Reviewer's report

Title: Periodontal health in an indigenous population in Northern Norway: A cross-sectional study

Version: 0 Date: 27 Jan 2020

Reviewer: Marhazlinda Jamaludin

Reviewer's report:

First and foremost, I enjoyed reading this manuscript. It is an interesting topic and sharing useful information. As a secondary data study, I wish to compliment the authors for describing information on the quality of the data including the missing data, etc. Many other papers have missed this or choose not to describe in detail.

A few matters I would like to clarify and highlight to further improve the manuscript are as below:

1. Regarding the objective to describe prevalence, severity, and distribution of periodontal disease as well as associated risk factors in an indigenous Norwegian population, are the other ethnicities like Norwegian, Kwen and others are considered as an indigenous group too but Non-Sami indigenous? The reason I asked is if they are not, may I suggest your Table 2 on the distribution of periodontitis in relation to demographic, socioeconomic and behavioral factors to be stratified by Sami and non-Sami as your objective is to describe the prevalence in an indigenous Norwegian population. Thus, it must be described among Sami (indigenous) and Non-Sami (non-indigenous). Currently, the distribution of NSP, Stage II, and Stage III/IV by socio-demographic, economic, and oral-health related behaviours are presented as overall together Sami and Non-Sami. Please ignore this comment if they (Norwegian, Kwen and others) are also indigenous Norwegian but non-Sami population. Perhaps one line information on whether only Sami or all are indigenous could help too.
2. From my understanding, the associated factors identified in the analysis were for general participants when controlling the ethnicity as one of the confounding variables. It was not the associated factors specifically for the Sami population. Again, depending on whether all groups or only Sami are indigenous, perhaps the objective is better phrased to identify the associated factors in the Northern Norway population including the indigenous Sami population? If the authors' interest was to study associated factors among Sami population only, then the analysis should be conducted among the Sami participants only to identify whether sociodemographic, economic, and behaviours affect the prevalence of periodontitis among the Sami population.

3. In a cross-sectional data the way OR is interpreted is slightly different from a prospective data. The way OR was interpreted in this study was like the data was a prospective, for example, 'Likelihood of having periodontitis was higher in males compared with females', instead of 'Those with periodontitis were 1.7 times more likely a male than a female'. Another example, 'The Sámi had higher probability of having more severe stages of periodontitis and had more deep periodontal pockets', instead of 'Those with severe stages of periodontitis and deeper periodontal pocket were more likely with Sami ethnicity background than non-Sami'. Thus, the conclusions would be a slightly different. Please look into this.

The above are my main concerns and below are other small suggestions that may help to strengthen this manuscript:

1. The study design was a cross-sectional, secondary data analysis.

2. Any explanations why when a participant with Sami background was classified as non-Sami when they considered themselves as non-Sami?

3. It would be good to briefly highlight how the smoking status was determined in this paper even though the details are on the referred paper as smoking is an important factor for periodontitis?

4. As the validity of the measurements was referred to as the original study, any information on how the reliability of the measurements was ensured like inter and intra examiner reliability? I think it needs to be highlighted in this study because they were nine dentists with a few dental therapists as examiners.

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

Yes

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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