Reviewer’s report

Title: Mothers' Health Care Seeking Behaviour and Associated Factors for Common Childhood Illnesses, Northwest Ethiopia: Community Based Cross-sectional Study

Version: 1 Date: 11 Nov 2017

Reviewer: Andrew DWYER

Reviewer's report:

The authors present data on health-seeking behavior and associated factors among mothers in rural northwest Ethiopia. Infant mortality is an important global health issue and a key target for WHO health objectives. The authors are to be commended for their efforts to better understand this issue in their resource-limited environment. I applaud their efforts to disseminate this information more widely via publication. This is an important topic. However, there are a number of issues that require attention to make this manuscript more suitable for publication. I appreciate that I am reviewing what appears to be a revised manuscript and that the authors seem to have already responded to several reviewer comments. While it may be frustrating to get a new set of comments on a revised manuscript, the peer review process is important for ensuring rigor and strengthening manuscripts for the widest possible audience. In this light, I have provided several constructive comments below for the authors to consider should they wish to revise the manuscript.

Major Comments

1. Introduction: The introduction could be restructured to present a more coherent rationale. For instance, the first paragraph could provide context for understanding the scope of the problem. Second, what is known about the problem, then what is not known and finally how this study proposes to fill this knowledge gap.

2. Methods: The methods section is unclear and needs clarification including some operational definitions to help the reader better understand the approach. For instance, what are kebeles? Cities, townships, provinces? Please explain briefly the difference in service delivery between health centers, health posts, private clinics and drug stores. Please clarify what different stages were for the 'multistage cluster sampling'? Please provide a reference for Anderson's Behavioral model and explain briefly the assumptions of this framework. Is wealth different from income? Please clarify. Literacy is reported in the results, how was this assessed? Self report of being able to read? Formal education? Where were the survey questions derived from? A previously used and published questionnaire? Or, was is developed specifically for this study without any formal validation or psychometric evaluation? Consider including the survey instrument as supplemental material for transparency. I am very concerned about the relationship between the power estimate (n=410) and the fact that verbal consent was obtained from exactly 410 people - with absolutely NO refusals. This is highly unusual and raises concerns regarding the adherence to a process of informed consent. This MUST be addressed.
3. **Results:** The reporting of results is very limited and much of the data in the tables are not discussed. It is not appropriate (or balanced) to only report the statistically significant findings. The negative findings warrant mention as well. It is not clear how the specific outcomes were operationalized i.e. knowledge, perceived severity. In the tables, consider re-ordering the data (e.g. occupation: 90.0, 7.1, 2.4, 0.5 rather than 90.0, 2.4, 7.1, 0.5) - this will help the reader. Reporting the quintiles of wealth in percentage is circular reasoning - please remove from table 1. Similarly, age and ethnicity are 100%. This is not informative - simply report it in the text. I would re-order it to: age, marital status, then family size, mother occupation, mother education, father education. Table 2, I do not understand what the question was under perception of illness severity - the reader has no context for interpreting these data. It is notable that 75% of perceived causes were scientific while 60% were curse/evil eye. This merits comment. There are numerous typos Holly - holy, birthing -breathing, own - own… Table 3: what is rich and poor respectively? The 1st and 5th quintiles? Please clarify. Also, please correct the typos and harmonize symbols. Figure 1: a pie chart is not very informative, consider a bar chart with total numbers or report in text only. Figure 2: Please comment on these findings and spell out abbreviations (i.e. Rx)

4. **Discussion:** This section could be improved. The discussion is very superficial, please comment on what was important that was learned, and how this contributes to our understanding of the problem - what about cultural context? There is no mention of study limitations. This must be added to provide a balanced evaluation of the relative strengths and limitations of the study. Page 8, lines 8-10 seem like an over-reach. It is not clear form the description fo the methods and the results reported that one can make this claim. Please keep conclusions based on the data presented and very focused.

**Minor Comments**

Please spell out the first use of any and all abbreviations in the text - for example ARI page 4 line 58. Also, if the term is only used once, there is no need to abbreviate (i.e. EDHS).

Page 3: Please explain what informal sector (line 12) (e.g. outside the formal healthcare system) and formal health sector (line 18)(e.g. hospitals and clinics) as well as traditional care (line 34).

Page 3, line 34: please clarify 'existing interventions' do you mean effective?

Please correct typos and errors in tables and graphs

Please have copy-editing by a native English speaker to clarify text.

**Are the methods appropriate and well described?**

If not, please specify what is required in your comments to the authors.

No

**Does the work include the necessary controls?**

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

Unable to assess
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:

Not suitable for publication unless extensively edited

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