Author’s response to reviews

Title: Prevalence of factors associated with positive Venereal Disease Research Laboratory in parturient women in Northeast, Brazil

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Author’s response to reviews: see over
Prezado Editor da Revista BMC Public Health
Prof. Dr. Nicole Dukers-Muijres

We are restating the manuscript “Prevalence and factors associated with positive Venereal Disease Research Laboratory in parturient women in Northeast, Brazil”, MS 1905170790798848 with the changes suggested by the referees, whose modifications are highlighted at the text.
We are sending two files: one with and one without emphasis.

Reviewer: Angelique Vermeiren

This is a simple yet nicely performed study on risk factors for Syphilis among parturient women in Brazil. However, the reporting needs some improvement.
Please consider the points mentioned below.

Major compulsory revisions.

General:
1. Between Title, abstract, end of background and conclusion: No consistent aim of the study. Was the goal of the study only to provide insights of factors related to a positive VDRL result or was the prevalence also of interest? OK

Title:

2. “Prevalence of factors” is confusing. Do the authors mean prevalence and factors? Or just factors? OK

Abstract:
3. There is no background indicated in the abstract. Remove heading “background” or, when describing the “background” is obligatory: add background information. OK

4. A major part of the method section in the Abstract concerns a power calculation, while I think only the outcome of this calculation should be in the abstract. OK

5. It would be informative to include more details on the analysis in the abstract. OK

6. The last sentence “Additionally, other internal……women’s health care”, is a bit vague and general and does not seem to rise specifically from this research. OK

Background:
7. Second sentence:
(The worldwide prevalence…..in South Africa). Do the authors mean with “range” that the lowest syphilis during pregnancy is found in Korea (north or south?) and is 0.11? And the highest is found in South Africa? Ok

8. Aim of the study: The authors mention insight into prevalence and factors related to positive VDRL as an aim of the study. It would be nice if the authors could also include why insight into these factors is important as an ultimate aim. Ok

Methods:
9. I am not sure what the authors exactly calculated in the sample calculation: the number needed to find a significant difference into a certain factor? The number needed to calculate the prevalence? Please describe more clearly in the manuscript. Ok

10. Second last paragraph: “It was performed a descriptive analysis……STATA, version 10”. This section is unclear to me due to the following points:
a. “It was performed”, is not grammatically correct, please change sentence structure. Ok
b. I seem to understand that frequency distribution was used for the variables to split them into groups (for example initiation of sexual activity < and > 19 years)? If this is correct please state more clearly in the text. Ok
c. I am not sure what the authors mean by the distinction between ‘Qualitative’ and ‘Quantitative variables’ and I am not sure why this distinction is mentioned. Ok

11. Please add for which factors the multivariate logistic regression was adjusted. OK

12. Research ethics: Are the two hospitals that approved the study the only hospitals included? OK

Discussion
13. Can the authors explain the high OR ratio for “previous diagnosis of syphilis” in the discussion.
It was decided to remove this variable from the analysis because of the possibility of serologic scar.

14. A paragraph should be added in which limitations of the study are discussed. OK
15: Paragraph 6: ‘‘sexual activity occurs earlier as time goes by”. Do the authors mean sexual activity starts earlier in the relationship when people get older? Or: Start of sexual activity has become younger over the time? Please clarify and add a literature reference. Ok

Tables:
16. I miss the variable “had sex for money” in table 1. Ok
17. I am a bit confused by the adjusted odds of having sex for benefits. It seems highly protective. This result should be considered in the results (and perhaps explained/discussed in the discussion). Ok

Minor Essential revisions (can be trusted to correct)
18. The manuscript could be improved by English editing. I have proposed some points of improvement in the review; however as I am not a native speaker I will most probably not been able to correct all points that need consideration. Ok

19. Authors contribution: Ana Paula Soares analyzed (instead of analyzed) Ok

20. General - Language:
Please write out Didn’t (did not), isn’t (is not) and other comparable abbreviations. Ok

Methods:
21. Language: the study population was “made up”. Please change in “consisted of” or “included”. (I do hope you did not "Make up" your population, as it means your subjects are fictional). Ok

22. Structure could be improved. Please divide methods into subparagraphs to improve structure, for example: - Study population - Data collection and - Statistical Analysis Ok

23. The page settings of the 4th paragraph are different than that of the others. Ok

24. Last paragraph, language: “the people who were in charge of them”, I am not sure whether this expression really says what you want to say. Ok

Results
25. Please mention “Table 1” in the paragraph describing table 1. Ok

26. 4th en 5th paragraph: Please rewrite these two paragraphs in one paragraph, stating the p-value and direction of every significant effect found. Ok

Discussion:
27. First paragraph:” since these studies performed confirmatory tests.” I believe could be better states as: “especially considering that these studies did perform confirmatory tests.” Ok

28. “It is recommended” “it was found”, not grammatically correct in combination with the rest of the sentence structure. Ok

29. Third paragraph. Please consider splitting this paragraph into two sentences, as it is hard to understand this way. Ok
Tables
Table 1:
30. All n’s of the variables add up to 320 except for Family income; please explain (in methods or table) **OK**

Table 1:
31. It would be informative to see, next to the percentage, also the number of positive VDRL among the subgroups. **Ok**

Table 1 and 2:
32. Please make them consistent in whether or not you provide p-values. **Ok**

Table 3:
33. Please indicate under the table where the adjusted odds were adjusted for. **Ok**

Discretionary Revisions (recommendations for improvement can author choose to ignore)

34. I am not sure whether to include the name of the test in the title; I believe “syphilis” would be more a more informative outcome to mention in the title, especially for readers not familiar with VDRL. **Ok**

Methods:
35: “Data were stored….version 18.” Since SPSS is a commonly used program, just the abbreviation can be used. **Ok**

36: Why did the authors use both SPSS and STATA? Since all statistic analysis techniques used can be done by both programs. **Ok**

Explain in the methodology why the two methods was used

Results:
37. Last paragraph, I would prefer to just mention the CI or the P-value in the text. Please be consistent over the whole result section. **Ok**

Level of interest: An article whose findings are important to those with closely related research interests

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

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests.

Reviewer: Mohammed Bukar
Major compulsory revisions
1. The title is ambiguous. Change **Ok**

2. State the study type clearly. Cross sectional study complemented with some information from the records is not a standard study type **Ok**
3. Linguistic revision Ok

4. Large OR and extremely wide CI needs to be explained. Ok
After change the sample size we decided to change the presentation format of the multivariate analysis too.

5. Was the questionnaire translated into local language. How was it decoded? was the questionnaire validated. Was it structured or unstructured? How did you control for non response?

**Level of interest:** An article of limited interest
**Quality of written English:** Needs some language correction Ok

1. Authors should spell out other causes of biological false positivity of VDRL. Ok

2. A positive VDRL of 5.3% makes little significance as long as false positivity is not controlled for. Comparison as done in the discussion with antibody based test is inappropriate. Compare like with like! Ok

3. What were the illegal drugs identified as significantly associated with positive VDRL? Ok

4. Would the manuscript be of more interest if the titer of VDRL is correlated with perinatal outcome if antibody tests are not readily available? This will give better idea as to the titration level at which CS occurs and recommendation on who to treat based on this rather than treating all patients with positive VDRL. Remember that treating all positive VDRL is not only an overtreatment but in the long run will lead to emergence of resistance and therefore more expensive drugs will have to be used in the treatment of syphilis in an environment that is already impoverished.

We would like to point out that this study aimed to analyze the prevalence and factors associated with positive VDRL test in parturient women and do not collected data form newborn. For this reason, it is impossible to associate the titration of the mother with the outcome in newborns.

5. Conclusion of the study should be strictly based on findings from your study. Ok

6. The authors need to search more literature as there are many missing gaps in the background and discussion, which earlier articles had highlighted. Ok

7. The sampling method is a convenience sampling and not random as alluded to in the methods Ok

8. Was the questionnaire structured or unstructured Ok
9. Cite statistical package in the standard way Ok

10. Error margin was given as 2% in the abstract but 5% under methodology. Please reconcile. Ok

11. Under methods, it was stated that for those under 18 years, others sign the forms for them. What is the legal age of consent in Brazil? Ok