Reviewer's report


Version: 0 Date: 30 Jan 2019

Reviewer: Peninah Masibo

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Thank you for your manuscript on Determinants of stunting of children in Nepal.

General comments

This manuscript requires editing for English language to correct language and sentence construction as necessary. The manuscript has no page numbers. Please include these in the next version of the document.

Abstract

Provide data in the results section of the abstract. for example, the statistics related to line 39 to 41 should be shown complete with the Odds ratios, confidence intervals and p-values. Remember that the abstract is the first stop for your audience the reader and this abstract as is does not provide much appetite to the audience to read the full paper.

The conclusion provided on line 42 of the abstract page indicate that stunting is a multi-sectoral problem. This conclusion is too general and should be narrowed down to the determinants isolated by the analysis in this study.

Background

In the background page, line 74, the authors argue that Nepal has made significant gain in health and nutrition. please provide evidence of these gains, highlighting policy level, programmatic steps that have contributed to these gains.

The authors should provide a proper justification of why this study is important. What is the gap in evidence or programming that the study seeks to address? What new knowledge this paper is adding around the issue of stunting, provide a proper justification for undertaking this study.
Methods

Provide a summary of the DHS methodology in the methods section. For example, what was the sampling frame, why do we have lesser numbers in 2011 and 2016 than in 2006? was there a change in sampling for the different rounds of the DHS survey?

Explain how the categorization of food security status was arrived at. For example, who was mild food secure and who was severely food insecure?

Detail the inclusion and exclusion criteria for this analysis. For example, were pregnant women or those 2 months postpartum with young children included in this analysis? how about children with less than 145 cm of height? - refer to NDHS, 2016 table 11.10.1 as you consider if to include all the women or not.

In line 107 of the methods page, the authors included only two categories of BMI, [18.5 or not]. Does this mean that the women who were overweight and obese were counted as normal weight in this analysis? what would it look like of you considered the overweight/obesity levels in the analysis. Perhaps you could be looking a double burden where the mother is overweight while the child is stunted. this data should be analysed in the appropriate BMI categories to look at both ends of the malnutrition spectrum without a bias to undernutrition in women.

In line 106, explain what improved and unimproved water and sanitation sources are.

In line 110 of the methods section, define how anaemia was determined in children and the mothers. Was it using hemoglobin levels? if so, what were the cut off points?

Results section

Correct the English language, e.g line 118 reads "...groups, more than half of from..."

Refer to all the tables in the text to point the reader to which table they should be looking at.

Line 119 - 120, the results about women's education should be put on the text. The statement says "...percentage of no schooling was higher in all three surveys” what is the comparison here? is it the surveys or other categories of education levels?

Line 125 about prevalence of stunting, conduct further analysis to test if the decline in the national prevalence of stunting was statistically significant across different surveys. You can do this through a pulled analysis of data from different surveys. The authors may refer to the DHS user forum online for further guidance on these analysis [https://userforum.dhsprogram.com/]

Line 130 - 135 - the results narrated here should be supported with the statistics.

In line 139 of the results, state what factors were adjusted in the statistics model.
Results tables are running more than one page and they should have repeated column headers on the next page. Tidy up the tables by making them single space. The results lack the numbers showing distribution of children in each category. For example, home many children were from the poorest household wealth quintile in 2006, 2011 and 2016? providing this data is useful for the contextualization of results. Please provide for table 1, and 2 at least.

Discussion

This discussion should be a succinct summary of evidence around the issue of stunting and its determinants in view of these results. Re-write this section putting into account these comments.

Line 153 of the discussion page talks about the decline of stunting in Nepal. Give specific examples of the nutrition-specific and culturally sensitive interventions that have contributed to this decline. explain what is in the MSNP that could have contributed to this change. see typing error on line 157 "stunning". do you mean stunting? This and other errors should be thoroughly corrected in the whole manuscript. Avoid using no for "number" in scientific writing. Write out the full word.

The discussion section should provide incites with evidence from literature about the observed predictors of stunting. For example, what are the reasons why the number of children in the family, anemia, maternal BMI etc are predictors of stunting. Explain each one of these from literature. For example, what is happening to the anemic child that can impact on their growth? what does maternal education have to do with children care practices? what about household wealth? Does maternal education have anything to do with household wealth in Napal? are more educated mothers possibly living in higher income households and therefore correlations with these two variables with stunting?

Discuss how complementary feeding practices may impact on a child’s stunting outcome from other studies that provide this evidence.

Line 180 in the results section, the authors state that health of a child is largely dependent on household socioeconomic status. Give evidence for this statement.

Line 189 - explain why anemia was not a significant predictor of stunting in this study which is contradictory to other findings. Are the anaemia levels exceptionally different in Napal compared to other countries? Was the anaemia seasonal while stunting is more long term outcome?

Provide a paragraph explaining the usefulness of these results to policy and to programming in Napal.
State any data limitations

On the ethical considerations, explain how the data was obtained, were there permissions sought from the DHSprograms.com, was the data provided by the authorities in Napal. Even if the data is publicly available, there are data custodians who give the requisite permissions either through a web portal in the case of the DHS data.

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?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

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

Needs some language corrections before being published
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