Co-design and user validation of the MedFit App: A focus group analysis

Orlaith Duff[1,2], Deirdre Walsh[1,2], Bróna Furlong[1], David Monaghan[2], Kieran Moran[1], Noel E. O'Connor[2] and Catherine Woods[1]

[1]MedEx Research Cluster and School *of Health and Human Performance, Dublin City University, Dublin, Ireland.*
[2]*Insight Centre for Data Analytics, Dublin City University, Dublin, Ireland.*
Orlaith.duff2@mail.dcu.ie

Abstract

This abstract details the development phase of the formative research process outlined by the Medical Research Council [1], used to develop a theoretically informed Android App, named MedFit, to enhance disease self-management and quality of life in adults with cardiovascular disease (CVD). The overall aim of the app is to increase physical activity minutes of adults with CVD. A key part of the development phase, which is the focus of this abstract, is the co-design and user validation of the MedFit app.

1. Introduction

Focus groups are group interviews led by a moderator who guides the interview while a small group (usually 6-8 participants) discusses the topics raised by the moderator [2]. The focus group script and content used during these focus groups was developed and informed using a questionnaire based on the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2). A questionnaire [adapted from a questionnaire developed by Venkatesh et al. (2012)] [3] entitled the 'Acceptability of mobile phone applications among adults with chronic illness' was completed by participants (N=119) of MedEx Wellness in Dublin City University. This questionnaire data identified constructs that were primary concerns for end-users. Specifically, these constructs were performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation and behavioural intention.

2. Methods

Participants in the focus groups were recruited from the HeartSmart programme in MedEx. MedEx is an exercise rehabilitation programme for people with chronic illness run in DCU. Participants indicated in the questionnaire that they would be willing to participate in the focus groups. In total 26 people took part in the groups (65% male; mean age 64±8.2 years). There were five focus groups: one pilot group and four subsequent groups. Each focus group lasted approximately 1.5-2 hours in duration with a max. of six people per group. The focus group was led by a moderator, who guided the interview, while an assistant moderator took notes on the ensuing discussion. The focus group had two main strands. The first focused on the usability of the MedFit app where the researcher presented the different functions of the app and the participants could follow along using a Samsung Galaxy S5 Neo on which the app was downloaded. Participants were asked to give their feedback and opinions on the prototype app components. The second strand of the focus group concentrated on the acceptability of the app. Questions were asked relating to the main constructs identified in the questionnaire which impacted participant's acceptance and use of apps. The data was analysed using content analysis [4].

3. Results

Table 1: Focus group feedback

App component	Focus group feedback
Login	-Keep simple -Need to see password on screen -Retrieve password function
Home screen	-Confusion about the 'burger' menu -Use the word menu instead
Exercise programme	-Play the video continuously under the timer -Music with a beat
Visualisation of exercise progress	-Separate the weekly and daily results tabs -Make clear distinction between each block of information -Ability to log different activities
Notifications	-No more than 4 per week
My Healthy Lifestyle	-Remove the 'My' from the title as the section contains generic information -Happy with the content
My MedFit Group	-Liked the idea of an events page and chat function -Majority were against the leaderboard
Contact Us/Help	-Video tutorial -FAQ section -Technical support contact

4. Conclusion

User validation through the focus groups is a crucial part of the user-led formative research and design process. The feedback will be translated into feasible technical improvements through close collaboration with the technical design team. Future work includes further adaptations in conjunction with the technology team based on the patient feedback and comments from the focus groups resulting in a 4-week feasibility study.

5. References

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