Author's response to reviews

Title: Assessment of oral self-care in patients with periodontitis: A pilot study in a dental school clinic in Japan

Authors:

Atsushi Saito (atsaito1@gmail.com)
Momomi Kikuchi (kikuchimomomi@tdc.ac.jp)
Fumie Ueshima (mirisarimama@gmail.com)
Shinya Matsumoto (matumotoshinya@tdc.ac.jp)
Hiroki Hayakawa (green-v-hiro@m6.gyo.ne.jp)
Hitomi Masuda (hmasuda716@yahoo.co.jp)
Takemi Makiishi (makiishi@tdc.ac.jp)

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Dear editor,

Re: MS: 1036886372668254 - Assessment of oral self-care in patients with periodontitis: A pilot study in a dental school clinic in Japan

We thank the reviewers for their comments and we have revised our manuscript accordingly.

**Reviewer 1**

1. The role of gender and its effect on the results. Also, add some comment on why the number of females is twice that of males and how might this affect the results.

We were unable to match the subject by gender in this pilot study. In a previous study in Japan, it has been reported that gender or age difference can be a significant factor in oral self-care (Kawamura et al., J Occup Health 1999). Therefore, we added this comment as a limitation of the present study.

2. Some editing and language correction is required.

We made further improvements.

**Reviewer 2**

1. In the discussion, the probable effect of age (great age variation) on the results of the study has to be added to the paragraph "weaknesses of the study".

We added this comment as a limitation of the present study.

2. The advantage and future utilization of the questionnaire used here (Table 1) should be discussed as well.

We added comments in the discussion.

3. The references used for Table 1 could be added to the table as footnote.
We prefer not to add references to Table 1. Although we used the two models as theoretical frameworks, the questionnaire itself was our original design.

**Reviewer 3**

1. **Abstract:**
   Indicate the study design early in the section ‘methods’: a cross-sectional study design was used.

   We modified the abstract accordingly.

2. **Objectives:**

   We modified the wording accordingly.

3. **Methods:**
   Subjects: mention the number of participants and explain how the study size was arrived at.

   Since this was a pilot study, no attempts were made to perform sample size estimation. As for the number of participants, we have provided the information in the results section.

   4. Start a section ‘data collection’ in the third paragraph: ‘After collection of full medical and dental histories …’

   We modified the section accordingly.

5. **Data collection:** there is a need for a more structured section using three subdivisions: ‘clinical oral examination’, ‘questionnaire’ and ‘patients records’.

   We included subdivisions.
6. For the questionnaire variables: provide the reader with details on the methods used to compute the variables and how they were used in the analysis.

We feel that information already provided within the method section as well as tables (including legends) is sufficient.

7. Clinical variables: 'The presence or absence of supragingival dental plaque…':
PCR is described as a dichotomised yes or no variable. How do we have to interpret the mean PCR as reported in the section results? Provide the reader with some more details of the method of assessment (measurement) of dental plaque. PCR is a rather less frequently used measurement instrument and the reference is old and difficult to consult.

We understand the reviewer’s view. For research purposes in general, the use of other indices including Plaque Index may be preferable. However, in the present study, we aimed to develop a concise instrument that can be introduced in a clinical setting. In clinical practice to treat periodontal disease in Japan, the plaque control record is routinely and widely used. And it was the only data available to us regarding the level of plaque control in our patient population. Also, it likely that the PCR is used for future oral hygiene instructions. Therefore, as a variable within our pilot study, we feel that use of PCR is appropriate.

8. Statistical analysis: indicate the rational for using non-parametric tests.

Since this is a pilot study and we were not sure if the Gaussian assumption is met. Also, considering the small sample size, we decided to use non-parametric tests. We selected Fisher’s test because it is the best choice as it gives the exact P value, and it is preferably used for analysis of small samples.

9. Results:
Remark on table 2: see above concerning the PCR

Please see our previous response to comment 7.

10. Oral hygiene: ‘three times or more’ in stead of ‘more than three times’.

We appreciate the reviewer’s instruction. We modified it accordingly.
11. Table 4: frequency of between meal snacks: the total amount of percentages does not reach 100%.

We corrected the calculation.

12. Not all tables are based on the full number of participants n=65?. In case of missing answers, indicate the number of participants for each variable of interest and report the number and percentage of missing answers.

We added total number of response to each item in the table.

13. The tables give an idea of the relationship between the questionnaire variables and plaques scores, but no information is given on the direction of this relationship. Report mean plaque scores for the different subgroups.

We understand the reviewer’s view. Indeed, such information was missing. We added comments regarding the relationship with plaque scores in the result section, in order to clarify the direction.
Given the limitation of the use of PCR score, we do not feel necessary to provide the mean PCR scores for each subgroup.

14. Discussion:
Indeed, the present study assessed the oral health related behaviour and perceptions of patients with periodontitis, but the study did not investigate the validity of the questionnaire. Did the questionnaire really measure the oral health related behaviour of patients? Information bias?

We completely understand the reviewer’s view. We did conduct a pre-test for content validity. Although we feel that the assessment with the present questionnaire could provide fundamental information regarding the oral self-care, validity and reliability of the questionnaire needs to be further examined in future studies. We added the comments in the main text.

15. At the end of the second paragraph the authors stated that the results provided additional evidence that interdental cleaning should be emphasized in the
development of periodontal care plans. None of the results reported in the present study support this statement!

We rephrased the sentence as our data do not really support the original notion.

We truly thank all reviewers and the editor for thoughtful and constructive suggestions and instructions. We modified our manuscript and hereby re-submit it for your consideration to publish in BMC Oral Health.

Sincerely,

Atsushi Saito, DDS, PhD
Department of Clinical Oral Health Science,
Tokyo Dental College
2-9-18 Misaki-cho, Chiyoda-ku,
Tokyo, 101-0061, Japan
E-mail: atsaito@tdc.ac.jp;
atsaito1@gmail.com