Reviewer’s report

Title: Development of a 5As-based technology-assisted weight management intervention for Veterans in primary care

Version: 0 Date: 17 Jul 2017

Reviewer: Elizabeth Sturgiss

Reviewer’s report:

This is a qualitative study reporting the development of an electronic weight management program based on the 5As principles. It is specifically for veterans.

I have a number of queries for the authors. Addressing these questions will greatly strengthen this paper.

- The development of this tool was underpinned by the Theory of Planned Behaviour. Can you explain why this theory was chosen? There are some psychological researchers that now feel this theory has too many weaknesses to be used in research - for example see this highly cited paper http://www.tandfonline.com/doi/pdf/10.1080/17437199.2013.869710

- "Qualitative methods and participant characteristics for the focus groups and key informant interviews are described elsewhere [38, 39]." This quote means the reader needs to look elsewhere for details about the participants. If this information is essential to the understanding of this paper, it would be better to have more information included.

- In the methods, the coding is described as inductive looking for emergent themes. However I don't believe this describes the process undertaken - was it more analysis of existing interviews looking for specific themes, i.e. related to online tool development? Could this please be clarified.

- What is the ORBIT framework? Could this please be explained for the reader.

- "We iteratively developed the online weight management counseling tool based on the original MOVE!23, now called the MOVE!11." - please explain these different "MOVE"’s for the reader.

- "In a previous study with Latina women, we found that the MOVE!23 did not adequately support goal setting and participants had difficulty using a mouse(trackpad on desktop/laptop computers and preferred 205 touchscreens [42]." I am uncertain of why this the research in Latina women is relevant to VAs? They seem like vastly different population groups to me. Could this please be explained.
- In most studies of online health, the privacy of data for participants is a concerning feature. This was also identified by your participants. Can you please describe how this will be managed?

- Could you please expand on the description of the veterans that will be targeted in the final intervention - age, education level, etc

- the prototypes were only trialed with 5 in each session; were they representative of your final target population?

- point 4: "The patient then receives a personalized binder of tailored materials generated by the tool to facilitate the creation of SMART goals and further health coach counseling." Who gives the participant this? Please be clearer in your description of health care professionals involved.

- The same participants were used for the formative and pilot testing work. This is a limitation of your method and should be included in the discussion. An explanation of why this was used would also be useful.

- why only 5 participants in each round? How did you know this was enough? Please outline how you decided on this many participants. It seems like a small number to the reader.

- Who was at the one on one interviews? What was their training?

- "research staff took field notes on interactions with each screen of the tool." What was done with these field notes? Who took them and their training?

- More detail please, this is important detail for the reader: "In between Rounds 1 and 2, we made significant edits and improvements to the language/content, back-end structure, and front-end design of the GEM tool."

- What is a "health coach"? What was their training and background?

- In your limitations, the difference in the professional involved in different parts of the study should be discussed as a limitation: "5As counseling during Round 1 of testing was conducted by the Principal Investigator (MJ), an attending 260 physician at the Manhattan VA, while 5As counseling during Round 2 was conducted by a trained member of the research team who had no formal clinical training (KFM). The research team member received 10 hours of training in motivational interviewing, role-playing, the 5As Model, SMART (Specific, Measurable, Attainable, Relevant, and Timely) goal setting [49], and referring to the MOVE! program."

- Were the items that have been identified as "themes", just items that were discussed by the participant? Please reference the thematic analysis method that you followed.
- The same veterans were interviewed in round 1 and 2. Can you please explain why you chose to do this, and how you maintained methodological rigor? To the reader it seems to weaken your methodology.

- significant changes were made to GEM after round 2, why were these changes not tested with a group?

- I have difficulty with the method described used for "Findings from Open-Ended Feedback: Health Coaching Sessions" - did 10 participants do this part? The information is not presented in a helpful way, the qualitative methods are not discussed. It reads more like the documentation of an informal chat. Who did these interviews? Is it possible that participants could not give negative feedback to the research staff?

- In the intervention, which veterans will be asked to arrive 45 minutes prior to appointment, how will they be identified? Was this discussed with participants and feedback given? It seems like a significant time burden on patients.

- "Health Coaches training also includes recognition of any patient-related issues that may require immediate PCP notification" - this is triage. How has this model been tested? what are the risks?

- Has any work been done with participants to see why they aren't enrolling in MOVE!? As increased attendance at MOVE! is an aim of ongoing work, it would be important to understand this from a participant perspective.

- "To date, there are few standardized guidelines to developing weight management interventions" - the MRC guide to complex interventions from the UK is exactly this. This paper would be better structured under the guide suggested by the MRC. https://www.mrc.ac.uk/documents/pdf/complex-interventions-guidance/

- "We used rigorous formative methods, combining perspectives from both Veteran patients and PACT healthcare team members to identify, prioritize, and develop initial intervention components" - I did not see anything reported from team members? Please clarify.

- Patient Centred Medical Home - need to carefully define this as the term is used differently in other healthcare settings. On a more minor note, it needs consistency with capitalisation throughout

- "our (albeit relatively small) study population that participated in the development and testing phases was diverse in race/ethnicity, gender, and age." In the results table, it was 60% men, 60% African American? This does not seem very diverse. Please explain your statement. Representation of the target population would seem more important (see points above).
- the multidisciplinary team that is mentioned in the discussion should be fully described in your method section.

- there are no limitations mentioned in the discussion. See above points for suggestions.

- the discussion talks about this work being generalisable - is this possible with the qualitative methods that were chosen? Is this an aim for qualitative research? This paper might be helpful https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4535087/

- did you determine as a research team what would be considered to acceptable before the two rounds of trialing? For acceptability trials, this is the most rigorous approach, where it is determined prior to data collection how you will determine acceptability. For example, if 4/5 participants said they liked a particular feature, than that would be acceptable. What about if one participant didn't "like" a certain part? How would this be handled?

- In light of recent discussions about obesity is BMI plus health impairment, what does that mean for this tool? http://onlinelibrary.wiley.com/doi/10.1002/oby.21801/full

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

No

**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.

No

**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

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