Author's response to reviews

Title: Effectiveness of the bucco-lingual technique within a school-based supervised toothbrushing program on preventing caries: a randomized controlled trial

Authors:

Paulo Frazão (pafrazao@usp.br)

Version: 4 Date: 15 December 2010

Author's response to reviews: see over

Tim Shipley, PhD
Executive Editor
BMC-series Journals

Dear editor:

I am writing to submit the third version of the original article entitled *Effectiveness of the bucco-lingual technique within a school-based supervised toothbrushing program on preventing caries: a randomized controlled trial.* I also provide a point-by-point response to the reviewer’s comments.

The research was supported by The Foundation for the Support of Research of the State of São Paulo, Brazil (Grant 51300-0/2006) and the Department of Health from Sao Vicente City Hall. There was not any financial concern or other relationships that might lead to a conflict of interest.

The manuscript was reviewed, has not been published before, and is not being considered for publication elsewhere. I agree to assign exclusive copyright to *BMC Oral Health*, if and when the manuscript is accepted for publication. All changes were indicated by letters in boldface.

Yours faithfully,

Paulo Frazão

Correspondence to Professor Paulo Frazão, Faculdade de Saúde Pública da Universidade de São Paulo. Av. Dr Arnaldo 715 – São Paulo, SP, Brasil. CEP 01246-905 Tel: (55 11) 3061-7957 Fax: (55 11) 3083-3501 Email: pafrazao@usp.br
Author's response to the review

Title: Effectiveness of the bucco-lingual technique within a school-based supervised toothbrushing program on preventing caries: a randomized controlled trial

Author: Paulo Frazão <pafrazao@usp.br>

Version: 3

Date: 15 December 2010

Report from Satu Lahti

The paper aims to assess if the bucco-lingual technique can increase the effectiveness of a school-based supervised tooth-brushing program on preventing caries. The revised version has addressed the main shortcomings. Especially, the revision of the Figure 1 improved in understanding the design.

Major compulsory revisions
1. The justification for the selection of the schools still remains a bit unclear, possibly due to the order how the issues are presented. Was the Sao Vicente area selected on the basis that supervised toothbrushing was already applied as a preventive measure in that area and author wanted to study the effect of professional toothbrushing? If so, this should be said first and then the randomization of the school in that area.

I would like to thank again the reviewer for the comments. They have been valuable for improvement of the manuscript. As it was presented in the Introduction, the research question was to study the effect of professional toothbrushing within a community intervention such as a school-based supervised toothbrushing program. However considerations of ethical order did not recommend the assigning of a control group without exposure to fluoride dentifrice, a preventive measure of acknowledged evidence. So the objective was to assess if the bucco-lingual technique provided by a trained dental assistant can increase the effectiveness of a school-based supervised toothbrushing program on preventing caries. With this in mind six preschools located in the same region within the peripheral insular area of the Sao Vicente that shared similar curriculum framework and socio-environmental context were selected. This information was moved in the third version.

2. It is also mentioned that lot of manpower and material resources are used in this area for disease prevention. If the interest was in the effectiveness of different brushing technique it should be at least discussed why more frequent brushing interval was applied for the test group thus leading to more frequent fluoride exposure and especially to use of more human and material resources. If cost-effectiveness calculations are not done this difference should at least be discussed.

It is very important to discuss this aspect. The reviewer’s comment calls for a point that requires more clarification. The description of the brushing interval for each program was adjusted for twelve months. If twelve months were considered the
average interval would be respectively about 60 and 75 days. However the supervised toothbrushing program has begun from the second month of each year and has finished before the last month because the preschools do not have had a regular functioning in January and December. About 14 days were spent in each time for both. In fact, the modified program was carried out five times per year while the conventional one was carried out four times per year. Activities were not carried out at the first and at the last month of the year. In other terms, the modified program was applied every about 45 days from February to November while the conventional one was carried out every about 60 days. The frequency description was improved in the third version. This lower timing interval increases the control on conditions for plaque accumulation on molar surfaces but requires more human and material resources. For this reason, beyond the effectiveness investigated in this study, it is important to assess the marginal costs related to the number of avoided lesions. This subject matter will be dealt in other publication. This aspect was added in the before the last paragraph of the Discussion.

Minor revisions
3. I am also a bit bothered about the expression and justification of the skin color variable as it might rather be a proxy for socio-economic differences. As it was not used in the modeling the author could consider its importance in this paper. If skin color had not been observed one could argue that the difference between test and control groups could be related to higher number of white participants in one of the groups. The results showed that the majority of the study population was mixed. No statistically significant differences were observed according to skin color. Two issues have emerged from this figure. The disparity between the estimates for 1,000 children could not be attributed to this variable and the context marked by a low-income area was reinforced. This was added in the third paragraph of the Discussion.