Original Research Article

Internet Addiction: Pattern of Smart Phone and Internet Usage Among Students of Professional Courses.

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Abstract

Background: Rapid expansion and proliferation of the internet has provided better opportunities for communication, information and social interaction although mobile phone usage has both pros and cons. The excessive, undisciplined, uncontrollable and damaging use by individuals has led to the emergence of the concept of internet addiction.

Objectives: to estimate the pattern of smart phone and internet usage among professional courses students and to assess level of addiction among them.

Method: A cross sectional study was conducted on the professional course students of MBBS, Nursing and Bachelor of Engineering (B.E) between 18 to 25 years age group in Jhalawar City, Rajasthan. Young's scale of Internet Addiction was used for evaluation of internet addiction. Chi-square test was used for analysing categorical variables and student t test for quantitative variables. P-value < 0.05 was considered as significant.

Result: Out of the 408 students, 142 (34.8%) having mild internet addiction, 36 (8.83%) moderate internet addiction and 07 (1.71%) having severe internet addiction. Young students ≤20 years were more addicted to internet. Most common causes of internet use were assessing of social sites (98.3%), movies & music (87.9%), games (86.3%) and search of academic related material (51.9%). Addiction to internet was more in boys and BE students. 227 (55.6%) reported that excessive use of internet affect their academic performance.

Conclusion: Use of internet is widespread among professional students. Certain degree of internet addiction (mild to severe) was found among 45.3% of students and more commonly among younger age.

Key words: Cross sectional study, Internet addiction, Professional students, Young's scale

Introduction

One of the vital technological innovation in the last few decades has been the advent of mobile.[1] Mobile phone, particularly internet enabled smart phones holds a great importance in today's world.[2] Internet user population world-wide has increased from 360 million in

December 2000 to 3.53 billion mobile internet users by April 2017.[3,4] In India, there were about 371 million internet users in June 2016 as compared to 5 million in December 2000.[3,5]

The development and evolution of internet has brought profound changes in the health care delivery systems across the globe ranging from education and training to diagnosis and patient management.[6] Internet is a cost effective medium of communication which can help in meeting the complex information needs of healthcare professionals and has important implications in medical education. It can serve as an important learning tool in medical education by providing access to latest evidence anytime and anywhere. Mobile phone and internet usage have become universal practice especially among college students. College students are unique population, occupying middle ground between childhood and adulthood, between work and leisure.[7]

Rapid expansion and proliferation of the internet has provided better opportunities for communication, information and social interaction although mobile phone usage has both pros and cons.[8,9] The internet is a relatively new technology that has impacted the world and provided many benefits to its users. At the same time, the internet has had negative ramifications. Some people are becoming preoccupied with the internet, are unable to control their use of electronic devices, and are jeopardizing school, employment, and relationships. The excessive, undisciplined, uncontrollable and damaging use by individuals has led to the emergence of the concept of internet addiction.[10]

According to various studies, younger internet users were more at risk of becoming internet addicts than older users. Psychological and environmental factors in the lives of college students may leave them disproportionately vulnerable to internet addiction.[11-13] Professional students need to study for longer hours compared to other streams. On one hand, availability of smart phones very easily can

hamper their focus and learning process. But on the other hand, availability of e-text books, power points of their study materials by smart phone also help a lot in study. However, problematic internet use by youth is reported with increasing addictive behavior and mental health implications.

Materials and Method:

A cross sectional study was conducted on the professional course students of MBBS, Nursing, Bachelor of Engineering (B.E) between 18 to 25 years age group during the period of June and July 2021in Jhalawar. Total of 408 students using internet since one year were selected by simple random sampling. The data was collected by self-administered questionnaire having three parts. First part recorded demographic information, second part assess pattern of smart phone and internet usage and third part consist Young's scale of Internet Addiction.

Prior to administering the questionnaire, confidentiality was assured and written consent was obtained from the students. Students were addressed regarding the purpose of study and the way of filling questionnaire. It was emphasized to choose the answer which they actually felt. Questionnaire was anonymous to increase the participation and reduce the respondent bias.

Young's scale of Internet Addiction: In 1995, Dr. Kimberly S. Young first identified addictive use of the Internet as a distinct psychological disorder and he developed a scale to assess internet addiction in 1998 which is one of the most reliable scales for evaluating internet addiction.[10] Young's Internet Addiction Test (YIAT) is the only available test whose psychometric properties have been tested by Widyanto and McMurran.[14] It is a 20- item instrument that has demonstrated good reliability, to screen for Internet addiction.[14,15] It is a likert based scale consist 20 items and score for the sum of 20 items ranging from 0 to 100. Based on the scoring, subjects were classified into normal users (<20), mild (21-49), moderate

(50-79) and severe (>79) internet addiction groups.[10]

Statistical Analysis:

Data were analyzed using SPSS software (version 20.0). Data were presented in tables and figures. Frequencies and percentages were calculated for all the categorical variables. Mean and standard deviation were calculated for quantitative data. Chi-square test was used for analysing categorical variables and student t test for quantitative variables. P-value < 0.05 was considered as significant.

Ethical consideration:

The study was conducted after obtaining the approval from the research ethics committee and permission was sought from the college authorities of all the respective colleges.

Result:

Total 408 students from professional courses participate voluntarily in study. Of the 408 students, there were 224 (54.9%) males and 184 (45.1%) females with mean age of 20.27 ±1.8 years.
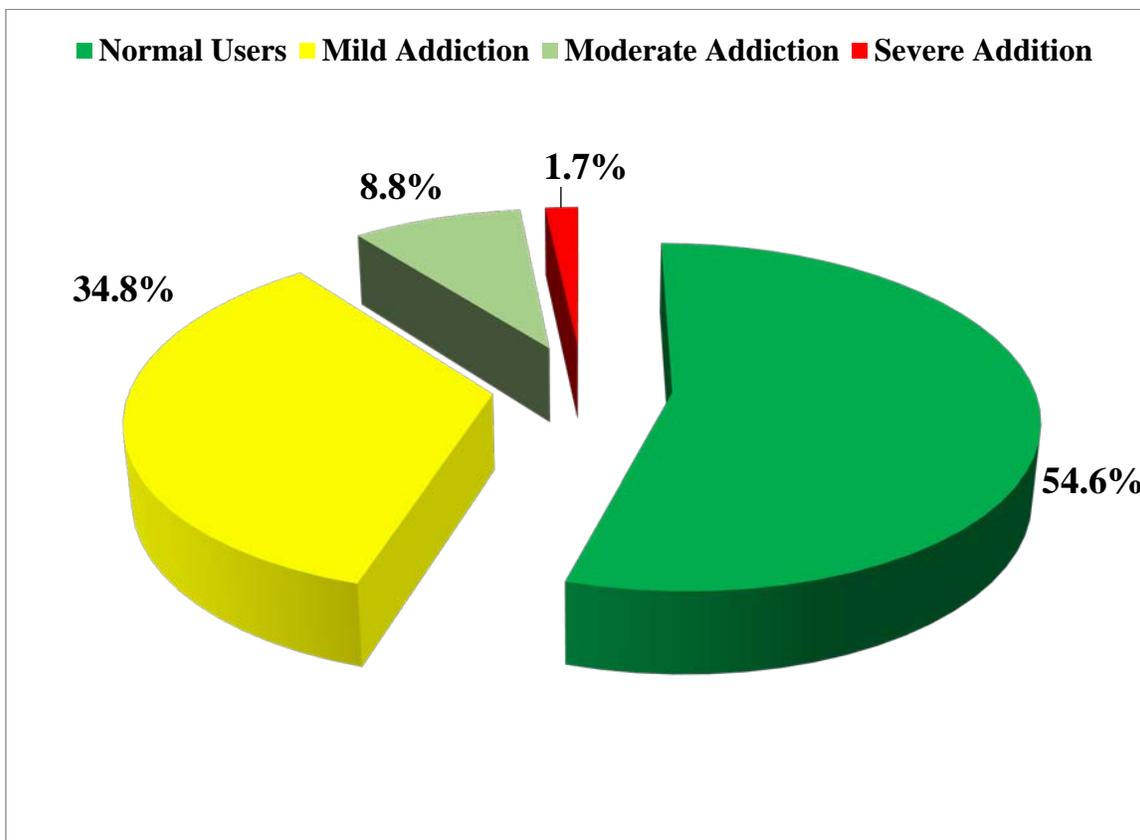

Figure 1: Distribution of study participants according to level of internet addiction according to YIAT score.

According to YIAT score, 223 (54.66%) students were normal users, 142 (34.8%) having mild internet addiction, 36 (8.83%) moderate internet addiction and 07 (1.71%) having severe internet addiction. (Figure 1) For purpose of analysis normal and mild internet addiction was clubbed and considered as no addiction (365, 89.5%) while moderate to severe internet addiction was clubbed and considered as addicted to internet (43, 10.5%).

Table 1: Association of internet addiction with demographic variables.

Variables	Internet addiction present (n=43)	No internet addiction (n=365)	Total number (n=408)	P value*
Age				
≤20	29 (16.8%)	144 (83.2%)	173 (42.4%)	<0.001
≥21	14 (5.9%)	221 (94.1%)	235 (57.6%)	
Gender				
Male	26 (11.6%)	198 (88.4%)	224 (54.9%)	0.43
Female	17 (9.2%)	167 (90.8%)	184 (54.1%)	
Professional course				
MBBS	11 (8.1%)	125 (91.9%)	136 (33.3%)	0.25
Nursing	13 (9.6%)	123 (90.4%)	136 (33.3%)	
BE	19 (13.9%)	117 (86.1%)	136 (33.3%)	
Mean time spend on internet per day	5.3±1.6	2.2±1.1	2.52 ±1.20	0.0001
Money spend per month	386.5±74.2	205.8±52.4	226.7±63.4	0.0001

*Test of significance applied is Chi-squared test and t test. p value <0.05 is considered as statistically significant.

Young students ≤20 years were more addicted to internet. Addiction to internet was more in boys and BE students although statistically significant association of internet addiction was found only with young age. The mean time spent on internet by students was 2.52 ±1.20 hours per day. Students from internet addiction group spent average 5.3±1.6 hours per day while 2.2±1.1 hours per day were spent by no addiction group. Average money spend per month by internet addiction group was 386.5±74.2 rupees while it was 205.8±52.4 rupees by no addiction group. Average time spend per day and average money spend per month was significantly higher (p=0.0001) among internet addiction group. (Table 1)
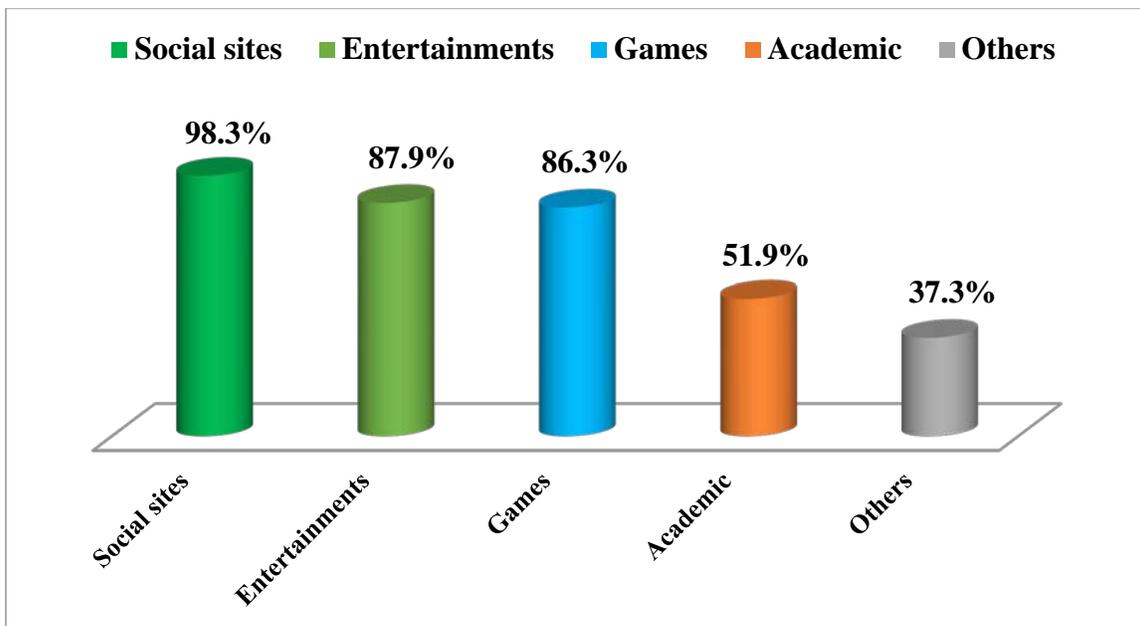

Figure 2: Common causes of internet use among study participants.

Most common causes of internet use were assessing of social sites (401, 98.3%), movies, music (359, 87.9%), games (352, 86.3%), search of academic related material (212, 51.9%) and other work such as railway/shopping etc.(152, 37.3%). Most common academic related activities include reading /downloading books (176, 83%), recent advances in their field (65, 30.7%) and assess journals (46, 21.7%). (Figure 2)

Table 2: Perception of study participants about internet usage.

Perception about internet usage	Male (n=224)	Female (n=184)	Total (n=408)
Feel addicted to internet			
Yes	102 (52.1%)	94 (47.9%)	196
No	122 (57.5%)	90 (42.5%)	212
Impaired academic performance			
Yes	118 (51.9%)	109(48.1%)	227
No	106 (58.6%)	75 (41.4%)	181
Improve social life			
Yes	161(53.6%)	139(46.4%)	300
No	63 (58.3%)	45 (41.7%)	108
Improve academic gain			
Yes	97 (57.1%)	73 (42.9%)	170
No	127 (53.4%)	111(46.6%)	238
Fear of life being bored without internet			
Yes	206 (57.2%)	154(42.8%)	360
No	18 (37.5%)	30 (62.5%)	48
Decreased outdoor playing time due to use of internet			
Yes	117 (60.9%)	75 (39.1%)	192
No	107 (49.5%)	109(50.5%)	216
Feel sleepless because of being online till late night			
Yes	163 (58%)	118 (42%)	281
No	61 (48.1%)	66 (51.9%)	127

Table 2 depicts perception of study participants about internet usage. In inquiry about perception of student, 196 (48%) students find themselves addicted to internet. Out of 408 students, 227 (55.6%) think excessive use of internet affect their academic performance however 170 (41.7%) students felt information available on internet improve their academic gain. Students were so used to internet that 88.2% student being bored without internet although 68.8% students felt sleeplessness because of being online till late night. 192 (47.1%) student perceive internet and mobile use decrease their outdoor activities like playing.

Discussion:

Observing the explosive escalation in internet use among the professional course students, it is important to study internet addiction in this subset of population. Professional course students are a predominantly vulnerable group on account of the time they spend on the internet. This study was carried out to understand the extent of internet addiction by using YIA scale among professional course students in Jhalawar.

In present study, based on YIAT score, 142 (34.8%) having mild internet addiction, 36 (8.83%) moderate internet addiction and 07 (1.71%) having severe internet addiction while 223 (54.66%) students were normal users. Study of Arvind Sharma et al[16] study 391 students and found 224 (57.3%) students as normal users, 137 (35.0%) as mild internet addiction, 29 (7.4%) moderate internet addiction and 01 (0.3%) having severe internet addiction. Study on the prevalence of internet addiction in Indian adolescents reported the prevalence at 0.7%.[17] Chathoth Vidya Mavila et al, reported prevalence of internet addiction (representing moderate and severe addiction) as 18.88% in undergraduate medical students in Mangalore.[18] The studies that have estimated the prevalence of internet addiction have come up with varying results ranging from 0.9% to 38% depending on the criteria used and the sample studied.[19,20]

In this study, statistically significant association of internet addiction was found with young age and association with gender and type of profession was found insignificant. In contrast to present study, Arvind Sharma et al[16] found significant association of with gender (p=0.000), type of profession (p=0.010) and type of mobile phone (p= 0.003) while association with age (p =0.464) found insignificant. Grover et al[21] also reported significant association (p<0.05) with gender. Mashhor Al-hantoushi et al[22] reported mean age 17 years and also reported no significant difference in internet addiction between different ages. In this study, average time spend per day and average money spend per month was significantly higher (p=0.0001) among internet addiction group. Similar result was published by Nalwa et al.[23]

In present study, most common causes of internet use were assessing of social sites (401, 98.3%), movies, music (359, 87.9%), games (352, 86.3%), search of academic related material (212, 51.9%) and other work such as railway/shopping etc.(152, 37.3%). According to study of Rahul B Damor et al[2], majority (65.2 %) students used internet for social networking,

5.8 % played online games, 8.3 % watched online movies and songs and 19.5 % mentioned academic literature search as main purpose of internet use on mobile phones. Aggarwal Sumit et al[7] reported that 76.79% accesses academic related material, 81.55% accessed social sites and 13.10% accessed pornographic material on internet.

In this study, student's perception shows, 48% students find themselves addicted while 88.2% student being bored without internet, 68.8% students felt sleeplessness and 47.1% student perceive decrease outdoor activities due to internet. Similar to these findings, Rahul B Damor et al[2] observed 48.5% students feel addicted to internet while 41.8% think impaired academic performance due to internet addiction. In the study of Abhishek Ghosh et al[24] found 19.75 % students reported improved performance while 35.81 % reported deteriorating performance.

Conclusion and Recommendation:

Use of internet is widespread among professional students. Certain degree of internet addiction (mild to severe) was found among 45.3% of students and more commonly among younger age. Students were use internet on an average 2.52±1.2 hours per day and most commonly internet was used for assessing social sites. Internet addiction is growing problem among students of professional courses, which affect all dimensions of health and had impact on student's life. So it is necessary to develop strategies for prevention and safe use of the internet and smart phones

References:

1. Dhara P, Swarna R, Rachana K et al. Usage of Mobile Phone among Medical Students in Ahmadabad Gujarat. International Journal of Scientific Research 2014;3(9):251-3.

2. Damor RB, Gamit SP, Modi A et al. Pattern of Smart Phone and Internet Usage among Medical Students in Surat, Gujarat – A Cross Sectional Study. National Journal of Community Medicine 2018;9(7):469-73.

3. Internet users in the world: distribution by world regions – 2012, Q2. Internet World Stats: Usage and population statistics. Available from: URL: http://www.internetworldstats.com/stats.htm . Assessed on December 12th, 2021.

4. Mobile internet users in World. Available at https://thenextweb.com/contributors/2017/04/11/current -global-state-internet/#.tnw_PfrEatfx accessed on August 20th, 2021.

5. Mobile internet users in India. Available at: http://economictimes.indiatimes.com/articles how/555435_89.cms. accessed on August 20th, 2021.

6. Demiris G, Afrin L. B, Speedie S, Courtney KL, et al: Patient-centered applications: use of information technology to promote disease management and wellness. A white paper by the AMIA knowledge in motion working group. J Am Med Inform Assoc 2008, 15(1):8-13.

7. Aggarwal S, S; Ambalkar D, D; Kalpana, K, M; Nandkeshav A, R. et al: Pattern of Internet Use Among Medical Students; A Cross Sectional Study. Asian Journal of Science and Technology 2015;6(4):1285-88.

8. Liu T, Potenza MN. Problematic internet use: Clinical implications. CNS Spectr 2007;12:453-66.

9. Griffiths M, Wood RT. Risk factors in adolescence: The case of gambling, videogame playing, and the internet. J Gambl Stud 2000;16:199-225.

10. Young KS. Caught in the Net: How to recognize the signs of Internet addiction and a winning strategy for recovery. New York, NY: John Wiley & Sons, Inc; 1998. p. 196.

11. Soule L, Shell W, Kleen B. Exploring Internet addiction: demographic characteristics and stereotypes of heavy internet users. The Journal of Computer Information Systems 2002;44:64-73.

12. Young KS, Rogers RC. The relationship between depression and internet addiction. Cyberpsychol Behav. 1998;1:25-8.

13. Griffiths M. Internet addiction: Does it really exist? In: Gackenbach J(Ed.), Psychology and the Internet: Intrapersonal, interpersonal, and transpersonal implications. San Diego: Academic Press; 1998. p. 61-75.

14. Widyanto L, McMurran M. The psychometric properties of the internet addiction test. Cyberpsychol Behav 2004;7:443-50.

15. Chang MK, Law SPM. Factor structure for Young's Internet Addiction Test: A confirmatory study. Computers in Human Behavior 2008;2:2597-619.

16. Sharma A, Sahu R, Kasar PK, Sharma R. Internet addiction among professional courses students: A study from Central India. Int J Med Sci Public Health 2014;3:1069-73.

17. Goel D, Subramanyam A, Kamath R. A study on the prevalence of internet addiction and its association with psychopathology in Indian adolescents. Indian J Psychiatry 2013;55:140-3.

18. Chathoth VM, Kodavanji B, Nayanatara AK, Pai SR. Internet behaviour pattern in undergraduate medical students in Mangalore. International Journal of Innovative Research in Science, Engineering and Technology 2013;2.

19. Jang KS, Hwang SY, Choi JY. Internet addiction and psychiatric symptoms among Korean adolescents. J Sch Health 2008;78: 165-71.

20. Yoo HJ, Cho SC, Ha J, Yune SK, Kim SJ, Hwang J, et al. Attention deficit hyperactivity symptoms and Internet addiction. Psychiatry Clin Neurosci 2004;58:487-94.

21. Grover S, Chakraborty K, Basu D. A survey of Internet use pattern among professionals. Ind Psychiatry J 2010;19:94–100.
22. Al-hantoushi M, Al-abdullateef S. Internet addiction among secondary school students in Riyadh city, its prevalence, correlates and relation to depression: A questionnaire survey. Int J Med Sci Public Health 2014;3:10-5.
23. Seo M, Kang HS, Yom YH. Internet addiction and interpersonal problems in Korean adolescents. Computers, informatics, and nursing: CIN 2009;27:226-33.
24. Abhishek Ghosh, RajshreeJha, Surjeet Kumar Malakar. Pattern of Smart Phone Use among MBBS Students in an Indian Medical College. International Journal of Applied Research 2016; 2(5): 389-92.