

PEER-REVIEW REPORT

Name of journal: *World Journal of Critical Care Medicine*

Manuscript NO: 87211

Title: Systematic review and meta-analysis of seroprevalence of HIV serological markers among pregnant women in Africa, 1984-2020

Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 02978909

Position: Peer Reviewer

Academic degree: MD

Professional title: Associate Professor

Reviewer's Country/Territory: Iran

Author's Country/Territory: Cameroon

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Reviewer chosen by: Geng-Long Liu

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Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Novelty of this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
Creativity or innovation of this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No creativity or innovation



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Scientific significance of the conclusion in this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No scientific significance
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input checked="" type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous
	Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

Please see the attached file.

World Journal of Critical Care Medicine

Dear Editor,

Many thanks for the invitation to review the manuscript entitled “Systematic review and meta-analysis of seroprevalence of HIV serological markers among pregnant women in Africa, 1984-2020”. This review has been done to estimate the pooled HIV prevalence among African pregnant women as well as to identify potential heterogeneity sources across the included studies. While the results can be of interest, I have some major and minor concerns about the methodology and data presentation.

Major comments

1. Pooling the data of all studies and presenting them as the overall prevalence of HIV in Africa, creating little interest for readers. As the authors declared in the *Introduction* section, a significant reduction in HIV prevalence has been reported among the general population during the 2010s. So, it is essential to assess the significant changes in HIV rates over study time. They need to perform a meta-regression analysis to show any significant trends in HIV rates among the studied population. Alternatively, they might conduct a subgroup analysis for the time range, for example, before 2001, 2001 – 2015, and 2016 – 2020. I suggest the last period because global health sector strategies on HIV were approved by WHO in 2016 to guide the activities during 2016-2021.
2. A sensitivity analysis is applied when the eligibility of some studies is uncertain. So, the meta-analysis will include only well-known eligible studies. Hence, it would be better if the authors included confounders such as study design or degree of RoB in the subgroup analyses instead of sensitivity analysis for cross-sectional studies and surveys with low RoB.
3. The subgroup analysis should also be included for ‘studies sample size’, for example, < 100 and ≥ 100 .
4. Performing meta-regression would be helpful to explore the factors associated with high heterogeneity.
5. The authors should provide the newest data on HIV epidemiology in Africa in the *Introduction* section. They can refer to the last WHO/UNAIDS global reports on HIV.
6. ‘Supplementary Table 6’ should be transferred to the main text as ‘Table 1’. Moreover, the ‘*Meta-analysis*’ part of the *Results* section could be shortened due to repeated data in this table and the related figures.
7. The ‘*Discussion*’ section is poorly written:
8. Not searching for grey literature should be expressed as a review limitation at the end of the *Discussion*.

Minor comments

1. Please add the following keywords at the end of the *Abstract*: Prevalence, Review, Meta-analysis.

2. In line 143, please define the exact date of the studies inclusion (February 2023). Also, it would be best to tell us how many countries are located in Africa.
3. Could you explain the rationale for choosing studies with more than 10 samples?
4. In line 196, please change 'iv' to 'iii'.
5. The part of the '*Selection of included articles*' (lines 210–219) should be shortened due to repeated data in Figure 1.
6. In the part of the '*Article search strategy*' (lines 156–157), the authors stated that "The reference lists of all relevant articles were reviewed to complete searches in the bibliographic database", but they did not refer to any document retrieved through this manual cross-checking in the *Results* section.
7. In the '*Materials and Method*' section (line 197), the authors declared that 'educational level' was considered a covariate in subgroup analysis. However, I could not find such analysis neither in the text nor in the tables.
8. In the '*Results* section', please define the total number (and range) of participants recruited by the selected studies (line 225). Furthermore, please explain how many African countries were included in the final analysis (line 226).
9. Please describe 'low and moderate RoB' in line 236.
10. I strongly recommend that Table 1 be removed because of the complete data given in the text (lines 239–246).
11. I think only one subtitle of '*Findings of subgroup analyses*' would be better than multiple subtitles such as '*Meta-analysis by UN regions, HIV characteristics, women's characteristics*'.
12. In Figure 1, you showed that 17 full-text articles were excluded due to duplication. You removed duplicates before in the screening step. Do you mean 'overlapping studies'?
13. Different colors were used to show the same percentage ranges in the three parts of Figure 3. Could you please redesign it?
14. In 'Supplementary Table 1', please clarify which page item 11 (Data items) was reported on.
15. In 'Supplementary Table 2', please replace #3 with #4 in the two last rows. Also, change #4 to #5 in the last row.
16. In the PDF file of the manuscript, the references were listed several times. Please remove the repeated list!