Reviewer's report

Title: Education and micronutrient deficiencies: an ecological study exploring interactions between women's schooling and children's micronutrient status

Version: 0 Date: 20 Mar 2017

Reviewer: Sigrun Henjum

Reviewer's report:
Review of the paper "Education and micronutrient deficiencies: an ecological study exploring the critical interactions between women's schooling and child micronutrient status".

General comment: The paper can be an important contribution to the research field of education and micronutrient deficiencies. However, I think that the manuscript needs considerable more elaboration, more information needs to be added to the method section, and the result and discussion could be shorter and more focused. Please check grammar and spelling. I suggest a major revision before publication, as suggested below. Please make it clearer in the manuscript what associations you are looking for, according to the abstract it is the relationship between maternal education and children's micronutrient status, however, in the introduction and results/discussion/conclusion you also present data on women's micronutrient status (anemia among non-pregnant women), and populations zinc deficiency risk, as well as iodine status of countries.

Major revisions:
Abstract:

Line 5: please define nutrition-sensitive intervention.
Line 6, please define nutritional wellbeing
Line 16, please define OGHIST
Introduction:
Line 32, please specify what you mean with at-risk children, at-risk children of malnutrition, reduced growth, weight gain etc.
Line 32-33, please rewrite "For many studies in this literature"
Line 36-37, you can delete (OR (95%CI): 0.89 (0.85-0.93) and (0.75 (0.71-0.79) in the introduction.
Line 49 please add reference.
Line 51, please specify if it is globally that "the education level have risen"
Line 63, you should mention "intergenerational effect of malnutrition"
Line 82-83, when you write "This paper seeks to unpack the relationships between maternal education and child undernutrition globally", I expect you to also present data on anthropometry.
Line 87, please add information of which six indicators of micronutrient deficiencies you will investigate in this paper.
Line 88, here you write women but in the conclusion you have also included "children, women and the general population", please include the other age groups as well.

Methodology
Line 98-114, I suggest you put the information of different cut-off with references in a table.
Information concerning sampling procedure should be added to this section.
Please define income level of countries in methodology.

Results
Line 159-169, this information should be moved to methods, since it is definitions and classification of variables.

Discussion:
Line 258, and non-pregnant women is not mentioned in the main objective in the abstract or in the introduction.
Line 264, here you write "anemia and micronutrient deficiencies", other places you only write micronutrient deficiencies, it is best to use the latter, since anemia is a micronutrient deficiency.
Line 266-268, please add a reference.
Line 275, please consider to rephrase this sentence, "these studies also showed that and that education did".
Line 277, I suggest you start this section with this finding from your study and discuss it is light of the ref 40-43 as you have done.
Line 284, please add a reference.
Line 284, one of the main challenges with zinc is that the absorption is hampered by phytat.
Line 284, its better to write, "consuming dietary zinc requires first, food item with zinc".

In general, refer to your findings in the beginning of a section and discuss it in the light of other literature. Line 282-361, you mainly review of existing literature, without referring to your finding, please rewrite this part, include your findings and shorten it down.

Conclusion:
Line 423-424, please rewrite and make this sentence more focused.
Line 429-447, this could be deleted or moved to the discussion. Some of it is repetition from discussion.

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.
Unable to assess

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.
No
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

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:

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No competing interests

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