Reviewer's report

Title: Promoting parenting strategies to improve tooth brushing in children. Design of a non randomised cluster-controlled trial

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Reviewer: Marja-Liisa Laitala

Reviewer's report:

The present protocol describes a trial evaluating the effect of a caries preventive intervention project called 'Shine!' The intervention aims to improve children's oral hygiene and dental health as well as parents' self-efficacy in relation to tooth brushing.

In my opinion, the topic is important and the upcoming trial very interesting. The study protocol is meticulously designed and the manuscript clear and explicit; I have only some minor comments and questions:

Key words: should 'self-efficacy' be included in key words?

Background: The scientific basis including underlying theory is quite thoroughly written, but I still miss some literature concerning e.g. Motivational interviewing (Miller & Rollnick) and possible previous studies concerning (children's) oral health.

Methods:

- General dental practices: Matching of the general dental practices was based only on similar size of the patient population and socioeconomic status of the region (lines 53-54). Could it be possible, that previous working experience and/or previous education of the therapists/hygienists are different in the intervention and control groups? Any calibrating of the therapists before the onset of the study?

- Children and their parents: It is said that a random sample is to be recruited. This remains a little indefinite; how is the randomization performed in practice? The first 10 children-parent pairs who are willing to participate?

- on the whole, the exclusion criteria of the participants are clearly stated

- power calculation: (line 56), an error in typing (dmfs))

- The intervention: (line 22) 'care as usual' is said to consist of regular dental check-ups. To a foreign reader this is unclear. Are these check-ups performed on an individual base / annual to every child / something else?

- Study outline and timeline: especially Figure 1. is essential and informative
- Data collection: A questionnaire on children's oral hygiene; is this questionnaire validated and piloted / used in other surveys? e.g. how is the frequency of skipping tooth brushing asked/categorized? Could this questionnaire be attached in the manuscript?

- Data collection: Is the intra-examiner reliability assessed?

Discussion: I agree with the authors that one strength of this study is that it is conducted in 'real world' settings. This, of course, brings some risks for the study. It is possible that not only the study participants but also some of the hygienists/therapist will drop out. I suggest that these things are more discussed.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

Yes

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Yes

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

Yes

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I recommend additional statistical review

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