Reviewer’s report

Title: SKIP (Supporting Kids with diabetes In Physical activity): Feasibility of a randomised controlled trial of a digital intervention for 9-12 year olds with type 1 diabetes mellitus.

Version: 0 Date: 18 Oct 2018

Reviewer: Freya MacMillan

Reviewer’s report:

* This intervention targets an important, under researched target group. The paper is written well. At present, it is not clear of the novelty of the intervention however. To highlight this, a critique of the literature on lifestyle focused intervention through technology for this target group is required. E.g. have there been any other website based, or app based interventions etc in this target group? What did they find? How is your intervention different? What specifically is this paper adding to the literature? What is the research question being answered as part of this research? This literature also needs to be referred back to throughout the discussion section to highlight the novelty and any similarity/differences with your intervention.

Minor comments:

* Line 58 in abstract: 'at the end' rather than 'of the end.'

* Do not use the term 'diabetics' (not politically correct) - it is 'people/person with diabetes'

* Intro: Final sentence of first para - should parents not be targeted too, seeing as earlier in this paragraph you mention the importance of parental involvement?

* Intro: Diet has not been mentioned anywhere. The focus of the paper is physical activity but diet needs to be acknowledged, at least as an important part of managing diabetes.

* Line 108: 'in a RCT' rather than 'and a RCT.'

* Methods: Line 139 - how was 'usual care' measured? This is not clear.

* Line 156 - is this correct? That you had a burden questionnaire to measures the burden in completing questionnaires. Or did you mean a burden questionnaire to measure the burden of participating in the online intervention?

* Line 179 - '…with their 95%' rather than 'with its 95%.'

* Add the cut points targets you used to define feasible and acceptable
* The interview questions need to be included in the methods or an associated table/appendix - what was asked?

* Results, line 190: 'residential' what?

* Line 201: 'into' SKIP, rather than onto.

* Line 205 - what were the demographic and clinical characteristics that were collected (these need stated in the methods section).

* Line 245 - this first sentence should be in the methods section.

* Line 279 - Second sentence should be in methods.

* Discussion - Line 357 - is chronically 'ill' an acceptable term? Would 'individuals with a chronic condition' be better to use here?

* Line 360 - 'collect' rather than 'collection.' What were the targets for your data collection and why were these values set?

* Line 365 - are these completion rates CYP with t1d? If not, please refer to studies specifically in CYP with t1d

* Line 402 - short term improvements in what?

* Line 416 - why were aspects of the intervention withdrawn - what was the reasoning behind this?

* Limitations - there are others. Why was the Polar Active watch used - is this popular with young people? Small sample size for the quant part too. Diet was not measured and could impact on clinical markers

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 recommend additional statistical review

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

Acceptable

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