text of the manuscript needs more detail given about how the search terms were used.

5) Lines 123-128: This section, "Eligibility Criteria," needs to be rewritten with greater clarity. Definitions for which measures and cutoffs for childhood obesity and overweight should be included here. A cut-off for obesity is given in Table 1, however in the results section obesity and overweight are both mentioned. Also, definitions other than the cut-off given here (BMI > 85th percentile) are also sometimes used in the literature - did you include any of these studies in your review? Make sure you include all definitions used in the studies cited in this review.

6) E.g. lines 167: Throughout the methods and results section, there are places where you have included numbers both written out in English and in their numerical form, e.g.: "nineteen (19)."
Please choose one (preferably the form commonly used by this journal) and use it consistently instead of including both.

7) Line 191: You state that "about 16 potential risk factors were reported." It is not clear why you have not given a more confident count of the number of risk factors you encountered. I counted 17 in your results section.

8) E.g. lines 199-200: There are places throughout the results section where you have included the authors' names (in addition to the citation numbers), but in other places have not done this. Please be consistent in your citations. It seems redundant to include both the names and citation numbers, and makes the text more cumbersome to read.

9) Lines 269-273: In this section you have grouped together studies that found high BMI in either the mother or the father. I wonder if it would be better to separate these: there are likely similar SES- and diet-related factors related to associations with child obesity for both mothers and fathers, but there may also be epigenetic factors at play in the relationship between maternal and child overweight.

10) E.g. lines 276-278: Throughout the results you have included countries with most descriptions of results, but not all. This should be consistent throughout.

11) Line 308: This heading, "Morbidities and comorbidities associated with childhood obesity" currently is formatted in the same style as the different risk factors for obesity. This heading should be reformatted to show that it is a different theme, as described in lines 150-152.

12) Please check that all references are correctly numbered. For example, in line 361 the study by Fruhstofer et al. is numbered as 100, but in the reference section it is number 101.

13) Lines 398-407: This paragraph needs to be rewritten for clarity. It is not clear whether interventions need to be studied, or interventions need to be done in the areas included in this study. There were a few studies of interventions included in this review, and it might be helpful to include them in the discussion here to demonstrate what you mean by intervention trials.

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.
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.

Not relevant to this manuscript

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

Needs some language corrections before being published

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests.

Reviewer Publication Consent. I agree for my report to be made available under an Open Access Creative Commons CC-BY License (http://creativecommons.org/licenses/by/4.0) if this manuscript is accepted for publication. Any comments that I do not wish to be included in the published report have been included as confidential comments to the editor, which will not be published. If you are not happy for us to publish this report, please contact the editorial office before completing the review. If you wish, you can include your name in your published report.
Please note you must decide whether to include your name at the start of the process and confirm this decision whenever prompted. If you change your decision later, we will not be able to publish your name.

I agree to the terms of the CC-BY 4.0 license; please **do not** publish my name with my report. (default)