Prevalence of smart phone use and smart phone addiction among Students of Doctor of Physiotherapy: A cross sectional study

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ABSTRACT

Objective: To determine the prevalence of smart phone use and smart phone addiction among students Doctor of Physiotherapy Department of Isra University, Islamabad Campus.

Study Design: Descriptive Cross sectional study

Place and Duration: Isra University, Islamabad Campus from 1st September 2017 to 30th November 2017.

Methodology: Students were given a structured questionnaire, which consisted of three basic parts. First had questions concerning demographic profile, 2nd part included questions about smartphone use, and the 3rd part was used to assess smartphone addiction. Addiction was assessed by SAS-SV scale and association of addiction with gender and academic year was analyzed. The parameter used to assess addiction were, decreased work efficiency, poor concentration, emotional liability in absence of phone, repeated checking of phone, lack of social communication and lack of time management. The cutoff values for males and female smartphone addiction were taken to be 31 and 33 respectively.

Results: Among total of 220 participants, 21.4% were male while rest were females. Mean age was 21 years. Students who used smart phone for 6 hours per day were 30% as compared to 1.8% students who used it for less than 10 minutes per day. Respondents using smart phone 21-50 times a day were 27.7% whereas, 8.6% used it for less than 5 times a day. Regarding smartphone usage after waking up, 50.9% students used it within 5 minutes while only 12.3% students used it after more than 60 minutes. Addiction was found to be positive among 44.5% participants. Among males, 63.8% were addicted as compared to 39.3% females.

Conclusion: Indicators of smartphone usage revealed high usage among majority of students of physiotherapy. Male gender was found to be more addicted to smartphone use.

Keywords: Physiotherapy, Students, Smartphone, Prevalence, Addiction, Dependence.

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INTRODUCTION

As cell phone possession is becoming widespread, especially among the youngsters, society is realizing and starting to question the effects of cell phone use on adolescent development[1]. According to the global mobile statistics for 2011: Google had $1 billion in annual mobile advertising revenues and U.S. mobile advertising revenues were expected to reach $1 billion[2]. There has been quite an enormous amount of popularity of cellular phones in younger generation within a short span of time[3]. An extraordinary growth has happened in smartphone use. According to CNN report 269.9 million smartphones were purchased internationally in 2010 while in 2011 a half a billion smartphones were purchased worldwide[4]. Youth is more inclined towards using mobile phones for activities apart from communication than older generation[5].

These latest technologies like iPhone and similar smartphones have been described as addictive[6]. Terms such as “Smartphone addiction”, “mobile phone addiction”, “problematic mobile phone use”, “mobile phone dependence” ‘compulsive mobile phone use” and ‘mobile phone overuse” have been synonymous to describe more or less the same phenomenon, that is, individuals engrossed in their smartphone use to the extent that they neglect other areas of life[7-9]. Most commonly, the terms used to describe this kind of addiction are “mobile phone addiction” and “smartphone addiction”[10-12]

Many researches have shown that instead of living without their iPhone, people would give up brushing their teeth, exercising, wearing shoes, showering, and eating chocolate for the same period of time[13]. One of the studies conducted by Ahmed I in

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Pakistan revealed similar pattern[14].

Internet and smartphone addiction is quite different from other addictions such as alcohol or drugs; the former are behavioral and not substance dependent while the later is substance dependent. We can define behavioral addiction as a disorder characterized by behavior that functions to produce pleasure and to relieve feelings of pain and stress, and failure to control or limit the behavior despite significant harmful consequences[15]. This phenomenon is more prevalent among teenagers and college students as they are more open to explore and adopt new and innovative technologies. When teenagers and college students start their university life, the stress to fit in the new environment becomes enormous and stressful. These stressors from interpersonal and University-related anxiety automatically relate to smartphone addiction[16]. Smartphone can act as an easy escape by providing its users instant connections with their social contacts[17]. These findings have led us to the rationale of this study which is to assess the level of dependence of Doctor of Physiotherapy students to smartphone. Keeping in mind the above-mentioned scenario a study was conducted to determine the prevalence of smart phone use and smart phone addiction among students of Physiotherapy department of Isra University, Islamabad.

METHODOLOGY

This descriptive cross-sectional study was conducted by using convenience sampling on the students of Physiotherapy Department from Isra University Islamabad from 1st September 2017- 30th November 2017.

All students from five years of DPT program were included in the study. Students enrolled in any other academic programs were excluded. A structured questionnaire was distributed and collected after two days.

The questionnaire consisted of three basic parts. First had questions concerning demographic profile, second part included questions about smartphone use including frequency, duration and time till first use, and the third part was used to assess smartphone addiction for which a valid questionnaire was used i.e. "The short version of smartphone addiction scale for adolescents (SAS-SV)" having Cronbach's alpha value of 0.85[18]. It comprises of questions that have been selected for their validity. Likert scale from 1-6 was used in SAS-SV questionnaire, in which 1 indicated strong disagreement whereas 6 showed strong agreement. The parameter used were, decreased work efficiency, poor concentration, emotional liability in absence of phone, repeated checking of phone, lack of social communication and lack of time management.

Data Analysis: Data was analyzed using SPSS version 22. After the collection of data, scoring was done, by adding the scores of marked answers. The cutoff values for males and female smartphone addiction were taken to be 31 and 33 respectively. Frequency distribution was calculated, cross tabulation were produced between Smartphone addiction with gender and academic year.

RESULTS

A total of 220 participants between ages 17-25(Mean age 21years) were included in the study. Males were 47(21.4%) while Females were 173(78.6%). Regarding the distribution of students among academic years 25(11.4%) students were from 1st year, 20(9.1%) from 2nd year, 40(18.2%) from 3rd year, 58(26.3%) from 4th year and 77(35.0%) students were from 5th year.

Out of 220 students 66(30%) students used smart phone 6 hours per day as compared to 4(1.8%) students used it for less than 10 mins per day. (Fig-1)

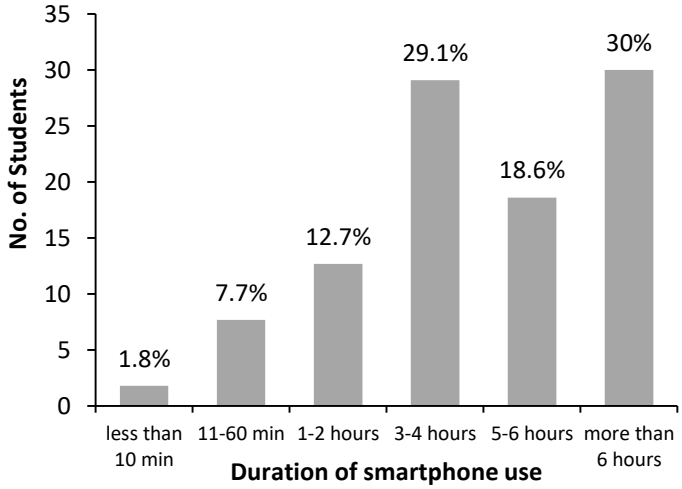

Fig-1: Duration of smart phone use on a typical day (N=220)

Highest number of students that is 61(27.7%) used smart phone 21-50 times per day, while only 19(8.6%) used it less than 5 times a day (Fig-2).

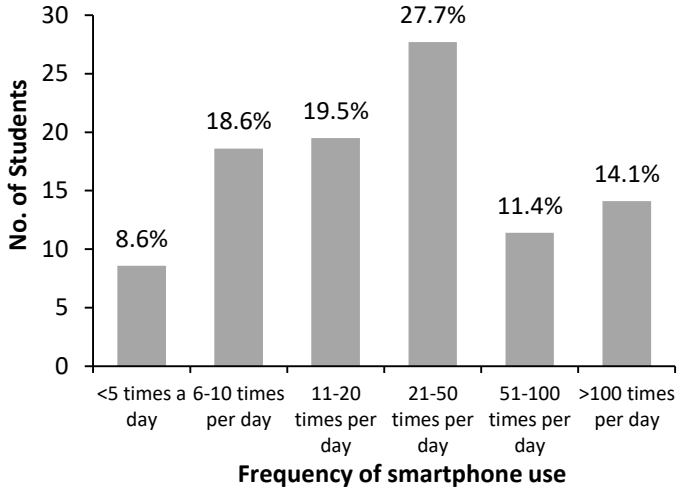

Fig-2: Frequency of smart phone use on a typical day (N=220)

112 (50.9%) students used smart phone within 5 minutes waking up, while only 27(12.3%) students used it after more than 60 minutes of waking up (Fig-3).

The p-value is statistically significant for both gender and class as seen in the Table-I.

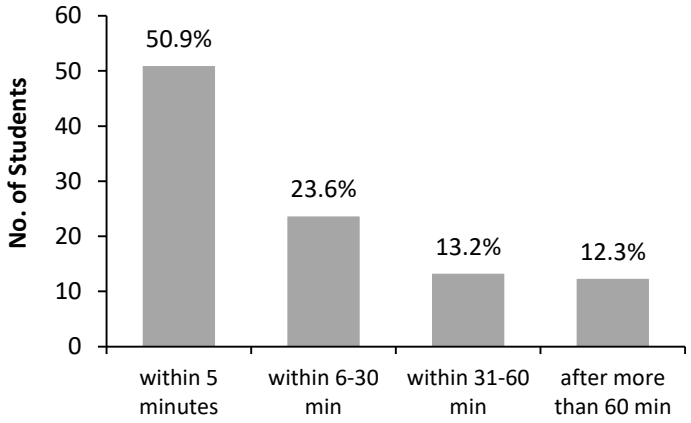

Fig-3: Time until first smartphone use in the morning (N=220)

Table-I: Smartphone addiction and its association with gender and academic class (N=220)

Variables		Smartphone Addiction		Total	P-Value
		Present	Absent		
Gender	Male	30 (63.8%)	17 (36.2%)	47 (100%)	0.003
	Female	68 (39.4%)	105 (60.6%)	173 (100%)	
	Total	98 (44.5%)	122 (55.5%)	220 (100%)	
Class	1st year	7 (28%)	18 (72%)	25 (100%)	0.014
	2nd year	14 (70%)	6 (30%)	20 (100%)	
	3rd year	19 (47.5%)	21 (52.5%)	40 (100%)	
	4th year	19 (32.7%)	39 (67.3%)	58 (100%)	
	5th year	39 (50.6%)	38 (49.4%)	77 (100%)	
	Total	98 (44.5%)	122 (55.5%)	220 (100%)	

DISCUSSION

This study examined the indicators of smartphone use and smartphone addiction. The smartphone addiction scale short version showed good reliability and validity for the assessment of smartphone addiction. The, SAS-SV could be used efficiently for the evaluation of smartphone addiction in community and research areas[18].

When duration of smartphone use on a typical day was enquired, it was found that 30% of the students used it for more than 6 hours a day, therefore one third of our respondents used smartphone for longer duration of time. This is consistent with a Swiss study with similar findings which showed usage of smart phone for longer duration negatively affecting the lifestyle of students. Social networking was the most personally pertinent smart phone operation that was associated with smart phone addiction followed by messenger surface, web surfing, games and entertainment[19,20]. In a study, taken among King Saud University students, majority of respondents had lower than normal sleeping hours, and encountered a lack of energy the next day, had an unhealthy lifestyle, had adversely affected academic achievements due to spending more than 8 hours and using more than 4 applications of smart phone per day[21].

While assessing the frequency of smartphone usage, 27.7% of students used smart phone 21-50 times a day, whereas 8.6% used it for less than 5 times per day. This repeated smartphone use may link with adverse outcome in their lifestyle. In a study conducted by Demirci it was found that the higher the addiction level, more was the level of anxiety, depression and day time dysfunction[22,23].

Almost half of the students included in our study checked their phones within 5 minutes of waking up in morning causing stress. Similar report, with a bit higher prevalence had been reported in a cohort study[24]. Both of these studies show that in this region the current lifestyle of our youth is highly dependent on starting their day by checking their smartphones soon after getting up.

Regarding gender association with smartphone addiction, males were found to be more addicted to smart phone as compared to females in our study, while females were more addicted in a study conducted by jung-Yeon Mok in Korea[25]. However, a study of nomophobia and smart phone dependence in Indian medical students revealed that this disorder is prevalent equally amidst the study groups regardless of gender[26]. In our study male gender having higher levels of addiction may be due to more affordability and accessibility in male dominated society.

Among the 5 academic years of DPT, high number of students with smart phone addiction were observed in 2nd year, while least number were seen in 1st year. This may be due to more social interactions, they are more involved in knowing others and they might get more assignments and projects by this time so more internet usage is required. It could be due to more gaming and bullying purposes also, as mentioned in a research done on junior and senior high school students in Japan where junior high-school girls mentioned that bullying among friends took place in their real relationships as well as through the instant messenger app, for example, through insulting posts or forced expulsion from the chatting groups. Male students mentioned that many of their friends are so involved in gaming apps, that they run these programs even during a recess of 10 minutes or so, in order to participate in random event-battles[27]. Further studies on smartphone addiction, gaming addiction, substance use and their detrimental effects on personality would provide better understanding of characteristics of different addictive disorders.

CONCLUSION

Indicators of smartphone usage revealed high usage among majority of students of physiotherapy, Isra University, Islamabad Campus. Male gender was found to be more addicted to smartphone use.

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CONTRIBUTION OF AUTHORS

Javaid A: Conceived idea, Designed research methodology, Data collection
Yasir I: Literature search, Data analysis, Data interpretation
Ahmed F: Literature search, Data analysis, Manuscript writing

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