

PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

ARTICLE DETAILS

TITLE (PROVISIONAL)	Evaluation of frequency of consumption of cariogenic snacks by freshmen versus the senior dental students in Tehran and the related factors: A cross-sectional study
AUTHORS	Gholami, Mahdia; Mohebbi, Simin; Mafakheri, Milad; Shahhosseini, Houra

VERSION 1 - REVIEW

REVIEWER NAME	Ramadhani, Atik
REVIEWER AFFILIATION	Universitas Indonesia, Dental Public Health and Preventive Dentistry
REVIEWER CONFLICT OF INTEREST	None
DATE REVIEW RETURNED	30-Mar-2024

GENERAL COMMENTS	<p>Review of the Original Article Frequency of consumption of cariogenic snacks by freshmen versus senior dental students and related factors I have carefully reviewed the findings of your study on the frequency and related factors of consumption of cariogenic snacks by freshmen versus senior dental students and appreciate the opportunity to provide feedback. Your findings make a significant contribution to the understanding of diet cariogenic within this demographic. Here are a few constructive suggestions aimed at strengthening certain aspects of your manuscript, which I believe will further enhance the value of your already commendable research.</p> <p>Title Suggestion: Indicate the study's design with a commonly used term in the title</p> <p>Introduction:</p> <ol style="list-style-type: none">1. The introduction lacks clarity and requires further elaboration on the rationale for focusing on consumption of cariogenic. Add one or two sentences at the beginning explaining the general importance of cariogenic consumption and its specific context in your research.2. The remainder of this paper is structured as follows: paragraph 1 describes the existing knowledge, paragraph 2 outlines the knowledge gaps, and paragraph 3 explains the purpose of the study.3. You may include any prespecified hypotheses of the study.4. Reorganize the magnitude of the problem by presenting the prevalence/data
-------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<p>information regarding cariogenic consumption, specifically mentioning findings most relevant to this research.</p> <p>5. Explicitly state the knowledge gap this research aims to fill and emphasize the importance of this research in the your context, possibly by highlighting the lack of previous data or research in this area.</p> <p>6. The Introduction still using references that are over 10 years old. Please update your literature review with references maximum from the five years back.</p> <p>Materials and Methods</p> <p>1. What language did you use for the questionnaire? If you use your own local language, please explain the translation and validation process of the questionnaire to ensure semantic and cultural equivalence. If a pilot study was conducted to ensure the validity and reliability of the questionnaire, please present the results in this section.</p> <p>2. Offer more details about your variables of interest. How many questions does the questionnaire contain? How long did it take to complete, and who completed it? Include citations as necessary.</p> <p>3. How you determine the sample size is. Please add more explanation about sample size calculation and sampling type that you used so it could improve clarity of the research.</p> <p>4. Describe the setting, locations, and relevant dates, including periods of recruitment, follow-up, and data collection.</p> <p>5. This method has a bias because it is nonrandom and selects only easily accessible respondents. The research should acknowledge this limitation and discuss the potential bias in the results.</p> <p>6. The methodology describes a linear regression analysis but does not provide details about the assumption of linear regression.</p> <p>7. How are the eligibility criteria of the participants? please explain how participants were informed about the research and how consent was obtained, especially given the sensitivity of the research topic. Additionally, describe how the researchers protected the confidentiality and privacy of research subjects?</p> <p>8. How did you measure the pH of the participants? please explain more detail and how you calibrate the examiner?</p> <p>Results:</p> <p>Please report the numbers of potentially eligible individuals examined for eligibility, confirmed eligible, included in the study, and analyzed. I suggest you use a flow diagram.</p> <p>Table 1:.</p> <p>1. If possible, display the actual sample numbers alongside percentages to provide better context about the sample size.</p>
--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<p>2. There seem to be several categories of financial status, but it is not always clear how these categories are defined or measured.</p> <p>3. Please use term of sex rather than gender, since the term “sex” refers to the biological attributes that distinguish subjects as male, female, and intersex, the term “gender” refers to psychological, social, and cultural factors that strongly influence attitudes, behaviors, and relationships of individuals.</p> <p>Table 2:</p> <p>1. A more detailed explanation of what is considered significant is needed, whether $p < 0.05$ is the sole criterion or if there's an adjustment for multiple comparisons? Please provide the statistical analysis information under the table</p> <p>2. A brief but informative explanation of how the interpretation of p value relates to the research hypothesis would be very helpful.</p> <p>Table 3:</p> <p>Please check on your table, there is a typo regarding “Number” (N)</p> <p>Table 4:</p> <p>1. Please provide the 95% CI (upper and lower bound) in your table and R2 in your result.</p> <p>2. Statistical findings were integrated with a narrative in the text to help readers understand the implications of these findings in a broader context.</p> <p>Discussion:</p> <p>1. This study included an in-depth analysis of the reasons for the differences in recorded prevalence across countries/universities.</p> <p>2. Please discuss about what is the strength of this study?</p> <p>3. What is potential bias in your research, and what is your effort to overcome such bias/limitation?</p> <p>4. Although recommendations are provided, the discussion about the concrete steps that students can take to address dietary cariogenic issues could be more detailed.</p> <p>5. What is the key message from this study?</p> <p>Some areas for general improvement are as follows:</p> <p>1. Some sentences could be made more concise to improve readability. Avoid unnecessary repetition of information.</p> <p>2. We ensured that the statistical results were consistent. This includes the presentation of percentages, p values, and confidence intervals.</p> <p>3. Check that all references are cited consistently in the text and that the reference list follows the required citation style.</p> <p>4. While the grammar is generally good enough, a thorough proofreading to catch minor grammatical and punctuation errors would enhance the manuscript's professionalism.</p> <p>5. Ensure that the discussion links the study's findings to the broader context and literature, addressing the implications and any potential applications or future research directions.</p>
--	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	6. The author should add more references (at least 3-5 years back) especially for discussion
--	----------------------------------------------------------------------------------------------

REVIEWER NAME	Fernández, Constanza
REVIEWER AFFILIATION	Universidad de Talca
REVIEWER CONFLICT OF INTEREST	None
DATE REVIEW RETURNED	11-Jun-2024

GENERAL COMMENTS	<p>Thank you for the opportunity to review your manuscript titled "Frequency of consumption of cariogenic snacks by freshmen versus senior dental students and the related factors." I regret to inform you that I must recommend rejection of the article.</p> <p>While the study addresses an important topic related to dental health, the main outcome is not adequately explained. It is unclear if this outcome has been previously used as it not citation. There is also unclear how it can be applied in practice. Clarity and thorough explanation of the main outcome are essential for readers to understand the significance and relevance of the study findings.</p> <p>I encourage you to revise the manuscript to provide a more comprehensive explanation of the main outcome, its relevance to the field, and how it contributes to existing knowledge. Additionally, consider providing context for the study findings by discussing how they align with or diverge from previous research in this area.</p> <p>Thank you again for the opportunity to review your work, and I wish you the best of luck with your revisions.</p>
-------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

VERSION 1 – AUTHOR RESPONSE

Reviewer: 1

Dr. Atik Ramadhani, Universitas Indonesia

Title Suggestion: Indicate the study's design with a commonly used term in the title

Done (Page 1 line 2-3)

Introduction:

1. The introduction lacks clarity and requires further elaboration on the rationale for focusing on consumption of cariogenic. Add one or two sentences at the beginning explaining the general importance of cariogenic consumption and its specific context in your research.

More explanation was added (Page 3, line 65-70)

2. The remainder of this paper is structured as follows: paragraph 1 describes the existing knowledge, paragraph 2 outlines the knowledge gaps, and paragraph 3 explains the purpose of the study. We focused on the main topic of the article (The effects of diet and sugar intake on oral health) in the first few paragraphs of the introduction. Then we added more explanations about the knowledge gap and purpose of the study at the end of the introduction.

3. You may include any prespecified hypotheses of the study.

Done (page 5, Line 114-116)

4. Reorganize the magnitude of the problem by presenting the prevalence/data information regarding cariogenic consumption, specifically mentioning findings most relevant to this research

Done (page 4, Line 78-81)

5. Explicitly state the knowledge gap this research aims to fill and emphasize the importance of this research in your context, possibly by highlighting the lack of previous data or research in this area.

Done, (Page 5 line 116-118)

6. The Introduction still using references that are over 10 years old. Please update your literature review with references maximum from the five years back.

Done, several new references were added throughout the introduction

Materials and Methods

1. What language did you use for the questionnaire? If you use your own local language, please explain the translation and validation process of the questionnaire to ensure semantic and cultural equivalence. If a pilot study was conducted to ensure the validity and reliability of the questionnaire, please present the results in this section.

The tool that was used for data collection was not a questionnaire containing a number of questions, so it did not require reliability and validity evaluation. There was a form or table where the participants recorded their cariogenic snacks in each column corresponding to a day of the week. Therefore, we replaced the word "questionnaire" with "cariogenic snack record form" in the manuscript (Line 140).

2. Offer more details about your variables of interest. How many questions does the questionnaire contain? How long did it take to complete, and who completed it? Include citations as necessary. As mentioned in the explanation of the previous question, the data collection tool was a form for recording sweet snacks, which was completed by the students themselves. Then, based on the information recorded in the forms, the researchers calculated the PAP index as a dependent variable. Completing the forms took about 15 to 20 minutes in total. The mentioned explanations and related reference were added to the study method (page 7, Line 140-147).

3. How you determine the sample size is. Please add more explanation about sample size calculation and sampling type that you used so it could improve clarity of the research.

Explanation about the sample size calculation was added to the method (Page 6, Line 131-134).

The sampling method (census) had been mentioned in the method part (Page 6, Line 129).

4. Describe the setting, locations, and relevant dates, including periods of recruitment, follow-up, and data collection.

The study was a cross-sectional and the data was collected at one stage. The relevant explanations about the setting and date were added to the method (Page 6, Line 129-130).

5. This method has a bias because it is nonrandom and selects only easily accessible respondents. The research should acknowledge this limitation and discuss the potential bias in the results.

There are four dental schools in Tehran that we considered all these four schools in the present study. In addition, we considered all the seniors and freshmen students in these schools as the census sampling. So, we didn't do convenience sampling that might be resulted in selection bias.

6. The methodology describes a linear regression analysis but does not provide details about the assumption of linear regression.

The assumptions were added to the method (Page 8, Line 167-169).

7. How are the eligibility criteria of the participants? please explain how participants were informed about the research and how consent was obtained, especially given the sensitivity of the research topic. Additionally, describe how the researchers protected the confidentiality and privacy of research subjects?

Based on the comments, related explanations were added to the method (Page 6, Lines 137-139) (Page 7, Line 143)

8. How did you measure the pH of the participants? please explain more detail and how you calibrate the examiner?

We did not measure pH directly. We calculated the PAP index based on the intake of cariogenic snacks that the students recorded in the forms, which can indirectly indicate the duration of oral pH drop. Based on the reference provided, for each consumption of different types of snacks (liquid, solid, slowly dissolving), we considered certain minutes of oral pH drop and then calculated the average minutes of daily pH drop, which has been completely explained in the method. Calculation of the index was done by one of the researcher (MM).

Results: Please report the numbers of potentially eligible individuals examined for eligibility, confirmed eligible, included in the study, and analyzed. I suggest you use a flow diagram.

Explanations about the enrollment (eligibility and exclusion) were added to result. (Page 8, Lines 175-178)

Table 1:.

1. If possible, display the actual sample numbers alongside percentages to provide better context about the sample size.

Done

2. There seem to be several categories of financial status, but it is not always clear how these categories are defined or measured.

We added the phrase of “self-reported family’s” before “financial status” in the method (Page 7, Line 151). In addition, we added a reference to evaluate the economic situation as used in the article (reference No. 21).

3. Please use term of sex rather than gender, since the term “sex” refers to the biological attributes that distinguish subjects as male, female, and intersex, the term “gender” refers to psychological, social, and cultural factors that strongly influence attitudes, behaviors, and relationships of individuals.

Done

Table 2:

1. A more detailed explanation of what is considered significant is needed, whether $p < 0.05$ is the sole criterion or if there's an adjustment for multiple comparisons? Please provide the statistical analysis information under the table

Done (a table footnote was added)

2. A brief but informative explanation of how the interpretation of p value relates to the research hypothesis would be very helpful.

Explanations about the results of table 2 in relation with the research hypothesis were added (Page 11, Line 207-208).

Table 3: Please check on your table, there is a typo regarding “Number” (N)

It was amended.

Table 4:

1. Please provide the 95% CI (upper and lower bound) in your table and R2 in your result.
We had done linear regression analysis. We added the related values to the table 4 and the value of R square to the text (Line 233).
2. Statistical findings were integrated with a narrative in the text to help readers understand the implications of these findings in a broader context.

Relevant explanations were added (Page 12, Line 228-233)

Discussion:

This study included an in-depth analysis of the reasons for the differences in recorded prevalence across countries/universities.

2. Please discuss about what is the strength of this study?

We discussed about the strength of the study (Page 15 line 283-285).

3. What is potential bias in your research, and what is your effort to overcome such bias/limitation?

It was mentioned on Page 15 line 294-298.

4. Although recommendations are provided, the discussion about the concrete steps that students can take to address dietary cariogenic issues could be more detailed.

More recommendations were added to discussion (Page 16, line 306-310).

5. What is the key message from this study?

The key message was added at the end of the discussion.

Some areas for general improvement are as follows:

1. Some sentences could be made more concise to improve readability. Avoid unnecessary repetition of information. **Done**
2. We ensured that the statistical results were consistent. This includes the presentation of percentages, p values, and confidence intervals. **Done**
3. Check that all references are cited consistently in the text and that the reference list follows the required citation style. **Done**
4. While the grammar is generally good enough, a thorough proofreading to catch minor grammatical and punctuation errors would enhance the manuscript's professionalism. **Done**
5. Ensure that the discussion links the study's findings to the broader context and literature, addressing the implications and any potential applications or future research directions. **Done**
6. The author should add more references (at least 3-5 years back) especially for discussion

New references were added to the introduction and discussion, and the findings of our study was compared with these studies (page 14, Line 267-272), (Page 15, Line 281-283).

Reviewer: 2

Dr. Constanza Fernández, Universidad de Talca

While the study addresses an important topic related to dental health, the main outcome is not adequately explained. It is unclear if this outcome has been previously used as it not citation. Clarity and thorough explanation of the main outcome are essential for readers to understand the significance and relevance of the study findings. There is also unclear how it can be applied in practice.

The main outcome was related to the intake of cariogenic snacks of dental students that we calculated it based on the PAP index. We explained more about this index in the introduction (page 5, Line 99-103) and the knowledge gap (Line 114-119).

More explanations about the main outcome (PAP index) were added to the method part (Line 146-149) (Line 156) (Line 160-162) and we provided a relevant reference (reference No. 17).

In addition, we discussed that for the first time in this study we calculated the consumption of cariogenic snacks quantitatively and in the form of PAP index (discussion, Line 296-298)

I encourage you to revise the manuscript to provide a more comprehensive explanation of the main outcome, its relevance to the field, and how it contributes to existing knowledge. Additionally, consider providing context for the study findings by discussing how they align with or diverge from previous research in this area.

Done. We added more explanations to the introduction, methods, results and also discussion based on the reviewer's comments. All amendments have been marked in red.

VERSION 2 – REVIEW

REVIEWER NAME	Ramadhani, Atik
REVIEWER AFFILIATION	Universitas Indonesia, Dental Public Health and Preventive Dentistry
REVIEWER CONFLICT OF INTEREST	I don't have any competing interests
DATE REVIEW RETURNED	25-Aug-2024

GENERAL COMMENTS	The authors made many changes to the manuscript that was submitted. Thank you for your hard work.
-------------------------	---------------------------------------------------------------------------------------------------

VERSION 2 – AUTHOR RESPONSE