Internet Addiction among MBBS Students of PUMHS (W) Nawabshah, Pakistan.

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Abstract

Background: Unjustified use of internet is common overall, students are more involved unnecessary.
Objective: The current study was carried out to evaluate the frequency, habit, and addiction risk of internet (IA) in students of MBBS at PUMHS (W) Nawabshah, Pakistan. **Study design:** Current study was cross-sectional.
Study place: PUMHS (W) Nawabshah. **Duration:** Current analysis was done during February 2019 – March 2019.
Methods: All female students of PUMHS (W) from IST to final Year MBBS, willing to participate in current study were recruited. Young's IA test using 20-item scoring system was used to detect addiction of internet for data collection. Qualitative and quantative variables were assessed in terms of age, age group, study class, socioeconomic class, mobile type and quantity etc. For addiction of internet (IA) the score was evaluated as low risk (score ≤49 points) and high risk (score ≥50 points). Proportions, Chi-square test, adjusted and un-adjusted odds ratio (OR) (95% confidence interval) were calculated using regression analysis.
Results: Out of total 250 students, from each class there were 50 students, with average age of 20.3 ± 1.4 years; and 61.9% were residing in hostels. In 114/250 (45.6%) students internet use score was average at low risk (score ≤49), p<0.00. In 124/250 (49.6%) students internet use score was 50-79, p<0.00 and were experiencing intermittent or recurrent difficulties. In 12/250 (4.8%) students internet use score was 80-100 and was causing considerable troubles in their routine life p<0.00. Based upon Chi-square test (p<0.00) students were found to be suggestively connected by an increased risk of IA.
Conclusion: Large majorities (49.6%) of students were having infrequent or recurrent difficulties due to use of the Internet, while in 45.6% students Internet use score was average and in 4.8% of students Internet habit was causing considerable troubles in their life.
Keywords: Young's Internet Addiction Test, Addiction, Internet, Medical Students, Entertainment

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INTRODUCTION

Lack of concentration in study and poor academic performance were experienced by medical students who were overusing the internet. The internet is mainly used to interconnect with friends, family and for entertainment[1].

According to International Telecomm-unication Union about 3.2 billion people (50% of the world population) was on line in 2015, which raised to >51% by 2017; out of which 81% of the internet was used by developed countries and rest by the developing countries[2].

In the younger age group theuse of internet and social media has raised extremely over the last two decades, throughout the world. The number of internet users is increasing day by day. In 2001 there were about 07 million, in 2006 there were 40 million internet users in India and it was assumed that by year 2019 this count will reach up to 700 million [3].In India currently, the count of active internet users are about 51 million, out of them about 40 million are urban and 11

million are rural internet users. Internet had reached to almost 10% of Indian households and 4.4% Indian households have multiple users, regular users are 97% and daily users are79%[3]. Study by Sulania, Anika et al had shown that a large majority (84.7%) of students in study are found to be at low risk of internet addiction[4].Students and teenagers are considered to be the main population becoming Internet addict compared to other population groups [5].The students of internet addiction show academic problems, depression, anxiety, change in lifestyle, aggression, sleeping and physical disorders, phobias and a change in attitude to their emotions [6,7]. Its continues use even results in serious consequences on lifestyle change, ignoring health and main social activities [8,9]. Vyjayanthi et al reported equal amount of Internet usage among both sex groups [10].Rogers et al who reported excessive use of the Internet among female to update information, access knowledge, and contact with friends and family, spend leisure time, and online shopping[11]. Ansari et al, in their study analyzed no any statistically noteworthy associations. Being away from home and family; puts pressure on students. To fill and compensate loneliness they expend more time on the internet and hence are prone to develop IA [12].

Rationale: Major use of internet was for communication with their family and friends, entertainment and for academic purposes. So this study will help different students to justify themselves for the

Objective: To evaluate frequency, procedure, and threat of IA (internet addiction) amongst MBBS Undergraduates of PUMHS (W) Nawabshah, Pakistan.

Data collection:

The current research was cross sectional, and was carried out at PUMHS Nawabshah in students of different classes of MBBS. The ethical committee of this institution approved the study and the contestants signed the written informed consent Performa. The students were selected by convenience sampling and any student with previous psychological illness and any other comorbid systemic ailment were omitted from the research. A standard Young's Internet Addiction Test [13] 20 items with responses on Likert scale (5 point) was distributed among the students and measured in levels of Internet addiction as mild, moderate and severe.

The student response for individual questionnaire fluctuated from 0 to 5 like; 5 = always, 4 = often, 3= frequently, 2 = occasionally, 1= rarely, and 0 = does not apply.

The scores obtained for all 20 items were calculated to obtain the total scores. The IAT was categorized as; score 20-49 points: ordinary internet user and surf for longer durations but can control the overuse. Score 50-79 points: representing frequent Internet use and need consideration due to full influence on life. Score 80–100 points: associated with significant use of Internet and need to address the problems (students showing poor academic performance) resulting due to use of internet.

After explaining the aims of current research, questionnaires were distributed to all students during a lecture slot and were collected after the students filled them. The pupils were advised not to inscribe their names in the questionnaire and chose more than one option of the questions.

Data Analysis:

SPSS version 20 a computer based program was used to process and analyze the collected data. For descriptive statistics the frequency distribution was used. Mean age, frequency and percentages of different variables were assessed.

Correlations, chi-square, and other statistical test were applied.

Results:

Descriptive Statistics

Table 1:Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Age (Years)	250	16.00	21.00	18.3920	1.49643
Valid N (listwise)	250				

The age statistics had shown that the mean age was 18.39 with SD1.49, minimum was 16 years and maximum was 21 years. **table 1.**

Table 2: demographic variables			
Variable	Frequency	Percent	P Value
Age Class			
16-18 Years	134	53.6	.255
19-21 Years	116	46.4	
Academic Year			
1st Year MBBS	50	20.0	1.000
2nd Year MBBS	50	20.0	
3rd Year MBBS	50	20.0	
4th Year MBBS	50	20.0	
Final Year MBBS	50	20.0	
Address			
Urban	191	76.4	.000
Rural	59	23.6	
Socioeconomic Class			
Upper Class	105	42.0	.000
Middle Class	101	40.4	
Lower Class	44	17.6	

Table 3: Number Of Mobile Phones			
One Mobile	195	78.0	.000
Two Mobiles	55	22.0	
Type Of Mobile Phones			
Smart Phone	195	78.0	.000
Mobile Phone With Keypad	10	4.0	
Two Smart Phones	30	12.0	
Smart Phone And Keypad Phone	15	6.0	

Demographic variables:

Total 250 students were selected; 50 students from each class from 1st year MBBS to Final year MBBS. There were 134 (53.6%) students belonging to 16-18 years age group, while 116(45.4%) were from 19-21 age group.

Majority were from urban setup 191(76.4%) and 59(23.6%) from rural setup.

Upper class was dominant in this study 105(42.0%) while middle and lower were 101(40.4%), 44(17.6%).**Table 2.**

There were 195 (78.0%) students having ONE mobile. 55 (22.0%)have two mobile phones. Smart phone was 195(78.0%), mobile phone with key pad was 10(4.0%), two smart phones were 30(12.0%) and smart phone and keypad phone were 15(6.0%). **table 3.**

In 114/250 students Internet use score was average. 20-49 in smart single mobile users 89(78.1%), 25(21.9%) in two mobile users. In 114 students Internet use score was 50-79 in smart single mobile users 96(77.4%), 28(22.6%) in two mobile users. in key pad users 0.0,02 mobiles0.0 and with smart phone and keypad 0.0. Internet use score was 20-49 in double smart mobile users 0(78.1%), in key pad users 5(4.4%), 02 mobiles 14(12.3%), and with smart phone and keypad 6(5.3%),. p=0.000

Table 3: Number of Mobile Phones Type of Mobile Phones* Internet Use Score Cross-Tabulation

internet use score				Type Of Mobile Phones: Smart Phone	Mobile Phone With Keypad	Two Smart Phones	Smart Phone And Keypad Phone	Total	Pearson Chi-Square Asymp. Sig. (2-sided)
20-49 You are an average on-line user. You may surf the Web a bit too long at times, but you have control over your usage.	Number Of Mobile Phones	One Mobile	Count	89	0	0	0	89	.000
			% of Total	78.1%	.0%	.0%	.0%	78.1%	
		Two Mobiles	Count	0	5	14	6	25	
			% of Total	.0%	4.4%	12.3%	5.3%	21.9%	
	Total		Count	89	5	14	6	114	
			% of Total	78.1%	4.4%	12.3%	5.3%	100.0%	
50-79 You are experiencing occasional or frequent problems because of the Internet. You should consider their full impact on your life.	Number Of Mobile Phones	One Mobile	Count	96	0	0	0	96	.000
			% of Total	77.4%	.0%	.0%	.0%	77.4%	
		Two Mobiles	Count	0	5	15	8	28	
			% of Total	.0%	4.0%	12.1%	6.5%	22.6%	
	Total		Count	96	5	15	8	124	
			% of Total	77.4%	4.0%	12.1%	6.5%	100.0%	
80-100 Your Internet usage is causing significant problems in your life. You should elevate the impact of the Internet on your life and address the problems directly caused by you Internet usage.	Number Of Mobile Phones	One Mobile	Count	10		0	0	10	.002
			% of Total	83.3%		.0%	.0%	83.3%	
		Two Mobiles	Count	0		1	1	2	
			% of Total	.0%		8.3%	8.3%	16.7%	
	Total		Count	10		1	1	12	
			% of Total	83.3%		8.3%	8.3%	100.0%	

In 124/250 students were experiencing infrequent or recurrent difficulties due to the Internet. Internet use score 50-79 was in smart single mobile users 96/124 (77.4%), in key pad users 0.0/124,02 mobiles 0.0/124 and with smart phone and keypad 0.0/124. Internet use score was 50-79 in double smart mobile users 0/124 (%), in key pad users 5/124(4.0%), 02 mobiles 15/124 (12.1%) and with smart phone and keypad 8/124 (6.5%) .p=0.000

In 12/250 students Internet habit was cause considerable troubles in your life. Internet use score was 80-100 in smart single mobile users 10/12(83.3%), in key pad users 1/12, 02 mobiles 1/12 and with smart phone and keypad 0/12.

Internet use score was 80-100 in two mobile users 0/12(%), in key pad users 1/12, 02 mobiles 1/12 and with smart phone and keypad 2/12 .p=0.000

YOUNG INTERNET ADDICTION TEST:

Subsequent to finishing of all questions responded, response of every taking part participant to each of the 20 questions were noted. All the 20 replies, with admire to six-point/5 point scale, were added to obtain a very last score for that student.

Using the kindly internet addiction scale score, the response to remain more on line than planned was rare in 14%, occasional in 29%, frequent in 30.4%, often in 14.4% and always in 12.4% participants.

In response to question number 02 of kindle internet addiction score students responded as rarely 14%, occasionally 23%, frequently 30%, often in 13.6% and always in 15.2%.

The response to question 03 was as; rare by 8%, occasional 22%, frequent 30%, and often 20% and always by 19.2% participants.

The response to question for new relationships with fellow on line users was noted as rare in 26%, occasional in 22%, frequent in 18.8%, often in 17.6% and always in 16.44% of the participants.

The response of participants observed to next question was, rarely in 37%, occasionally in 17%, frequently in 24.4%, often in 10% and always in 11.6%.

The question number 6 of this scale as responded by participants was rarely by 51%, occasionally 15%, frequently 10.8%, often 14% and always by 9.6%.

Regarding to check the email question the response observed was rare in 21%, occasional in 27%, frequent in 25.2%, often in 9.2% and always in 17.6% of participants.

The response noted in question number 08 of kindly internet addiction scale was rarely in 29%, occasionally 26%, frequently 14.8%, often 10% and always in 20% of participating students.

Most of the participants responded to question 09 as rarely 47%, occasionally in 14%, frequently in 16.8%, often in 9.6% and always in 12.4%.

Question number 10 of scale was responded as 27% rarely, in 28% occasionally, in 23.2% frequently, in 13.6% often, and in 14.8% as always.

The response to question number 11,that was found rarely in 35%, occasionally in 29%, frequently in 30.4%, often in 14.4% and always in 12.4% participants.

Question number 12 of kindly internet addiction scale was responded as 45% rarely, in 12% occasionally, in 17.6% frequently, in 16.8% often, and in 88.4% as always by the participating students.

The response to question 13 was noted as rarely in 18%, occasionally 31%, frequently 23.2%, often 15.2% and always in 12% of participants.

Regarding the question do you lose sleep due to the late night log-ins? the response by the participants was as 30% rarely, 24% occasionally, 30% frequently, 7.2% often, and in 9.2% as always.

Question number 15 of the scale as responded by participants as 30% rarely, in 30% occasionally, in 18% frequently, in 15.2% often, and in 7.6% as always.

The response to stay on line just a few more minutes was rarely observed in 14%, occasionally in 19%, frequently in 28%, often in 20.8% and always in 1.4% of participants.

Regarding the question number 17 the response rate was noted as rarely by 12%, occasionally by 25%, frequently by 22.4%, often by 16% and always by 24.7% of participants.

The response of participants as 46% rarely, 20% occasionally, 17.2% frequently, 9.2% often, and in 7.2% as always regarding Question number 18 of scale.

The response to spend more time (question 19) was rarely in 23%, occasionally 41%, frequently 18.8%, often 8.4% and always in 8.8% participants.

Question number 20 of the kindly internet

Table 4: Evaluation proforma of kindly internet addiction test										
	Rarely		Occasionally		Frequently		Often		Always	
Questions:	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
1	35	14.0	72	29	76	30.4	34	14.4	31	12.4
2	35	14	58	23	85	34.0	34	13.6	38	15.2
3	20	8.0	55	22.0	75	30.0	52	20.8	48	19.2
4	64	26	54	22	47	18.8	44	17.6	41	16.4
5	92	37	43	17	61	24.4	25	10.0	29	11.6
6	127	51	37	15	27	10.8	35	14.0	24	9.6
7	52	21	68	27	63	25.2	23	9.2	44	17.6
8	37	29	65	26.0	37	14.8	25	10.0	50	20.0
9	118	47	35	14.0	42	16.8	24	9.6	31	12.4
10	67	27	70	28.0	58	23.2	34	13.6	21	8.4
11	87	35	59	24	49	19.6	18	7.2	37	14.8
12	112	45	31	12	44	17.6	42	16.8	21	8.4
13	46	18	78	31	58	23.2	38	15.2	30	12.0
14	75	30.0	59	24	75	30.0	18	7.2	23	9.2
15	74	30	74	30	45	18.0	38	15.2	19	7.6
16	35	14.0	47	19	70	28.0	52	20.8	46	18.4
17	30	12.0	63	25	56	22.4	40	16.0	61	24.4
18	115	46.0	51	20	43	17.2	23	9.2	18	7.2
19	58	23	102	41	47	18.8	21	8.4	22	8.8
20	140	56.0	60	24.0	13	5.2	17	6.8	20	8.0

addiction scale was responded as 56% rarely, in 24% occasionally, in 5.2% frequently, in 6.8% often, and in 8% as always by participants.

DISCUSSION

The current research was carried out with the aims to know the usage pattern, prevalence, and levels of IA among undergraduate students of three different educational streams in a health institution from PUMHS Nawabshah.

Internet is used by students for the informal portions of their teachings, and alsotheir social lives are augmented as they go on line [14,15]. The modernized practice of medicine with increased use of telemedicine and the evidence based medicine had made the students to access the internet[16]. Internet is inexpensive and free access to literature and medical knowledge is easy so it is preferred by the students [17].

Increased use of internet leads to physical and psychological issues, so it is highly recommended by them to use the judiciously [18]. The average internet use for 38 hours weekly can lead to sleep deprivation undue fatigue, and poor concentration in class and affecting the study performance [19].Online interactive gaming has acquired the addictive scopes as reported from China, Chorea and Taiwan [20], and subjects especially medical students who use internet intensively and improperly are at high risk to have internet addiction [21].

IA (Internet Addiction) has negative effect on academic performance and is associated with poor mental health due to Internet overuse for purposes other than studies; however, there are studies which testified that there was neither addiction to internet nor any effect on academic performance [22].

Recognizing the harmful effects of excessive screen-based media use (SBMU) including television watching, game playing, using social network, and web use guidelines were issued by the American Academy of Pediatrics in the year 2002 to limit the use and prevent related impairments [23].

Tao et al. in 2010, where on the basis of his research he concluded that the maximum

limit of utilization of internet should be 06 hours [24].

However, the recent recommendation given by Prakash et al. in 2015 advised restricting the duration of daily nonessential use of internet to 4 hours [25]

Currently, with limited research studies and lack of consensus with regard to the standard definition of IA and safe usage pattern per week, etc., there is an urgent need for attention of all stakeholders for the development of realistic guidelines. Here in our setup no proper guidelines are present.

The evaluation of the internet addiction is mostly performed by Young's IAT (Internet Addiction Test). The scores obtained by IAT were insignificant with the severity and length of disease. For evaluation of the addiction to internet the IAT had restricted clinical usefulness. For to interpret the IAT scores a substantial attentiveness is needed [26]. This study was aimed to scrutinize subjects with the Internet addiction and value of IAT.

The pathological internet use is more common in male subjects as they are involved more in activities online as game playing, gambling and pornography [27,28,29].

The study also revealed that students staying in private accommodation are more prone to internet addiction as compared to those staying in hostel and home. This finding is in accordance with the finding by Asiri *et al.*[30] which also predicted that the internet addiction score is higher in students staying alone. The reasons might be that being alone, confidentiality for internet actions, and shortage of observation. The internet addictions may lead to the financial crises as large amount of money is needed and also can result in disturbance of the academic performance due to greater time consumed on internet. The unidentified environment of internet communications, changing personal identities online, and the necessity to develop friendly affiliations may be the explanations why social networks overuse the Internet. Watching adults only material online for sexual fulfillment can also lead to pathological internet use[29].

IA may cause a variety of issues such as physical, psychological and social. It also leads to impaired work function, disturbed academic performance, and insufficient sleep, poor eating habits headaches, eye fatigue, social isolation and interpersonal issues [31,32,14].

IA also has been found to be linked to certain mental illnesses such as alcoholism, lack of concentration and hyperactivity, depression and anxiety [33].

CONCLUSION

This study shows that IA for most medical students is a dark reality and that timely remedial measures are needed. Therefore, the detection of IA has important significance in professional institutes such as medical institutes. Therefore, more attention should be paid to students' internet addiction. A widespread plan should be organized for students to upsurge the attentiveness of IA among students and faculties colleges so that they can be detected before they become a problem. It is important to emphasize that students must be educated for safe and healthy Internet use.

Strength and limitations

Our data collection was based on students' self-reported symptoms, and we did not conduct any interview with students to confirm clinically the diagnosis of internet addiction. Being a cross-sectional analysis, although we found factors associated with IA, the reason, effect and relationship among associated factors and internet addiction could not be established. An observational, longitudinal study would give more information on the prevalence of addiction.

To my familiarity, current study is the only study on internet addiction and its relevance to academic performance in PUMHS medical students. The main limitation of current study was that it was conducted in a single center, so the outcomes of this study could not be widespread to the all students. Therefore, multicenter studies are suggested amongst medical students in various institutions to endorse the relationship among IA and educational performance.

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