Reviewer's report

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

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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).

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.

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.

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Yes
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
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Yes

Are the conclusions drawn adequately supported by the data shown?
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