Original Research Article

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Pattern of internet use and prevalence of internet addiction among interns of a medical college in Kerala

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ABSTRACT

Background: Exponential increase in use of smartphones and availability of internet services makes the students and young doctors prone to internet addiction. The interns are particularly at risk because of their unique communication and academic needs. The study was conducted to evaluate the pattern of use of internet and prevalence of internet addiction among interns.

Methods: This cross-sectional study was conducted using an online questionnaire related to internet use and Young's internet addiction test.

Results: All interns were using smartphones and 96.3% of them used internet daily. About 80% of them started using internet before the age of 19 years. Duration of use of internet exceeded three hours a day among 40% of them during weekdays. During the weekends 60% of interns used internet for more than three hours per day. All of them were using internet for communication specially for instant messaging. Another common use was social networking by 90% of them. Educational purpose, file sharing, web browsing and listening to music or news were also done using internet. Prevalence of internet addiction among interns was 47.9% (Mild - 36.3%, moderate - 11.3% and severe -1.3%).

Conclusions: Prevalence of internet addiction is high among the interns. Efforts should be taken to enhance awareness and prevent internet addiction among them.

Keywords: Internet use, Internet addiction, Interns, Medical college, Kerala

INTRODUCTION

Internet is now one of the most important sources of information for students in institutions of higher learning throughout the world. The development of the Internet has made instantaneous access to much of the entire body of medical information an exciting possibility. It has evolved as a popular medium for delivering educational materials. The Internet has been used for medical education in diverse ways including teaching, diagnosis of diseases, conduct of medical examinations and for research activities. More than half of the respondents in a survey conducted by Podichetty and colleagues claimed that web information influenced their health care decisions.1 Addictive use of internet is fast becoming significant problem worldwide and university students are particularly vulnerable for the reason that internet use is an integral part of student life.² Literature shows evidence of increasing use of mobile phones and internet among health care professionals. Takeshi Sato compared various studies of internet addiction in student population and reported that the prevalence of internet addiction varies between 8 to 10%.³ Sumit and co-workers conducted a study on final year MBBS student and interns and reported that 97.02% possessed an internet enabled mobile phones and 94.05% used internet mostly on their mobile phones.⁴ In a study Koehler and his colleagues reported possession of mobile phones among 91% of health care professionals and 87% of them used mobile phones during clinical practice.⁵

The internet is used worldwide for imparting medical education and improving its delivery. Internet finds many uses in the medical domain like rapid seamless delivery of educational material, access to online databases, exploring the application of theoretical ideas and use of various interactive tools to enhance understanding of complex ideas. As the Internet has become pervasive in the lives of young people, their online activities and interactions have become the focus of intense research. In the medical field, computers/smartphones have been used mostly for biomedical practice and research, and less often for medical education. Considering the rapid expansion of biomedical knowledge base and the need for self-directed learning to acquire life-long learning skills the students of medicine should be promoted to use internet for educational purpose.

Objectives

- To study the pattern of internet use among interns in a medical college in Kerala state.
- To find the prevalence of internet addiction among the study population.

METHODS

This cross sectional study is carried out among interns working in Malankara Orthodox Syrian Church Medical College in Kerala state during May 2017. All the interns working in the college were included in the study. An online questionnaire designed for study was provided to the participants through email. All data entered into the online questionnaire is maintained in the Google cloud. Provision was provided for using printed questionnaire. To avoid duplication of response participants were asked to login to their g-mail account to fill the questionnaire. A questionnaire was developed to collect information

regarding internet use and demographic information about the participants for this study. In addition to this, twenty questions used to assess internet addiction developed by Young were also included in the online questionnaire.⁶

The study was approved by the institutional Ethics committee. Data were collected without disclosing identity of the participants during the study. The participants were provided with a participant information sheet and informed consent was obtained from each participant before inclusion in the study.

Data analysis was conducted using Microsoft excel software. Descriptive statistics was used for tabulation and presentation of data. The scores of internet addiction test were compiled and severity impairment index was calculated. Scores below 30 points indicates normal level of internet usage, 31 to 49 points indicates mild 50 to 79 reflects moderate and above 80 points indicates a severe dependence of internet.

RESULTS

Out of 81 participants, 62 (76.54%) were females and 19 (23.46%) were males. Age of the interns ranged from 21 to 30 with mean 24. All of them owned Smartphone of which 76 (93.8%) were using android phones and five were using iPhone. Smartphone is used as major gadget for accessing internet by 75 (92.6%) participants. Of them 13 (16.04%) reported internet use for more than 10 years, 53 (65.43%) started internet use for 5 to 10 years. The rest, 15 (18.51%) reported use of internet for less than five years.

Among the participants 78 (96.29%) were using internet daily. The rest reported internet use at least once a week. Among daily users, 66 (84.6%) were using internet several times a day.

Based on symptom complaints sub scores, higher prevalence of Internet addiction was observed in Excessive use (56.79%) and in Lack of control (51.85%) Least prevalence was observed in Neglect of work category (35.80%).

Table 1: Pattern of internet addiction based on symptom complaints.

	Internet addiction test scores			
Symptom complaints	No addiction	Mild addiction	Moderate addiction	Severe addiction
(maximum possible score)	<30*	30-49*	50-79*	80-100*
	No (%)	No (%)	No (%)	No (%)
Salience (25)	46 (56.79)	28 (34.56)	5 (6.17)	2 (2.47)
Excessive use (25)	35 (43.20)	36 (44.44)	8 (9.87)	2 (2.47)
Neglect of work (15)	52 (64.19)	20 (24.69)	6 (7.4)	3 (3.70)
Anticipation (10)	44 (53.32)	23 (28.39)	13 (16.04)	1 (1.23)
Lack of control (15)	39 (48.11)	27 (33.33)	13 (16.04)	2 (2.47)
Neglect social life (10)	43 (53.08)	24 (26.63)	13 (16.04)	1 (1.23)

^{*}Percentage of maximum possible score.

Excluding one participant all of them (80) used internet on week days and weekends. Duration of use was more during weekends compared to weekdays. Among the participants 33 (40.7%) used internet for more than 3 hours per day during weekdays whereas 48 (59.3%) reported it during weekends.

Instant messaging and file sharing were the commonest uses. The least used were listening to music and news browsing as shown in Figure 1.

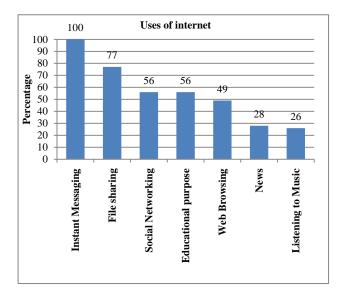


Figure 1: Distribution of activities of daily users (n=78).

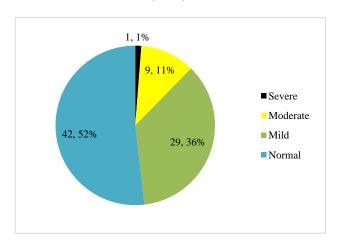


Figure 2: Level of internet addiction of the participants.

Prevalence of internet addiction was 48%. Of the participants having internet addiction (IAT Score more than 30), 29 (74.35%) were mild, 9 (23.68%) were moderate, and 1 (2.56%) was severe.

Pattern of internet use: All the participants used instant messaging as their communication tool. Of the participants 78 (96.3%) used instant messaging daily, 2 (2.5%) 3-5 days a week and 1 (1.2%) once a week. Social

networking was another common use. Among the participants 73 (90.12%) used internet for social networking. Of them, 44 (60.27%) were using daily and 29 (39.73%) once in a week or less. Of the participants 6 (7.4%) used internet for file sharing daily, 40 (49.3%) used once in a week, 13 (16.1%) less than once in a week and 22 (28.2%) not used It. Of the study population 38 (48.71%) used web browsing daily, 26 (33.3%) once in a week, 7 (8.64%) less than once in a week and the rest 11 (13.6%) not used it. Of the participants 32 (39.5%) visited blogs once in a week, 19 (23.4%) less than once a week and 30 (37.1%) were not using internet for visiting blogs. Of the participants 70 (86.4%) used internet for listening to music. Of them 20 (24.69%) listened music daily, 22 (27.16%) weekly and the rest, 28 (34.56%), less than once a week. Among participants 22 (27.16%) used internet for accessing news daily, 41 (50.61%) weekly and rest 18 (22.22%) less than once a week. Of the participants 33 (40.74%) used internet TV weekly, 19 (23.45%) monthly and 29, (35.80%) not used. Among the participants 30 (37.03%) used gaming weekly, 24 (29.62%) monthly and 27 (33.3%) not used. Among the study respondents 78 (96.29%) used internet for educational purpose. Of them 44 (54.32%) used it daily 24 (29.63%) weekly and 10 (12.34%) less than once a week. Of the participants 62 (76.54%) used internet for online shopping, 32 (39.50%) of them using it weekly.

DISCUSSION

Pattern of Internet Use: In this study 96.3% of the respondents were using internet for educational purpose. Lower rates were reported among medical students by Chathoth and colleagues from Mangalore (82.2%), Ranganatha and others from Bengaluru (80.3%), Sumit and co-workers from Maharashtra (76.8%) and Lal and colleagues from Delhi (56.6%). The study conducted by Singh and co-workers among medical students in Jodhpur and Delhi also reported 35.2% use for academic purpose. Bashir and co-workers from Lahore reported a rate of 63% among University students.

In our study 96.3% of participants used internet for instant messaging. In study conducted by Chathoth and colleagues from Mangalore reported a lower proportion of respondents (65.6%) used internet for online chatting. Bashir and co-workers from Lahore also reported a lower proportion of students (32%) using internet for communication. 11

In the present study 90.1% used internet for social networking. Higher level of use for social networking is reported by Chathoth and colleagues from Mangalore (97.3%) and Ranganatha and others from Bengaluru (98.4%).^{7,8} In the study conducted by Singh and colleagues in Jodhpur and Delhi only 10% of participants used internet for social networking.¹⁰

In our study 86.4% reported listening to music and 64.2% were using internet TV for entertainment purpose.

Studies by Chathoth and colleagues from Mangalore (82.2%), Ranganatha and others from Bangalore (71.2%) and Sumit and co-workers from Maharashtra (66.67%) reported similar level of use of internet for entertainment. ^{4,7,8} In study among students by Bashir and co-workers from Lahore internet use for entertainment was found in 24% of the participants. ¹¹

In our study 77.8% used internet for news browsing. Studies by Chathoth and colleagues from Mangalore (63.3%), Mazhari from Iran (61.9%) and Bashir and coworkers from Lahore (16%) reported lower rates. 11,12 In the present study 60% were using internet for online games in comparison with study by Chathoth and colleagues in Mangalore reported only 28.9%.7 In the present study higher rate of visiting blogs (48.1%) was found in comparison with study by Chathoth and colleagues from Mangalore (6.7%). In our study 72% of respondents used web browsing while a study by Sumit and co-workers from Maharashtra (81.55%) reported higher rate.⁴ A lower rate was reported in a study by Lal and colleagues conducted in Delhi 36.5%.9 In our study none has reported use of internet for Email communications. In studies conducted in Delhi by Lal and colleagues (48.7%) and Mazhari from Iran (76.6%) internet is used for email communication. 9,12

Internet addiction

Our study showed overall prevalence of 48% with 35.8% mild addiction, 11.1% moderate and 1.2% severe addiction. An almost similar rate of moderate (11.8%) and severe (0.5%) internet addiction was reported by Srijampana and colleagues among medical students in Andhra Pradesh. ¹³ The combined prevalence of moderate and severe internet addiction (IST Score above 50) was 12.3% in our study. Prakash reported a similar prevalence of 13% in a cross sectional study conducted among 100 Junior Doctors in Delhi. ¹⁴ Chaudhari and co-workers reported a higher overall prevalence of 58.87% and a lower prevalence of moderate and severe internet addiction (7.45%) in western Maharashtra. ¹⁵

Higher rates of moderate and severe internet addiction were reported among medical students in some studies. Studies by Ranganatha and others from Bengaluru 22.8%, Ratan and co-workers from Maharashtra 23.3% (21% moderate and 2.3% severe), Chakraborti and colleagues from West Bengal 19.3% and Ching et al from Malaysia (36.9%) were some among them. ¹⁶⁻¹⁸

Some studies conducted among university students also reported higher rates of Internet addiction. A study by Hasanzadeh R and co-workers at Islamic Azad University in Iran 17.6%, Sharma in Udupi 16.3% and a study conducted by Nitu in Ranchi (13.33%) are such studies. ¹⁹- Among University students in United States Christakis and colleagues observed a lower prevalence of internet addiction. ²²

CONCLUSION

Use of mobile phones and internet is universal among interns. Most of them use for communication purpose. Higher rate of use was reported in comparison with studies conducted in other parts of India and abroad. Duration of Internet use is more than 3 hours a day among one third of them is a matter of concern even though only around 12% reported moderate/ severe internet addiction. The problem of internet addiction and mobile phone use is a matter of concern among the medical profession and needs further studies in this region.

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