Reviewer’s report

Title: Ethnic disparities in children's oral health: findings from a population-based survey of grade 1 and 2 schoolchildren in Alberta, Canada

Version: 1 Date: 07 May 2017

Reviewer: Azza El-Housseiny

Reviewer's report:

OHEA-D-16-00333R1

Ethnic disparities in children's oral health: findings from a population-based survey of grade 1 and 2 schoolchildren in Alberta, Canada. This revised manuscript is improved but some shortcomings still need to be addressed by the authors.

* In general, the writing language and structure of some sentences need to be revised.

* The authors did not provide sample size calculation but description of their sample, however, since this study is a secondary analysis of data previously collected, they can calculate and write the power of the sample they have.

* Calibrating each team separately do not ensure consistency in data collection among the 5 teams who collected the data. Since there is no information about inter- and intra-examiner reliability, severity or caries may be determined differently among different teams. This may influence the validity and reliability of the data. This should be addressed and added to the limitations of the study with a statement to take the results cautiously.

* In page 6 lines 136-138 "Assessment teams followed the protocol from the Iowa Fluoride Study [29], which is based on the WHO criteria[30] and yields a d1d2-3 mf index, which assessed the decayed, extracted/missing (due to decay), and filled teeth and tooth surfaces (primary and permanent)[29].” It is not clear which method was used in caries detection Warren et al 2002, d1d2-3 /D1 D2-3 identifying cavitated and non cavitated carious lesions or WHO, deft/DMFT for only cavitated lesions. While, in the results and tables the authors presented this as deft/DMFT. There is no analysis for non cavitated lesions.

* Page 7 lines 163-164. "Appendix 1 presents the question used, which was drawn from Cycle 1 of the Canadian Health Measures Survey (CHMS), household interview [29]." In the reference list # 29 is Warren et al 2002 which is not related to this statement. Citations of references need revision.

* Page 12 lines 266-271 "Table 1 shows ..... the average number of teeth with caries experience (deft/DMFT) was 2.71 ................. average number of teeth with dental caries
was 4.76 " the title in Table 1 is "Table 1. Weighted percentages of oral health outcomes, socio-demographic and caries-related behaviours variables, by ethnic groups" It is not appropriate to put average number teeth ..... under a title of percentage of children with different outcomes. These average numbers should be placed in another table.

* Discussion still has a table number.

* Conclusion should be based on the results and not repetition of the results.

* References have many errors that need considerable revision. Examples:
  o Some references have two numbers e.g. # 7-8, # 25-26
  o Some books and reports references are incomplete
  o There are many incomplete references: e.g. # 28, # 35, # 45

**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.

Yes

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

No

**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

**Quality of written English**
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published
Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal