Reviewer’s report

Title: KIDS OUT! Evaluation of a brief multimodal cluster randomized intervention integrated in health education lessons to increase physical activity and reduce sedentary behavior among eighth graders

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Reviewer: Thomas Skovgaard

Reviewer's report:

The submitted paper, reporting on a cluster randomized intervention aimed at promoting physical activity and reducing sedentary behavior among youth, has a relevant focus which should be of interest to the readers of the journal.

For the most part the paper is well-ordered, straightforward and substantiated by relevant tables and figures. Nevertheless, it is recommended that the authors make use of a professional text editing service to heighten the quality of English.

The paper highlights a theme termed 'safety' which, ostensibly, is related to intervention implementation. However, at least for this reviewer, it is not clear what the 'safety' issue is about.

The authors should be commended for their systematic and considered use of the RE-AIM framework to secure a broad-based evaluation of the presented intervention. The RE-AIM framework is widely applied to ensure a holistic assessment of intervention and implementation outcomes. The framework has been utilized extensively to assess school-based PA interventions and to guide process evaluations. The framework is made up of five key dimensions: Reach, Effectiveness, Adoption, Implementation and Maintenance. Through the years RE-AIM has also been employed to support intervention designs, planning and implementation. Apparently, this is not the case in the present paper.

The design of the reported intervention has been informed by specific theoretical approaches. However, the articulations of how the intervention, more precisely, was hypothesized to promote the stated primary and secondary outcome measures are rather vague. The intervention only had minor, albeit positive, effects at the student level. At the same time, the fidelity rate among the chief providers of the intervention (i.e. the teachers) was very high. Thus, the intervention was delivered as planned. The authors are recommended to discuss, in more detail, explanations for this interesting finding: A well-delivered, theory-informed intervention having only minor impacts on primary and secondary outcomes. By doing this the authors may be able to highlight the potential gaps between, on the one hand, how the intervention initially was assumed to achieve final outcomes via key components and, on the other, actual intervention results. This would strengthen the merit of the evaluation.
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 am able to assess the statistics

Quality of written English
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Needs some language corrections before being published

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