Reviewer’s report

Title: Self-reported oral and general health in relation to socioeconomic position

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Reviewer: Carol Guarnizo Herreno

Reviewer's report:

The paper entitled 'Self-reported oral and general health in relation to socioeconomic position - a national survey in Sweden' presents interesting findings on a relevant topic. The manuscript is well conceived and implemented. The data treatment is appropriate and provide interesting insights with multiple measurements. There are, however, some issues the authors might want to consider to further improve the quality of the manuscript:

Background

- I think the reader would benefit from a sentence or two at the end of the Background section that states more clearly the rationale of the analysis. For example, whether the study aimed to compare the magnitude of inequalities between general and oral health and/or to identify which socioeconomic indicators had stronger relationships with the two outcomes.

- I would also suggest including a couple of sentences that place the study in the context of what is already known about socioeconomic inequalities in oral health in Sweden and how this analysis builds upon the existing literature.

Methods

- On page 4 line 71, I would suggest replacing "The participants were randomised…" for "The participants were randomly selected…"

- When mentioning the inclusion criteria, please indicate the age inclusion criterion and if institutionalized individuals (living in prisons, elderly care homes, etc.) were also in the SPAR register and therefore, potentially selected in the sample.

- Regarding the questions on self-rated health, is there any particular reason why the response options were different for general health and oral health?
- Given that income is a family/household measure, please clarify whether income was equivalised to adjust for the number of people in each household. If that was not the case, I would suggest acknowledging this limitation in the Discussion section.

- Also related to the income variable, please mention how the categories were defined. Are they quartiles based on the income distribution of the sample?

- On page 5, line 97, I recommend including the word "descriptive" in the sentence "The analysis included frequencies, measures of central tendency (means), and variability (standard deviation)."

- On page 5, lines 99-100, I think it is important to expand the sentence to: "Multivariate logistic regression analysis (MLR) was used with the self-rated health variables as the dependent variables and the socioeconomic indicators as the independent variables".

- Please clarify how the socioeconomic variables were introduced in the models and if there was a model where all the SEP variables were included at the same time.

Results

- I think current Tables 1 and 2 should be merged in a single Table 1: Descriptive statistics for study variables.

- By looking at the percentages of poor oral and general health presented in Table 3, I assume that these derived measures correspond to a combination of the 'poor' and 'fair' vs. otherwise response options for oral health; and a combination of the 'poor' and 'bad' vs. otherwise response options for general health. However, that is not clearly mentioned in the Methods or Results sections. Please clarify how these health measures were derived. Additionally, the authors should consider stating what would be the implications (in terms of comparability between the two outcomes) of placing the 'fair' response option in a different way for the oral and general health derived variables.

- Related to the previous comment, if the 'fair' response option was indeed part of the poor oral health derived outcome, but not part of the poor general health one, please revise the statements on page 6 (lines 124-128 and 136-135) as the comparison between the two derived measures would not be straightforward.
- On Tables 3 and 4, I suggest adding subheadings for each socioeconomic measure.

- Table 5 shows three categories of education. However, four categories of education had been presented in previous tables and text. I assume that 'University' and 'Masters or PhD' were combined in one group for the regression analysis. Please clarify this when presenting the results.

- I would suggest including a similar clarification for the SEP measure of obtaining 15,000 SEK in one week which appears with three categories in Table 5.

- Related to the two previous comments, I think it would be better if the authors categorize the socioeconomic variables in a certain way and use this categorization consistently throughout the paper (descriptive, bivariate and multivariate analyses).

Discussion

- I think the first paragraph would be strengthened by the addition of a sentence about the SEP measures that showed stronger associations with the two health outcomes.

- Regarding the discussion point on the national insurance system, I would suggest adding that the dental care system is less generous and universal for adults compared to children in Sweden (if I understand well).

- On page 9 line 190, I recommend replacing the word 'personal' for 'material' so the sentence would read: '…the variables most clearly associated with material resources in a short-term perspective…' This is because: a) at least one of the variables was measured at the household rather than at the individual level and b) both variables refer to a specific type of resources: financial or material.

- Authors refer to results obtained when using all categories of the SEP variables (page 9 lines 203-208). I wonder whether is possible to present those results in an online appendix.

- The authors might want to consider discussing the potential limitations derived of excluding people who do not speak Swedish in the survey.
Authors could mention that results on education need to be looked bearing in mind the inclusion of participants aged 19-25 years, who could be still studying and therefore have not reached their highest educational level.

On page 10 lines 215 and 229, I think 'risk ratios' need to be replaced by 'odds ratios'.

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.

Yes

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I am able to assess the statistics

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