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Title: eHealth self-management intervention for adults with chronic kidney disease, My Kidneys My Health: mixed-methods study

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Reviewer 1: Arsh Jain — London Health Sciences Centre, The University of Western Ontario, Canada, Medicine, Nephrology

Reviewer comments and author response

Abstract:

1. It would be helpful to include a description of the patients included.

Response: We have included CKD within the abstract under results: “Twenty-nine participants with CKD were enrolled...” (pg. 2, tracked changes version)

2. It seems like your survey is somewhat similar to the USE questionnaire. Did this questionnaire influence your question development? Lund, Arnold M. "Measuring usability with the use questionnaire¹²." Usability interface 8.2 (2001): 3-6.

Response: No, we did not use the “USE questionnaire” for this study. However, we previously tested usability for the MKMH website and have published this work (12) and used the “System Usability Scale”. Thank you for highlighting another option for measuring usability.

Results

3. How do these patient’s demographics compare to the average CKD patient in your clinic? The participants seem young with not very advanced CKD. Mean age would be helpful.

Response: We have noted the concern regarding generalizability as a study limitation. (pg. 15, tracked changes version)

4. Although the Get information about disease improved statistically, does this represent a clinically significant change?

Response: We are unable to determine whether this would represent a clinically important change. However, based on our qualitative data, patients reported that MKMH website provided them with relevant information based on their needs.

5. Given that there were multiple ways of accessing the website, it would be good to understand the patients approach (e.g. tablet, desktop vs smartphone). Where are they using it most, can

they use it on-the-go etc.

Response: Based on our findings from our previous research (References: 11 and 12) patients identified that they wanted a website that is mobile friendly versus a mobile app. On website is functional on computers, tablets, and mobile friendly devices.

Interpretation

6. As you mentioned, restricting to patients who had internet access and were using a computer, tablet, or mobile device, may have resulted in some bias. Could these characteristics correlate with socio-economic status, which would then influence your acceptability and self-efficacy results.

Response: The reviewer raises an important point, which unfortunately we are unable to address with our data available. We have noted potential limitations to generalizability in the study limitations.

Reviewer 2: Alexabder Logan — Samuel Lunenfeld Research Institute, Medicine

Reviewer comments and author response

Description: This manuscript from national and international investigators reports the results of a feasibility study to access a web-based tool – My Kidneys My Health (MKMH). Study subjects were recruited through advertisements placed in local (Alberta) and national email and social media platforms and from out-patient CKD clinics in Alberta. To participate individuals had to have internet access and be familiar using computer technology. Oral consent was sufficient to collect personal information. The primary outcome was acceptability using the measurement tool, Technology Acceptance Model (TAM).

Critique:

1. The 8-week study employed a ‘before-after’ study design. There was no comparator tool to get information about disease. Thus, it is difficult to put into perspective the study’s findings, for example, the CDEES score on ‘Get information about disease’.

Response: We have reframed this work to be a preliminary evaluation rather than a feasibility study. See response to Senior Editor’s Comment #3.

2. Of the 33 individuals enrolled, 22 (66.7%) completed the TAM, the primary outcome assessment tool, a high drop-out rate in a short-term study. The reasons for non-participation are not provided and the implications for interpreting the study results are not mentioned.

Response: Thank you for noting these limitations. We have included these concepts under the Limitations section.

“Finally, our overall study size was small, with a high drop-out rate, and thus may limit the ability to detect a statistically significant difference in quantitative results and generalizability and interpretation of our findings.” (pg. 15, tracked changes version)

3. The authors do not mention the areas in Canada of participants. Was participation essentially local (Alberta) or did they draw from across Canada? This information should be included in the manuscript.

Response: Thank you for this suggestion. Similar to the Senior Editor's Comment #1 we have included this information in the abstract and results sections.

4. It is unclear from the description in the paper as to how the investigators aggregated the data collected in TAM to derive an overall acceptability score (the presumed outcome measure) and what threshold is considered acceptable. This aspect of the paper requires clarification.

Response: The TAM included eight questions where participants responded using a 5-point Likert scale (strongly disagree to strongly agree). We have provided percent responses for each question (Figure 2). We asked two questions about satisfaction (i.e., overall satisfaction and look and feel) where participants responded using a numerical rating scale from 1 (not satisfied) to 10 (extremely satisfied). The mean for each of these was provided. Our intention was not to provide an overall acceptability score with a threshold.

5. For the Google Analytics, there is no indication on the number of individuals contributing to this analysis.

Response: From July 28 2020 to February 2, 2021 there were 138 "users" who visited the site. The count of "users" measures how many users engaged with our site during a specific period of time, including new and returning users. Unique users are not reported.

6. For the qualitative evaluation the authors stated that they stopped recording interviews 'due to data saturation', which they do not define. The statement about saturation appears to be at odds with the statement (p 15 of 32, l 8) 'their experiences may not reflect the experiences of a wider group of website users', which would include the 7 participants who completed the study but not interviewed.

Response: We have addressed this under the Senior Editor's Comment #8d with the following response. For clarity, we have included the following statement: "A total of 15 patients contributed to the qualitative evaluation before we stopped further interviews due to data saturation (i.e., no new information was obtained)." (pg. 11, tracked changes version)

7. The authors mentioned under study limitations that the study population was not representative the non-dialysis chronic kidney disease population in Canada. Thus, it is hard to place the relevance of the study into context of the population of interest.

Response: We have noted potential limitations to generalizability in the study limitations.

8. A surprising omission is the lack of comment on how they will use the information gathered in

this study on improving My Kidneys My Health, especially when the authors concluded ‘overall mean satisfaction with the website was moderate (7.7/10) on page 13 of 32, l 18. One obvious limitation, mentioned in the qualitative interviews, is the lack of an app version of their information tool.

Response: Thank you for bringing this to our attention. We have added the following statements under the Conclusion section:

“Our study findings highlight potential adaptations to the website including providing content specific to caregivers; more resources related to travel, mental/sexual health and peer support; a tool for predicting disease progression; adding features including webinars; and creating a mobile app version.” (pg. 15, tracked changes version)