

healthline pISSN-2229-337 X eISSN-2320-1525

VOLUME: 5 ISSUE: 1 January-June 2014



healthline

GLOBAL JOURNAL OF HEALTHCARE

Original article

Assessment of status of internet addiction and related factors among medical students of Rajkot city.

Dipesh D. Zalavadiya¹, Nirav B. Joshi², Mayur C. Vala³, Chirag N. Bhola⁴, Ankit M. Sheth⁵, Matib M. Rangoonwala⁶.

¹Tutor, ^{2,4,5,6}, Resident doctor, PSM Department, PDU Govt. Medical College, Rajkot, ³ Assistant Professor, PSM Department, GAIMS College, Bhuj

Correspondance to Dr. Dipesh Zalavadiya, E-mail Id: drdipesh44@gmail.com

Abstract

Introduction: The internet is an exciting new medium that is evolving into an essential part of everyday life all over the world. It has opened a new domain in social interactivity with the promise of increasing efficiency and worldwide understanding. Though devised primarily to facilitate research, information seeking, interpersonal communication and business transactions, for some internet users it has become the central focus of their lives and a temptation that is hard to resist.

Materials and Methods: It was a cross sectional study done in PDU Government Medical College, Rajkot from April 2013 to June 2013. The study included 212 medical students of 1st, 2nd, 3rd year MBBS who were using internet daily and consented to participate. Young's Internet Addiction Test (YIAT20) was used to study the level of internet addiction.

Results : Out of 212 medical students, 143 (67.5%) were males and 69 (32.5%) were females and the age range was 17 to 25 years. YIAT20 showed 1 (0.5%) had the scoring in the range of 70 – 100, 61 (28.8%) had the scoring in the range of 40 – 60 and 150 (70.7%) had the scoring 20 – 39. There was significant difference for level of internet addiction and gender, year of study, duration of internet usage and length of internet usage.

Conclusion : The level of internet addiction is high among the medical students, watch over the use of internet by parents and

colleges necessary to prevent and stop emerging internet addiction.

Key words: Internet, Addiction, Young's Internet Addiction Test

Introduction

Rapid development of information technology in societal interactions and particularly the invention and advancement of internet led to major changes in human life¹. Internet has grown extensively in its availability, connectivity and geographical distribution since 1990s² and the number of internet users have raised dramatically and it continues to rise. India ranks 3rd after China and United States in terms of numbers of Internet users.³

Interestingly, internet addiction bears many similarities to other compulsive consumer behaviors, and its study as a type of non-rational consumption behavior could be an interesting issue in consumer studies.⁴ Excessive use of the internet phenomenon may affect people with negative impacts on the academic, relationship, and other aspects of many lives.^{5,6}

Although there is not a standard definition for internet addiction yet.⁷ The most basic symptoms can be listed as inability to restrict internet use, to continue internet use despite social or academic hazards and feeling a deep anxiety when access to internet is restricted⁸. Internet addiction comprises a heterogeneous spectrum of internet activities with a potential illness value, such as gaming, shopping, gambling, or social networking⁹.

Prevalence of internet addiction range from 2% to 15% depending on the respective sociocultural context, sample and assessment criteria utilized.^{10,11}

The use of the internet on school campuses and in society has increased dramatically in recent years. Whereas the academic use of the internet is primarily intended for learning and research, the internet has also become an important part of student life⁷. More and more students are addicted to internet, while spending lots of time surfing on the internet. Such indulgence damages their health, sleep, studying and family relationship.

The literature contains only a limited number of studies which investigated level of internet addiction in college students. The present study was conducted considering the above facts, with the objective to assess the level of internet addiction and factors affecting it among the medical students – the prospective physician/surgeon of P D U Govt. Medical College, Rajkot, Gujarat, India.

Materials and Methods

The present study was conducted among medical students of 1st, 2nd and 3rd year MBBS studying at P D U Govt. Medical College, Rajkot, India. All medical students were invited to participate in the study. 425 medical students were currently studying in MBBS in P D U Govt. Medical College, Rajkot. Out of 425 medical students approached, 212 students who were using internet daily and consented to participate were included in the study, so almost 50% medical students participated in the study.. The students were assured about confidentiality of information and informed consent was taken for participation following a brief about the nature and potential value of the study. Modified Prasad's socio-economic classification was used to determine the different socio-economic classes of the study participants¹².

Despite the convenience sampling procedure employed, attempt was made to secure a sampling procedure as unbiased as possible and to have in the data as much variability of the variable “place of permanent residence” as possible. The data was collected from April 2013 to June 2013.

The questionnaire was in English and also included basic demographic data like age, sex, residential and socio-economic status. Young's Internet Addiction Test (YIAT20) was used to study the level of internet addiction. It is a 20 – item questionnaire, answered in a five – point Likert scale. It covers the degree to which their internet use affects their daily routine, social life, productivity, sleeping pattern and feelings. The responses to the questions were on a five point Likert scale, rarely=1, occasionally=2, frequently=3, often=4 and always=5. The minimum score is 20, and the maximum is 100; Higher the score, greater the level of internet addiction and the problems internet usage causes. Young suggests that a score of 20 – 39 points is an average online user who has complete control over his/her usage, A score of 40 – 69 signifies frequent problems due to internet usage, and a score of 70 – 100 means that the internet usage is causing significant problems. The reliability was subjected to Cronbach's alpha coefficient test which gave a score of 0.889.¹³

All data were carefully cleaned and double-spot checked for accuracy. The data was then entered and analyzed in Epi Info version 3.5.1 (CDC, Atlanta) software¹⁴. The chi square test was applied to compare the groups.

Results

Total 212 medical students participated in the present study. Out of 212 students, 143 (67.5%) were males and 69 (32.5%) were females. The age range of medical students was 17 to 25 years. The mean age for male was 20.11 ±1.87 years,

for female 19.0 ± 1.20 years and for total study population 20.04 ± 1.68 years (table 1). 40.6% students were residing at home; 56.1% were at hostel and 3.3% were having other living arrangement. As compared to females (47.8%) more males (60.1%) were residing at hostel.

Table 1: Demographic details of medical students participated in the study (n = 212)

Category	Age in years Mean \pm SD	Living arrangement of participants			Total
		Home	Hostel	Other *	
Male	20.11 \pm 1.87	52 (36.4)	86 (60.1)	5 (3.5)	143 (67.5)
Female	19.0 \pm 1.20	34 (49.3)	33 (47.8)	2 (2.9)	69 (32.5)
Total	20.04 \pm 1.68	86 (40.6)	119 (56.1)	7 (3.3)	212 (100)

* Other includes living as a paying guest, on rent, with relatives etc.

Young's Internet Addiction Test (YIAT20) showed 1 (0.5%) had the scoring in the range of 70 – 100 (internet usage causing significant problem), 61 (28.8%) had the scoring in the range of 40 – 69 (frequent problem due to the internet usage) and 150 (70.7%) had the scoring 20 – 39 (average online user). More males (35%) had problems due to internet usage compare to females (17.4%) and the chi square test showed the statistically significant difference ($p = 0.0084$). Compared to second year (13.6%) and third year (28.3%) students, almost half students from first year (51.1%) had the problems due to internet usage and the difference was statistically highly significant. ($p = 0.0001$). Almost equal proportion students from each socio – economic class had problems of internet usage; 29.3% from upper class, 29.2% from middle class and 28.6% from lower class. Those students who were residing at home (36%) had more problem than that residing

at hostel (25.2%), but the difference was not statistically significant.

Table 2: Internet addiction score of medical students for demographic variables (n = 212)

Variable	Internet addiction score (%)		Total	P value
	20 – 49 (not causing problem)	≥ 50 (causing problem)		
Score wise students	150 (70.8)	62 (29.2)	212	
Gender				
Male	93 (65.0)	50 (35.0)	143	0.01
Female	57 (82.6)	12 (17.4)	69	
Study year				
First	23 (48.9)	24 (51.1)	47	0.00
Second	51 (86.4)	8 (13.6)	59	
Third	76 (71.7)	30 (28.3)	106	
Socio-economic class				
Upper	99 (70.7)	41 (29.3)	140	NA
Middle	46 (70.8)	19 (29.2)	65	
Lower	5 (71.4)	2 (28.6)	7	
Living arrangement				
Home	55 (64.0)	31 (36.0)	86	NA
Hostel	89 (74.8)	30 (25.2)	119	
Other*	6 (85.7)	1 (14.3)	7	

* Other includes living as a paying guest, on rent, with relatives etc.

Daily duration of internet usage for non educational purpose showed that as hours for internet usage increased, problem also increased; 12.2% for < 1 hour usage, 29.4% for 1 – 2 hours and 36.5% for 2 or more hours and difference was statistically significant ($p = 0.02$). While daily duration for educational purpose showed almost equal problems with increasing usage time; 29.9% for < 1 hour usage, 25% for 1 – 2 hours and 25% for 2 or more hours and no significant difference ($p = 0.87$) was observed with duration of usage. However total daily duration of internet usage for any Table 3: Level of internet addiction with duration and length of usage (n = 212)

Variable	Internet addiction score (%)		Total	P value	
	20 – 49 (not causing problem)	≥50 (causing problem)			
Score wise students	150 (70.8)	62 (29.2)	212		
Duration of non educational use of internet				0.02	
	< 1 hour	36 (87.8) 53 (70.7)	5 (12.2) 22 (29.4)		41 75
	1 – 2 hours ≥ 2 hours	61 (63.5)	35 (36.5)		96
Duration of educational use of internet				0.87	
	< 1 hour	129 (70.1)	55 (29.9)		184
	1 – 2 hours ≥ 2 hours	15 (75.0) 6 (75.0)	5 (25.0) 2 (25.0)		20 8
Total duration of use of internet				0.03	
	< 1 hour	43 (84.3)	8 (15.7)		51
	1 – 2 hours ≥ 2 hours	42 (71.2) 65 (63.7)	17 (28.8) 37 (36.3)		59 102
Length of internet usage				0.04	
	< 6 months	17 (81.0)	4 (19.0)		21
	6 months - < 1 year ≥ 1 year	42 (82.4) 91 (65.0)	9 (17.6) 49 (35)		51 140

purpose showed increasing trend of problem with increase in time spent for internet; 15.7% for < 1 hour usage, 28.8% for 1 – 2 hours and 36.3% for 2 or more hours and significant difference was observed with duration of usage (p = 0.03). Analysis of duration of internet usage to that of problem due to its usage showed that for duration of usage < 6 months 19% students had problem, for 6 months to 1 year 17.6% had problem and for one year and more than that 35% students had problem due to internet usage. The difference for length of internet usage and problem due to its usage was found significant (p = 0.04).

Discussion

In past decade use of internet has been increased dramatically. Because of availability of smart phones, access to internet is very easy, so more and more people using internet daily especially young. Internet addiction is newer concept and affecting the young generation, with this respect, the present study was directed on the prevalent internet addiction among medical students with focus on the factors affecting it. The most important finding reported in present study was that 29.2% students had either frequent or significant problems due to internet usage. The study showed that males had more problems due to internet usage as compared to females, similar finding was also observed in a studies done by Scherer K¹⁵ and Morahan M et al¹⁶. The striking feature in the present study was that as compared to second and third year students, first years students were found to have more problems of internet usage. The possible assumption for that is it might be due to change in social environment of first year students which leads them to more internet usage. There was not much difference for internet addiction and socio economic class which might be due to various sources of internet availability, accessibility and affordability to students of all socio economic classes e. g. smart phone with internet connection. As compared to students residing at hostels those residing at home showed more problems due to internet usage which can be assumed due to involvements of hostel students in other recreational activities and talking with peer groups, whereas those residing at home spent more time on internet in absence of the peer group company. The present study showed that as the time spent on internet for non educational purpose and total time spent per day increased, the problems of internet addiction also increased. NalwaK et al¹⁷ also found that

among internet addicts 33.2% and among non addicts 9.5% were using internet for more than two years. Length of usage was also higher for those who had problems with internet usage, among students using internet for one year and more than that; 35% had problems of internet usage and among those using for less than six months; 19% found to have problems of internet usage, whereas Nalwa K et al found that 61% dependents and 66.7% non dependents were using internet for more than one year which is almost equal for dependent and non dependents.

Limitations

The study had some limitations which may affect the applicability of the findings in other situations like, the study was undertaken on a convenient sample hence bias due to non-randomization effect might have occurred; the study participants were from one medical college only and students from other scientific streams and general citizens may have different internet addiction level.

Conclusions

The present study provides insight to the prevalence of internet addiction and factors affecting it among the prospective physicians (medical students). The level of internet addiction is high among the medical students, watch over the use of internet by parents and colleges necessary to prevent and stop emerging internet addiction.

References

1. Sahin C. An Analysis of Internet Addiction levels of Individuals according to various variables. *The Turkish Online Journal of Educational Technology*. 2011 October; 10(4): p. 60 - 6.
2. Weiser EB. Gender Differences in Internet Use Patterns and Internet Application Preferences: A Two- Sample Comparison. *Cyberpsychology & Behavior*. 2000; 3(2).
3. Internet World Stat. [Online]. [cited 2013 November 30]. Available from: <http://www.internetworldstats.com/top20.htm>.

4. Kim S, Kim R. A Study of Internet Addiction: Status, Causes and Remedies. *Journal of Korean Home Economics Association English Edition*. 2002 December; 3(1): p. 1 – 19
5. Chou C, Tsai CC. Developing web - based curricula: Issues and challenges. *Journal of Curriculum Studies*. 2002; 34
6. Young KS. The emergence of a new clinical disorder. *Cyberpsychology & Behaviour*. 1998; 1(1).
7. Chou C, Condron L, Belland JC. A Review of the Research on Internet Addiction. *Educational Psychology Review*. 2005 December; 17(4): p. 363 – 88.
8. Ozturk O, Odabasioglu G, Eraslan D, Genc Y, Kalyoncu OA. Internet Addiction and Delay Discounting in College Students. *The Psychological Record*. 2010; 60.
9. Kuss DJ, Griffiths MD. Internet gaming addiction: A systemic review of empirical research. *Int. J. Ment. Health Addict*. 2012; 10: p. 347 - 74.
10. Johansson A, Gotestam KG. Internet addiction: Characteristics of a questionnaire and prevalence in Norwegian youth (12 - 18 years). *Scand. J. Psychol*. 2004; 45.
11. Lin MP, Ko HC, Wu JY. Prevalence and psychosocial risk factors associated with internet addiction in a nationally representative sample of college students in Taiwan. *Cyberpsychol. Behav. Soc. Netw*. 2011 December; 14(12).
12. Kumar P. Social classification-need for constant updating. *Indian J Community Med*. 1993; 18: p. 60-1.
13. Frangos CC, Frangos CC, Sotiropoulos I. A Meta - analysis of the Reliability of Young's Internet Addiction Test. In *WCE 2012*; 2012; London, UK.
14. Scherer K. College life online: Healthy and unhealthy internet use. *J. College Stud. Dev*. 1997; 38(6): p. 655 – 65
15. Morahan M, Schumacker P. Incidence and correlates of pathological internet use. *Comput. Human Behav*. 2000; 16: p. 13 - 9.
16. Nalwa K, Anand AP. Internet Addiction in Students: A Cause of Concern. *CyberPsychology & Behavior*. 2003 December; 6(6): p. 653-6