An Evaluation and Guidance for mHealth Apps

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Abstract: The number of mobile health apps is growing at a fast frequency as it's nearly doubled in a year between 2015 and 2016. Though, there is a lack of an effective evaluation framework to verify the usability and reliability of mobile phone health education applications which would help saving time and effort for the numerous user groups. This abstract describing a framework for evaluating mobile applications in specifically mobile health education applications, along with a guidance select tool to assist different users to select the most suitable mobile health education apps. The effective framework outcome is intended to meet the requirements and needs of the different stakeholder groups additionally to enhancing the development of mobile health education applications with software engineering approaches, by producing new and more effective techniques to evaluate such software. This abstract highlights the significance and consequences of mobile health education apps, before focusing the light on the required to create an effective evaluation framework for these apps. An explanation of the effective evaluation framework is going to be delivered in the abstract, beside with some specific evaluation metrics: an efficient hybrid of selected heuristic evaluation (HE) and usability evaluation (UE) metrics to enable the determination of the usefulness and usability of health education mobile apps. Moreover, an explanation of the qualitative and quantitative outcomes for the effective evaluation framework was accomplished using Epocrates mobile phone app in addition to some other mobile phone apps. This proposed framework-An Evaluation Framework for Mobile Health Education Apps-consists of a hybrid of 5 metrics designated from a larger set in usability evaluation and heuristic evaluation, illuminated grounded on 15 unstructured interviews from software developers (SD), health professionals (HP) and patients (P). These five metrics corresponding to explicit facets of usability recognised through a requirements analysis of typical stakeholders of mobile health apps. These five hybrid selected metrics were scattered across 24 specific questionnaire questions, which are available on request from first author. This questionnaire has been sent to 81 participants distributed in three sets of stakeholders from software developers (SD), health professionals (HP) and patients/general users (P/GU) on the purpose of ranking three sets of mobile health education applications. Finally, the outcomes from the questionnaire data helped us to approach our aims which are finding the profile for different stakeholders, finding the profile for different mobile health educations application packages, ranking different mobile health education application and guide us to build the select guidance too which is apart from the Evaluation Framework for Mobile Health Education Apps.

Keywords : evaluation framework, heuristic evaluation, usability evaluation, metrics

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