

Smartphone and medical related App usage among physiotherapy students of Delhi

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Abstract: *Advancements in technology have always had major impacts in medicine. The smart phone is one of the most ubiquitous and dynamic trends in communication, in which one's mobile phone can also be used for communicating via email, performing Internet searches, and using specific applications. The smart phone is one of the fastest growing sectors in the technology industry, and its impact in medicine has already been significant. India is going through a mobile revolution with smart phones now outnumbering PCs and desktops and is set to reach 314 million mobile Internet users by 2017.*

This research will throw light on how smart phones are being used by physiotherapy students to increase educational and workplace activities.

Key words: Smartphone, Technology, Mobile App, PDA

INTRODUCTION

Information and Technology plays a vital role in health care. Its smart usage is increasing the quality time spent by a therapist with his patient. The use of ICT if made user friendly would simplify the needs of both patient as well as therapist. Smart phones, personal digital assistant (PDA) and handheld tablets are such devices which are acting as building blocks in this direction.¹ from internet to email, they offer on the go access to information never before possible. They have the potential to have a positive impact upon patient care. Specifically, by providing personnel with immediate access to medical and health information, this technology can lead to improved decision-making and reduced numbers of medical errors thereby increasing safety, quality and efficiency of health care^{1,2}. improved communication between hospital medical staff^{3,4} and enhanced telemedicine capability^{5,6}.

Utilization of smart phones by medical personnel has evolved. Doctors are now able to hold textbooks on their smart phone. Moreover these apps update themselves, and are relatively easy to produce and release. While early literature focused on properties such as remote information access and improved communication, the recent trend has been for personnel or departments to use this technology to develop customized apps to improve an area of work.⁷⁻⁹ Visualization of radiological images on smart phones, so-called 'teleradiology', has been a popular area of research as have clinical guideline/decision support apps like finding the degree of cobs angle for diagnosing Scoliosis,¹⁰

All these benefits in clinical practice are making students also learn about these apps. It is described as the "learn anywhere" resource for students¹¹, with further research exploring the use of podcasts on smart phones as a way of delivering education. They provide numerous benefits to learners, such as formative evaluation, feedback, and enhancement of problem formulation, with evidence for improved case logbook use¹²

With widespread student self-adoption of such new personal technology, educators can look forward to increasing portability of well-designed, multiplatform "learn anywhere" resources

As a result of these developments the need for a study examining the uptake and application of smart phones was identified. The aims of the study were to: identify the extent to which physiotherapy students own smart phones and use them to enhance their clinical activities; and how often they use apps for education and clinical professional development.

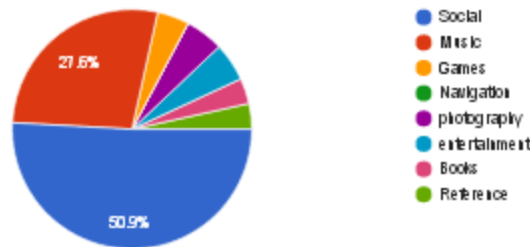
Methods

A survey of physiotherapy student’s cohorts was undertaken within Delhi. Participants were asked whether they owned a Smartphone and if they used apps on their Smart phones to support their education and practice activities. Frequency of use and type of app used was also investigated. Open response questions explored participants’ views on apps that were desired or recommended and the characteristics of apps that were useful. It was also tried to found out what is limiting them to use these apps.

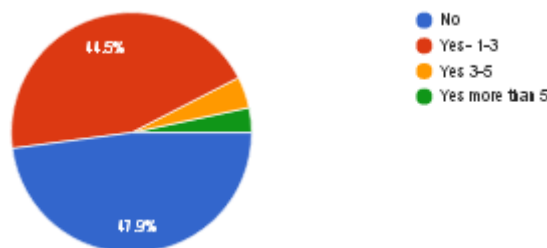
Results

Out of all the respondents 77% were females. Almost all of them owned smart phones, mainly Android. Only 8% of them used the Smart phone for Books or reference, rest all used for entertainment like music, photography or social networking. 62% students have installed physiotherapy related apps which they are either using for learning or revising or both. There is population of students (13.2%) who have installed but never used. The most preferred activity is web access. The students are not spending more than 30 minutes per day on smart phone applications related to clinical and educational activities. The most preferred (53.6%) benefit of academic app they feel is that it increases their knowledge in the field of study and almost 67% feel that it does not increase motivation to complete course work. Limited funds to download the app or lack of awareness are the major reasons for not using mobile Apps. Easy accessibility is the characteristics they find useful in an app along with its rich and accurate content. Easy to understand and interesting pictures and videos that make the applications a better tool for learning, are the qualities which students feel are still lacking.

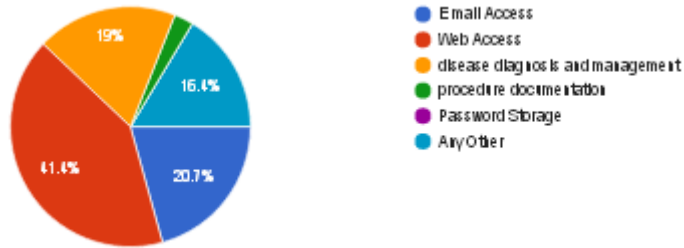
Which category of app you use most frequently?



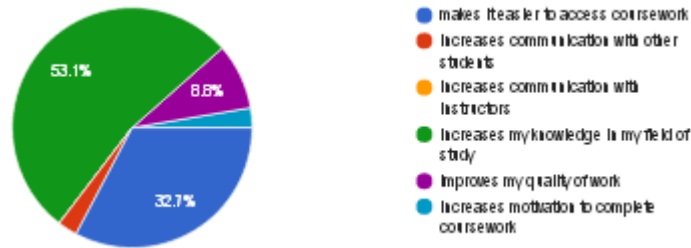
Concerning your smart phone, do you own physiotherapy related applications:



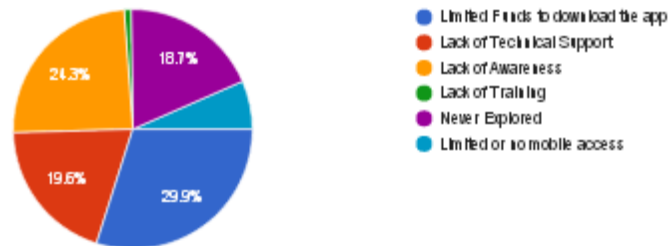
In relation to the following types of applications, please indicate which the most preferred activity on smart phone is:



Benefits of academic app Preference 1



Reasons for not using mobile Apps Preference 1



DISCUSSION

The quick embracement of new technologies of mobile phone gives both academicians and students anywhere a diversity of options regarding how they accept useful information. The Institutions of Higher Education are in the first rank to know and to make easier the integration of technologies of next generation. Both academicians and students can take more responsibility for their own study.

The mobile phone technology has made knowledge easily accessible to those who request it. New technologies also help making easier the knowledge approach, creating opportunities for the collaboration and eliminating barriers on and off the campus. Mobile phone technologies give an opportunity to provide a new generation of people with means of communication and activities without taking into account the place. Our study also focuses that today's physiotherapy students are also very inclined to use it and they are realizing that it can be used as real-classroom learning practices.¹³

The cost of affordability and accessibility of such apps is still in question and being student it is indeed a big problem. Although there's no easy solution here, some acquisition models are worth considering for higher education institutions. Among them are loans, leases, stipends, and making device and app purchases part of tuition or may be the library has a short-term tablet

loan program to address low tablet ownership rates or mobile service carriers to provide service and equipment discounts for students and faculty members. This way the problem may be taken care of.

Through this survey we know how often and what all apps students are using which might help instructors to provide more value addition to mobile devices, which can increase device ownership and user engagement too. Instructional designers and specialists can offer instructors pedagogical support by walking beside them as they outline their learning goals and teaching strategies. Once the outline is established, decisions about mobile technology's relevance to a course can be made. Mobile technology should be used only if it can support student learning and enhance the curriculum during learning experiences.

This collaboration between the receiver (student), the resource person (academician) and the IT developer would help in designing of apps which would satisfy learner's needs and provide professional development by best pedagogical implications.

Conclusion

Smartphone and medical related Apps are used by physiotherapy students in Delhi but the use is limited.

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