Author's response to reviews

Title: Change in Oral Impacts on Daily Performances (OIDP) with increasing age: Testing the evaluative properties of the OIDP frequency inventory using prospective data from Norway and Sweden

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Version: 2 Date: 16 April 2014

Author's response to reviews: see over
16.04.14

Editor in chief
BMC Oral Health

Thank you for the review of the manuscript “Change in Oral Impacts on Daily Performances (OIDP) with increasing age: Testing the evaluative properties of the OIDP frequency inventory using prospective data from Norway and Sweden”. We are grateful for the valuable comments from the reviewers. We have revised the manuscript according to their suggestions. Please find attached the revised manuscript. The response to reviewers’ comments is detailed below.

On behalf of the co-authors

Sincerely,

Ferda Gülcan
Referee 1- Sudaduang Krisdapong

1. Please state clearly in all places, particularly where important eg. title, objective, methods, conclusion that the study applied OIDP frequency score only, not general or full version.

We have now clearly stated that the study applied a shortened version of the complete OIDP inventory, namely the OIDP frequency score.

2. It is not so clear whether self-administration or interview method was applied for gathering data on OIDP frequency. It seems to be former one. If so, validation process of self-administered questionnaire should be concerned.

We have added the statement of self-administration. We have also considered that there is evidence in the literature of high agreement between self-administered and interviewer administered Child OIDP

3. Non-response was quite high, for Norway in particular. The study also found that follow-up groups had better oral health perceptions in all measures. I wonder whether this would affect study’s findings, for example, that Swedish (higher response rate) had better OHRQoL.

We agree that the non-response rate was quite high and this may affect the study findings by a probable selection bias. This was pointed out in the discussion part (P16).

4. Conclusion and last paragraph of Discussion say Norwegian/Swedish were more/less likely to have worsened and less/more likely to have improved OIDP. But the latter was not statistically significant. Please check.

We have checked this and made a correction in the text

5. Findings regarding both positive and negative changes in OHRQoL after tooth loss were previously found and discussed as authors have included in Discussion. However assumptions that tooth loss might decrease pain and at the same time increase difficulty chewing, resulting in both directions can be proved by this study through analyses of subscales (8 items) of OIDP data. This would make study’s findings more fruitful

Yes – but this would require additional analyses and we wanted to avoid making the whole article longer
6. OIDP in title should be out in the parentheses after its full name, not after comma.

   It has been corrected.

7. The term OIDP ADD appears on page 7, OIDP total score on page 8. Are they the same? Please be consistent. Moreover, OIDP frequency ADD or OIDP frequency total score would be more appropriate. Similarly, OIDP frequency SC would be more accurate that OIDP SC. Please also have “0-40” in parentheses after the term OIDP ADD/total score.

   Thank you for the comment. The corrections have been made.

Referee 2- Anna-Lena Ostberg

General Comments

Abstract

The methods should be included how many included counties and how many participants. The sentences about participation rates might possibly be condensed to one. The conclusion in the abstract and the conclusion in the main text do not correspond.

We have made adjustments in the method section in the abstract. The conclusion has been corrected according to the conclusion in the main text

Key words

Please consider the MeSH-term “aged”

We have now added the term “aged” in key words.

Introduction

The differences between the two countries in dental care organization and dental care consumption in the current ages could be clearer to explain why it is interesting to study two neighboring countries. These could be expected to have more similarities than differences regarding these issues.

We have considered this; however the main aim of the study was to assess the evaluative properties of the OIDP inventory in these countries. We wanted to keep the focus on the main aim and give a brief description of the oral health care systems in the two countries. As a second aim we assessed the country variation. This can be included in another research article where the focus would be on the differences or similarities in oral health care services in Sweden and Norway.
• P3, §1, last sentence: examples of the many benefits?

Examples of the benefits have been outlined also higher up in this paragraph.

• P3, §2, line 1: “exposure” does not seem to be the right word here.

It has been corrected.

• P3, §2: it is little obscure why the transition in dental subsidies for young people is mentioned.

We wanted to get attention on that in both countries an abrupt transition occurs once the age of 21 years is attained, that the financing of dental health care for adults is based on patients’ payment.

• P4, §2: is there really “vast” number of OHRQoL instruments?

The word “vast” has been removed.

• P4, §2: the reference relate to ADULT and elderly populations in Norway, Sweden and Bosnia/Herzegovina. What about “France, UK and many middle-and low income countries”?

It has been corrected and the references have been added.

Methods

• P5, §2, line 4-5: which are the “known variability in oral conditions”?

There is evidence of differences in the adult caries experience across those counties.

• P6, §2, line 5: please insert that the scale was a 4-point Likert one.

It has been corrected.

• The term for negative scores is varying in the paper: negative, worsened, worsening, deteriorated. Please be consistent. What about impaired.

It has been checked and corrected.

Results

• P9, §1, line 6: please write that the difference in participation rate relate to the follow-up study.

It has been corrected.
• **P10, §1**: please keep the same sequence when giving series of figures, for instance 1) no change, 2) deterioration, 3) improvement.

   It has been changed.

• **P10, §1**: what is “stable tooth loss”? This might imply that a person can gain more teeth over time.

   A trajectory score of change in tooth loss was constructed from dummy variables in 2007 and 2012 with the categories of (0) stable all teeth (all or almost all teeth in 2007 / all or almost all teeth in 2012), (1) tooth loss (all or almost all teeth in 2007 / lost teeth in 2012) and (2) stable tooth loss (lost teeth in 2007 / lost teeth in 2012). This implies that a person reported stable major tooth loss across survey years (stable tooth loss).

• **P11, top**: according to the table the range in the effect size in Sweden was 0.1 to 0.4.

   We have now corrected the sentence.

• **P11, §2 and P12, §1**: is there a difference in “reported tooth loss” and “experienced tooth loss”? Also, you sometimes write “lost teeth”- is that the same phenomena.

   Lost teeth and tooth loss is the same phenomena. Experienced tooth loss is the same as reported tooth loss. Tooth loss was assessed asking the question “How many of your own teeth do you still have?” The variable was dichotomized into (0) all or almost all teeth and (1) lost many teeth.

• **Tables**: the traditional sign for statistical significance- “stars” is used. Please clarify.

   We prefer to keep this as “*p<0.05, **p<0.001”. The significance level of 1% (p<0.01) not considered in the analyses.

**Discussion**

The section has been shortened.

• **The validity of questions. For instance, how might the question about “tooth loss” be understood by respondents? Were there any pilot tests or others tests in earlier studies?**

   A study of validation of the question about tooth loss was taken, and this was pointed out in the methods section (P8).
• **The lack of “objective” (clinical) assessment**

We acknowledge the lack of “objective” (clinical) assessment. This has been pointed out in discussion part that the evaluation of the OIDP was limited to the comparison with change scores of self-reported oral health and tooth loss (P15).

• **The found difference between the two countries. This is discussed rather superficially. The “cultural dimension” mentioned- what can that be in this case? There was a rather big difference in tooth loss between the two countries- reflections? Any idea of the quality of retained teeth?**

As a sub-aim of the study country variation of the relationship between tooth loss and OIDP was assessed. We agree that this is discussed lightly. However, we wanted to have the focus on the main aim. This can be discussed in another paper where the focus is to compare the two countries.

• **The rather amazing finding that tooth loss was associated with improved OHRQoL is discussed in term of pain relief. Did the referred studies find that?**

With this part we wanted to discuss that the positive relationship between tooth loss and worsened OHRQoL is not simple, and by that some people might experience pain relief and improved OHRQoL whereas some might experience chewing difficulties and problems which may lead to deteriorated OHRQoL.

Other minor changes have been corrected as suggested.