Reviewer’s report

Title: Prevalence of active trachoma and associated risk factors among children less than ten years in Baso Liben district, East Gojjam, Ethiopia

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Reviewer: Assegid Aga Roba

Reviewer’s report:

I. GENERAL COMMENTS
The article has some substance. The information it generated helps current endeavours in mapping the remaining pockets of trachoma across the world. Identifying areas which need the SAFE intervention is a major contribution towards the global initiative for the elimination of blinding trachoma by the year 2020. The study also confirmed association between trachoma and most of the known risk factors.

However, the paper cannot be published before a major revision. The reference is totally messed up and the language is not adequate.

1. Is the question posed by the authors well defined? : CAN BE IMPROVED
2. Are the methods appropriate and well described? CAN BE IMPROVED
3. Are the data sound? YES
4. Does the manuscript adhere to the relevant standards for reporting and data deposition? YES
5. Are the discussion and conclusions well balanced and adequately supported by the data? YES
6. Are limitations of the work clearly stated? NOT COMPLETELY
7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished? YES
8. Do the title and abstract accurately convey what has been found? NO, SEE COMMENTS
9. Is the writing acceptable? NO

II. SPECIFIC COMMENTS
A. Major Compulsory Revisions

1. Title: A bit confusing. According to WHO, active trachoma is measured in children between 1-9 years of age; NOT for all children <10. This issue should be corrected in the Abstract and throughout the article.

2. Abstract -Results: Prevalence of TF % is the most important measure to decide on intervention! Please report TF, 17.2% [95% CI: 14.8, 20.1], separately in the abstract.
3. Abstract – Results: The variation between low altitude (29.3% [24.2, 34.9]) and medium altitude (23.1% [18.1, 25.2]) is not statistically significant! So, you have to state the variation as not significant or ignore reporting it in the abstract. Why only altitude? There were others with no significant associations.

4. Abstract – Results: Water use < 20 liters was a significant risk factor but not water use < 40 liters/day. Explain or correct the abstract.

5. Abstract – Results: Why is economic level (monthly household income) not mentioned as a significant risk factor? Explain.

6. Abstract – Conclusion needs to be clearly rewritten based on the objective findings. Is Active trachoma a significant problem in Baso Liben district? Which children are more likely to be affected with trachoma? What do you recommended to solve the problem? - implement a trachoma control program in the area using the SAFE strategy with mass distribution of antibiotic?

7. Introduction: Reference 14, 15 are not appropriate for the statement on GET2020. (see below-References)

8. Introduction: Objective is not clearly explained as to why this study was done in that particular area? Why was Baso Liben district chosen? Is there a plan to start a trachoma control program? Is it part of mapping trachoma in the province? Was there indirect evidence from routine data from clinics?

9. Methods – Sample size: The sample size for this study may be grossly underestimated! This is because you took the highest provincial prevalence of TI (62.5%) but only a cluster effect of 2. There was no consideration made for possible reduction over five years due to economic developments. TI is not a reliable measure to assess prevalence of trachoma. Please revise the sample size calculation method based on the WHO guideline which advises to use prevalence of TF; not TI. [Trachoma control: a guide for programme managers. © World Health Organization 2006-available on the Internet] For example it is better to say: With expected prevalence of TF as 30% with 20% precision range (i.e. ± 6%), cluster effect of 3, 95% CI [224 x 3 = 672] and 15% contingency; a sample of 774 children was adequate.

10. Methods – Design: What is the total population of children 1-9 in Baso Liben district? Please calculate this based on population pyramid of the area. This information is more important than the total population.

11. Methods – Sampling: Was the selection this five village out of 21 based on probability proportionate to size?

12. Methods – Terms: Include TF among the definitions. Again, use Low Altitude and Medium Altitude. Mind about the target population which is 1-9; not under 10.

13. Results – Text: First paragraph says 792 children while the abstract reported 791; please explain or correct. What was the response rate? Was it 791/792 or 99.8%?

14. Results – Text: Why was 400 ETB taken as a cut-off point? Is the definition of poverty level in Ethiopia corresponds to that value? Or is it the quartile value?
For international readers, it is better to report monetary value in terms of US Dollar. Usually 1.25USD/day (600ETB/mth) or 2USD/day (1080/mth) is used as poverty line.

15. Results –Table 1: Remove Religion and Ethnicity from the table. These are uniform for almost all the participants. It would be enough to report these in text. Also remove education status of children which has unique n-value; it is confusing. Report it in text. Change “Children’s family monthly income” to “Monthly Income”.

16. Results –Figure 3: Remove; not necessary. The study found no significant association regarding altitude!

17. Discussion: The explanation on the very low prevalence of trachoma is not adequate. Why compare the result of this study with a study from Ghana only.

18. Discussion: The references do not go with the statements. This makes it difficult for the reviewer to assess if the comparison with other studies were appropriate.

19. Discussion: One major limitation of the study could be small sample size.

20. References: OH, SORRY! I THINK THE WHOLE REFERENCE NUMBERING MIGHT HAVE BEEN MESSED UP! IT SHOULD BE REORGANIZED!

21. The writing should be improved very much. Many long sentences can be shortened or divided in to two. Passive sentences can be changed to active ones. E.g. ‘Close follow up by investigator during data collection process was done’ sounds better when written as “The principal investigator closely supervised the entire data collection processes”. I strongly advice the authors to get the manuscript polished by a professional English editor or use a Grammar checking software.

B. Minor Essential Revisions

22. Title: It could be shorter. Suggested title: Active trachoma among Children in Baso Liben district of East Gojjam, Ethiopia.

23. Abstract- Background: The national prevalence of active trachoma was 40.1% (TF: 26.2%) in Ethiopia (Berhane et al, 2007). Please use this figure. But it is better not mention prevalence here. Remove the clause ‘with estimated prevalence (43% to 58%) of active trachoma in children’ from the abstract.

24. Abstract -Results: First two sentences can be connected to form one sentence. Please put the % figure and provide 95% CI for all key results in the abstract. Readers can understand that because the total is already mentioned.

25. Abstract –Conclusion: The term ‘highly’ prevalent is highly subjective! What is high? I do not know what level of ‘active trachoma’ is considered to be of high public health significance. But according to the WHO, TF prevalence of >10% warrants mass distribution of antibiotics or the ‘A’ component of SAFE. And for TF 5-10% the recommendation is to intervene with F& E only.

26. Introduction: 1st part 3rd sentence needs appropriate reference. ‘The disease
is endemic in 48 countries’. Burton (2009) says there are 50 countries.

27. Methods: The headings can be improved. Keep headings short and simple. ‘Study design, area and period’ = Design; Cancel ‘Source population and Study population’. It is part of the Design. ‘Sample size determination and sampling technique’ = Sampling; Data Collection Procedures = Data Collection, Data processing and analysis = Analysis

28. Methods: Remove “were” from the 2nd sentence under data collection.

29. Methods: Last paragraph 2nd sentence under Data Collection (‘the purpose of the study was informed to respondents for the quality of the data’) is neither clear nor necessary. Better to remove it.

30. Methods:—Analysis: remove ‘following data collection’ from 1st sentence; correct the sentence. Does clear means clean? Is cleaning done before entering the data into SPSS? It is confusing! Please reconstruct second sentence accordingly.

31. Results –Text: First paragraph, 4th sentence states ‘(Table 1 and 3);. Where is Table 3? Please correct.

32. Results –Table 2: Generally this is the best part of the report. But you need to complete the title by replacing ‘study population’ with ‘children 1-9’.

33. Results –Table 1: Do not use study population in the titles. Replace with ‘household heads’ and include address and time.

34. Results –Table 2: The second column should have Total Examined, 3rd column proportion positive. Remove the column of proportion of negative cases; it is redundant.

35. Results –Figure 1

36. Remove; not necessary. The concept is simple and it can be easily explained in text under methods section.

37. Results –Figure 2

38. Correct the title by replacing ‘study population’ with ‘children 1-9’. And change the style of the figure to show the total Active trachoma composed of TI plus TF inside it!

39. Results –Figure 4: Remove; not necessary. The concept is simple and it was well explained in text under Results section.

40. Results –Text: The last sentence which is dull and long, should be reconstructed using ‘ones’ instead of ‘once’.

41. Discussion: The last sentence of first paragraph, ‘…and study period of study’, needs to be reconstructed.

42. Conclusion: It should match the revised statements in the Abstract section. The focus should be related to the research question: is there significant trachoma in the district? If so what should be done?

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45. Reference 10: Please remove; it is not a reference and it is wrongly placed.


C. Discretionary Revisions

47. Abstract-Methods: Please mention which method of classification (Simplified WHO 1983) was used to define trachoma.

48. Abstract-Methods: Please use the terms ‘Low altitude’ and ‘Medium Altitude’ consistently throughout the article. Avoid using ‘low land’ or ‘medium land’.

49. Abstract-Results: Replace ‘water source from more than 30 minutes’ walk’ with the phrase ‘Access to water’. The former is a standard definition for the latter.

50. Abstract-Conclusions: It is good you selected few risk factors in the conclusion. But were these more risky? It would have been clear if Odds Ratios were reported in the results part.

51. Introduction: Improve first sentence in second paragraph or divide it in to two.

52. Methods: What were the Knowledge questions about; active trachoma? Please explain.

53. Results-Subheadings: Please remove ‘of the study population’ from the first two subheadings. Also remove ‘prevalence of’ from the third subheading. Keep headings short and simple.

54. Results –Text: Too much information is expressed in text which is visible in the table. Please revise the redundant part and try to avoid double reporting.

55. Discussion: The article confirmed association between trachoma and most of the known risk factors. But it has limited value if it fails to focus on TF and intervention with the SAFE strategy!

56. References: The authors used too many references for an original article with a specific objective. This is not a review on trachoma. It is better to use short list of essential references.

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, and I have assessed the statistics in my report.
Declaration of competing interests:

'I declare that I have no competing interests'