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Conference Abstract

An extension of the UTAUT 2 with a focus of age in healthcare: What do different ages want?

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Abstract

Introduction: The objective of this study was to understand the factors that affect the adoption and acceptance of technology, in particular to analyse the underlying mechanisms by which age affects acceptance of mobile IT in a healthcare context. Understanding how and why people accept or reject technologies has been the subject of a large body of information systems research including the Technology Acceptance Model [2] [3]. The Unified Theory of Acceptance and Use of Technology model 2 [4] combines the dispersed literature into a unified model and looks at technology acceptance from a consumer use context thus making it of particular use for the public health environment. The authors of the model describe the moderating effect of age on each of the seven constructs [4], and show empirically that age *does* have an impact using longitudinal studies; however the rationale behind the underlying mechanisms of this is scant. Age is often an important consideration, *especially* with technologies introduced in healthcare. Individuals show declines in psychomotor skills [5], processing capacity, and increased distraction by side issues when using technologies with increased age; however, they can continue to use technology to a high level [6].

Methods: A review of the current literature on mobile technology was conducted, in addition to qualitative primary data collection. Focus groups were conducted for three different age groups, 15-30, 31-50, and 51+ in order to explore views on acceptance of mobile technology in healthcare and the factors that affect the adoption of technology. Thematic analysis was performed to analyse focus group responses. A mobile web application for recording Patient Reported Outcome Measures was used as an example for focus group participants to interact with. Patient reported outcome measures are validated questionnaires, completed by patients to measure their perceptions of their own functional status and wellbeing. They are currently collected in a paper format, but an application has been created to improve response rates. We used our finding to make recommendations to the current Patient Reported Outcome Measures application to improve user acceptance.

Results and Discussion: Our results from the literature review and primary data collection extend the Unified Theory of Acceptance and Use of Technology 2 model from a healthcare perspective. Our findings confirm that age does moderate the seven constructs of user acceptance but shows that it does so via the 17 mechanisms that we indentified. These 17 mechanisms are outcome expectancy, convenience expectancy, time expectancy, base ease of use, ease of learning, impact of disability, practitioner influence, support, security and confidentiality, prompts, usage enjoyment, novelty enjoyment, hardware costs, software costs, technology preference, location preference and reminders. The model highlights the factors that need to be considered when developing mobile IT in healthcare. We used our finding to make recommendations on how to improve uptake of the current Patient Reported Outcome Measures App with respect to age with a view on improving response rates.

Keywords

model for technology acceptance; age; health information technology

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