Author’s response to reviews

Title: The burden and correlates of childhood undernutrition in Tanzania according to composite index of anthropometric failure

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Title: The burden and correlates of childhood undernutrition in Tanzania according to composite index of anthropometric failure.
Authors:
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Revised Date: 23th July 2020

Dear Editor: Prof Andrea Deierlein, BMC Nutrition

With pleasure, we resubmit the revised version of our research paper entitled "The burden and correlates of childhood undernutrition in Tanzania according to composite index of anthropometric failure" (NUTN-D-20-00131R1). We would like to thank all reviewers for providing their constructive comments and acknowledgement to our manuscript. I would like to carefully return a revised version of this manuscript to you in consideration for publication to the BMC Nutrition. The reviewers’ comments are very much appreciated; it really helps to improve our manuscript. The answers to all comments have been point-by point answered in this letter. Detail responses to reviewer’s comments are subsequently address here below. All changes in the manuscript are colored.

Editor Comments:
Comment: Can you please explain how this study is different to the other study that you recently published in 2019? Why should this study be published as well? The current study has ~60% similar text to the previous study.
Response: Dear Editor, our previous study which was published recently aimed to show how dietary diversity is influencing undernutrition of children aged between 6 to 23 month in Tanzania, using only TDHS data of 2015. In that study, conventional indices of wasting, stunting and underweight were used as outcome variables, and a dietary diversity being the only main
independent variable (https://doi.org/10.1186/s12887-019-1897-5). While in the current study, we aimed to determine the overall burden of undernutrition in Tanzania using aggregate indicator of CIAF and examine the trends from 1991-2015. We believe that these two studies are independent and have large variations in their objectives, methods, discussion and conclusion. However, the dataset used comes from the same source.

Reviewer 1:
This manuscript describes the overall prevalence of undernutrition as well as trends of undernutrition among children under the age of five years and examines the correlates associated with undernutrition among these children. The authors analyzed the data of mother-child pairs from the Tanzania Demographic and Health Surveys from 1991-2016 using as the main index of undernutrition the anthropometric failure (CIAF).

Comment: Overall, the paper is very well written. The Methods should have more details on how the variables for CIAF were obtained other than saying "...anthropometric measurements were taken according to international and national recommended procedures by the WHO." For example, it is not clear how wasting was determined and how it was distinguished from underweight. It is also not clear who took the measurements in these surveys and what was their training.

Response: In the Method section line 138-142, We described how stunting, wasting and underweight was constructed and their cut off points based on WHO reference. In addition, TDHS surveys are large country representative surveys administered after every five years. The data collectors and enumerators received adequate training to do all anthropometric measurements before data collection. The surveys are done in accordance with International agreed DHS standard in order to get comparable results across countries, line 115-118.

Comment: The manuscript states in the Discussion, that individual indices of stunting, wasting and underweight when used alone, miss significant number of children who experience multiple anthropometric deficits. Yet previous study (reference 2 of this manuscript) using the same surveys but looking at stunting instead of CIAF, arrived at results that are more or less the same as the current manuscript. The authors need to compare their results to those obtained in reference number 2 and discuss the similarities and/or differences in the Discussion section.

Response: The Author agree with this suggestion. We consider this as an important comparison to make with a previous study. We added more statements in the Discussion section stating the similarities and differences between this study and the previous one. Line 288-296.

Reviewer 2:
Comment: This manuscript describes a secondary analysis of data from six Tanzania Demographic Health Surveys (TDHS) conducted between 1991 and 2015 to determine the correlates of undernutrition in children