Author’s response to reviews

Title: Determinants of Undernutrition among Children Under-Five Years Old in Southern Ethiopia: Does Pregnancy Intention Matter? A Community-Based Unmatched Case-Control Study

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Response to reviewers
Response to the reviewers according to the concern they raised is given below sequentially as it was received on mail.

Reviewer #1: Raja Chakraborty, PhD
Abstract

• The cases and controls should be clarified in abstract. --- Clarified as suggested in the abstract

• The Key words could be more judiciously chosen. For example, child malnutrition, Ethiopia, Stunting, under five, pregnancy, etc. ---- Corrected as suggested in key word sections

Introduction:

• The Introduction is well written, the state of knowledge in the area of study is well documented. However the justification of the study is a bit weak. Particularly, the reason of studying the association in the specific population should be explained with some evidence or mentioning lack of evidence. ---- We have readdressed justification in the last paragraph of background

• Page 3, line 47: The study revealed the association, not the 'effect'. – Corrected
Methods:

• One of my major concerns about how was this equal number of Cases and controls were generated by simple random selection? -----To select the cases and controls we have used simple random sampling separately after identification of the total stunted and non-stunted children and fortunately all of the respondents responded successfully for the enquiry

• The clear definition of the cases and the controls should be stated clearly in the methods. --- Now clearly stated under the population subsection

• Page 4, lines 37-47: The sampling procedure is not clear, for example, who were selected from the stunted and who were selected from the non-stunted children? ---- Now we have rewritten to make it more clear under sampling procedure subsection

• The process of randomization is not clarified. How was the 'simple random sampling' undertaken? ---- We have used table of random numbers after identifying of the population frame during the survey. Now we have tried to rewrite it clearly in the sampling procedure

• The unmatched case control study may be a little bit explained in the light of the objective of the study for wider readership. Not clear

• Please clarify EDHS 2016 with proper reference. --- we put the as the standard referencing

• Very important: Was the Z-score transformation internal or with reference to a standard reference population? Z-score should be calculated with reference to 'standard population' data, e.g., CDC, WHO or local standard. ---We have used ENA for SMART software and Z-Score transformation was done using the default WHO standard. This is also explained in the measurement section as you have recommended

• Statistical analyses were appropriately undertaken.

• However, classification characteristics for each categorical variables should be explained in brief in Methods section. For example, how was the adequate meal frequency contrasted with inadequate? ---- This is also explained in the measurement section

Discussion:

• Page 8, line 35: The finding of the Bangladesh Demographic and Health Survey indicated here may be stated clearly. ----- Rewritten

• What was the probable reason that Mothers' educational status did not show any significant impact? ----- From the routine findings from different literatures educational status of the mother is one of the main determinants of malnutrition. But this hasn’t been the case in our study. This may be happened due to chance or any other unknown issue. Otherwise, we couldn’t get further explanation from the characteristics of our population and way of analysis
Page 9, line 31: Could not the difference be due to the difference in methods of assessment of feeding pattern between the studies? ---- That could be the case and we have used it as a possible explanation

Conclusion:
The conclusion is satisfactorily clear and objective friendly.

Reviewer #2: SYLVIA KIRCHENGAST

The introduction is well written, unfortunately no hypothesis is presented. --- We have presented the hypothesized idea in the background

There is no information how the survey to identify the number of children under the age of five years and their nutritional status was carried out. ---- We have tried to clarify on the sampling procedure section

Who contacted the parents? What have the inclusion and exclusion criterions? ---- Data was collected through face-to-face interview and the trained data collectors have contacted the parents. This is also explained in the methodology. Exclusion criteria was put under the population.

What about ethnical background of the participants? There is no considerable ethnic background difference among the population.

Who filled out the questionnaires? Who filled out the questionaire in case of illiterate mothers? ---- The questionnaires were filled by trained data collectors (diploma nurses)

Why is no information regarding maternal age in this section? ---- The mean was presented in the text under the socio-demographic section and the detail is presented in table 1.

How was stuntedness defined? --- Explained in the text of the manuscript under population subsection

Why are nearly 70% of the children males? About 63% of the total children were males and this might be happened by chance otherwise we have did nothing in favor of males.

Why is there no information regarding body height or body length and body weight of the children. ---- Height and weight of the children was measured and the anthropometric index we used to assess the nutritional status was derived from that

Why is there no information regarding somatic parameters of the mothers (body height, BMI)? We haven’t included maternal nutritional status as a variable in our study.
• Why are age variables of children and mothers only presented as categories? It would be much better to have the age in months of years and present means, standard deviations and ranges. It is included as suggested under the result part in maternal characteristics

• Why is there no information regarding the number of siblings and the position of the child? Since it haven’t showed association with the variable of outcome, we only presented it in the table within the manuscript

Thank you for your nice comments that were really vital for the improvement of the manuscript
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