Reviewer’s report

Title: A school-based intervention improved dietary intake outcomes and reduced waist circumference in adolescents: a cluster randomized controlled trial.

Version: 0 Date: 25 May 2017

Reviewer: Estela Blanco

Reviewer's report:

This article describes the findings of a large school-based intervention. The paper focuses specifically on results related to changes in dietary habits and waist circumference and all provides some results of a process evaluation. Results related to at least one other outcome measured (physical activity) in the same study have been published previously. Specific comments below:

Abstract:

- The abstract does not mention that the results of the process evaluation will also be included as outcomes reported on in this paper ("This paper reports the effect on dietary outcomes (fruit and vegetables intake, added sugar, unhealthy snacking, unhealthy snacking at school and breakfast intake) and waist circumference"), thus I was a little surprised to read so much on the methods and results of that portion of the study.

- Key words could be improved. Spelling mistakes should be corrected.

- In abstract and throughout, I am not familiar with the term "less competitive foods". After reading the complete article I understand that is used to mean less healthful foods, correct?

- A problem first noted in the abstract and repeated several times in the manuscript was a confusion of the interpretation of the results on daily fruit and vegetable intake. The results imply an increase in grams of fruit/vegetable intake when comparing the intervention to the control group (23.88 g), but the authors consistently use the term "decreased".

Introduction:

- Rather than spend any time on describing global prevalence of obesity and diabetes among adults, authors should discuss prevalence rates in school-age children directly and then discuss how obesity tracks into adulthood.
Page 5, the authors mention school-based interventions conducted in Chile, Mexico in Brazil, yet only cite a single paper of a study conducted in the US. Was this a referencing error?

Page 5, additional information is needed to explain why the Andean region of Latin America might need specific interventions. This reviewer agrees, in principal, that the statement is true, but a least 1 sentence justification is needed.

Methods:

- This section is very long. As at least one article is already published with the same intervention, could a more succinct methods section be provided?
- There are many areas that the English grammar could be improved, but specifically the paragraph beginning with "Unhealthy snacking..." should be re-written.
- This reviewer is unsure about adjusting for sex, as it was a matching criteria for the school clusters.

Results:

- Page 16, comparisons would be easier to interpret with the complete information. For example the authors wrote: "At baseline, adolescents from the intervention group consumed, on average, more fruit and vegetables (7%) than those in the control group. Whilst adolescents in the control group consumed more competitive foods during snacking (11%)." In both sentences we are missing the % in the opposing group (control in the first sentence and intervention in the second sentence).
- The authors state: "No significant differences in outcomes at baseline were found between the final sample remaining for analysis and the participants lost to follow-up." No differences with respect to what?
- As stated in comments above, there was considerable confusion with the interpretation of the results related to fruit/vegetable intake.
- The authors state that effects were larger during the first stage and level off after stage two, but that does not seems to be the case for sugar or (what the authors call) competitive foods intake. I think what the authors mean is that the biggest change was between baseline and first follow-up, versus between the first and second follow-up. Because if you compare baseline to the second follow-up versus baseline to first follow-up the changes are greater for at least the 2 items I previously stated.
- Page 18, the statements regarding bachelor grades are unclear.

- This reviewer is not understanding the necessity of including the results of the process evaluation. This item requires much explanation for what, in this reviewer’s eyes, provides little gain.

Conclusions:

- The authors state: "More intensive coverage, active participation of stakeholders and involvement of researchers might enhance the effect". Is this in reference to the current study or in general? The intervention discussed seemed to involve many stakeholders.

- "Future studies should determine the effectiveness of the intervention at large scale"---how much larger of a scale? Do authors feel that the sample was too small to show effects? To what end should a larger intervention be implemented?

Overall: many English mistakes should be corrected, "truck", "naturally sugars", "trail".

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