Reviewer’s report

Title: Sero-prevalence and trend of human immunodeficiency virus among blood donors in Ethiopia: A systematic review and meta-analysis.

Version: 2 Date: 18 Mar 2019

Reviewer: Aklilu Endalamaw

Reviewer's report:

Sero-prevalence and trend of human immunodeficiency virus among blood donors in Ethiopia: A systematic review and meta-analysis.

Dear, authors

The reviewer appreciates your initiation to show the burden of HIV infection among blood donors that has bidirectional importance. The donors, whom HIV to be found may not know their status before and they will linked to HIV care continuum and on the other side, those need blood are recognized how much they are risk if blood screening would not made.

Background

Overall: it lacks coherence, collect the same ideas together,

Line 73: you mentioned that "Today, there is a need to improve testing the safety of all donors' blood for HIV and other infections before they are transfused to recipients." Can you mention the exact time when screening blood before transfusion had been recommended? It may difficult to pass by a simple saying a need to improve testing the safety of all donors is not starting just to day.

Line 92-97: The authors mentioned that the sero-prevalence is high but not cited. It has to be put the sero-prevalence among donors across different settings. What strategies are currently implemented in Ethiopia and what are gaps you saw in this regard?. The reference you cited "24" is not appropriate for the idea the authors putted.
Methods

1. Are you sure that this paper followed the PRISMA guideline? If yes, you missed some components and recheck it.

2. Your search engines CINHAL and EMBASE are need to have permission to access this databases. How can you access them? All the authors are from Ethiopia. Questionable?

3. Why you are included only published articles? Because in developing countries, most of graduates' research are not published because of lack of information about publication, lack of internet access, and they are go to rural health centers or district hospitals, where academic activities are less promoted. May unpublished articles pass your quality assessment criteria and finally it increase the representatives of your finding. I have well-informed that University of Gondar and Addis Ababa University have online repository of unpublished articles as well as many articles are found in Google without publication.

4. Put Publisher of Endnote x7

5. Your search terms is neither adequate nor principle based (it seem arbitrary used). For which data-bases fitted as well? You didn't use all alternative words and/or phrases for all those available words in your search strings. Please make sure that your search terms can be utilized by other future researchers.


7. Put the publisher for STATA.

8. Do you believe I-square=25% is homogenous? May be low risk for heterogeneity.

9. Did you appreciate the difference between Begg's and Egger's regression test? If your answer is agreed with they have no difference function, why you can be used either of them?

Results

1. The authors accessed only 138 studies initially. Please review your search strategies.
2. The authors assessed 53 studies quality. When the readers saw this sentence, they felt that 53 studies assessed by Newcastle ottawa quality assessment criteria. I think you assessed eligibility based on your established inclusion and exclusion criteria. Correct it.

3. Line 157, please specify the other specifically (37, 38).

4. Trend part: putting model type may not be a must because you already mentioned in the method section. Better if you remove it from the table. I am confused that in table 1, the included studies are between 2007-2017 but in trend analysis you started from 2004. What is your start point to categorize 2004-2006, 2007-2009 etc.. but usually trend analysis have taken 5 year, 10 years , or 15 year. For trend analysis, each year has its own estimation unless it is difficult. For trend result, as you mentioned, particularly in the abstract section it is significantly decreased. However, to say significant, you have to calculating p-value is a must. Put the p-value result on your graph.

Discussion:

It is the heart of overall you work. If it is not satisfactory, your document lacks opportunities.

1. Why it is high in Amhara region? it needs possible explanation.

2. The possible explanation for being higher prevalence than other countries is "This higher prevalence rate in our result might be due to low public awareness regarding HIV and higher incidence rate of HIV infection in the general population." It needs reference. only this explanation is neither adequate nor satisfactory. Similarly, for that higher prevalence reported countries, your justification is not satisfactory. Search additional explanation with citation. "These variations might be due to the difference in eligibility criteria to donate blood, the type of donors and the effectiveness selection procedure."

Eligibility to donate blood for which country, type of donors for which country, procedure for which?

3. No adequate explanation in trend? Why in China it is not decreasing?

4. Could this paper has policy implication?

5. Please improve the limitation of this paper. Lacking previously studied meta-analysis is not the limitation of this paper. If available meta-analysis is found in your setting, you may not initiated to do this analysis.
Conclusion

Improve your conclusion.

When it could be concluded as low?

Your recommendation need improvement.

Figures

Figure 1: 9 articles are excluded due to poor quality? Did they excluded after it was assessed by Ottawa quality assessment method?

In all plotted figures (figure 2. 3), change ES by P (prevalence)

In Figure 2, put sample size next to authors (year)- at middle

Figure 4: Y-axis stands for? Please write it on figure. On X-axis log pr- "pr" is not clear

Figure 5: it is not explanatory. What 1, 2, ……11 stands? Command the software to have list of authors.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

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:

Needs some language corrections before being published

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

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5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

None.

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