Author’s response to reviews

Title: Factors associated with health care provider knowledge on abortion care in Ethiopia, a further analysis on emergency obstetric and newborn care assessment 2016 data

Authors:

Tefera Tesema (tefetes@gmail.com)
Theodros Zemedu (tedi.getachew@yahoo.com)
Girum Zeleke (girumt2000@yahoo.com)
Misrak Beyene (misrakg81@gmail.com)
Atkure Deghebo (atid1999@yahoo.com)
Geremew Eba (geremew2013@gmail.com)
Habtamu Wubie (habtamutekli2@yahoo.com)
Sheleme Chibssa (mhexpert14.mh@gmail.com)
Aster Woldkiros (mhexpert1.mh@gmail.com)
Zenebe Tilaye (zenebe.akale@moh.gov.et)
Kassahun Bedasso (KMormu@packard.org)
Abebe Belayneh (Abebe1277belay@gmail.com)

Version: 1 Date: 05 Aug 2019

Author’s response to reviews:

Editor:

(1) Please copyedit your text to improve the quality of written English. We suggest that you ask a native English-speaking colleague to help you with this, or to consider using a professional service;

As per the comments the whole manuscript was copyedited by a native English-speaking colleague.
(2) Please include the full name of the ethics committee (and the institute to which it belongs to) that approved the study. If the need for ethics approval was waived by an IRB or is deemed unnecessary according to national regulations, please clearly state this, including the name of the IRB or a reference to the relevant legislation. If any administrative permission required/granted to access data, please provide details in this section.

A statement on ethics approval was here attached with the full name of the ethics committee and the institute to which it belongs to that approved the study for your reference.

Reviewer 1:

1. My first overall comment is that the paper needs a close copy edit.

As per the your comment on copy editing, the whole manuscript was copyedited by a native English-speaking colleague

2. My next main comment is that the methods section needs substantially more information.

The questions that are listed in the results ("Health care providers were asked a series of questions related to unsafe abortion: "What are the immediate complications of unsafe abortion?" "What do you do for a woman with an unsafe or incomplete abortion?" "What information do you give to clients after unsafe or incomplete abortion?") were moved to the method section, and all be listed. Moreover, the type of questions were listed (see page 6 the highlighted on data analysis sub section).

Further, the questions about type of facility, location of facility, etc. ("Provider's profession, sex, performed MVA, trained to perform MVA, type of facility, location of facility, availability of computer, internet, safe abortion care and family planning guidelines") should be listed and explained.

Then, it needs to be clear how these were analyzed.

The questions about type of facility, location of facility, provider’s profession, sex, whether perform MVA or not, train on MVA or not, etc. were listed on page page 5, paragraph 3 which are highlighted. For the above variables simple descriptive statistics (frequency/percentage) were calculated. For further you can see Table 1.
3. Also missing is any discussion about whether this is a valid way to elicit information from providers. Asking them to provide answers seems similar to an OSCE to me, but this was never justified.

This study is not exactly similar to OSCE. This study assessed knowledge based on 3 open-ended questions. Other types of questions were not included. We put this as a limitation in the discussion section (See on page 13, lines 5 to 8 on paragraph 3 which is highlighted).

4. The cut off point:

We have tried to get literature on the cut off point for knowledge on abortion. But we couldn’t get strong reference. Hence, the author agreed to categorize the knowledge score in to two in which those scored \( \geq 50 \) as pass score otherwise fail score.

5. “The major causes of maternal death are primarily pregnancy related and preventable, six percent of all maternal deaths were attributable to complications from abortion (6). Unsafe abortion, is one of the preventable causes of death (7). Accounting for 32 percent of the deaths, unsafe abortion was one of the most common causes of maternal mortality in Ethiopia (8). However, according to emergency obstetric and newborn care assessment (EmONC) in 2016, out of 564 maternal deaths due to direct causes, nearly 1 percent of all maternal deaths were attributable to complications from abortion (9)". So, do complications from abortion cause 1, 6, or 32% of maternal deaths? It seems to say all three.

The introduction and discussion sections were reviewed. We included all your important comments and suggestions. We put only few striking findings as per your suggestion.

Maternal death due to abortion complication in Ethiopia was 32%. We dropped the other findings (See page 3, paragraph 2, line number 1)

Thank you for your comments. We have revised this sections as well as the whole body of the manuscript.

6. Were participants asked about their willingness to provide abortions, or their experience providing abortions? In the discussion section, it is written, "This analysis revealed, most respondents providing comprehensive abortion care were midwives, which accounted 84%, followed by nurses 12%." Where were they asked if they provide abortions? And if they were, why was this not included in the assessment of their knowledge?
The participants were those who provided the highest deliveries in the last month or in the last two months and who were available in the facility during the assessment. Their willingness to provide abortion were not asked. Among the interviewed providers, how many were providing abortion care calculated.

7. It seems like this is an analysis of knowledge, but attitudes and practice (the KAP assessment) are also important components, and the A and P are missing from this assessment.

The primary objective of the EmONC 2016 assessment were to evaluate emergency obstetric and newborn health care and generate the 8 EmONC indicators. This paper was a further analysis of the existing data. Moreover, it is based on only 3 open-ended knowledge questions, hence, it does not include attitude (A) and perception (P) as you indicated. This might be one of the limitation.

8. In the discussion section, there is no need to reiterate the numbers presented in the results section. It felt as though I was re-reading the results section.

Thank you for your comments. We have revised discussion section as per your valuable comments. The results which were repeated in the discussion were removed as per your comment.

9. I am unclear on how the results are presented in Table 3. Are the adjusted ORs one model?

Yes, two models were conducted. The first one is a regression model using one independent and dependent variable at a time. The second one is the adjusted one which uses multiple independent variables at time to control the confounding effect of others.

10. Clinical officers were not the reference group. The reference category was health officer which 4% of the sample. We have dropped the medical officers and other professional from the analysis since their sample were very small.
11. And is the outcome knowledge or lack of knowledge? Because it is written, "the result showed that the observed overall low knowledge score (&lt;50%) related to safe abortion care were 1.96 and 2.99 times more likely among midwife and nurse professionals compared with health officers…Male providers were also higher in terms of their knowledge when compared with their female counterparts.", but the title of the table is, "Factors associated with health care providers' knowledge on abortion care". So, is the outcome low knowledge, and therefore the 1.96 and 2.99 OR are that midwives are almost twice as likely, and nurses 3 times as likely as their MD colleagues to have low knowledge score, and males are less likely (OR .78) to have a low knowledge score? I am not sure these are meaningful comparisons, given there were only 4 clinical officers, out of 3,000 people surveyed.

- Thank you for the comments. The dependent variable is low knowledge score and we rephrased as suggested.

12. Why would the clinical officers be the reference group, with less than .1% of the sample?

- Thank you for the comments. The medical doctors and health officers are different cadres. Since the medical doctors are few in number we excluded from the regression analysis. However, we used the health officer’s cadre as a reference because they are the highest level of cadres with almost equivalent training with medical doctors.

13. In the results section, I suggest cutting out a lot of the language. The information presented in paragraph form is also presented in the tables. It is hard to read and digest all of those numbers in paragraph form. Instead, just highlight the 2 or 3 findings that are most striking, and then point the readers to the tables"

- Thank you. We removed some paragraphs.

Reviewer 2:

INTERPRETATION: As per your comment, we have revised the discussion and tried to interpret the findings.

OVERALL MANUSCRIPT POTENTIAL: We revised both the language and major issues raised by you and the first reviewer.