Reviewer's report

Title: Prevalence and factors associated with undernutrition and anaemia among school children in Durbete Town, northwest Ethiopia

Version: 1 Date: 4 March 2015

Reviewer: Silvia Gonzalez

Reviewer's report:

Review of: Prevalence and factors associated with undernutrition and anaemia among school children in Durbete Town, northwest Ethiopia

The study presents the prevalence of undernutrition and anaemia among school-aged children in Durbete Town, and examines the factors associated to these conditions. Is an informative document; however, methods are confusing and could be more detailed. And the discussion and conclusions could be improved including an analysis of the public health and/or policy implications of the results obtained. The manuscript needs several language corrections.

- Major Compulsory Revisions

Materials and methods

1. It is important to specify the age range the children in your sample.

2. In the “Nutritional Status” paragraph, besides including the reference for the nutritional status classification, it is important to mention that this classification is according to the WHO Growth Standards.

3. In the “Haemoglobin level determination” paragraph, I recommend to define anaemia or anaemic status to the readers, based on the cut-off points for age from your reference.

4. In the “Data analysis” paragraph:
   • Did you estimate the prevalences of undernutrition and anemia? You did not mention that and is your main objective.
   • Did you stratify the prevalence analyses for age or sex?
   • Looking at the tables I’m confused about the chi-square test that you conducted. You are presenting the results of a chi-square test in Table 1 and according to the title this table is not related with the association of intestinal helminth infection.

5. The data analysis segment needs a more detailed description of the statistical analyses that you conducted.

Discussion:

6. In the first paragraph, 5th line: I'm confused: You state that “male sex and older age children were at risk of being stunted”. This statement is based on the difference in the prevalence? Or did you estimate an OR specifically for stunting?
If so, why didn’t you include it in the tables?

7. In general, the discussion could be improved including policy and public health implications of the results obtained.

Conclusions:

8. I think that saying that undernutrition and anaemia represent moderate and low public health problems could be misunderstood and could lead to underestimate the problem. How does this study contribute to public health strategies in Ethiopia?

9. In the background, the authors stated that “information about risk factors is helpful to design integrated, timely and appropriate strategies to control the diseases”; based on your results, what do you recommend to take into account for strategies development?

- Minor Essential Revisions

Abstract

10. In the third line of the first paragraph please correct “were assessed” instead of “was assessed”.

11. The methods section should include a sentence describing the statistical analyses conducted.

12. The results could be clearer for the reader if you interpret the odds ratios.

Background

13. I suggest to specify the ages of the children (under-five, school age children?) in the evidence that you cited in the background. Specifically in the evidence on undernutrition in developing regions that you included in the third line of the first paragraph of the background and the evidence in underweight, wasting and stunting in Ethiopia in the sixth line from the second paragraph.

14. In the second paragraph of the background, regarding reference 12, I tried to review the criteria used for this classification but I could not find these facts in the reference cited. Please check if the references are correct.

15. In the tenth line of the second paragraph please correct “multifactorial”.

16. In the 13th line of the second paragraph please correct “were assessed” instead of “was assessed”.

Materials and methods

17. I recommend to detail the socio-demographic variables that you adjusted for in your analysis. How did you assess the socio-economic status?

18. Regarding ethical considerations, did the children and parents sign an informed consent? If so, I suggest mentioning that.

Results

19. A table 1 with the description of the sample of the study could be very informative. We don’t know anything about the SES distribution, the age distribution of the sample nor any of the socio-demographic variables that you
included in your logistic regression.

20. In the first paragraph of “Results”, in the lines 4-5, include the p value when you describe a significant or no-significant difference between groups.

21. As I suggested in the abstract, it could be easier to understand if you interpret the OR for the reader and maintain parallelism when presenting the results. Include the estimators (OR) and the 95%CI for all the variables that you are mentioning in the results.

Discussion

22. I think you should include a reference after the last sentence of the second paragraph “However, some regions of the country exhibited high prevalence…”

23. Fourth paragraph, line 4: STH: What does this acronym refers to? You have not defined it previously.

Conclusions:

24. In the third line, correct “stunted” instead of “stunting”.

Tables

25. As I mentioned before, I think it could be interesting to include a table 1 with the descriptive characteristics of the sample.

26. In table 1:
   • Include “stratified by sex and age” in the title.
   • Why didn’t you include the overall prevalence of undernutrition and anemia?
   • I suggest to clarify in a footnote what is the chi-square test proving.

27. In table 2:
   • The title is not clear for the information that you are presenting in the table. The current title suggest that you are presenting the prevalences of intestinal helminth infection, undernutrition and anaemia, but you are presenting the adjusted OR’s. Maybe it could be: Associations of intestinal helminth infection, sex and age with undernutrition and anemia.
   • It is important to clarify to the reader how are the socioeconomic variables defined. It could be in the methods section or as a footnote to the table. How did you defined the hand washing habit?

- Discretionary Revisions

Materials and methods

28. What was the response rate of the study?

29. I suggest to include the reference or model of the scale

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published
**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests