Reviewer’s report

Title: Magnitude and predictors of undernutrition among children aged six to fifty nine months in Ethiopia: a cross sectional study

Version: 0 Date: 12 Feb 2017

Reviewer: Kristine Montecillo

Reviewer's report:

Title

1. The age group stated in the title is not in accordance/harmonious with what is being discussed in the manuscript. May revise the title of the article to "Prevalence and Predictors of Undernutrition among Children Aged Six to Fifty Nine Months in Rural Kebeles of the Hawassa Town, Southern Ethiopia: A Cross Sectional Study".

Abstract

2. Consider providing conclusion on the prevalence and predictors of children undernutrition in the study area (i.e. underweight, wasting) and not just on stunting.

3. Use the word 'determine' instead of 'assess' in stating the objective of the study in the Abstract Section.

Background/Introduction

4. Provide an explanation or justification why the study area was chosen to answer the objective of the study.

5. Spell out the acronyms/abbreviations in the manuscript when using it for the first time (e.g. SNNRP, EDHS).

6. Improve the coherence/transition of ideas/flow of discussion in the background/introduction especially the last two paragraphs.

7. Consider including Operational Definition section and define the following: kebeles, Sidamigna, Chembelala and diarrheal morbidity.
Methodology

8. Provide a more detailed methodology.

a. In the paper, it was specified that there were 15,723 under-five children based on the 2007 National Census. This should not be the population (N) of the study. Indicate the N of 6-59 months old children in the study area.

b. Were the children without mothers, but with fathers/guardians excluded from the study?

c. What is the basis for the design effect of 2 in computing the sample size? Please indicate the reference or basis of assumption.

d. Consider using of a flow diagram for the sampling method.

e. Why only one child was selected per household?

f. Indicate the single population proportion formula used in the computation of the sample size.

g. Describe the process of anthropometric measurement in the Data Collection section and not in the Study Variables section.

h. Describe the analysis of anthropometric measurement in the Data Analysis section and not in the Study Variables section.

i. Indicate which cut-off points was used for classifying the nutritional status of the children (e.g. WHO classification, local classification of nutritional status for children, etc.)?

j. Provide some background on how the health post generated the list of households in the area to establish the credibility of the source (e.g. time it was collected, frequency of their data collection, month and year of when the list was last updated, who gathers the data, etc.).

k. Describe how Chembelala works in computing for the child's age.

l. Explain why different methods (i.e. base on the vaccination card and Chembelala) were used for the computation of the children's age.

m. Indicate the instrument used in measuring the weight of the children older than two years old.

n. Provide a more detailed specification of the equipment (e.g. brand, measure of precision, measures up to 150 kg, etc.) used in measuring the height and weight of the children.
o. Check with WHO, UNICEF or local policies/guidelines if the instruments/equipment used for measuring the height and weight of the children are recommended for conducting a scientific study.

p. Like the weighing scales, were the equipment used for measuring the height of the children also calibrated?

q. Did you use SPSS 17 or 16 in the statistical analysis? In the abstract, it was specified that you used SPSS 17 while in the manuscript it was SPSS 16. Same with the data management program used. Did you use EPI info 6.04 or version 3.5?

9. What are the professions of the three public health professionals hired to supervise the data collection? Why are the investigators not the ones who supervised the data collection?

10. Indicate the reason for non-participation/response of the participant.

11. Use other terms for the words 'mentally retarded' and 'illiterate'.

12. The study was conducted in August to September 2012. Will the result of the study still be relevant to the area?

Results

13. Polish the order of presentation of findings in the Results section. May consider discussing the findings in the manuscript in an order that is harmonious with how the findings were presented in the tables.

14. Discuss of demographics of children and mothers separately.

15. Leave the actual number of the participants in the tables for reference. Discuss only the results in prevalence/percentages in the manuscript.

16. Did you conduct bivariate logistic regression analysis? What method did you used?

17. What is the relevance of asking the birth order of the last child?

18. Show the results of the test for association of all indicated independent variables and dependent variables even though they are not significally associated.

19. Indicate the p-value in the tables.

20. Do not interchange undernutrition with underweight, wasting or stunting in the discussion.

21. Highlight all significantly associated factors/predictors of underweight, wasting or stunting among children in the Results section.
22. The duration of the breastfeeding seems to be significantly associated in all types of undernutrition looked into in the study. How were children aged 6-23 months classified? Were they excluded in the test for the association of undernutrition (e.g. stunting, underweight, wasting) and duration of the breastfeeding? Or did they just fall under "Less than two years"?

23. Indicate number of participants with missing data for each variable of interest, if any.

24. What do you mean by 'Diarrheal morbidity in the last year'? Does it mean 'Diarrheal morbidity in 2011'? Or did it only pertain to 'in the past 12 months'?

25. Replace 'colostrums feeding' with 'colostrum feeding'.

Discussion

26. Improve the cohesion and flow of ideas in the Discussion section.

27. Provide possible explanations for the association of undernutrition (i.e. underweight, wasting or stunting) and all its predictors found in the study.

28. Cite the literature reviewed for all the claims or possible reasons provided in the Discussion section even though it seems 'obvious' (e.g. educated mothers being more autonomous in the allocation of money; family with more children experience more economic strain; inadequate intake of breast milk nutrients that increases the risk of undernutrition; diarrhea may result in lower appetite and poor digestion and mal-absorption; colostrum is full of nutrients and antibodies, etc.)

29. Expound the similarities found in other literature.

30. Provide a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence.

31. Discuss how the study results can be applied in other settings/areas.

Conclusion

32. Provide a summary of the key results and provide conclusion based on the objectives of the study.
Limitation

33. Improve the Limitation of the Study section of the article. May only include the 3rd point as
the limitation of the study.

34. Take into account all possible sources of potential bias or imprecision. Discuss both
direction and magnitude of any potential bias.

Abbreviations

35. Check if all abbreviation are properly indicated and used in the article.

Level of interest
Please indicate how interesting you found the manuscript:

An article of importance in its field

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

Not suitable for publication unless extensively edited

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

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. 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/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal

Do you want to get recognition for reviewing this manuscript? Add a record of this review to Publons to track and showcase your reviewing expertise across the world’s journals. Signing up is quick, easy and free!

Yes