Reviewer’s report

Title: Association of caries experience and dental plaque with sociodemographic characteristics in elementary school-aged children: a cross-sectional study

Version: 0 Date: 02 Jun 2017

Reviewer: Luciane Maria Pillotto

Reviewer's report:

The following are some concerns that could be addressed to increase the clarity of the study "Association of dental caries and dental plaque with socio demographic characteristics in elementary school-aged children: a cross-sectional study”.

Title

"socio demographic" or "sociodemographic"?

Abstract

In the background, although it is possible to identify the propose of the study, it could be specified. Suggestion: "Thus, the proposal of this study..."

The bracket is not necessary: 7-8 years [6.53 (SD=4.37)]. Review the use of the bracket in the results section and the tables as well.

Please review the interpretation of the result, because girls had dmft smaller than boys: "The chance of developing dental caries (dmft) was 0.475 time higher in girls than in boys (p<0.001)". This same phrase is used in the Results and Discussion section.

The authors could standardize the number of decimal places used with the OR, usually 2 decimal places are used.

Introduction

It would be important for the authors to contextualize the situation in Hamadan province as there are important differences between the regions in Iran.
Correct: dentistry care, - dentistry care,

Correct: entire regions in Iran Besides - entire regions in Iran. Besides

Methods

The use of dental explorer is not indicated for diagnosis of dental caries. The use of this instrument could overestimate the diagnosis or cause cavitation that could influence the increase of future index. In addition, the use of plaque disclosing tablets to measure plaque may increase the value found. Perhaps these facts influenced the outcome and could be discussed in the paper.

In this section, there is a sentence describing the use of logistic regression and linear regression to investigate association between independent variables and oral health indicators. Please explain how the DMFT/dmft variable was treated in the regression model. Moreover, in my opinion, I would consider the use of plaque presence as an explanatory variable rather than outcome.

Results

The authors wrote: "The boys had 77.5% primary teeth and 47.08% permanent teeth with caries and the girls had 68.2% primary teeth and 45.9% permanent teeth diagnosed with caries" - DMFT/dmft > 0 (%) does not indicate the percentage of decayed teeth but the percentage of children with caries experience (decayed, missing or filled teeth). Additionally, the numbers reported for dmft are incorrect. In the Discussion section it is also written as percentage of decayed teeth.

The data mentioned in this sentence are not in Table 1: "The highest dmft was seen in boys aged 7-8 years [7.87 (SD= 4.36)], the highest DMFT in girls aged 12-13 years [1.43 (SD= 2.10)], and the highest dental plaque in boys aged 12-13 years [52.78 (SD= 25.71)] (Table 1)."

In the Methods section, it is written that the inclusion criteria were age range of 7-12 years old, but in the results (see above) and in other parts of the text appears the age group of 12-13 years. Please check ages.

Review the use of the world "higher" in the sentence: "The chance of developing dental caries was insignificantly higher in school..."

Correct: pain(p<0.05) - pain (p<0.05) There was no loss of data in any variable?
Discussion

This study is important because it provides information on oral health in children aged 7-12 years of Hamadan, but the generalization of the findings may be compromised since the schools were selected by convenience sampling. Authors need to be cautious in their assertion.

Correct: Hamdan- Hamadan

I'm sorry but I'm confused by the interpretation of the authors in this sentence: "According to current study, dmft has increased by 1.15 times in children aged 7-8 years and DMFT increased by 0.60 time in children aged 12-13 years in Hamadan compared to the corresponding figures in national survey in 2012-2013." In my understanding, DMFT decreased in this period.

In this section, the authors emphasize that high caries rates are due to inadequate oral hygiene habits or lack of knowledge. Currently, there is a wide discussion about the influence of social determinants on oral health. It would be interesting for the authors to address this issue. Water fluoridation influences the caries index and the authors do not mention this fact in this section. Reference 4 may help with this. Furthermore, in this study the variables father/mother's education-father/mother occupation and parent supervision were not significant.

The meaning of the last paragraph in Discussion section is not clear to me. Please explain what is the relation of study design limitation if the demographic characteristics did not show any association between parental socioeconomic characteristics.

In the discussion, the authors reinforce some preventive strategies that seem to be repeated within this section and at the conclusion. Some results are also repeated here. Please review the last paragraphs and the conclusion.

Correct in reference 4: iran – Iran
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

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 am able to assess the statistics

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