Author's response to reviews

Title: Knowledge and performance of the Ethiopian health extension workers on antenatal and delivery care: a cross sectional study

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Version: 3 Date: 29 October 2012

Author's response to reviews: see over
Dear Editor,

First of all, on behalf of all authors, I would like to express my appreciation to all reviewers for their time in reviewing our manuscript. We are grateful for their constructive comments. We found the comments helpful in enriching our manuscript. Reviewers 1 and 2 seem satisfied with our manuscript. Hence our reflections are mainly on the newly received comments forwarded by reviewer 3.

Attached herewith you will find our point to point reflection (*indicated in italic*) on the comments forwarded by the reviewers.

On behalf of all authors,

Kind regards,

Araya Medhanyie
Reflection on comments given by referee 1

Reviewer's report
Title: Knowledge and performance of the Ethiopian health extension workers on antenatal and delivery care: a cross sectional study
Version: 2 Date: 10 August 2012
Reviewer: Henriette Svarre S Nielsen
Reviewer's report:
All points raised have been addressed and the manuscript now appear ready for publication.
Level of interest: An article of importance in its field
Quality of written English: Acceptable
Statistical review: No, the manuscript does not need to be seen by a statistician.
Declaration of competing interests:
I declare that I have no competing interests below

Reflection – There was no comment given by referee 1
**Reflection on comments given by referee 2**

**Reviewer's report**

**Title:** Knowledge and performance of the Ethiopian health extension workers on antenatal and delivery care: a cross sectional study

**Version:** 2 **Date:** 15 September 2012  
**Reviewer:** Sudhakar Morankar

**Reviewer's report:**

Minor revisions.

1. Page 8 , last line It can written as -- All the interviews were conducted by principal investigator. Remove (AM) after principal investigator as abbreviations of author's generally not included in the text.

*Revision- we removed the abbreviation and revised it accordingly (page 9, paragraph 1)*

2. Remove see word in the brackets where ever author is mentioning as reference for box and table. Correct in pages -- 5, 10, 11,12.

*Revision- we removed the word “see” accordingly (pages 11,12,13)*

3. To keep consistency -- give full stop at the end of the reference numbers 2 and 6.

*Revision- we put full stop at the end of reference numbers 2 and 6 (page 18).*

4. Page 20 - Box 1 - second para make H small as ---- Ethiopian health system --- instead ---- Ethiopian Health system.

*Revision- In this revised manuscript, box 1 is removed based on the comment given by reviewer 3. The information which was in box 1 is now in the settings of the methods section.*

5. Page 22 -- In the heading --- remove .... dots and make it as Health posts with

Revision – we did it accordingly (page 22)

**Level of interest:** An article of importance in its field  
**Quality of written English:** Acceptable  
**Statistical review:** No, the manuscript does not need to be seen by a statistician.  
**Declaration of competing interests:**  
I declare that I have no competing interests.
Reflection on comments given by referee 3

Reviewer's report
Title: Knowledge and performance of the Ethiopian health extension workers on antenatal and delivery care: a cross sectional study
Version: 2 Date: 29 September 2012
Reviewer: Lemessa Oljira

Reviewer's report:
Title: Knowledge and performance of the Ethiopian health extension workers on antenatal and delivery care: a cross sectional study

This article contains relevant information and looks promising. However, the article needs major revision and editing. I encourage authors to revise the manuscript. See suggestions below

1. Major
1a. Abstract: the type of study design should be made clear in the methods section of the abstract.

Revision- We mentioned the type of the study design we used in the methods section of the abstract (page 2, paragraph 2)

1b. Introduction: first paragraph the recent maternal mortality estimate of Ethiopia from EDHS2011 is different from what is indicated. Authors need to also refer to such national figure.

Revision- In this revised manuscript, we included the recent maternal mortality rate estimate from EDHS 2011 (page 4, paragraph 1).

1c. Methods: It is not clear why authors preferred too many sub-headings here which unnecessarily inflate the size of the manuscript. They can differentiate different sections of the methods either by paragraph or reorganize by major subheadings like procedures, data processing, and etc.

Reflection – we followed the author’s instructions. We think that having the methods divided in subheadings will guide and help the reader to understand the content easily and clearly.

1d. Design, sample size and analysis: the study design, the sample size estimated and the analysis conducted were not convincing. I suggest if authors go for qualitative than quantitative analysis as the sample size doesn’t allow them to conduct regression analysis they tried to show.

Reflection- It is not exactly clear from this comment, why the reviewer thinks the design, analysis and sample size are not convincing. We agree with the reviewer that the sample size is too small for the regression analysis, but otherwise we think the design, sample size and analysis we followed is appropriate. As to the suggestion made on using a qualitative analysis, we believe that the assessment of HEWs’ knowledge on contents of ANC counseling, danger signs, symptoms and complications can be adequately made using the quantitative approach. What we
agree with the reviewer is qualitative approaches could have better explored the barriers and facilitators for HEWs in maternal health services provision.

Revision- In this revised manuscript, we excluded the regression analysis and hence table 6 is left out. In the discussion we mentioned that using a qualitative approach would have been better to assess the barriers and facilitators for HEWs in the provision of maternal health services (paragraph 16, paragraph 3).

1e. The Ethiopian University Scoring System: Actually there often times it relative scoring system for specific professionals who apply fixed scaling like in medical profession it is: 85% and above excellent, 70 – 84% very good, 60 – 69 good, 50 – 59 poor and less than 50 is failure. So if authors want apply this fixed scaling approach if they reconsider it again or go for relative scaling which best describes respondents’ situation based on mean or median score.

Reflection- We used the Ethiopian university scoring system, because we could not find a standard scoring system for evaluating HEWs’ knowledge. The HEWs training did not use any standard scoring system. Results are given simply in percentages. They call it marking system. They do not rank or rate HEWs results as A, B, C,...or excellent, very good, good and so on. Hence, we adapted the university scoring system. The reviewer mentioned the fixed scale for medical students, but what we used in our manuscript is the Ethiopian revised scoring system which serves for all university students and has been practiced since 2009. What we used is not the scoring system which specifically serves for medical students. To give additional information on the Ethiopian revised scoring system, student results are classified and ranked as A (85-100), A- (80-85), B+ (75-80), B (65-75), B- (61.25-65), C+ (57.5-61.25), C (50-57.5), C- (46.25-50), D+ (42.5-46.25), D (35-42.5), F (0-35). Hence in our manuscript we used this scoring system by slightly modifying it into a four scale ranking as: 80% and above excellent, 60-79 good, 45-59 fair and below 45 poor. We adjusted the scoring into four levels of ranking as the Ethiopian scoring system has a long list of levels. Although it might seem illogical to use the university scoring system for HEWs, it has no influence on the description we made, because basically we draft the knowledge questions in the assessment from the guidelines, manuals and log books of HEWs. All the knowledge questions were about the contents of ANC counseling, danger symptoms, signs and complications that are expected to be known by HEWs.

Revision- We found the reviewer suggestion to include the mean or median scores important. Hence, in this revised manuscript we included the mean scores on the knowledge of HEWs to strengthen the descriptions made using the university scoring system. We also included additional explanation on the scoring system we used in the methods (page 10, paragraph 1) and discussion (page 16, paragraph 1) sections.

1f. Results: quantitative analysis like reporting percentages for total number of respondents less than hundred (50) is misleading. Better if qualitative description is reconsidered rather than trying to quantifying and conducting regression analysis which I guess they didn’t plan for at design stage.
Reflection- We understand the concern of the reviewer but we prefer keeping the percentages, because it makes the results easier to interpret. Please see our reflection to comment 1d (above) as regards the qualitative versus quantitative analysis. To the best of our knowledge, we are not aware of any rule that says using percentages when the sample size is less than 100 is inappropriate. The rule that we are aware of regarding using percentages is the following.

“When the sample size is greater than 100, report percentages to no more than one decimal place. When sample size is less than 100, report percentages in whole numbers. When sample size is less than, say, 20, consider reporting the actual numbers rather than percentages.” (Lang and Secic (2006) p. 5)

If. Discussions: first paragraph as authors rightly said HEWs played not much role assisting birth. That may be due to lack of knowledge and skill as all HEWs were not trained to assist birth rather to refer mothers to health facilities. Some of them are getting supplemental training to enable them provide delivery services. It will be good if authors clearly indicate HEWs who actually received supplemental training that enable them to provide delivery services. And the mean number deliveries assisted (if authors favor quantitative report) should also be computed among those who have such training.

Reflection- When we were doing this study, all HEWs were in principle expected to assist births. We are aware there is a recent debate among decision makers and officials of regional health bureaus on the role of HEWs in relation to assisting births. Some argue HEWs should focus on identifying women with risks and complications, referral and facilitation while others have strong opinion that HEWs should continue assisting births. There might also be slight variations in the HEWs training across the country. HEWs in Tigray, where our study was conducted, have been trained for assisting birth during their pre-service training and most of them took additional on job training for one month on clean and safe delivery. Hence it is fair to consider HEWs are not skilled birth attendants, but they are trained to give clean and safe delivery service. The mean number of births assisted by HEWs which is indicated in our manuscript is the mean number of births assisted six months prior to our data collection. Even those 4 (8%) HEWs that did not assist birth at least once in six months prior to our data collection might have assisted births six months before our data collection. It is not necessarily to mean that these 4 HEWs have never assisted births at all since their graduation as a HEW.

1g. Discussion: second paragraph … authors mentioned that it is unknown whether HEWs could play a significant role in improving skilled birth assistance. In reality, HEWs are generally not considered as skilled birth attendants as all of them are not trained to the proficiency level. It is wise if authors concentrate on the well-defined roles of HEWs in relation to ANC and Delivery services rather than on what they are actually not trained for.

Reflection – we agree with the reviewer and we are fully aware that HEWs are not skilled birth attendants, but they are trained for clean and safe delivery and assist normal (uncomplicated) births as we mentioned above. We stated this fact in the introduction section of our manuscript
(pages 5, 6). Additionally, HEWs in Tigray region where we did our study are trained on how to administer mesopristol so that they can manage post partum hemorrhage.

Revision- To avoid ambiguity, we rephrased the sentence that says “it is unknown whether HEWs could play a significant role in improving skilled birth assistance.” (Page 14, paragraph 2).

2. Minor
2a. Methods: it is not convincing why author conducted interview himself. This should be mentioned as limitation of this study rather than strength.

Reflection - We chose the author to be the data collector, because we wanted to be sure that the gathered data would be of good quality. New data collectors may not have been familiar with the mobile phone approach of data collection, or may be less motivated that get all the necessary data. In principle, we share the concern of the reviewer having an author as data collector may introduce some kind of bias but in this study the topic is not really prone to bias.

Revision- In this revised manuscript, we add a sentence that explain why we chose the principal investigator to be the data collector (Page 9, paragraph 1)

2b. Methods: Ethical consideration: It will be enough that the study was approved by concerned agencies. I do not see the importance of letter number referencing.

Reflection- In this revised manuscript, we removed the reference letter number of the ethical clearance (page 10, paragraph 2).

2c. Box: I do not see the importance of presenting such textual information in box. Authors can include the information into introduction and cite the reference as required.

Revision- we removed the box and included the information within the setting subheading of the Methods section (Page 7). We chose to put this textual information in the methods section for two reasons. First the information talks about Ethiopian health system structure which is basically about the health system in the study area (setting). Second we want to give more focus on describing the research question than describing the Ethiopian health system in the background section.

2d. Tables 1-6: reconsider whether that information are worth presenting in tabular ways. Qualitative description may be enough.

Reflection – we removed table 6 but we chose to present table 1-5 as they were in the previous version of our manuscript. Please also see our reflection to comment 1d above on the qualitative versus quantitative description.

Level of interest: An article of importance in its field
Quality of written English: Needs thorough language corrections before being published

Revision- The reviewer might have got the first version of the manuscript. But when we submitted a revised version of our manuscript based on the comments given by referees 1 and 2 last June, we had the manuscript proofread by a native English speaker, and both reviewers 1 and 2 judge the English of the revision as acceptable. This revised manuscript is also proofread by linguistic person.

Statistical review: actually I go for qualitative description rather than statistical review as the samples are not adequate.

Reflections- Please see our reflections for comments 1d and 1f (above)

Level of interest: An article of importance in its field

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
' I declare that I have no competing interests' below