Author's response to reviews

Title: Establishing oral health promoting behaviours in children - parents' views on barriers, facilitators and professional support: a qualitative study

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Author's response to reviews: see over
Dear Editor,

Thank you and the reviewers for taking the time to review our manuscript and for the valuable comments and suggestions. Please see our responses to the reviewers’ comments below and a description of the changes included in the revised manuscript.

Reviewer #1

Abstract
The conclusion in the abstract is vague and contains only overall suggestions for the future. This must be more specific. Also, it does not correspond to the conclusion in the main text.

We agree with the reviewer that the conclusion in the abstract should be less vague. Therefore, we adjusted this section according to the conclusion in the main text (see p. 3, line 56 – 59). Suggestions of parents for oral health support were not included in the conclusion, as this would repeat the text from the result section in the abstract.

Methods
The choice of homogenous focus groups should be motivated. Also, the choice of focus groups for data collection should be motivated as a whole (specifically interaction). One ethical question about the sampling: were the parents informed about the inclusion criteria, that is their children’s caries status?

A sentence was added in the introduction to explain why focus groups were our choice of method (see p. 5, line 116 – 119). “Focus groups were chosen as a method, as opposed to individual interviews, because it encourages parents to provide open responses and it allows parents to build on each other’s ideas through facilitated discussion.” In the methods section we explain our motivation for homogeneous focus groups (see p. 7, line 161 – 163). “Homogeneous focus groups of people from similar cultural and socioeconomic characteristics were created, because homogeneous groups are generally more comfortable and open with each other, whereas mixed ethnic or socioeconomic groups make it more difficult to achieve a high degree of group interaction [29].” Parents were notified that they were recruited on the basis of sociodemographic factors and their child’s oral health status. These data had been collected in a study in which they had previously taken part. This is now added in section on ethical approval (p.6, line 131-133).

The group interviews were held in a dental centre. Could this influence the participation, the results etc? Please motivate in the methods and reflect and discuss in the discussion section.

Yes, we agree that the location at the dental centre may have influenced the responses of parents.
We now address this in the discussion (see p. 25, line 602-603). Focus groups were conducted in the early evening, so dental professionals working at the centre were not present.

An assistant moderator “made sure that all participants contributed to the discussion”? How was this carried through? This is normally not the role of an observer (the same person took field notes that is, acted as an observer).

The assistant moderator / observer took field notes during the discussion and in the mean time she made sure that all participants contributed to the discussion by asking questions such as “How do you experience this?” to involve somewhat more quiet parents. These tasks were not in conflict, and could be performed by one person. We added the double function of assistant moderator and observer in the text (see p. 9, line 212).

The storage of the data material is unclear; it is only said where it is NOT stored.

The storage location is now added to the methods section (see p. 9, line 216-218), “The audio tapes, transcripts and other supporting data were stored digitally in a password protected database at the Academic Centre for Dentistry Amsterdam, which was only accessible for the authors (DD and MdJL).”

The method for analysis is said to be content analysis in the abstract and thematic analysis in the main text. This must be corrected. Also, there is no reference given for the data analysis, and this is also very meagre described. The model mentioned is not a model for qualitative analysis.

The error in the abstract (‘content analysis’) has been corrected to thematic analysis, and a reference for thematic analysis has been provided (see reference 32).

We did not use grounded theory where all hypotheses derive from the results from the focus groups, but an existing conceptual model (Fisher-Owens) was used to define topics for discussion (see p. 8, line 197-198). This model has not explicitly been designed for the purpose of qualitative research, but it provides a good overview of potential influences on children’s oral health based on literature from the medical / public health field.

Did all authors read the transcripts equally carefully?

Yes, all authors fully read all transcripts, and several discussions were organized to jointly discuss and decide on the coding scheme and themes. This is now mentioned in the methods section (p.10, line 230-231).

Results
The results section is a challenge for the reader, long and complicated. Firstly, it is desirable to guide the reader in a short “introduction” about the structure of the themes and main categories.

Based on the suggestion of the reviewer, we have added an introduction to describe the structure of the results section (see p. 10 - 11, lines 249 – 256, and 271 – 273 and p. 16, lines 375-377). We also added numbering to make the results more organized.
Two main themes are presented, one of them with two underlying subthemes with many categories. These two subthemes (the one about tooth brushing and the other about sugar consumption) are parallel with many categories in common. Moreover, many of the categories are overlapping, which should not be the case. To me, this part of the analysis does not seem to be completed. I understand that the authors want to separate “tooth-brushing” and “sugar consumption” to be able to tailor intervention programmes: “this and that should be considered when tooth-brushing is promoted” etc. But life is not as simple as that – certainly the parents’ attitudes/perceived influences and so on are about the same for the two research questions.

**Tooth brushing and sugar-snacking are two completely different behaviours, which may be influenced by different factors and determinants. Therefore, we decided to study both behaviours separately. By isolating the two behaviours in the group interviews, we aimed to provide focus in the discussion. If both behaviours were simultaneously discussed (e.g. as oral health behaviours in general), there would have been a risk of a dispersed discussion without sufficient depth and detail. Because this was embedded in our methodology, we cannot report the results on tooth brushing and sugar snacking combined.**

Moreover, in the presentation related to the figures, the factors described together are on different levels, the first example is in line 234: “social norms” is at a higher level than “parental perception” according to Figure 1. This goes on throughout the results.

We rightfully included social norms at ‘community level influences’, because ‘social norms’ reflects perceptions and norms beyond the individual parent or family. Social norms refer to the extent to which individuals think that others in their network / community practice a certain behaviour. In addition, it requires individuals to believe that people in their network / community think it is important that they also practice the behaviour themselves. We could derive from parents’ discussions that they perceived tooth brushing as a behaviour that was practiced by everyone and that - as a person – you are ‘supposed’ to do so.

*Because this was not clear from the manuscript, we added an explanation of social norms in the results section (see p. 12, line 277 – 280).*

The categories (or similar) mentioned in the figures, for instance “Value of healthy teeth & prevention” and “Locus of control” are very difficult to find in the text. This is also the same throughout the section.

*As part of the changing the terminology of the themes (see earlier comment), we also checked*
that similar terminology was used throughout the text.

Examples of quantitative “thinking”: lines 252, 253, 279, 334, 348 etcetera. Qualitative analysis is about discerning and identifying different ways of thinking about a phenomenon, not how common or frequent they are.

We understand the concern of the reviewer that by using words, such as e.g. ‘two-third of the parents’, that we may be implying that this is a commonly held view, while this is not the purpose of qualitative research. Therefore we deleted all examples that could refer to quantitative thinking throughout the results and discussion section. However, we still use terms, such as ‘a few’, ‘some’ or ‘many parents’ in order to provide the necessary description of the six focus groups discussions of this study.

Line 320: I interpret that this heading relates to Figure 2, however it is not called the same there.

That’s correct. We have changed the heading in the text (‘controlling the consumption..’ instead of ‘reducing the frequency of consuming…’), (see p. 15, line 373).

The second theme (Parental views on limitation and opportunities for professional oral health support) is given far less attention than the first theme. Why? Also, why are the subthemes and categories presented with a table here (and not a figure as for the first theme)? Moreover, in the table six factors are described, while only four are stated in the text.

Parents’ ideas and suggestions for oral health interventions and professional support were discussed as a separate topic in the focus group interviews. This section was given the same attention as the first theme, but the description is less extensive, because less themes emerged during the discussion on this topic.

We chose to present the results of the second theme in a table, because raised suggestions referred to different settings for support (which could not be classified into various levels). To us, it seemed more clear to report suggestions per setting, and thus in a table.

We indeed identified six themes of settings, as presented in the table. We adjusted the headings of the text in the results section, so that these six settings are in agreement with the table. ‘Dental professionals’ and ‘Child health centres’, as well as ‘Schools’ and ‘Kindergarten’ were reported together in one paragraph, because these themes were (often) discussed in the same context during the focus group interviews (see p. 21, line 516 and p. 22, line 540).

And: which parents were cited – at least I hope that all focus groups are represented with citations. Some examples of the interaction in the groups should be given, too.

Annotations by group have now been provided throughout the results section (e.g. ‘a high-SES Dutch mother said’, ‘a Moroccan father said’, etc.).

Discussion
In the first paragraph of the discussion (line 504) the authors write that the study findings are useful as a theoretical basis for interventions. Please explain the use of the word “theoretical” here.
The word ‘theoretical’ might indeed be confusing in this context, as it relies on scientific (qualitative) research. Therefore, we now rephrased the sentence: “Herewith, study findings are useful for understanding barriers for desirable oral health practices, which should be targeted in caries preventive interventions” (see p. 24, line 577-580).

Para 2 is partly repeating results.

We assume that the reviewer referred to paragraph 4, instead of 2. We have deleted the sentences in this paragraph that were not necessary to repeat (see p. 25, line 604 – 609).

Also here in the discussion, a quantitative thinking is shining through (para 3); please check and reflect. The last part of this paragraph should be provided with references. This goes for lines 556-561, 569-572 and 573-580 as well.

Examples of quantitative thinking were deleted (see previous comment regarding the results section).

We provided a reference for former line 573 (see reference 39).

The statement in former lines 579-580 is supported with reference 40 (former 38).

The statements in (former) lines ‘556-561’ (“Thus, there was a clear discrepancy between the perceived ‘problems’ and the suggested ‘solutions’”) and ‘569-572’ (for future qualitative research, it would be interesting to ask parents directly how they think that each reported barrier could be addressed in interventions”) are interpretations by the authors on the basis of the results of this study, and therefore they cannot be referenced.

Conclusion: please see under abstract.

See our response under ‘abstract’

Lastly, the core question: What is really new in the results?

To the authors’ knowledge, this is the first study to explore parents’ views and ideas for professional oral health support. These are important results, as the development of oral health promoting interventions primarily relies on evidence from intervention studies and the expertise and opinions of (oral health) professionals, while parents’ concerns and ideas for further support have not yet been considered in intervention development.

Concerning the results on the influences of oral health behaviours: most of the factors that parents raised are indeed not surprising. However, there is limited empirical evidence in the dental literature on whether these factors impact on children’s oral health behaviours. One of the interesting findings is that most influences on children’s tooth brushing behaviours were primarily located within the family context, while factors related to sugar-snacking were also perceived in the external environment.

Finally, the results confirm hypotheses and findings of previously conducted studies, which is also important, in addition to new findings.
Reviewer #2

Major compulsory revisions
1. Background: page 5, paragraph 2, line 108: Some studies did indeed look at parental views on preventive interventions, but as you rightly noted in the opening of the paragraph, they were in other populations. As such, I would remove this sentence as it makes a general claim, or alter it so that it is specific to the population in the Netherlands.

The last part of the sentence has now been removed, as it was indeed redundant (see p.5, line 111).

2. As an international reader, I’d like to know more regarding the child dental care system in the Netherlands. Insurance companies were discussed in the findings, but the exact role those companies have in child dental care in the Netherlands was not clear to me. Furthermore, is dental care for all children free? Do all children need to register with a dentist? Are there specific toothbrushing and diet guidelines followed by dental health professionals in the Netherlands? These points should be explained in a few sentences either in the background or the methods, as the authors find fitting, to provide context for the related findings.

Information on the abovementioned topics is provided in the methods section, ‘Study population background’ (p. 6, line 138 – 144).

3. Methods: Page 7, line 161: I suggest that the response rate is moved to the opening of the results, as this is more appropriate than including it in the methods. Were any of the groups more difficult to recruit than the others?

We have moved the response rate to the beginning of the result section ‘Characteristics of focus groups and participants’, and reasons for a lower response rate in the Turkish and Moroccan group is provided (p. 10, line 239 – 247).

4. Methods: Page 7, lines 166-172: Same as point three. The characteristics of the focus groups and the participants should be included in the results and not in the methods.

This section has also been moved to the beginning of the results section (p. 10, line 239-247).

5. Methods: Page 9, line 205: Thematic analysis should be referenced to provide interested readers with a resource they can read to learn more about the process.

The reference for thematic analysis is provided (reference number 32).

6. Methods: I presume the quotes were originally given in Dutch. I suggest that the approach to translation should be noted.

For reporting purposes, quotes were translated from Dutch to English by Denise Duijster, who is fluent in both languages. This is added to the text (p. 9, line 233-234)
7. Results: All quotes need to be annotated. This can be done at the start of the quote: e.g. A Moroccan mother noted, a Dutch father from the high SES group said, or, at the end of the quote: e.g. Participant number, Turkish mother

*Annotations by group have now been provided throughout the results section (e.g. ‘a high-SES Dutch mother said’, ‘a Moroccan father said’, etc.).*

8. Discussion: Page 22, line 521: I would not call the sample small, as this was a qualitative study where, as the authors explained, thematic saturation was reached. Furthermore, I suggest they introduce the reader to the exact term ‘thematic saturation’ here and reference it.

*We adjusted the text using the correct term ‘thematic saturation’ (p. 25, line 596-597).*

Minor essential reviews

1. Page 14, line 337: ‘who did not concern’. More appropriate to say ‘who were not concerned’.

*Thank you for the suggestion, we have changed the text accordingly.*