Medical Students' Perceptions Regarding the Impact of Mobile Medical Applications on their Clinical Practice (RE: JMTM 2014, 3(1):46-53)

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In February 2014, an original article, titled, "Medical Students' Perceptions Regarding the Impact of Mobile Medical Applications on their Clinical Practice" was released in Journal MTM. The survey was conducted on all 169 medical students in their first clinical year of the International Medical University (IMU) in the city of Seremban, State of Negeri Sembilan, Malaysia. Data was collected by using a self-administered questionnare. The questions were formulated from a list of desired qualities in medical applications (apps) which has been published by Visser BJ and Bouman J. The students' perceptions regarding medical apps, the impact of medical apps on clinical practice and the characteristics of an ideal medical app were explored. It was found that the prevalence of medical students who owned a smart device was about 88% and 87.5% had medical apps installed on their smart devices. Data was analysed by using SPSS software version 20. The results showed most students had positive perception towards smart devices and medical apps and agreed they have positive impact on their studies and clinical practice.[1]

Lack of an appropriate sample selection method was the main limitation of the mentioned study. The samples were selected only from medical students in their first clinical year of one school, rather than random sampling from more schools. Thus samples were less representative of the target population which is medical students at different levels of their education. It is clear that students' perceptions can be changed as they gain more knowledge and insight in medicine. It is well known that failure to take an appropriately sample can substantially lead to bias the results of the analysis. However, it was possible to obtain reliable data about overall population by selecting a representative sample as simple random sampling in which every member of target population have an equall chance of being selected into sample.

Three years ago, a survey was conducted by Hasan Babri et al entitled "Contributing Factors to the Attitude Towards Acceptance of Mobile Learning among Students of Isfehan University of Medical Science Using Technology Acceptance Model (TAM)." The participants in the study were all students of Isfehan university of Medical Science in the city of Isfehan, Iran. Random sampling method was implemented and 214 students were selected from medical fields in different stages of education. Data was also collected by using a self-administered questionnare which questions were formulated based on Technology Acceptance Model (TAM) published by Davis (1986). Data was analysed by using SPSS software version 16. The results showed that "perceived usefulness", "perceived ease of use", "attitude towards using" and "behavioral intention to use" variables were considered as the effecting attitudinal factors and all had positive influence on acceptance. Based on analysis of data, model of mobile learning acceptance was confirmed in the study population and therefore was applicable to the target population.[2] This study applied the TAM to assess the factors contributing mobile learning acceptance among medical students. TAM focuses on the attitudinal aspects towards learning from mobile phone technology. It posits

two particular beliefs.[3] "Perceived usefulness" and "perceived ease of use", are of primary relevance for technology acceptance behaviours.[3] A key purpose of TAM, therefore, is to provide a basis for tracing the impact of external factors on internal beliefs, attitudes and intentions.[3]

Health professionals are beginning to recognise the positive impact smartphone apps can have on patient safety, on outcomes, on equity, and on system efficiency.[4] Medical apps have an enormous potential for improving our practice by providing a quick, comprehensive, and up to date overview of current clinical guidelines, which could help clinical decision making and change the way healthcare is delivered in the future.[5–8]

Comparing two studies mentioned, several questiones arise: How well do intentions predict usage? How well does TAM explain intentions to use a system? Do attitudes mediate the effect of beliefs on intentions? Is there some alternative theoretical formulation that better accounts for observed data? Both studies seem to be complimentary to one another in building confidence in using smart phone technology for medical educational purposes and healthcare. Both studies predict behavior from behavioral intention (BI).[3] We recognize that any model is an abstraction of reality and is likely to have its own particular strengths and weaknesses.[3] Perhaps bringing together the best of both models, in our pursuit of a theoretical account of user acceptance is the best way to investigate the user behavior.[3]

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