Author's response to reviews

Title: Impact of treating dental caries on schoolchildren's anthropometric, dental, satisfaction and appetite outcomes: A Randomized Controlled Trial

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Version: 4 Date: 24 July 2012

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BioMed Central Public Health Editorial

Dear Dr Kaye Roberts-Thomson,

Re: MS: 9243845066966547

**Impact of treating dental caries on schoolchildren's anthropometric, dental, satisfaction and appetite outcomes: A Randomized Controlled Trial**

Thank you for reviewing our manuscript and for the comments of the referees. The following list outlines the reviewers’ comments and how we have addressed them. We have now revised the manuscript in accordance with the reviewers’ comments. We hope that the changes represent a satisfactory response to the reviewers’ comments.

Looking forward to hearing from you.

Yours sincerely,

Heba Alkarimi, on behalf of all authors
REVIEWER 1

1) According to the authors: “Severe dental caries was defined as having at least 2 teeth with pulpal involvement at enrolment”. Some clarification is needed.

Response: The following text and related references were added to clarify our definition of “severe dental caries” and also explain why pulpal involvement/Infected pulps was included as the main criterion.

Page 5  Paragraph 1  line 11

“Pulpal involvement was used as a criterion because teeth with infected pulps negatively affect children’s eating and sleeping abilities (14,15,19) and are also linked to higher levels of inflammation, which has been shown to affect immunity (20–22), contribute to anaemia (23) and potentially lead to growth failure (24,25).”

2) Reference WHO AnthroPlus software should be included in the measurements (page 7).


Response: done
REVIEWER 2

My only concerns which raises doubts on the results is the short term of the study. Usually RCT’s are longitudinal for a period of 3 years or more. In this case, it was only for 6 months, so it is a very short follow up to conclude on some findings

Furthermore, I would question if the intervention would actually bring a change in anthropometric measures in a short time of six months. Anthropometric measures take a considerable time to develop and therefore researchers are unlikely to accept changes in a short time span.

I think the authors should consider these areas before submitting the revised version.

Response: We agree with the reviewer that –from a researcher’s point of view- ideally the study should have been longer. However, the period stated (3 years) is unrealistic for the type of study we conducted. As the subjects had severe caries and in many cases, related inflammation, it was considered unethical to plan a study for longer than 6 months. We have already explained in the Introduction that the maximum waiting period for receiving treatment is 8 months and it would be unethical to delay the treatment of the control group for longer than they would receive it otherwise. Therefore, while we acknowledge the point made by the reviewer about a longer follow-up, this was not adopted when planning the study for ethical reasons.

Furthermore, we are also in agreement about the point that a longer follow-up would be more reasonable in terms of observing statistically significant differences in the anthropometric changes between the two groups. This is something we have discussed in the study limitations paragraph in the Discussion. It is worth noting that while the differences between test and control groups in the anthropometric outcomes (baseline vs. follow-up) changes were not significant, the changes were in the expected direction with test children showing improvement while controls showing deterioration at follow-up. Furthermore, there were significant differences between the two groups for the change in other “intermediate” outcomes, such as pain.

We have clearly mentioned these points in the revised Discussion (page 14, paragraph 2):

“The study has some limitations. First, the follow-up period was only 6 months and incorporated a single follow-up point, which may not be entirely representative of the pattern of growth changes in children aged six and seven. More importantly, this short-term follow-up period may partly explain the lack of differences between test and control groups in terms of anthropometric outcomes. Significant differences between the groups may have been observed if a longer follow-up period was possible as the direction of change in anthropometric outcomes was in line with the hypothesis. This suggestion is supported by the observed significant differences between treated and untreated groups in other outcomes, such as elimination of pain and sepsis and
increased appetite, that could be viewed as the more immediate effects of the intervention. It seems reasonable to assume that these improvements might precede improvement in children’s growth. However, delaying dental treatment of controls beyond six months was regarded as unethical as control children had severe dental caries and their treatment could not be delayed to accommodate the ideal requirements for our study”. 