Reviewer’s report

Title: The development and feasibility of a randomised family-based physical activity promotion intervention: The Families Reporting Every Step to Health (FRESH) study

Version: 0 Date: 17 Dec 2018

Reviewer: Liane Azevedo

Reviewer's report:

This is a significant paper which accesses the feasibility of family-based physical activity intervention in families. The intervention is evidence-based and was clearly designed using behaviour theories. There are a few relatively minor comments to address.

Line 151 - It would be interesting to present in a supplement file the data collected in the university-run community engagement event to develop four concepts for the intervention selection.

Line 167 - The intervention is only reaching two levels of the socio-ecological model (individual and family). I suggest that this presented explicitly somewhere in the manuscript.

Table 1 - I suggest the behaviour change technique follow the BCT taxonomy suggested by Michie et al. 2013. Most of the information on BCT from Table 1 at the moment is following these terminologies. However, "family support" could be changed to "social support" to use a more generic term as you did for others.

Line 202 - The issue about no steps counts for some activities (e.g. swimming) is an interesting one. How were steps estimated for activities that had no steps? Could you add some examples here or in a supplement file?

Line 235 - The target sample was 8 to 10 years. Therefore, I think you don't need to say that you have excluded children <8 years from the aerobic tests. I appreciate that you have testes all children in the family, but the younger age (<8 years) were not on your inclusion criteria. Therefore they were not excluded for this particular measure, but for all reported in the paper.

Line 252 - Were the questions about expenditure related to memberships presented at baseline and follow-up? This data was not provided on tables.

Line 254 - Write 1 in full (one)

Line 288 - You reported that less than half (43%) of interested families participated. Could you explain how this data was collected? Was this the number of people who asked questions about the study but decided not to participate after?
Line 296 - The challenges presented in here are challenges faced by families that were recruited. Therefore, I am not sure if it is correct to say that these are challenges in recruitment, as it did not involve families that did not want to participate. I would say that these are actually challenges on the delivery of the intervention.

Line 310 to 312 The sentence - "This highlights that greater…” should be in the discussion rather than results.

Line 332-333 - The values presented in brackets for the intervention fidelity need to be explained that they are Likert scale.

Line 394 - Please add that the time for data collection was per person.

Line 400 - It would be interesting to know how many hours in total the data was collected for the GPS. This would give us an idea of how many hours were missed from the GPS since you have the number of hours that it provided the location.

**Level of interest**
Please indicate how interesting you found the manuscript:

An article of importance in its field

**Quality of written English**
Please indicate the quality of language in the manuscript:

Acceptable

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