Reviewer's report

Title: Effectiveness of a school-based physical activity intervention on obesity in school children: a nonrandomized controlled trial

Version: 2 Date: 7 October 2014

Reviewer: Louisa Peralta

Reviewer's report:

Dear Authors,


This paper may contribute to the field of obesity prevention programs in schools. The multifaceted approach, which includes only individual measures may add to the field, if a number of amendments are made to the paper to ensure that transparent reporting is attained (following the CONSORT statement). Please find below my comments.

Major Compulsory Revisions

1. The CONSORT statement needs to be adhered to when presenting this study and data. There are some major omissions (e.g., intervention details and compliance and adherence) that are needed to determine the strength of the intervention. The intervention features, although presented, were lacking in detail, particularly for the PE and extra-curricular aspects. What games/skills were practiced? Are there any other outcomes associated with PE (other than PA intensity and duration)? How many students attended each session? Were the extra-curricular activities compulsory for overweight and obese students? In light of the compliance and adherence of participants to the intervention, there needs to be process data collected and/or the RE-AIM framework utilised to determine this.

2. No theoretical framework underpinned the design of the intervention?

3. The design of the research study needs further clarification. I am led to believe it is a cluster randomised trial, not a non-randomised trial as is stated in the paper. This would have an impact on the statistical analyses, as presently these are not appropriate for a cluster-randomised trial (to overcome cluster bias and confounding effects, despite the attempt at matching schools). Additionally, there were no adjustments for the significantly different measures at baseline between groups at follow-up or difference between a number of factors at follow-up (e.g., schools)? Statistical power was not mentioned either.

4. School-based obesity prevention programs need to measure adverse effects, particularly if they are targeting overweight/obese students, as this program has
done for running the extra-curricular activities.

Minor Essential Revisions

Abstract and paper:
1. Describe the intervention as a 12 week intervention, rather than a 3 month intervention.
2. Remove class from physical education class.
3. Control group participated in usual practice, rather than no intervention.

Paper:
1. There are a number of spelling, grammatical and typographical errors throughout.
2. At the end of the background section, you need to state current research suggestions of what school-based obesity prevention programs need to look like.
3. In the subjects section of the methods, add ages of students at each school (elementary and middle).
4. In the intervention section of the methods, it wasn’t clear of what happens of intensity levels in the range of different activities are not attained. What happens? Does the teacher receive professional development?
5. What constitutes effective or quality teaching in PE in China? I believe that this needs to be clear for transferability of results.

Level of interest: An article of limited interest

Quality of written English: Not suitable for publication unless extensively edited

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:
I declare that i have not competing interests.