Reviewer’s report

Title: Identifying and selecting implementation theories, models and frameworks: a qualitative study to inform the development of a decision support tool

Version: 1 Date: 24 Feb 2020

Reviewer: Jim Smith

Reviewer's report:

Title: Identifying and selecting implementation theories, models and frameworks: a qualitative study to inform the development of a decision support tool

The following comments are suggested to enhance the coherence and clarity of the manuscript.

1) Did the authors follow any guidelines on developing a decision support tool? If not, why not?

We will be using established methods and will be guided by theory, a model and a framework to inform tool development. Because tool development is not the focus for this paper, we did not provide details on the methods.

To clarify this to the reader, we have added the following sentences to the Background section, starting on Line 116: "As tool development is not the focus for this paper, we did not provide details on the methods. These methods will be described in a subsequent development and evaluation paper".

I note the authors sentence however, this paper is part of the tool development. In order to inform a decision tool methods/guidelines are beneficial to follow and will show that the author considered the following steps of the tool development. It seems the authors have considered a method as they mention they will be following established guidelines. A short sentence is only required stating that they considered XXX guidelines in developing the tool. The authors need to justify why qualitative methods were used and the benefits qualitative methods can bring to the development of the tool.

The abstract background is not clear on the tool development aim and I would suggest to revise 'develop' to 'inform' in the following sentence as it still implies you will be developing the tool in the current paper: 'We propose to develop a decision support tool to facilitate the appropriate selection of an implementation theory, model or framework in practice.'

Ethics

Ethics was obtained in Toronto. How did this cover recruiting in the US?

This research study was conducted by a graduate student at the University of Toronto (Ontario, Canada) as part of her PhD thesis. The research was conducted at the Li Ka Shing Knowledge Institute at St. Michael's Hospital, Unity Health Toronto, where the student's thesis supervisor and university-affiliated lead investigator is based. As such, we applied for ethics approval from both Unity Health Toronto and the University of Toronto. Our study protocol outlined the tools we would use to identify potential participants for recruitment, who would identify potential study participants, who would make initial contact with potential participants and how that
contact would be made. Specifically, this included in-person recruitment at two large conferences, including one in the USA, by handing out study information sheets to attendees; collecting contact information from those interested in participating in an interview using a hard copy sign-up sheet; and sending a personalized email to interested participants following the conference to schedule a phone interview, all of which was done by the graduate student. This protocol was approved by both Unity Health Toronto and the University of Toronto.

The authors need to briefly cover that the recruiting process covered the conferences which covered participants in USA and Australia.

More information is required to explain why you selected the TDF over other popular Frameworks. In addition, why did you select these specific TDF domains for consideration over other TDF domains? What was your rationale for this?

We have revised the manuscript to more clearly justify our use of the Theoretical Domains Framework to inform our interview guide. First, we have moved, and revised, the following paragraph from the Discussion section to the Methods section, starting on Line 192 of the Methods: "The Theoretical Domains Framework is a validated determinant framework (25) that has been applied in numerous implementation studies to uncover the underlying barriers to and facilitators of behaviour change. Further, the framework includes a comprehensive set of barriers at the individual or person level, along with the organizational-level (e.g., groups of individuals), which we felt were most important to Powered by Editorial Manager® and ProduXion Manager® from Aries Systems Corporation understand when developing a decision support tool to meet the needs of our targeted end-user." (25) Cane J, O'Connor D, Michie S. Validation of the theoretical domains framework for use in behaviour change and implementation research. Implement Sci 2012;7(1):37. Second, the following paragraph was added to the Discussion section, starting on Line 468: "There are numerous determinant frameworks that we could have chosen to inform our interview guide. For example, our team recently mapped over 300 implementation theories, models and frameworks to Nilsen's taxonomy (3) and identified over 50 determinant frameworks targeting at least individual-level change. However, many did not include a comprehensive set of barriers and facilitators (unpublished data)." (3) Nilsen P. Making sense of implementation theories, models and frameworks. Implement Sci 2015;10(1):53.

The authors comments are noted, can they please explain why specific TDF domains were chosen. For example, TDF includes more domains than 'knowledge', 'skills' 'beliefs about capabilities' 'intentions', 'social/professional role and identity' on pg 8. Why did the authors select these specific domains for consideration over the other domains within the TDF? The authors need to justify this.

Good luck!

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.

Not relevant to this manuscript

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

Acceptable

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests.
I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal.