Reviewer’s report

Title: A pragmatic approach to selecting and developing behaviour change interventions for trial evaluation: the example of very brief interventions for physical activity in primary care

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Reviewer: Brandon Irwin

Reviewer’s report:

Major compulsory revisions

1. There is not a well-defined research question. The paper simply “describes a pragmatic method to select, develop and optimize promising candidate interventions for further evaluation and reports the findings”. I suspect, based on the data presented, that the research question is something along the lines of “which BIs/VBIs for physical activity are most feasible to deliver in clinical settings?”

2. The authors identify a significant problem to be addressed (i.e., the time it takes to identify, develop, and optimize interventions). However, the study does not address the problem laid out in the introduction. The problem laid out in the introduction is that existing methods for selecting, developing, and optimizing interventions are ‘often time consuming and require significant resources’. The reader expects a study to follow that shows the current method is shorter and more feasible than existing methods. However, there is never any mention of how long and how many resources the 2-step method took to identify the VBIs, which seems like a critical piece of data. It is not obvious that the current method is less time/resource intensive, especially considering that the primary outcomes of the study (feasibility) are not the same as those one would expect from using the MOST method (efficacy/effectiveness).

3. The comparison to the MOST method is not appropriate. The MOST method is one that systematically tests the effectiveness of potential BCTs. In the current study, there is no effectiveness testing. Rather, the primary outcome is feasibility (whether the VBIs could be delivered within 5 minutes). First, it’s perfectly reasonable to expect that the MOST method and other methods for identifying evidence-based interventions are equally as effective and time-consuming in identifying interventions that are feasible in clinical settings as the current method. Second, perhaps the most time consuming part of the MOST method, to which the current method is compared, is the efficacy/effectiveness testing, where the signature feature is running experiments. The current study does not include efficacy testing and, if it did, might show that none of the BCTs are efficacious and, thus, the researchers would have to spend more time going back and selecting new BCTs.
There is no data presented to support the claim that the 2-stage method for identifying feasible VBIs is less time consuming than other methods of identifying feasible VBIs. In Stage 1, along, the researchers conduct two systematic reviews, a scoping review, stakeholder consultations, qualitative research including observations and interviews with 51 patients, and a cost analysis study for VBIs. How long did all of that take? I think the main result of this study is not a less-time consuming method for identifying VB interventions, but the feasibility of those interventions. The manuscript either needs data to support the claim that the methods take less time than existing methods for identifying, developing, and optimizing interventions, OR the manuscript needs to be reframed around the research question above (i.e., a feasibility study) and that the methods used successfully identified feasible VBIs.

Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests