Author’s response to reviews

Title: Investigating Usability of Mobile Health Applications in Bangladesh

Authors:
Muhammad Nazrul Islam (nazrul@cse.mist.ac.bd)
Md. Mahboob Karim (mahboob4146@yahoo.com)
Toki Tahmid Inan (tokiinan5@gmail.com)
A.K.M. Najmul Islam (najmul.islam@utu.fi)

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Author’s response to reviews:

Editor-in-Chief

BMC Medical Informatics and Decision Making

Dear Dr. Editor-in-Chief,

We are pleased, that you gave us the possibility to revise this manuscript. We truly appreciate the reviewers’ comments, insightful and constructive recommendations, which were a tremendous help during the revision of the manuscript. We also want to express our appreciation for taking the necessary time and effort to provide such insightful guidance. In revision, we have addressed each of these concerns.

We hope that these revisions improve the paper in such a way that you and the reviewers now deem it worthy of publication in BMC Medical Informatics and Decision Making Journal. Next, we offer detailed responses to reviewers’ comments.

Best regards,

Dr. Muhammad Nazrul Islam

Military Institute of Science and Technology (MIST)
Dhaka, Bangladesh
nazrul@cse.mist.ac.bd
Responses to the Reviewer #1’s Comments

Reviewer’s Comments: This manuscript reflects a very important question in this day and age of digital developments -- in particular, understanding the benefits of mHealth apps. Given their proliferation globally, assessing how useful and user-friendly they are needs to be more widely practiced. The literature review and reference list is lengthy and detailed, as is the description of the three stages of the project.

However -- this manuscript appears to be written as a full report on a project that might be appropriate as a final report for a funding agency. It is far too detailed, with 9 tables and 4 figures that include unnecessary information, and has too little explanations of the meaning of the results to be a useful journal article. The three stages of the research described were far too much to include in one paper.

Either the second or third stages of this research could be developed as a useful article, with the other stages briefly summarized. The literature, methods and tables would need to be limited to content that is clearly related to the study's conclusions -- in this draft, the tables in particular simply clutter up the manuscript without a clear purpose. I went through the entire draft hoping that by the end I would have a few summary take-home conclusions other than the lack of usability of most of the apps studied. I didn't, only finding that both your independent evaluations using standard criteria were congruent with the user evaluations.

Again, the topic is important and the work of this evaluation are commendable. However, it it not yet in shape to be a journal article.

Authors’ Responses: Thank you very much for your comment. We think that all three stages are necessary and is tightly connected with the goals of this research. The first stage categorizes the applications. The second and third stages select applications from these categories. Therefore, without the first stage, we would not be able to execute second and third stages. However, we agree that the descriptions of the first stage could be short. Considering this, we have removed the application “development platforms of mHealth apps”. In second and third stages, we use different usability assessment approaches. The two approaches actually validate each other. Therefore, we think that our results are more trustworthy than a single approach. This warrants using both stages in this paper. However, we agree that we could reduce the number of tables. In response to that, we think Table 8, and Table A1 carries limited value. Therefore, we have removed these tables. Again, we also think that Figure 2 and Table 3 can be moved to the Appendix for better readability.

Finally, we appreciate and are thankful for your time and effort to help us improving the article, and for your detailed and insightful comments and guidelines.

Responses to the Reviewer #2’s Comments

Comment: [Minor comments and grammatical mistakes raised by reviewer#2 in the attached file].
Authors’ Response: Thank you very much for your comments and suggestions to revise the article. In revision, we have addressed each of these comments. The other major concerns raised by you are discussed below.

Comment: Why only 4 application in each category? What is the basis for selection?

Authors’ Response: We selected 4 applications randomly from each category. This is to make sure that our selection is not biased. Therefore, we think that our random selection is a good approach. Now the question is why 4, why not 5 or more. Actually the smallest category “homeopathic” had only 9 applications. We chose 4 just to have enough random choices from these 9. If we increase to 5 or 6, we actually reducing the random selection probability and the results will be biased. Therefore, we felt 4 is a good number.

Comment: Why 30? How were they sampled and selected?

Authors’ Response: In revision, we have provided more information on it to address this comment.

Comment: Only the selected apps were tested by SUS and user study. How can this statement be justified

Authors’ Response: We actually randomly selected 4 applications at second stage and performed expert inspection. Then we used SUS. And the results complement each other. Due to the random app selection, and use of multi-method usability assessment approach, we think that our statement is somewhat justified. However, to address your comment, we added the word “selected” in this statement to make it more justified.

Comment: What knowledge? [in section, 6.2]

Authors’ Response: In revision, we have clarified this. Thanks

Comment: The conclusion seems to be a repetition of what is mentioned earlier in two places. So rephrase

Authors’ Response: We have revised the first few sentences of Conclusion section to address this comment.

Finally, Thank you very much for your detailed and insightful comments and guidelines that helped us to improve the article.