Expert's usability evaluation of the pelvic floor muscle training mHealth App for pregnant women

ABSTRACT

Pelvic floor muscle training (PFMT) is the first line in managing urinary incontinence. Unfortunately, personal, and social barriers involvement hinder pregnant women to perform PFMT. Therefore, a Kegel Exercise Pregnancy Training (KEPT) app was developed to bridge the accessibility barriers among incontinent pregnant women. This study aimed to evaluate the usability properties of the KEPT app developed for pregnant women to improve their pelvic floor muscle training. A purposive sampling method of the experts was conducted from a sample of experts in informatics and a physician with a special interest in informatics. The design activities were planned in the following sequence: cognitive walkthrough for learnability of the app, heuristic evaluation for the interface of the app and usability questionnaire to evaluate the usability properties (quantitative assessment) of the app. The mHealth application usability questionnaire (MAUQ) was used as its assessment tool to assess the application usability. A total of four experts were involved in this study. Cognitive walkthrough revealed that the KEPT app has several major learnability issues especially the training interface and language consistency to ensure its learnability. Heuristic evaluation showed that the training interface must provide additional information regarding the displayed icon. KEPT app was rated by MAUQ being as ease-of-use, the interface and satisfaction with the usefulness by all the experts which scored 5.80/7.0, 5.57/7.0, and 5.83/7.0, respectively. The suggestions were shared to assist future researchers and developers in developing PFMT mHealth app.

**Keyword:** Pregnant women; Pelvic floor muscle training; mHealth app; Usability evaluation; Cognitive walkthrough; Heuristic evaluation