Author's response to reviews


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Author's response to reviews: see over
Dear Dr Charles Rwenyonyi,

Thank you for your positive response to our submitted manuscript MS: 1704200390982502. We have carefully read and considered the reviewers' comments and suggestions to the manuscript “Trends in tooth loss in relation to socio-economic status among Swedish women, aged 38 and 50 years. Repeated cross-sectional surveys 1968-2004.” In this letter we give responses to these suggestions and explain the changes made in the revised manuscript. We hope that you will find these changes in accordance with your and the reviewers intentions.

Referee 1

1. **Abstract - Background**: background is not a background but objectives. Please provide a background and also the objectives.
   We agree and we have now added a short background to the abstract.

2. **Abstract - Methods**: the number of examined subjects in each study should be given.
   The number of examined subjects is now included after each year of examination to make it more easy to understand.

3. **Introduction - I believe some epidemiological data regarding the Swedish adult people oral health status over the studied period could help the reader in understanding the paper.**
   We agree, and on page 5 we have included more information regarding Swedish studies concerning edentulism and remaining teeth to make it easier to interpret.

4. **Methods - I believe some more details on the studies should be included in order to make readers less dependent from the references: research environments (home, work, health service units, etc); population-based or health services-based sampling; parameters for sample size calculation are some examples.**
   We have added more detailed information about the studies and the sampling design under “Methods” that begins on page 5.
5. Results - I suggest authors should avoid the word “risk” as in page 10. Logistic regression provides (OR CI 95%), so a significant (OR CI 95%) increases the odds and not the risk of the outcome.
   We have changed the word risk and use the odds ratio instead on P10 where we found it appropriate.

Referee 2

1. The aim of the study is differently described in the abstract and in the paper. In the abstract – it seems that also secular trends in socio-economic differences with respect to remaining teeth was a specific aim of the study. The data have not been analyzed accordingly. Only secular trends in remaining teeth is presented whilst at the same time adjusting for socio-economic differences in remaining teeth across the survey years.
   This is a good point, so we have now clarified the aims in the abstract, as well as in the last sentence of the background / introduction and the wordings are now the same.
   Our intention has been to analyze changes over time concerning number of remaining teeth adjusted for some important independent variables by using both bivariate and multivariate statistical methods. However, changes in socio-economic status are also important to display, but our focus has not been to elucidate changes with multivariate changes.

2. The number of participants in the survey year 1968/69 is given. However information about the number of participants in the following survey years should also be provided. More information is needed also about the sampling method each survey year. What kind of design was utilized- cluster sampling – one /two stage sample and so on. It is not satisfactory to refer to previous studies for that information.
   This is an important aspect, and we have now included more detailed information about the studies and the sampling design under “Methods” that begins on page 5. This includes the number of dental participants each survey year.

3. A) The information regarding non participation at each survey year is also superficial. Information could be presented in a table providing information for each survey year about the number of the studied age groups in the population, number of eligible participants and participation rate.
   We have taken this into consideration, but in table 1 the number of participants are shown in each study year, as well as participation rate. With this information it is possible to calculate the non-participating 38- and 50-year olds.

B) Moreover, information about differences about participants and non participants at each survey year should be detailed and also how information regarding non participants were achieved. Any comparison of socio-demographic characteristics between participants and that of the population? In short – more information regarding the argument of having representative study groups each survey year could be presented.
Information is added on page 6 under the subheading “non-participation analysis”, as an argument for the representativeness of the Population Study of Women in Gothenburg, as well as three references.

4. **Table 1 and 2- Why not presenting between what years the number of teeth and socio-demographic characteristics differed statistically significantly?**
   We prefer to keep table 1 and 2 separately, since table 1 displays participation rate and distribution of teeth. Table 2 has some merit since it shows distributional changes in socio-economy over time.

5. **I presume that table 3 presents the bivariate association between socio-economic characteristics and mean number of teeth within each survey year? – please be more clear about this in the survey heading. When independents with more than 2 categories are analyzed – was there any use of post hoc multiple comparison tests?**
   In the heading of table 3 we have added what kind of statistical analyses we used, for better information for the readers.

6. **Discussion part – first section line 3- starting with – However, there was still a relationship between fewer teeth and lower social group among the 50 year old women irrespective of the examination year ------ please reformulate and explain this sentence. Is this referring to unadjusted bivariate analyses at each survey year presented in table 3?**
   Yes, we refer to table 3. We have clarified the sentence as you pointed out. Page 11 lines 3-6.

7. **Sample size of moderate sizes particularly in 1992/1993 is discussed – but information about the actual size was never provided.**
   On page 12, the first sentence of the second paragraph, we added “see table 1” which provide information about the actual sample size in both age groups.

8. **The repeated cross sectional design of this study should say something about period versus cohort effects**
   We believe that we have discussed, on page 14 last paragraph, some possible period, age or cohort effects. We found evidence of age and period effects. However, due to the design, i.e. no longitudinal method, we could not reveal cohort effects.

9. **In the discussion same importance or weight seems to have been devoted to results emanating from bivariate and multiple variable analyses- for instance “the increase in number of teeth over the study period was most remarkable among 50 years old? This stems from bivariate analyses presented in table 1 with no control for confounding variables. At the same it has been informed that no interaction effects were statistically significant, implying that the time effect upon remaining teeth did not differ statistically significantly between the age groups?**
   We have clarified the text on page 13, third paragraph, accordingly.
10. Possible biases due to self reported social status should be discussed and whether or not it might be expected that the accuracy of self reports could have changed across time? accurate. We have added text on page 12, second paragraph, about this issue with the self reported variables and possible bias.

Additional information:

The original manuscript was revised by a professional language consultant.

Sincerely

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