Reviewer’s report

Title: Current Status of Periodontal Disease in Adults in Takahagi, Japan: A Cross-sectional Study

Version: 0 Date: 18 Dec 2019

Reviewer: Youngkyung Ko

Reviewer's report:

The authors have put a tremendous amount of work and effort for epidemiological study of a Japanese population.

In the abstract, please consider re-writing the Methods.

A total of 582 (aged 20 to 89 years) randomly sampled Takahagi residents answered a comprehensive questionnaire and participated in clinical examinations—

Line 53 of background
by pockets, do you mean greater than 4mm periodontal pockets?
It is better to be clear in what you mean by pockets

Recent studies:
How much is high, &gt; please clarify
In Western nations less of a problem: Please clarify

The authors write about the National Survey of Dental Diseases that it did not include a detailed analysis of clinical parameters and that this study covered only 10 teeth. The reader is left to infer what the survey covered, please describe what this national survey studied.

First sentence of the second page of background
'was' should be inserted between examination and carried out.
is located approximately
Ushiku City residents: How many is many?

Therefore, a new cross-sectional study is necessary. This sentence seems to be unnecessary, or should be re-written as past tense.

Most readers may not familiar with the geography or administrative division of Japan. I think it may be kinder to readers to provide a map so that we may understand that these two cities are in the same region or same district (what is a district? is it the same as prefecture?).

Methods

I do not think that it is necessary to mention that Takahagi City is in the same district as Ushiku City, Japan (what prefecture is Ushiku City in? is it the Ibaraki Prefecture? Did you mean Prefecture when you wrote district?) in the first sentence where you are describing the survey participants.
Comparison of Ushiku City and Takahagi City

How was random sampling of the inhabitants accomplished? 582 people were randomly sampled from 1400 inhabitants? Or 1400 inhabitants were randomly sampled, and 582 people answered the questionnaire? What did the Japanese Society of Periodontology authorize the periodontist to do? Or does this mean that S.S. (one of the authors) was a specialist? If so, I think writing 'an experienced periodontist' carried out the examinations would be enough.

All participants agreed to take part or People who agreed to take part became participants? Their characteristics: Please re-write the sentence. What agreement did the Nippon Dental University have with Takahagi City in 2012?

Where did plaque adhesion go in the results? And how was this graded? Did you use Modified O'Leary's index? I see that you've described in Table 1, wouldn't it be better to put it in table 2?

Probing pocket depth should go before BOP if the PPD was measured before BOP (and I think that it would have been)

Recorded sites

Please re-write. Mesiobuccal appears twice. Where is mesial central?

Mesiobuccal, buccal, distobuccal would be the usual terminology.

Reproducibility of measurements

Shouldn't it be intra-operator reproducibility?

Data analysis

There is a typo in chi squared

Discussion

For the second sentence, provide a reference. Please provide a reference for the third sentence as well. Why would better numbers suggest better understanding? If differences between studies may be due to ethnicity, educational level, oral hygiene, please compare the this factors of different studies.

Precision and accuracy are two different things.

Comparison with the study of Ushiku City residents:
Please describe how these two cities are comparable.
I would think that number of missing teeth would be related to number of remaining teeth. Why not include these values in Table 1? I am not sure what you mean by the last sentence of the Discussion.

The line break of the second institution does not seem to be appropriate.

There seems to be two different fonts used in the References section.

In table 4, the prevalence of CAL greater than 5 decreases to 9.55 for people in the seventies, could this be correct?

Table 2, 2 commas after PD, in the table, Value has two Ls

List of abbreviations
CDC, AAP first letter of every letter should be capitalized.
The list needs more spaces.

Funding: translation has a typo.

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.

Yes

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 recommend additional statistical review
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Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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