Author’s response to reviews

Title: Traditional healers’ role in the detection of active TB cases in a pastoralist community in Ethiopia: a pilot interventional study

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Version: 1 Date: 25 Apr 2019

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Response to Editor and reviewers

BMC Public Health

Editorial office,

We would like to thank the Editorial Office for giving us the chance to resubmit the revised manuscript and respond to editor and reviewers comments. We would also like to thank the reviewers for very constructive comments.

Below is our point by point response to editor’s and reviewers’ comments.

Response to the Editor

Editor Comments:

Comment 1: Please do not use abbreviations in the title, TB should be spelled out.

Response: Thank you for the comment. We have now changed “TB” to read “tuberculosis” in the title.
Comment 2: Please provide a list of all the abbreviations used in the manuscript. This list should be placed just before the Declarations section. All abbreviations should still be defined in the text at first use (ex TH in the abstract).

Response: Thank you for the comments. We have now given definition of TH in the abstract as traditional healers (line 43, page 2) and we have placed the lists of abbreviations before the declaration section (page 16).

Comment 3: The main manuscript should be subdivided into the following headings: Background (not introduction), Methods, Results, Discussion, and Conclusions.

Response: Thank you again for the comment and now the manuscript is subdivided in to Background, Methods, Results, Discussion, and Conclusions.

Comment 4: In the section 'Funding', please also describe the role of the funding bodies in the design of the study and collection, analysis, and interpretation of data and in writing the manuscript.

Response: Now, we have described the role of the funding body (line 395-398, page 17).

Comment 5: Please use initials to refer to each author's contribution in this section

Response: Thank you for the comment. Now, we have used the initials of the authors in the author’s contribution section (line 401- 403, page 17).

Comment 6: We noticed there are some formatting issues with your Tables (Tables 1 and 2) in the final PDF version, please double check these.

Response: Thank you for the comment. We have modified the table as instructed (page 11 and 12).
Response to reviewers

Response to reviewer 1

Comment 1: Part of the background could read thus: ...Therefore this study evaluates the role traditional healers (THs) could play in the early detection and treatment of TB in a pastoralist community in Ethiopia.

Response: Thank you for the comments and we have made the corrections. We have also taken out the part that reads “how they could contribute to early detection and control of TB” because we did not measure the time to diagnosis the TB cases directly with a control population. Therefore, this study shows the THs role in the detection of active TB cases in the community (line 116-117, page 5).

Comment 2: Instead of TB suspect, please use 'presumptive TB case'.

Response: Thank you for the comments. We have now made the corrections.

Comment 3: Please cross-check the figures relating to number of presumptive TB cases referred, number of TB cases confirmed, number of TB cases that completed treatment, number free from TB (perhaps you mean 'cured?') as well as number lost-to-follow-up. Ensure that the numbers add up!

Response: Thank you very much for the comment. Now we have checked the numbers to make sure they are correct.

The numbers of TB presumptive cases referred were 24.

Out of which, 13 were confirmed TB cases and were put on TB treatment.

10 completed treatment and three of them were still on treatment.

Non TB cases (5) were those who were diagnosed to be other conditions (pneumonia, upper respiratory disease etc.) during further evaluation at the healthcare facility.

Six were lost to follow up for the THs. Therefore, it sums up as follows, 13 + 5 + 6 = 24

Comment 4. It seems to me that your sampling is better characterized as 'purposive' rather than 'convenient'.
Response: Thank you for your comments. For this study we used convenience sampling because we considered the availability of healthcare facility near the selected villages (geographical proximity), accessibility of the THs, and the willingness of the THs to collaborate with the conventional health system through presumptive TB case referral, availability during the study period. In addition, the THs expertise (well known in providing traditional healing services in the community) was considered. This makes our sampling convenience sampling rather than purposive.

Purposive sampling is mainly the purposeful selection of study participants due to their special quality or expertise they possess (1).

Comment 5: I missed a control population in your study but I was very happy to see that you clearly recommended a cluster randomized trial at the end.

Response: Thank you very much for your comment and appreciation. We did not have a control community because of limited funding. This was PhD project with small budget. But we believe this pilot project will help in planning a large scale cluster randomized control trial to evaluate the effectiveness of involving the THs in TB prevention and care program.

Comment: Your English is commendable. I do recommend however that you go through the text once again (if possible with a native English speaker) for final language editing.

Response: Thank you and the manuscript has now been edited by native English speaker.

Reviewer 2

Comment 1: The authors have researched an important issue to improve TB case detection especially from among hard to reach populations.

Although the sample size is small, it has shown the feasibility and positive outcomes of the intervention. However, it would have been good if the authors had compared the results with a control area. This would have strengthened their arguments.

Response: Thank you very much for the comment and appreciation. We do not have a control area because of financial constraints. However, this study could be used as a baseline to plan a bigger study such as cluster randomized control trials to evaluate the effectiveness of the intervention and possibility to scale it up in similar settings.
Reviewer 3

Francis Apolinary Mhimbira, PhD (Reviewer 3): Traditional healers' role in the detection of active TB cases in a pastoralist community in Ethiopia: a pilot interventional study

Diagnosis delay has detrimental effects to the patients by increasing severity of the TB disease, but also may contribute to TB transmission in the community. Evidence shows, traditional healers could be the first point of care for presumptive TB patients. Hence, intervening in this group is an interesting approach to learn and hopeful scale up in other areas with similar health seeking behavior approach. This is an interesting paper to read, and brings useful evidence to increase TB case finding in high TB setting. I have few comments that will need authors’ attention.

General

Comment 1: Try to shorten the introduction and methods section

Response: Thank you very much for the comment. We have tried to avoid repetitions and have included what was missing (the link between traditional healers visit and diagnostic delay) in the introduction section (line 82 – 85, page 3). We have also added a section in the measurement part of the methods section about how we ascertain the diagnostic results of the presumptive TB cases and their treatment status from the TB unit record (231 – 253, page 9).

Comment 2: The results are very interesting, but they lack the flow to capture the readers' attention

Response: Thank you for the comment and we have made a revision to keep the flow.

Comment 3: There are several typos and we need to improve the grammar. See lines 319

Response: Thank you for the comments and now we have made a revision on the language by a native speaker. Line number 319 is also corrected.

Comment 4: Results section needs to be enriched with other types of findings.

Response: thank you very much for the comment. We agree that other findings could have enriched the findings in this study. That was mentioned as the limitation of this study on the manuscript. The data we have about this pilot intervention is presented in the manuscript. We
were not able to add qualitative study/data due to the security problem in the district during the study period. The problem still exists and travelling to the district is risky. However, we have recommended a clustered randomized trial before fully scaling it up.

Comment 5: The discussion section has to be written to reflect the findings of this study.

Response: thank you for the comments. We agree with your comment and we have made revision to reflect on the findings of the study. For instance on line number 313- 315, page 13, the statement written as “In a pastoralist community, engaging THs in TB control might work to facilitate early detection of active TB cases and treatment of TB” is now changed to

“In a pastoralist community, engaging THs in TB control might help to facilitate the detection of undiagnosed active TB cases and treatment”.

This was because our data do not show the time to diagnosis and treatment initiation among the referred cases in comparison to the routine services. Instead, the contribution of the THs in this study is in the detection of undiagnosed active TB cases in the community.

Introduction

Comment 1: Line 73: Put italics in species names like … Mycobacterium tuberculosis…

Response: Thank you for the comment and now Mycobacterium tuberculosis is written in Italic (line 69, page 3).


Response: Thank you for the comments and now updated to WHO 2018 Global TB report (line 69 – 73, page 3).

Comment 3: Introduction: introduce on diagnostic delay in relation to the presumptive TB patients using the THs

Response: Thank you very much for the very important points raised to improve the quality of the manuscript. We have now introduced diagnostic and treatment delay in relation to frequent visit to THs among presumptive TB cases (line number 82-85, page 3).
Methods

Comment: There are no results of the original 22 THs. Is there a specific reason of why the authors are not presenting their results? This may help us to get a sense of why they ended up being loss to follow-up.

Response: thank you for the comment. We have their socio demographic data. We did not present it because they did not participate in the evaluation/revisit interview because they were lost to follow up due to seasonal migration.

Comment: Line: 179-180: can be joined to the other paragraph, it doesn't read well standing alone.

Response: Thank you for the comment. Now, we have modified the paragraph

Comment: Line 185-187: not clear what measurements/data did you take?

Response: We have collected data regarding the THs sociodemographic status, their knowledge regarding TB and their presumptive TB cases identification and referral practice. We have also reviewed the record of the healthcare facilities involved to see the number of presumptive TB cases, the presenting symptoms, and diagnosis and treatment outcome (line 211 – 216, page 9).

Comment: Line 209-211: keep the same format of the text with correct spacing.

Response: Thank you for the comment. Now, we have modified the format.

Results

Comment1: Line 263-266: I fail to understand the patient flow in your study. Please consider using a figure to show the participants flow.

Response: Thank you for the comment. Now we have presented a diagram to show the referral link between the THs and the conventional health system and to show the participants flow in the methods section (page 8).

Comment 2: How did the author ascertain the TB status form this study? Please try to be detailed in your study procedures. Consider additional text in the methods section.
Response: Thank you for raising this point. Now we have included under the Method section, on measurement parts, how we established the status of the presumptive TB cases from the TB records of healthcare facilities included in the study (line 231 – 243, page 9).

Comment 3: Table 1 & 2: the line numbers do appear in the table, please format this correctly. The data presentation in this table is also very confusing; try to improve the presentation of the data. Consider indenting the sub-options of each category. It may look nice and easy to understand for the reader.

Response: Thank you very much for the comment. We have corrected the formatting error and the line numbers will not appear in the table (page 11 and 12). We have also included a sub-section for each category in the table. We have also taken out the status of the presumptive TB cases from Table 2 and the result is presented in writing before the table (line 276 – 279, page 11).

Comment 4: Line 263 and Line 288: the total number of referred TB suspects is contracting. How may presumptive TB patients were referred in this study, either 20 or 24?

Response: The number of presumptive TB cases referred by the THs was 24. However, only 20 of the presumptive TB cases went to the healthcare facilities linked with the THs through referral system. The rest are lost to follow up.

Comment 5: The numbers referred seem to be so low for one year.

Response: Yes it seems. But the instability in the district for more than three years and the seasonal migration that the pastoralists follow might justify the low number of referred cases. In addition, it requires full commitment of the healthcare system leaders to keep the THs on track through continuous follow up and motivation. This to be effective, the national TB control program and the ministry of health as well as other concerned body need to do further evaluation of the feasibility of the collaboration and develop guidelines, polices, and training on its implementation.

Pilot studies like this one is tend to be considered “short term” and not taken as important as the main duties of the district TB control program. This was one of the challenges we have faced during the intervention.
Comment: Line 263-264: TB prevalence 13/24*100=54.1%, this is one of the highest TB detection rate I have ever seen. Does this actually correlate with the background prevalence of TB? Are there any other studies in such setting with such a yield?

Response: As far as our knowledge is concerned, there are no other studies with similar findings in a pastoralist setting.

Comment: Line 290:…" median age 31.5 (SD=17.34)".. If your summary statistic is median, then present interquartile range (IQR). Standard deviation is for mean and not median.

Response: Thank you for the comment. Now we have reported interquartile range (IQR) instead of standard deviation (line 294, page 12).

Comment: The TH was followed up after two years, why did the authors only ask the details of the presumptive TB patients for just one year?

Response: This was part of a single PhD project. The agreement with the healthcare providers at the TB unit in the healthcare facilities and the THs was for one year. I (the corresponding author) was responsible for conducting the field work and collect the data. It was not able to go back to collect the data Because of security challenges.

Comment: The results section doesn't present any results on diagnostic delay? If these results are available, do we have any controls to assess the effect of THs in reducing diagnostic delay?

Response: We did not assess time for diagnostic and the THs contribution to reduce it. We have tried to see the feasibility of involving the THs in the detection of undiagnosed active TB cases in the pastoralists’ community. We have avoided any misleading information in the manuscript regarding diagnostic delay and the THs role in this study.

Discussion

Comment 1: The results presented have no way shown they have improved TB care and preventions.

Response: Thank you for the comments. The first sentence in the discussion is about what other studies indicating the THs contribution to TB prevention and care. Not about the findings of this study. We have put a reference to the sentence now so that it will not confuse readers.
Comment 2: Line 305-307: based on the findings, it is difficult to suggest that the THs can facilitate early case detection. We have no comparison sites to make this suggestion, and no time to diagnosis has been presented in this study.

Response: Thank you for the comment. Now we have made a correction. The role of the THs was on the detection of undiagnosed active TB cases in the pastoralist community in this pilot study (line 313 – 315, page 13).

Comment 3: Comment on the design and how that affected the loss-to follow-up

Response: This study was a longitudinal cohort study design and it is by default prone to lost to follow up of cases. To minimize the lost to follow up in similar studies in the future, setting continuous meeting and follow up between the conventional health system and the THs could be helpful to identify gaps, support and follow up the THs and trace lost to follow up cases.

The national TB control program should consider conducting large scale studies and evaluate the effectiveness of the intervention and plan integration of the collaboration to national TB program.

Comment 4: Line 321 and 325: these results are not presented in the results section. I think they have to appear somewhere in the results. Please authors consider this.

Response: Thank you for the comment. It is now included in the result section (line 299 – 301, page 12).

Conclusion

Comment 1: Not sure what were the criteria chosen to assess knowledge retention among THS

Response: Thank you very much for the comment. Now we have made correction on the conclusion to be based on the findings of the present study. This pilot study indicated that the THs can be trained and contribute to the detection of undiagnosed active TB cases provided they are given training and support (370 – 375, page 15).
References