

Peer Review File

Article information: <https://dx.doi.org/10.21037/mhealth-22-40>

Reviewer A

Very interesting study. Love the app and the concept.

Comment 1: Suggestions: 1. Use the term "Pelvic Floor Muscles" for PFM. It is a group of muscles, not one muscle so the term should not be "Pelvic Floor Muscle" in the singular. For example, on line 18-19 it should read: "the Pelvic Floor Muscles (PFM), their functions..." This will require the same correction in the Title as well.

Reply 1: We have modified our text as advised (see Page 01, line 02, 04 and 23)

Comment 2: Line 58: I suggest "education" rather than "knowledge".

Reply 2: We have modified our text as advised (see Page 01, line 28)

Comment 3: Line 65 - space missing after "pre-".

Reply 3: We have modified our text as advised (see Page 02, line 36)

Comment 4: Line 68 after PFM "its" should be "their" (see #1).

Reply 4: We have modified our text as advised (see Page 02, line 38)

Comment 5: Validation section: I would like more detail about how participants were recruited - what social media platforms? how did the investigators obtain email contact info? was there any attempt to recruit from a diverse population in terms of race/ethnicity, socioeconomic status, education, etc.? No information about any of that data of participants is included in the text or tables. I would move the sentence about excluding participants who refused to sign the FICT to the end of the paragraph.

Reply 5: We added some data as the social media platforms used in this research (see Page 04, line 88-89), and the description of the diversity of the population (see Page 04, line 89-90). Ethnicity/race and socioeconomic information was not included, because the participants were not asked about these questions. Information on the age range of pregnant/postpartum women was added in table 5. We move the sentence about excluding participants who refused to sign the FICT to the end of the paragraph as advised (see Page 04, line 90-91).

Comment 6: Discussion section:

- 1st Paragraph: Including specific examples of "intense medicalization, disrespect... and unnecessary interventions" would make this more powerful. For example, are you referring to episiotomies, forceps/vacuum deliveries?

Reply 6: We have modified our text as advised (see Page 06, line 169)

- 2nd paragraph: I suggest the following change: "Expanded access to this content will promote enhanced autonomy for pregnant women by ensuring that they have the necessary information to make important decisions about prenatal care and childbirth interventions that may impact PFM function. Gaining such knowledge increases the likelihood that these women will feel safe and satisfied with their choices."

Reply 6: We have modified our text as advised (see Page 06, line 171-174)

-3rd paragraph: Move the sentence beginning on line 268 about the Asklund study to this paragraph and insert between the first and second sentence on line 248. The study example fits better here and makes your point about apps being effective tools for education with a similar population/another women's health issue.

Reply 6: We have modified our text as advised (see Page 07, line 178-179)

-4th paragraph: Line 257 "have" should be "had a good experience."

Reply 6: We have modified our text as advised (see Page 07, line 186)

-5th paragraph: insert "CVI" before value on line 261 for clarity and move Asklund study sentence as suggested above.

Reply 6: We have modified our text as advised (see Page 07, line 189 an 178-179)

-6th paragraph: Line 272: insert "sample" before "size".

Reply 6: We have modified our text as advised (see Page 07, line 185)

-Line 277 suggest change to last sentence: "Many pregnant individuals do not have unlimited access...".

Reply 6: We have modified our text as advised (see Page 07, line 199)

Comment 7: Conclusion: Suggest following changes: line 284: "Thus, the educational material on this app is expected to..." Line 286: "Making this knowledge widely accessible can promote...".

Reply 7: We have modified our text as advised (see Page 08, line 203 and 204)

Reviewer B

This article aims to fill the gap in needed health education regarding pelvic floor muscle anatomy, function and potential dysfunction for women who are pregnant or puerperal. The goal is admirable.

Comment 1: The article describes a process used to support the build of this application. It is not entirely clear if this app is meant to be "direct to consumer" (bypassing clinician), or alternatively per clinician recommendation or childbirth class coach recommended, or both. Please be specific as to intent.

Reply 1: We appreciate your note and we added this information (see Page 08, line 206)

Comment 2: The app's educational content is said to be drawn from "conducting a theoretical-scientific survey that supports the selection of information contained in the app interface". However, only 9 articles were selected from this "survey" approach to the literature (it's not clear why the 1000+ others were rejected) As listed in Table 1 it appears that the actual content used in the prototype is drawn out of the Miquelutti articles (3 articles, 2 different actual studies), as inferred from the brief narrative describing each of the 9 articles. So, this reviewer is longing to know what actual content came out of the "survey" of the literature and made it into the app.

Reply 2: We appreciate your comment and added this information on text (see Page 05, line 120-122) and Figure 1.

Comment 3: I also looked to Fig 2 of the prototype "layout" for hints of content and it appears that

one would need to go deeper into the app to see what is being taught. The word “multimedia” is used in both the title and body of the paper, but not explained in any detail that really helps us know what is in the app. For instance, animations are mentioned, but are these animated vignettes of PFMT? Or maybe animations for explaining PFM functional roles? Else?

Reply 3: The application presents numerous information, which unfortunately cannot be observed in the images contained in figure 1. However, we would like to emphasize that the application is titled as multimedia because it has a combination of dynamic resources (i.e. video, audio and animation) for explaining PFM functional roles and how perform PFMT.

Comment 4: My question then is: Could some type of annotated script of the app contents be provided as supplemental material, and where possible with references to support the health education provided? Without this, it is difficult as a reviewer to have confidence in the prototype product as content appropriate. An example of my worry: nomenclature regarding the critical components of the PFM is historically tangled (please see DeLancey, 2022, Lies, Damn Lies, and Pelvic Floor Illustration: Confused about... for a review of those issues and the pertinent references).

Yes, there is a script of the app's content. We send this script as supplementary material, which includes references to define the terms adopted.

Comment 5: Did the survey include looking for any other applications on PFM health education, specific to either the general population or to those in the perinatal year? It seems it may be worth a look to see what others have done in the application world, either within or outside of the scientific literature.

Reply 5: Our bibliographic review includes studies that address the health education of PFM in pregnant or postpartum women. We describe the steps for selection in the section "Bibliographic Review and Linguistic Adequacy" (see Page 02, line 51)

Comment 6: Because of the above issues, I suggest you soften the language in the article. For instance, the title should clearly include the word “prototype” – it otherwise implies a completely tested application.

Reply 6: We appreciate your suggestion and we include the word “prototype” in the title (see Page 01, line 01).

Comment 7: The data analysis you are reporting might be more appropriately framed something like initial usability/acceptability of a prototype app evaluated for both technical ease and appropriateness of content selection.

Reply 7: We appreciate your suggestion and we include this information (see Page 04, line 114-115).

Comment 8: If you agree with revising from these suggestions, I'd suggest there is plenty of streamlining possibilities in current content in both the intro and discussion to make room for additional detail elsewhere. Stay consistent in language – maybe something like: highly accessible health education is needed about pelvic floor muscle anatomy (refs), function (refs), and potential for dysfunction (refs) within the perinatal year, as drawn from the scientific literature (refs). There are known limits to women's information access via clinicians, hence direct to consumer health instruction has merit. Thus, the general objective of” continue with line 7.

Reply 8: We appreciate your suggestion and we've included it. (see Page 01, line 25-29).

Comment 9: In the discussion, I would like to see your thoughts on next steps, for yourselves or other investigators to move the application forward through additional testing and eventual distribution ideas. Does the app have a name yet or could you share some thoughts on possibilities for what it might be called?

Reply 9: We appreciate your suggestions. We describe at the end of the conclusion the next steps that we will take (see Page 08, line 209-211).

I applaud you for taking on this work. It is not easy to build a well-done application, and I am curious and excited about seeing this one come to its full fruition. My comments are intended to show that I'd like your manuscript to reveal more about it.

Reply: Thank you for your words and suggestions for improving the manuscript.