Reviewer’s report

Title: The development and feasibility of a health optimization support system for people with bipolar disorder

Version: 0 Date: 20 Nov 2016

Reviewer: Lauren Frensham

Reviewer’s report:

This pilot study aims to describe the development, and test the feasibility of, a health optimization support system for chronic disorders. It is an original concept, whereby both patients and clinicians can use a shared, digital platform to optimize treatment. The findings may be useful to researchers in the health optimization field.

Suggestions for improvement include:

Introduction

* Non-adherence to what? Perhaps specify that you mean non-adherence to medications, or non-adherence to care that a professional has recommended?

* Can a reference be provided for the statements regarding there being no evidence for improved clinical outcomes with existing e and m health technologies? A succinct review of the pertinent literature would be good here.

* Can rationale be provided for the importance of patient input? What evidence is there that patient involvement in decisions relating to their health improves outcomes?

* It would be useful to see more information and specific examples on how this tool could improve bi-polar treatment and lifestyle options.

Methods

* Good use of theories to justify methods. Can the authors reference other studies that have used SDM, MCDA and SSRD theories that have been successful in improving outcomes?

* More detail on the focus group is needed. How many participants were in the focus group? Was it semi-structured? Can you provide an example of the questions asked? Perhaps you have described this later on? -The layout of the methods is a bit confusing.

* Can you be more specific as to when the SUA scales and other questionnaires were implemented?
A specific example of health optimization provided by this tool would be beneficial to the reader.

Results

The qualitative results are very limited. It is encouraging that the users found the tool easy to use, but did you ask about difficulties they encountered? Did other themes emerge?

Discussion

Have the authors thought about the potential for carer input in this tool?

In regards to usability testing - the rationale for 20 test users being less useful than 10 users is confusing. Please clarify.

It would be useful if the results were commented on in light of previous studies and explain the differences (if any) between this study's findings and those reported by others.

Other

Overall the paper needs some polishing in terms of grammar, punctuation and tense.

The first sentence of the introduction is very long and could be shortened.

Make sure to spell all acronyms in full first.

Don't forget to title tables and figures.

Overall

Overall this is a unique pilot study, that has combined patient and practitioner input into a unified system.

With some refinement, and further detail and clarification about study processes, this paper can make a meaningful contribution to the literature on health optimization support systems for chronic conditions.

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.

Unable to assess

**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:

Needs some language corrections before being published

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