Author’s response to reviews

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

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We thank all the Reviewers for their valuable feedback and taking the time to provide useful comments to improve our manuscript entitled “Association of caries experience and dental plaque with sociodemographic characteristics in elementary school-aged children: a cross-sectional study”.

Based on the constructive comments the following changes have been made:

Response to Reviewer 2 – Alexandre Baumgarten

Comment in the abstract:

1. Page 1 -Line 22 - Separate the words: assesscaries.
Response: We have separated assesscaries word and assess caries now replaces it. Page 1 line 22.

2. Page 2 -Lines 4-5 - Information about software is unnecessary in the abstract (SPSS).
Response: Thank you for your valuable comment. We have deleted this sentence: “was run with SPSS software version16” from the abstract section.

3. Page 2 - Line 15 - P-value is missing a zero.
Response: Thank you for your valuable comment. We have added this sentence in Data analysis section in Material and Method “For all analyses, statistical significance was assumed if P < 0.05”. Page 8 line 3.
The odds of developing dental caries (DMFT) was 1.72 times higher in the students that reported dental pain frequently than in those who did not and P-value was 0.005, which indicated it is statistically significant at the 0.05 level. However it is also statistically significant according to the other common significance level of 0.01. So we used the 0.01 level of significance at the abstract. We have revised the p-value (p<0.01) and replaced it with the actual p-value (P=0.005)

4. Page 2 - Line 17 - What is the meaning of the abbreviation: PI
Response: We have deleted PI and the Plaque Index now replaces it. Page 2 line 15.

5. Conclusion - The authors modified the conclusion, despite this, again the conclusion does not essentially correspond to the objective of this manuscript.
Response: We have deleted this paragraph “The studied children according to results had a significant rate of dental caries experience and plaque formation. Therefore sufficient interventions to improve access to restorative treatment and preventive measures are urgently required in elementary school-aged children in Hamadan.” and the sentence now reads as follows:
Results indicated that dental caries experience and plaque formation among elementary school children in Hamadan were high and they were influenced by their sociodemographic factors. The associations found can be used as a helpful guide for planning accurate preventive programs for elementary school children in this region. Page 2 lines 17-20.

Comment in the Introduction;
Page 3 - Line 6 - Correct the comma.
Response: we have deleted comma and “period” now replaces it. Page 3 line 3.

Page 4- Lines 18-24 - Part of the text fits better in the methodology chapter. The authors use the term 'adolescent', 'elementary school-aged children', 'children'(standardization).
Response: We have deleted this paragraph “Therefore the aim of this study was to assess the oral health status of adolescents by measuring caries prevalence and plaque index in western Iran using the indexes for decayed, missed, and filled teeth for primary and permanent teeth (DMFT, dmft) and O'Leary index. Also sociodemographic characteristics (age, sex, Dental pain experience, Parent Supervision, Parental education, Parental occupation and District) of caries conditions in 7-12 year olds were assessed in association with decayed, missing and filled teeth (DMFT, dmft index) and plaque index status in 7-12-year-old Iranian schoolchildren.” and the sentence now reads as follows:

Therefore, the present study was carried out to determine the prevalence of dental caries and plaque index and their association with sociodemographic among primary school children. Page 4 lines 17-19.

- We have standardization this term and we have used 'elementary school-aged children' term in the all parts of the manuscript and changes have been highlighted by yellow.

The objective still needs to be clearly stated and defined, such as in the abstract.

Response: We have deleted this paragraph “Therefore the aim of this study was to assess the oral health status of adolescents by measuring caries prevalence and plaque index in western Iran using the indexes for decayed, missed, and filled teeth for primary and permanent teeth (DMFT, dmft) and O'Leary index. Also sociodemographic characteristics (age, sex, Dental pain experience, Parent Supervision, Parental education, Parental occupation and District) of caries conditions in 7-12 year olds were assessed in association with decayed, missing and filled teeth (DMFT, dmft index) and plaque index status in 7-12-year-old Iranian schoolchildren.” and these sentences now read as follows:

Therefore, the present study was carried out to determine the prevalence of dental caries and plaque index and their association with sociodemographic among primary school children. Page 4 lines 17-19.

Comment in the Materials and methods:

Page 6- Lines 6-10 - Specify the collection form and category of variables.

Response: Thank you for your valuable comment. We have deleted this paragraph “Data on demographic factors that would represent individual characteristics were collected; it included
the sociodemographic characteristics of elementary school-age children and their families, including the following: Dental factors: Dental pain experience, Parent Supervision

Social and demographic factors: Gender, Age, Parental education, Parental occupation, Living District

Subjects were asked about dental pain experience through a single question, as follows: “Have you experienced toothache in the last twelve months?” Subjects were asked about Parent Supervision through a single question, as follows: “do parent Watch or advise you while brushing your teeth?”

and this paragraph now reads as follows:

Data on demographic factors that would represent individual characteristics were collected through questionnaires by interviewing the elementary school children; it included the sociodemographic characteristics of elementary school children and their families.

Dental factors were numerical and were measured through DMFT, dmft and plaque index; Dental pain experience was measured through the question “In the last 12 months, how often have you had a toothache?” (Seldom/Often/ Never); Parent Supervision was recorded by asking “them to select one of the following options according to their parents’ reactions while they were brushing their teeth: “1. Watch me while brushing my teeth. 2. Do not watch but advise me 3. Never cared. 4. Only my mother watches me.” The replies were then dichotomized into two groups as parent supervision= yes (1) and parent supervision = no (0).

The following social and demographic factors were included in the questionnaires: age, sex, parental education categorized nominally as (primary or lower, high school and more than high school), parental occupation was also nominal categories (Worker, government service, self-employment and no job), the living district was categorized to center and Suburb. Parental occupations, level of education were collected through asking the parents of selected school children.

Page 6 lines 1-16.

Page 7 - Lines 13- 18 - Why the choice of these variables to fit the model?

Response: Although the role of socioeconomic factors on oral health behaviors have been studied and some associations have been found in Iranian adolescent population but we don’t have current and comprehensive information on this area in school aged children (1).
Furthermore other studies have demonstrated that age, gender, the living district, dental pain experience, parental education and occupation and parent supervision can be predictors of dental caries and dental plaque (2-6). We wanted to investigate whether the variables included in other studies could predict plaque and DMFT/dmft presence as an outcome variable in our population as well. Therefore we included Age, sex, parental education and occupation, living district, dental pain within the past year and tooth brushing under parental supervision as predicting variables for dental caries and dental plaque as outcome variables in elementary school children in the city of Hamadan. Page 7 lines 11-18.


Comment in the Discussion:

Presenting the tables during discussion is not necessary

Response: Thank you for your valuable comment. We have deleted table in discussion section.

First paragraph: This paragraph present restatement of results, which is not necessary.

Response: Thank you for your valuable comment. We have deleted this clause “The mean (SD) DMFT of children aged 12 years, dmft of children aged 7 years and plaque index of children aged 12 years in our study were 1.17 (1.77), 6.53 (4.37) and 51.97 (25.86) respectively. According to results of this study, the age, sex and dental pain experience were the only variables associated with the experience of dental caries in this cross-sectional study. Furthermore age was studied in relation to caries development in permanent teeth, and the risk increases by getting older.”

Page 10 - Line 22 - Brazil is a developing country, not developed.

Response: Thank you for your valuable comment. We have deleted this evidence.