Reviewer’s report

Title: "Individual and household risk factors of severe acute malnutrition among under-five children in Mao, Chad: a matched case-control study"

Version: 0 Date: 23 Feb 2018

Reviewer: Animut Ayalew

Reviewer's report:

Manuscript Title
Individual and household risk factors of severe acute malnutrition in children under five: a matched case-control study in Mao, Chad"

Manuscript number: AOPH-D-18-00003
Overview: Even though this article addressed a very import issue, I am not quite sure in the statistical method of analysis and interpretations. In addition, the paper is full of editorial and grammatical errors.

Title: It is better to correct as follow "Individual and household risk factors of severe acute malnutrition among under-five children in Mao, Chad: a matched case-control study"
Abstract: The abstract is well done, but it does not include all-important components of an abstract. For example, the method section of this abstract does not show the method of data entry and analysis. In addition, in line 25 it says multivariate analysis please write as multivariable analysis. Moreover, 
In line 19 please add a comma between year and month.
Please use Oxford English throughout the document. E.g line 35 insert comma before and
Be consistent when you write terms, therefore please write age in months or in years throughout the document.
Line 46 women not women's
Keywords: The number of key words should be between 3-5, but you put more than six key word words.
BACKGROUND: In this section, the authors should describe about the magnitude of SAM in worldwide, and the magnitude of SAM in developed countries. The authors should also explain about the impact of SAM on economical and psychological without intervention. In addition, what measurements the Chad government has done to alleviate the existing problem. Moreover, what were the effects of the interventions? Finally, what is the gap that you intended to fill? Generally, the paper needs extensive grammatical edition thought-out the document. Moreover, at the beginning please define what is SAM???

Methods:
Why you use 15% none response rate?? Because your study is case control. In the data, collection toll you said a structured questioner was used. Please specify whether interviewer administered or self-administered. In line 29 data collectors were trained. For how many days ???

The major limitation of this paper is on the statistical analysis. Under this section, the authors explained that data were entered and analyzed using EPI-info ???.
In addition, the authors used conditional logistic regression, which is quite appropriate for matched-case control, but the authors did not consider cluster effect. The authors should do reanalysis by considering a to stage hierarchical model (a two stage multilevel analysis) to see the household level effect and the individual level effect of SAM.

Moreover, from line 33-35 it says, "Variables that were significant in bivariate analysis were considered". Therefore, what does mean significant please specify the p-value that you used in the variable selection process?

In case and control proportion, how much proportion you used 1:1 or 1:2 or1:3

Discussion: This section of the research did not give any meaning to the finding. The authors simply put the result, but they should interpret the result and compare this finding with other previous research output, studied either in the country or other countries, WHO or country guideline. Moreover, they should come up with possible justifications. Their finding has no possible justification for the discrepancy. The discussion is weak and does not explain the importance of the study as well. In the discussion part, the researchers explained the whole result part. In addition, the authors discussed non-significant findings, for example to our surprise; we
did not observe a significant association between point-of-use water quality and SAM. Please avoid such and the like issues. The discussion should be presented in related to the objective. Therefore, I recommend to the authors to modify the discussion based on our suggestions. The limitation section was omitted, which is a very important issue in a case control study (recall bias is inevitable).

Conclusion: This section is relatively well written.

Overall comments
The authors did not use appropriate statistics
They only present their findings in table and text
The English writing is poor
The paper should be rejected!!!!!

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

Quality of written English
Please indicate the quality of language in the manuscript:
Not suitable for publication unless extensively edited

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