Reviewer’s report

Title: “Strong Teeth” – a study protocol for an early-phase feasibility trial of a complex oral health intervention delivered by dental teams to parents of young children

Version: 0 Date: 14 Mar 2019

Reviewer: Luciane Costa

Reviewer’s report:

I congratulate the authors for choosing such a relevant research topic, which deserves research with adequate methodological design.

I respectfully understand that the article has potential, but still needs adjustments to meet the basic requirements of a scientific report. Especially, two points need to be better described:

- Material and methods - as written, does not allow reproducibility.

- Conflict of Interest - What is the rationale for using electric brush? In many regions of the world, people who have cavities can not afford to buy electric toothbrushes.

- Articles not yet approved for publication - these should not be included in reference lists, as they have not yet been peer-reviewed, may undergo major modifications and are not accessible.

The comments and suggestions are detailed below.

1) Background:

-Perhaps the HABIT paper published in this journal should be commented in the rationale of this study.

-The concept of complex intervention should be better described.

-Page 6, line 142, "number of challenges": Please avoid general statements and be more specific. Cite the challenges that have been found by the cited references, so we can better identify the gap in the literature you want to fill.

-Page 7, line 161, "Strong Teeth": Please cite the URL where we can find the foundation of the intervention.

2) Objectives: "PSB" - Do parents brush the children's teeth? I looked for the meaning of "supervision" and understood that it is related to direct, observe the toothbrushing. I wonder if
children in this age range (3-5 years old) can effectively brush their teeth having and adult observing them.

3) Methods:

-Page 9, line 194: Does the sample size allow the "generalisability of the findings"?

-Page 9, line 205: Please give more the details on the oral hygiene and toothbrush behaviour questions.

-Page 9, line 211: How is parent-child interaction going to be "measured" or "described"?

-Page 10, first paragraph: The "Strong Teeth" recommendations should be summarised.

-Page 13, "We will formulate a preliminary measurement model and calculate factor loadings. Factor loadings will be available from the measurement model." I admit I did not understand the process. In your HABIT paper you used diagrams. Is it possible to do more clarification without self-plagiarism?

4) Conclusions: I would take this section out. It seems strange to think of conclusion for a protocol of an "early-phase" study.

5) Author contributions: Only 3 out of 14 included authors are mentioned here. What about the others mentioned in the beginning of the manuscript? Do they fulfil the criteria recommended in this journal Editorial Policies? If yes, they should appear here. If not, they should have been removed from the Authors section and maybe cited in an Acknowledgement section.

6) Competing interests: Please revise the Competing interests in the Editorial Policies and amend this section.

7) References:

- References 20, 21 and 22: They should be deleted until the paper is accepted.

- Reference 36 is the same of reference 11.

- Have you done a literature update before submission? After a quick and dirty search in the PubMed, I selected the following papers that could add some insight to your rationale or discussion:


**Level of interest**
Please indicate how interesting you found the manuscript:

An article of limited interest

**Quality of written English**
Please indicate the quality of language in the manuscript:

Acceptable

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Please complete a declaration of competing interests, considering the following questions:

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5. Do you have any other financial competing interests?

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Were you mentored through this peer review?

No