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Can Mobile Phone Apps Influence Peoples Health Behaviour Changes?

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***Abstract*: *Background:* life style modification is a key factor of the prevention and management of chronic disesases. Mobile device that people already carry provide a promising platform for facilitating this life style changes. As the prevalence of the cost of chronic diseases continue to rise with the advent use of mobile phone apps. In this paper we have argued that carefully designed mobile interventions can be a powerful way of fostering health behaviour change**

***Objective:* The aims of the present study is to: identify the extent to which junior doctors and medical students own smartphones and use them to enhance their clinical activities; and how often they use apps for education and clinical professional development.**

***Methodology:* A cross sectional study was conducted on college students of Mamata educational society, ethical clearance was obtained for instructions review board Mamata college. Questionnaire was distributed to students who are present the of the study and collected back on same day with their resposnses Data was analysed by using SPSS version 25 descriptive stastistic was performed chi square test was done. Among the categorical variable level of significance is set at 0.05**

***Results:* In this study, 200 participants were enrolled; 75% were females, 25% were males. The following 3 types of factors emerged from the data as influencing engagement with the intervention and physical activity: individual (self-monitoring of behavior, goal setting, and feedback on behavior), social (social comparison, similarity and familiarity between users, and participation from other users in the network), and technological. In addition, automation and personalization were observed as enhancing the delivery of both individual and social aspects.**

***Conclusion:* This study proved an insight of health behaviour changes in dental doctors with the use of mobile phone apps suggesting an improved health care status by improvising the better health related apps interventions and decreasing the unnecessary using mobile apps to save the time as well as to prevent the solitary life styles.**

***Keywords*: mobile phone, health behavior**

1. Introduction

Globally, mobile phone apps have become increasingly prevalent among users. By July 2015, Google Play, the largest app store, had 1.6 million apps accessible for users. remains the second-largest app store, with 1.5 million apps available for download [1]. The aims of this review are to examine the effectiveness of mobile phone apps in achieving health-related behavior change across a broader range of health issues and to examine the quality of the reported studies.

There is increasing interest from academics and clinicians in harnessing smartphone applications (apps) as a means of delivering behavioral interventions for health. Despite the growing availability of a range of health-related apps on the market, academic research on the development and evaluation of such apps is in the relatively early stages as portable devices that are highly valued by individuals, they tend to be switched on and remain with the owner throughout the day. Therefore, they offer the opportunity to bring behavioral interventions into important real life contexts where people make decisions about their health and encounter barriers to behavior change [2].

In addition to the existing body of research on telephone and SMS (short message service) text-messaging-delivered interventions, smartphone software programs, or applications (apps) have stimulated significant attention in recent years. At this juncture, as well as initial pilot studies of specific individual apps, there is a need for formative research that helps us to better appreciate the interest various groups of people have in using these sorts of apps and factors that may influence acceptability and engagement.

The utilisation of smartphone and other mobile devices, such as the personal digital assistant (PDA) and handheld tablets, has the potential to have a positive impact upon patient care. The smartphone has also proved useful within medical student populations. Trelease described the use of the smartphone as a potential “learn anywhere” resource for students [3], with further research exploring the use of podcasts on smartphones as a way of delivering education.

The aims of the present study is to: identify the extent to which junior doctors and medical students own smartphones and use them to enhance their clinical activities; and how often they use apps for education and clinical professional development. This survey was undertaken as a pilot study, to provide baseline data for future research being undertaken by the authors, planning to investigate a smartphone based apps

influence people's health behavior changes.

The use of technology in the delivery of behavior change interventions has potential in promoting their success and diffusion. Notably, mobile health (mHealth) interventions, involving mobile apps and wearable devices, can reach individuals continuously, enabling the self-monitoring of health and physical activity data and the tailoring of intervention components in real time [4]. In addition, Web-based social networks seem to hold great promise, as they can help address social processes related to behavior change such as social support and social comparison. Given their potential, interventions combining mHealth technologies and Web-based social networks might be particularly effective in promoting physical activity.

Mobile technologies that individuals routinely carry, such as mobile phones, may be a particularly effective platform for delivering such encouragement as they are likely to be with the individual when she most needs the support. Over the past several years, we have conducted early stage field studies of mobile technologies designed to encourage physical activity. In this paper, we describe key lessons learned from that work in an effort to help others who are designing systems to support health behavior change. We conclude with methodological reflections about how to design such systems so that they smoothly integrate into users' everyday lives while effectively encouraging lifestyle change.

2. Methodology

A cross sectional study was conducted on college students of Mamata educational society, ethical clearance was obtained for instructions review board Mamata college.

A pilot survey study was conducted in few students to check the feasibility of questionnaire total number of participants included in the study was 200 convenient sample method was followed students who are willing to participate and presented during the study are included students have been not willing to part and absent during the study was excluded the study was conducted from October to December 2018

A self-structured questionnaire which contains 15 questions which includes demographic details and attitude of students towards mobile phone apps and their practice

Questionnaire was distributed to students who are present the of the study and collected back on same day with their responses.

Data was analysed by using SPSS version 25 descriptive stastistic was performed chi square test was done. Among the categorical variable level of significance is set at 0.05.

3. Results

Total number of participants were 200 which includes males and females 50 and 150 respectively.

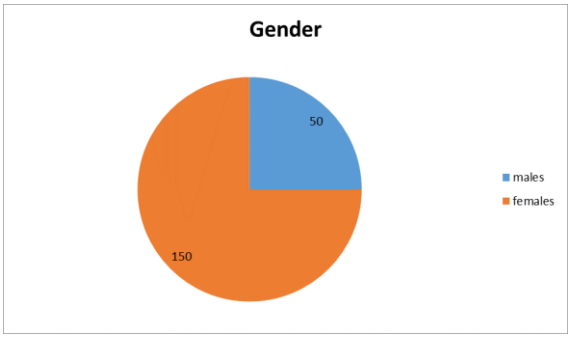

Fig. 1. Gender

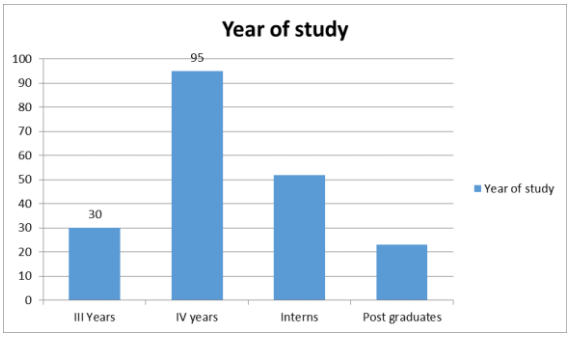

Fig. 2. Distribution of students according to year of study

Table 1 shows More than half (55%) of the people were using mobile phones half of a day. However, very few (12%) were using full day. Moreover, there was statistically significant difference was found.

Table 1

How long do you use smartphones?			
	Frequency	Percent	
Half a day	108	54.0	
More than half	67	33.5	
Full day	24	12.0	
Total	200	100.0	P<0.05

Table 2 shows Majority (60%) were having discomfort or pain in shoulder or hand after prolonged usage of mobile. On the other hand, less than half were (40%) were not having these symptoms. And there was significant difference was found.

Table 2
Have you experienced any discomfort or pain in shoulder or hand after prolonged usage of mobile?

		Frequency	Percent	
Valid	Yes	120	60.0	
	No	80	40.0	P<0.05
	Total	200	100.0	

Table 3
Do u think excessive usage of apps or mobile phones can cause brain cancer?

	Frequency	Percent	
Yes	150	75	
No	50	25	p>0.05
Total	200	100.0	

Table 3 shows most of the participants (75%) agreed for prolonged of mobile phone causes brain cancer. On the contrary, small number (25%) of them disagreed to the statement.

Table 4. shows large number of participants agreed (89%) that it is dangerous to keep mobile phones while sleeping. On the contrary, very few (11%) disagreed for that.

Table 4
Do you think it is dangerous to sleep along with mobile phones?

	Frequency	Percent	P value
Yes	178	89	<0.05
No	22	11	

Table 5 shows whatsapp is the commonly used app according to the participants of the study (53%). Which is followed by Instagram (35%). Major (84%) of the participants agreed that apps are one of the major reason for sedentary life style. To the contrast, 16% of the participants disagreed for the above statement.

Table 5
Do you think usage of apps results in sedentary life style?

	Frequency	Percent	
Yes	167	83.5	
No	33	16.5	
Total	200	100.0	P<0.05

4. Discussion

The present study was conducted to assess the health behavior of dental doctors by the influence of mobile phone apps.

Mobile phone apps offer more active engagement in health care and improved convenience of substantially lower cost. But in this current study the usage of mobile apps adversely resulted in sedentary life styles and health behavior changes.

One of the primary benefits of apps is their potential for incredibly high reach which mobile phone use reaching near saturation among some populations particularly young adults, and the high rates of consumer acceptability apps effectiveness research must also consider total app reach, this aspect of health behavior change apps has not been assessed with most studies being exceptionally small in scale. Apps that offer even a small health benefits could still be a valuable public health intervention if the population level reach is high enough.

Mobile phone apps are seen as a potential low cost way to deliver health intervention to both general at risk populations, many such apps exist. However, rigorous research to test their effectiveness and acceptability is lacking, despite their apparent popularity, public and commercial apps have not been comprehensively evaluated to date, they are currently being used without a thorough understanding of their associated risks and benefits, there is a gap between app concept, delivery, and translation into the health behavior change.

5. Conclusion

This study proved an insight of health behaviour changes in dental doctors with the use of mobile phone apps suggesting an improved health care status by improvising the better health related apps interventions and decreasing the unnecessary using mobile apps to save the time as well as to prevent the solitary life styles.

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