Reviewer’s report

Title: Prevalence and associated factors of safe and improved infant and young children stool disposal in Ethiopia: evidence from demographic and health survey

Version: 1 Date: 29 May 2019

Reviewer: Shervin Hashemi

Reviewer’s report:

The manuscript is informative and presents important results. I personally like to support such community-based studies which can lead decision makers into the right path toward achieving SDG 6.

However, I have a few comments and questions which hopefully can be useful for the author to improve his work.

1. Major Concerns:

1.1. Page 2, Lines 38-40: In the abstract, you have mentioned that "having improved toilet facility and presence of diarrhea were not significantly associated with safe child stool disposal." It is not clear what you are trying to say. In page 10, line 227-229, we read "In support of this, a study conducted by Bawankule et al reported that children whose stools were disposed of unsafely were more likely to suffer from diarrhea than children whose stools were disposed of safely." Then how the presence of diarrhea was not significantly associated with safe child stool disposal? Moreover, "having improved toilet facility was not significantly associated with safe child stool disposal" means that people who are having improved toilets at their house are disposing of the child stool in a risky way. Is that really so? Then this means that there are people who have toilets but they are disposing of the child stool in the open. If so, I wish you could discuss and explain why we have such a phenomenon and how we can overcome it.

1.2. Page 4, Lines 75-76: "Still, hygienic collection and disposal of young children's feces is rarely done and difficult." Can you explain why? Are there any specific barriers? How can we overcome them? How your study can help to overcome such problems?

1.3. Page 6 Lines 100 - 102: "A community-based cross-sectional study was used, and the recent nationally representative population-based Ethiopian Demographic and Health Survey (EDHS-4) data conducted in 2016 was used in this analysis." This phrase is very unclear. Have you done the community-based cross-sectional study by yourself and separately you have used the EDHS-4 data? Or this community-based cross-sectional study was a part of the EDHS-4? Please clearly mentioned which part is your contribution and which part is done by referring to the EDHS-4 data?
1.4. Page 6, Line 108: You are mentioning that you have conducted the survey for men aged 15-59, however, the results are not reporting anything about the role of "fathers" or evaluation the gender of parents. I think that child lower than 2 years old usually might be mainly raised and managed by mothers unless there is another specific condition. So is there any specific reason that the author has included men in this survey? If so, how are you reflecting the related results and discussions?

1.5. Page 6, Lines 116-118: "The WHO/UNICEF Joint Monitoring Program (JMP) for water supply and sanitation definition was used to get information about the disposal of the child's stools." This sentence is not clear. What kind of information have you got from JMP? Please list them and cite.

1.6. Page 6, Line 121: "The outcome variables were constructed based on the WHO/UNICEF definition." I suggest the author reviewing the WHO 2018 Guidelines on Sanitation and Health. Please check the link below carefully, think again about the outcome variables that you have considered, and cite if necessary.


1.7. Page 6, Study Variables: The author only considered the dispose of the child stool. I think that the collection of it is an important parameter which should not be missed. Are all child stool are collecting by dippers or there are other ways for collection which are not hygienic? Please consider this and revise accordingly.

2. Minor Comments:

2.1. Page 2, Line 16: What do you mean by less harmless? Less harmless = more dangerous! It does not match with the content of your sentence. I strongly recommend the author let the whole manuscript undergo an English language editing process so that the manuscript could become easier to read and understand.

2.2. Page 5, Line 91: "Perhaps, children's stool disposal practice itself is an under-researched subject in Ethiopia." Perhaps? So you are not sure? If you are not sure, please remove this sentence. If you have some examples for such research or studies, please cite. In any case, I suggest the author to avoid using words like "perhaps" since it may make the work inappropriate as a scientific paper for a prestigious journal like BMC Public Health.

2.3. Page 5, Line 92: I invite the author to revise the phrase "To the best of my knowledge" into "To the best of the author's knowledge."

2.4. Page 6, Lines 109-110: "The detailed methodology is found elsewhere [1]." This may not be a much suitable and appropriate way to write in a high-class research paper. I suggest the author removing this phrase, and instead start the paragraph from line 100 as: "The study was conducted following the methodology presented by Central Statistical Agency (CSA) and ICF [1]."
3. Ultra-Minor Comments: The author can think about the comments below but he is free to decide either applying them to his work or not.

3.1. Page 7, Statistical Analysis: Explaining in details is good. However, I feel that there are too many explanations about p-value in this section. Instead of all these explanations, you can simply mention "The ANOVA analysis was applied with $\alpha = 0.05$"

3.2. Whole Manuscript: I am very surprised that such a heavy work was done and now it is being reported in a paper with only one author. Also, there is no acknowledgment. Honestly speaking, it is a little unbelievable! Please be fair and consider adding more authors in the case that if there was any other person who has helped you with this work and may have noteworthy contributions. If this is really a work done by the author alone, and there was no funding process to be acknowledged, then this comment can be neglected.

4. Overall Evaluation:

In total, I have found the paper informative. The presented results are interesting. However, I am still raising a numerous amount of comments which I hope to be helpful for the author to improve the work.

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.

Yes

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 recommend additional statistical review

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