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OPEN PEER REVIEW

Toothache and its Determinants in 12-Year-Old Iranian Children: A Cross-sectional Study

Setareh Salehi, arash shahravan, Hamed Manochehrifar, Nader Navabi, Amir Nekouei

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About this report

This open peer review (OPR) report shows the public comments made on this article during peer review, by the reviewers, the associate editor and the editor-in-chief, for every revision round, together with the authors' replies. Comments appear only with the consent of the people who wrote them. Reviewers who chose to sign their report are named; the others are shown as "Referee". Comments are edited for language only, and confidential remarks to the editors are not included.

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1 Original submission

3 comments · 19 May 2023 – 9 Jun 2023

Referee 1 Reviewer

MAJOR REVISION 19 May 2023

1- The percentage should be stated in the summary of the conclusion.
2- The type of statistical test should be written in the abstract.
3- The studies at the end of the introduction can be transferred to the discussion.
4- The method is weak.
5- The discussion needs to be revised and new studies added.

Referee 2 Reviewer

MINOR REVISION 28 May 2023

1- The overall purpose at the end of the introduction should be revised.
2- The review of the articles mentioned in the introduction should be summarized, and a conclusion or purpose for mentioning them should be written at the end.
3- The statistical analysis section at the end of the methodology should be corrected as it is mentioned twice.
4- It has been mentioned in the limitations of the study that children whose parents are illiterate were not included in the study, but illiteracy has been included in the education level variable in the tables. (This is not mentioned in the exclusion criteria.) Please make the necessary correction.
5- New references and more recent articles (2020-2023) should be added or substituted for older ones.
6- The statistical and results analysis sections should be checked by an expert in the field.

Narges Farhad-Mollashahi Reviewer

MAJOR REVISION 9 Jun 2023

Abstract (conclusion)
In the sentence “Moreover, targeting families with lower socioeconomic status and lower educational levels could be an effective approach to reducing the prevalence of toothache in children”, what are your criteria for lower socioeconomic status?

Introduction
Line 52: Reference 21 is not related to the Iranian population!

Methods
-The children who had not experienced caries had experienced toothache. The pain may have originated from causes other than caries, e.g., eruption of teeth, problems in the temporomandibular articulation… Other sources of pain should be excluded.
-Some of the children who had not experienced toothache reported going to the dentist for checkups and prevention. This issue must be considered in relation to dental visits.

-Lines 72, 73 and 102-106 are repetitive.
-Line 76: The term “childeren” must be corrected.

Result
- Line 129: What does the sentence “Those who had never used toothpaste” mean?

- The information about “number of family member” and “absenteeism from school” should be presented in the table.

Discussion
-The discussion is poorly written and needs to be revised.

-Based on which data have you proposed “a significant impact ” of toothache on absenteeism from school in line 138?

-There is no need to mention the confidence interval in the studies in the discussion.
References
The references must be corrected.

2

Revision 1

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

Dear Reviewer,

We would like to express our sincere gratitude for your time and effort in reviewing our manuscript. Your comments and suggestions were extremely valuable in improving the quality of our paper. We appreciate your careful consideration of our work and your constructive feedback.

We have carefully reviewed all of your suggestions and have made the necessary revisions to address the issues you have pointed out. We believe that the changes we have made have significantly strengthened the overall quality and impact of the paper.

We are open to any further feedback or suggestions that you may have and are willing to make any additional changes that would further enhance the quality of our work. We appreciate your dedication to ensuring the scientific rigor of our manuscript.

Once again, we sincerely thank you for your time and effort in reviewing our manuscript. Your expertise and attention to detail have been invaluable to us.

Here are the responses to the questions and revisions suggested:

Reviewer 1:
1- The overall purpose at the end of the introduction should be revised.

Thank you for your comment. We change it as:

The present study aimed to investigate the prevalence of toothache and its determinants among 12-year-old children in Iran.

2- The review of the articles mentioned in the introduction should be summarized and a conclusion or purpose for mentioning them should be written at the end.

Thank you for your comments. The introduction consists of four paragraphs. In this section, we discussed the global and provincial prevalence of toothache and its associated factors. We highlighted that this study is the first to estimate the nationwide prevalence of toothache.

3- The statistical analysis section at the end of the methodology should be corrected as it is mentioned twice.

Thank you for your comments. It is corrected.

4- It has been mentioned in the limitations of the study that children whose parents are illiterate

were not included in the study but illiteracy has been included in the education level variable in the tables. (This is not mentioned in the exclusion criteria), Please make the necessary correction.

Thank you for your comment. In the informed consent section, we mentioned The children where both the child's father and mother were illiterate, were excluded from the study("The literate parent was asked to sign the informed consent. The children who both the child's father and mother were illiterate, were excluded from the study".)

We revised the limitation section as:

Moreover, Children with parents who were both illiterate and those who had dropped out of school were excluded.

5- New references and more recent articles (2020-2023) should be added or substituted for older ones.

Thank you for your comment. But it was the first study at the national level and we could not find appropriate references to add to the text. But we considered the recent systematic review and meta-analysis.

6- The statistical and results analysis sections should be checked by an expert in the field.

Thank you for your comment. One of the authors of the paper is an oral epidemiologist, while another author is a PhD candidate in epidemiology with a Master's degree in biostatistics.

Reviewer 2:

1- The percentage should be stated in the summary of the conclusion

This study found that 41% [95%CI=(38.4, 43.5)] of 12-year-old students had experienced toothache in the past six months. This study highlights the high prevalence of toothache among schoolchildren in Iran, with a significant association with demographic, socioeconomic, and behavioral factors.

2- The type of statistical test should be written in the abstract.

Thank you for your comment. we mentioned it.

3- The studies at the end of the introduction can be transferred to the discussion.

Thank you for your comment. It was mentioned in the manuscript.

4- The method is weak

Is there anything that needs clarification?

5- The discussion needs to be revised and new studies added

Reviewer 3:

Abstract (conclusion)

In this sentence "Moreover, targeting families with lower socioeconomic status and lower educational levels could be an effective approach to reducing the prevalence of toothache in children"; what is your criteria for lower socioeconomic?

Thank you for your comment. We correct it asMoreover, targeting families with lower educational levels could be an effective approach to reducing the prevalence of toothache in children.

Introduction

Line 52; Reference 21 is not related to the Iranian population!!

Please note that this study is a systematic review and meta-analysis, which estimated the prevalence of dental pain in Iran to be 42.5%. This prevalence is relatively high compared to other countries included in the study.

Methods

-The children without experience of caries had experienced toothache. the pain may have originated for reasons other than caries, e.g., eruption of teeth, problems in the temporomandibular articulation,…... Other sources of pain should be excluded.

Thank you for your comment. The objective of this study was to estimate the overall prevalence of dental pain, rather than specifically focusing on dental pain caused by caries. It is important to note that a significant proportion of tooth pain can indeed be attributed to caries.

-Some of the children without experience of toothache reported going to the dentist for checkups and prevention. This subject must be consider in dental visit.

Thank you for your comment. I do not understand what you mean. But the children without experience of toothache reported going to the dentist for checkups and prevention was considered in dental visits.

-Line 72,73 and 102-106 are repetitive.

Thank you for your comment. It is corrected.

-Line76 ,the term of "childeren" must be corrected

Thank you for your comment. It is corrected.

Result

- Line 129; What does this sentence "Those who had never used toothpaste" mean?

Thank you for your comment. We changed it as:

Those who had never brushed with toothpaste (AOR = 1.95, P=0.047) or sometimes brushed their teeth(AOR = 1.92, P = 0.001) were more likely to experience toothache than who had brushed two or more times a day.

- The Information about"number of family member" and "absenteeism from school" should be presented in the table

Thank you for your comment. According to the main objective of the study, the question regarding the number of family members was not included. Including the percentage of absentees from Madseh based on various variables may lead to a complex and cluttered table.

Discussion

-The discussion is poorly written and needs to be revised.

Thank you for your comment. We will be grateful if you provide a specific suggestion in this regard.

-Based on which data have you proposed "a significant impact " of toothache on absenteeism from school in line 138?

Thank you for your comment. We removed the sentence.

-There is no need to mention the confidence interval in the studies in the discussion.

We used them to show the prevalences are significant difference.

References

The references must be corrected.

Thank you we corrected them.

2 Revision 1

1 comment · 29 Jun 2023

Narges Farhad-Mollashahi Reviewer

ACCEPT 29 Jun 2023

Thank you for your effort in correcting your manuscript.

3

Revision 2

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

Dear Editor,

I hope this letter finds you well. I am writing in response to the review and feedback provided on our manuscript. submitted to Iranian journal of pediatrics. We carefully considered the comments and suggestions provided in the review, and we are pleased to inform you that we have completed the revision of our manuscript accordingly.

We want to emphasize our openness to any new comments or suggestions that the reviewers or editor may have. Please let us know if there are any specific areas or aspects of the revised manuscript that you would like us to highlight or provide further clarification on. We are committed to ensuring that our research aligns with the standards and objectives of Iranian journal ofpediatrics and appreciate any guidance you can offer in this regard.

Once again, we extend our gratitude to the reviewers and the editor for their invaluable insights and constructive feedback. We are grateful for the opportunity to have our work considered for publication in Iranian journal ofpediatrics and remain committed to the rigorous process of scientific advancement.

Thank you for your time and consideration. We eagerly await further guidance and feedback as we work towards refining our manuscript to meet the high standards set by Iranian journal ofpediatrics.

Corresponding Author.

Reviewer 1
Please consider the following comments that were not addressed in the article:
1- Please provide a more concise summary of the related literature in the introduction section. One example from each region is sufficient.

Thank you we add these inofrmation to the introduction.

Various studies have generally reported that children's toothache prevalence is between 5% and 88% [13-15]. Santos et al (2022) estimated that the overall pooled prevalence of toothache in children and adolescents was 36.2%[16]. Costa et al (2022) found that the prevalence of toothache in 12-year-old adolescents from the state of Minas Gerais in Brazil was 19.1%[17]. The Bakar et al (2020) study found that the prevalence of toothache among Indonesian children was 15.55%[18].

The Paredes et al (2021) study found that the prevalence of dental pain in 5-year-old children in Northeast Brazil was 28.7%[19].

The researches on the prevalence of toothache identify some factors that are associated with toothache prevalence in 12-year-old children. These factors include dental caries, socioeconomic status, and parental awareness of children's health conditions[16-19, 23]. Also, it was shown that people who live in deprived areas with limited access to dental services appear to have more untreated caries and experience more pain [15, 24-26], and regular dental visits were associated with a reduced prevalence of toothache [27].

2- Please conduct a more thorough search for newer articles and include them in the discussion section of the article.
For instance, the article titled "Factors associated with toothache in 12-year-old adolescents in a southeastern state of Brazil" is new and was published in 2022.

Thank you for your comment. We added some new references and justified our results based on them.

According to a systematic review of the global prevalence of toothache among children aged 6-12 years in 2020, the prevalence was 40% [95% CI = (33.3, 50.2)] in 2021 [20] and 36.2%[95%CI=(33.0,39.42)] in 2022[16]. In Iran, the prevalence of toothache in 12-year-old children is remarkably close to the global prevalence. The prevalence of toothache in Asia for all ages is estimated to be 36.8% [95% CI = (32.3, 44.8)].

The father's education was found to be significantly associated with the prevalence of toothache in children. Several studies showed that parental awareness of children's health conditions is associated with the prevalence of toothache [16-19, 23]. Parents' eductions could be a surrogate variable of parental awareness of children's health conditions and the association can be attributed to parents' awareness.

The present study showed that the prevalence of toothache was significantly higher in children living in towns than in cities. It would be compelling evidence of geographic disparities in oral

health in Iran. It was shown that people who live in deprived areas with limited access to dental services appear to have more untreated caries and experience more pain[15, 25, 26].

The prevalence of toothache was found to be significantly higher in children who had visited a dentist in the past six months compared to those who had not had a dental examination. In line with this result, it was shown that the caries are main cause of toothache in children [15, 24-26], and regular dental visits were associated with a reduced prevalence of toothache [27].

Associate editor

• References need special attention. Typed format is not acceptable. Please note the authors' instruction.

The references were edited based on Vancouver-Brieflands style file in the endnote.

• How long does it take the respected authors to completely conclude the study? (In what year and which months)

Data collection was conducted from January 2020 to July 2020.

• How many people were recruited to gather data in three provinces?

The response rate was 83.5%.

• There are grammatical errors in the following lines: 73 to 75 and 76 to 77.

It is corrected.

• Was written informed consent obtained from the parents?

Yes, It is describe extensilvly.

• Lines 69 and 70 are repetitions of lines 67 and 68.

It is corrected.

3 Revision 2

0 comments

No public comments in this round.