Reviewer’s report

Title: Relationship between oral environment and frailty among older adults dwelling in a rural Japanese community: A cross-sectional observational study

Version: 0 Date: 12 Sep 2018

Reviewer: Shenuka Singh

Reviewer's report:

Thank you for an interesting presentation. I have the following queries/comments:

1. How did the researchers test the potential participants' competence to provide informed consent for the study?

2. How is frailty defined? What parameters were considered?

3. Background: the authors allude to the relationship between nutritional status and frailty? There is no further mention in the methods section. Please justify.

4. What was the purpose of this sub-study?

5. What were the research questions and hypotheses (bacterial count) in light of the study design?

6. Did the questionnaire comprise open ended questions? If yes, how was this analysed?

7. Who was responsible for administering the questionnaire?

8. How was the questionnaire validated? What was the Cronbach's alpha score? How was this interpreted?

9. Where was the oral examination conducted? How was participant privacy maintained? How was infection control maintained?

10. At which time of the day was the oral/clinical examination conducted, noting that this could affect the production of saliva. How was this controlled?

12. How did the authors measure adherence to regular medication (as suggested by the Table 3? Please review.

13. I am interested in possible associations between underlying disease processes versus oral hygiene status. Please can you provide more detail on this?

14. What about the association between degrees of frailty and the ability to practice oral health care optimally? Please expand on this.

15. Please provide more references for the Discussion section.

16. The Conclusion section needs to be reviewed and amended in accordance to the methods and results sections.

**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.

Unable to assess

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

No

**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
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