Reviewer's report

Title: Association among oral symptoms, oral health-related quality of life, and health-related quality of life in a sample of adults living with HIV/AIDS in Malaysia

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Reviewer: Peter Robinson

Reviewer's report:

This cross-sectional analytic study aimed to determine the impacts of perceived oral health problems on OHQoL and HRQoL in 121 people with HIV attending a medical centre in Malaysia. Whilst reasonably soundly conducted the manuscript could be improved enormously by recourse to theory in the analytic strategy.

1. Where there any power calculations or precision estimates to determine sample size? Please add whether or not to the manuscript as this has implications for the interpretation of the analyses

2. Why did the authors exclude people infected for less than one year?

3. The variables on current oral health status and self-reported oral health questions are central to the aims and analysis in this study so need to be described in full in the method. Are there any data on the validity of these variables?

4. This study badly needs a theoretical model linking disease, self-rated health, OHQoL and HRQoL. The need for a model is laid out in Sarah Baker and Barry Gibson's Epidemiology2 paper published in CDOE, which the authors should read. I also suggest the use of the Wilson and Cleary model linking clinical variables to quality of life, as used by Baker (Baker, S.R.) and her group at the University of Sheffield. The data used in this study map on to the Wilson and Cleary model. Having that model will guide the data analysis in this study, and since the results obviously support the model then it would halve the length of the discussion! This would be a much stronger paper with that.
5. The results in the text are very detailed and somewhat duplicate the tables. The text could just highlight key findings from each table.

6. Some of the tables could be simplified to include only the multiple regression models.

7. I found the analyses of the individual sub-domains of OHIP and SF36 unnecessarily detailed, quite dull and unrelated to the aim. Also, in the absence of a power calculation and with the low reliability of these very short sub-scales leading to possible misclassification error there is a real chance that these are under-powered in a study of 121 people, which means we cannot easily interpret the apparent lack of relationships. The large number of analyses also increases the risk of type 1 error. It should be removed, along with Tables 6 & 7. This will also simplify the discussion.

8. The discussion largely seems to duplicate the results and triangulates the findings with other studies, which is a little dull and doesn't really go anywhere. Using the W&C model would simplify the whole thing as the data support that model in the current analysis. The model also highlights the role of individual and environmental factors, which the authors already note. This is another reason for starting with a theory! It helps you to remember what variables to study. Having seen that the data support the model the authors would not need to discuss every step, but to cite just a few examples. The Baker papers would also give the authors some ideas about what to put in the discussion.

9. None of the conclusions in this study are supported by the data. Having identified associations in the data, the authors go on to assume cause and effect, which needs to be removed.

10. Likewise the authors conclude that oral health care is needed for people with HIV. If they do that they must cite the evidence that care will reduce the impact of the oral diseases. In the absence of that evidence they cannot recommend health care.

I also have some minor comments, which although easy to make, are important

1. I dislike the phrase 'HIV patients' and prefer to remember that they are people first and foremost. They just happen to have a disease. I much prefer the term People Living with
HIV/AIDS (PLWHA) and implore the authors to use this phrase and acronym throughout the manuscript. Likewise, can we call them 'participants' rather than 'respondents' to recognise the active role they played in the research?

2. Robinson (1996) conducted a much better controlled study to demonstrate the periodontal health of people with HIV than the current reference (5) in this manuscript.

3. The authors need to be consistent about the number of decimal places in the manuscript, which varies between one and three. I suggest two (e.g. p < 0.05)

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

No

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.

No

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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

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