

Study of Internet Addiction In Undergraduate Medical Students

D. Ade¹, *Dr. A. Khare², Dr S. Kayande³

¹(Undergraduate student, B.J. Government Medical College, Pune, India)

²(Assistant Professor, Physiology, B.J. Government Medical College, Pune, India)

³(Post MD tutor[SR], Physiology, B.J. Government Medical College, Pune, India)

*Corresponding author: *Dr. A. Khare

Abstract:

Background: The use of Internet has now become indispensable. College students are a group particularly vulnerable to internet addiction as they spend a major proportion of their time in accessing the internet for both academic and extracurricular purposes. Pathological internet use can lead to depression, anxiety, lack of physical energy, dysfunction, emotional and behavioral symptoms, and social adaptation problems. It is an urgent necessity to consider obsessive internet usage as a complete and distinct mental illness. With this background the present study was conducted to study the internet use and addiction among undergraduate medical students.

Methods: The internet addiction test (by Dr. Kimberly Young) which is the reliable and validated measure of severity of internet addiction, was conducted in 100 undergraduate medical students of a government medical college in a metro city, of which 50 were male students and 50 were female students. Students were in the age group of 19-24 years. Based upon the six point scale, the response that best represented the frequency of the behavior described in the 20 items was selected. The severity of internet addiction was found out.

Results: Approximately 63% of the students were suffering from mild Internet addiction, 20% were suffering from moderate Internet addiction, 6 % were suffering from severe Internet addiction and 11% were suffering from no Internet addiction.

Conclusions: Internet addiction in medical students is increasing and requires timely remedial action. Comprehensive program for students should be carried out to increase awareness of internet addiction.

Keywords: Internet, addiction

Date of Submission: 05-03-2018

Date of acceptance: 19-03-2018

I. Introduction

The use of internet has now become indispensable, and technology has revolutionized the medical education and practice worldwide. Medical students have opportunity to keep updated with exponential growth knowledge to become a lifelong learner. Internet has provided better opportunities for communication, information, and social interaction.^[1] Moreover, medical schools in both developed and developing countries are utilizing educational technology to bring effective changes in medical education.^[2] Medical students start using internet for acquiring knowledge and information, as well as for social interaction like using email, facebook, whatsapp, twitter, etc. College students are a group particularly vulnerable to internet addiction. A number of studies have shown that students spend a major proportion of their time in accessing the internet for both academic and extracurricular purposes.^[3]

Various factors like large unconstructed time, being away from parental control, problems of adapting to university life and desire to escape stress like exam stress often lead to emergence of 'Pathological Internet Use.'^[4] It is a mental illness affecting many individuals surfing online. Main cause of this is extreme use of internet. This leads to internet addiction further leading to lots of adverse reactions^[5] such as depression, anxiety, lack of physical energy, dysfunction, emotional and behavioral symptoms and social adaptation problems. Internet abuse is defined as "excessive or poorly controlled preoccupations, urges or behaviors regarding computer use and internet access that led to impairment or distress." The term addiction has generally been associated with substance use^[6]. Again, such excessive Internet use is considered as addiction since symptoms of Internet addiction are comparable to symptoms of addiction to nicotine, alcohol or drugs.^[7]

It is an urgent necessity to consider obsessive internet usage as a complete and distinct mental illness as individuals with internet addiction are at risk and demand specialized care and treatment because of the risk of grave psychological, emotional and physical complications. With this background the present study was conducted to study the internet use and addiction among undergraduate medical students.

II. Material And Methods

The present study was a cross sectional descriptive study. This study was a part of ICMR research project. Permission from the institutional ethics committee was taken before the initiation of the study. Study protocol was approved by ICMR. Study was carried out in 100 undergraduate medical students of a government medical college in a metro city, of which 50 were male students and 50 were female students. Students were in the age group of 19-24 years. Medical students who gave history of using internet from past one year or more were included in the present study. Medical students with previous psychiatric illness and those who declined internet usage were excluded.

Before the study was undertaken the selected undergraduate medical students were assured that their information will be kept strictly confidential. Students participating in the study were given information about the nature of study and written informed consent regarding participation in study was taken from them. The internet addiction test (IAT) which is the validated measure of internet addiction to measure internet use in terms of mild, moderate and severe levels of addiction, was carried out. The internet addiction test (IAT) by Dr. Kimberly Young is based on Internet Addiction Diagnostic Questionnaire (IADQ) and is composed of 20 items. It was originally scored on five point likert scale ranged from “rarely” to “always” which was later modified to a 6 point scale with one response option being “does not apply”.^[8,9] Based upon the following six point scale, the response that best represents the frequency of the behavior described in the 20 items was selected by the students.

Participating students answered the questions in IADQ by using this scale as follows.

Response	Scale
Does not apply	0
Rarely	1
Occasionally	2
Frequently	3
Often	4
Always	5

Internet Addiction Diagnostic Questionnaire (IADQ)^[9]

Question	Scale					
1. How often do you find that you stay on-line longer than you intended?	1	2	3	4	5	0
2. How often do you neglect household chores to spend more time on-line?	1	2	3	4	5	0
3. How often do you prefer the excitement of the Internet to intimacy with your partner?	1	2	3	4	5	0
4. How often do you form new relationships with fellow on-line users?	1	2	3	4	5	0
5. How often do others in your life complain to you about the amount of time you spend on-line?	1	2	3	4	5	0
6. How often do your grades or college work suffer because of the amount of time spent on-line?	1	2	3	4	5	0
7. How often do you check your email before something else that you need to do?	1	2	3	4	5	0
8. How often does your job performance or productivity suffer because of Internet?	1	2	3	4	5	0
9. How often do you become defensive or secretive when anyone asks you what you do online?	1	2	3	4	5	0
10. How often do you block out disturbing thoughts about your life with soothing thoughts of the internet?	1	2	3	4	5	0
11. How often do you find yourself anticipating when you will go on-line again?	1	2	3	4	5	0
12. How often do you fear that life without Internet would be boring, empty, and joyless?	1	2	3	4	5	0
13. How often do you snap, yell, or act annoyed if someone bothers you while you are on-line?	1	2	3	4	5	0
14. How often do you lose sleep due to late-night log-ins?	1	2	3	4	5	0
15. How often do you feel preoccupied with Internet when off-line, or fantasize about being on-line?	1	2	3	4	5	0
16. How often do you find yourself saying “just a few more minutes” when you are online?	1	2	3	4	5	0
17. How often do you try to cut down the amount of time you spend on-line and fail?	1	2	3	4	5	0
18. How often do you try to hide how long you have been on-line?	1	2	3	4	5	0
19. How often do you choose to spend more time on-line over going out with others?	1	2	3	4	5	0
20. How often do you feel depressed, moody or nervous when you are offline, which goes away once you are back on-line?	1	2	3	4	5	0

The results were tabulated and statistical analysis was done by using a statistical software package EPI.

After all questions were answered, response of each participating student to each of the 20 questions was noted. All the 20 responses, with respect to 6 point scale, were added to obtain a final score for that student. The score was indicative of level of internet addiction of that student. (Table 1) Higher the score, greater the level of addiction and more are the chances of creation of problems resultant from such internet usage.

Table 1^[8]

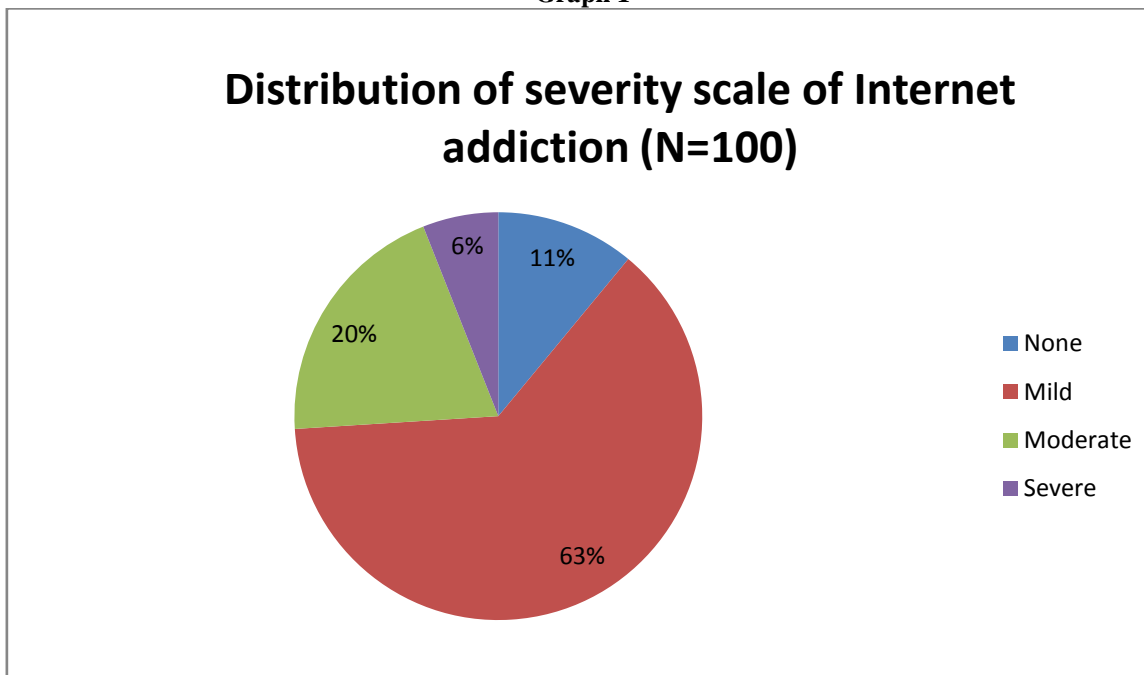
Score/points	Level of Internet addiction	Interpretation
0-30	None	Below average online user
31-49	Mild	Average online user, the individual has control over internet usage
50-79	Moderate	Frequent problems due to internet, full impact on life
80-100	Severe	Significant problems, evaluate the impact and address the problems

III. Results

Table 2: Distribution of severity scale of Internet addiction in students (N=100)

Levels of Internet addiction	Percentage wise distribution in students
None	11%
Mild	63%
Moderate	20%
Severe	6%

Graph 1

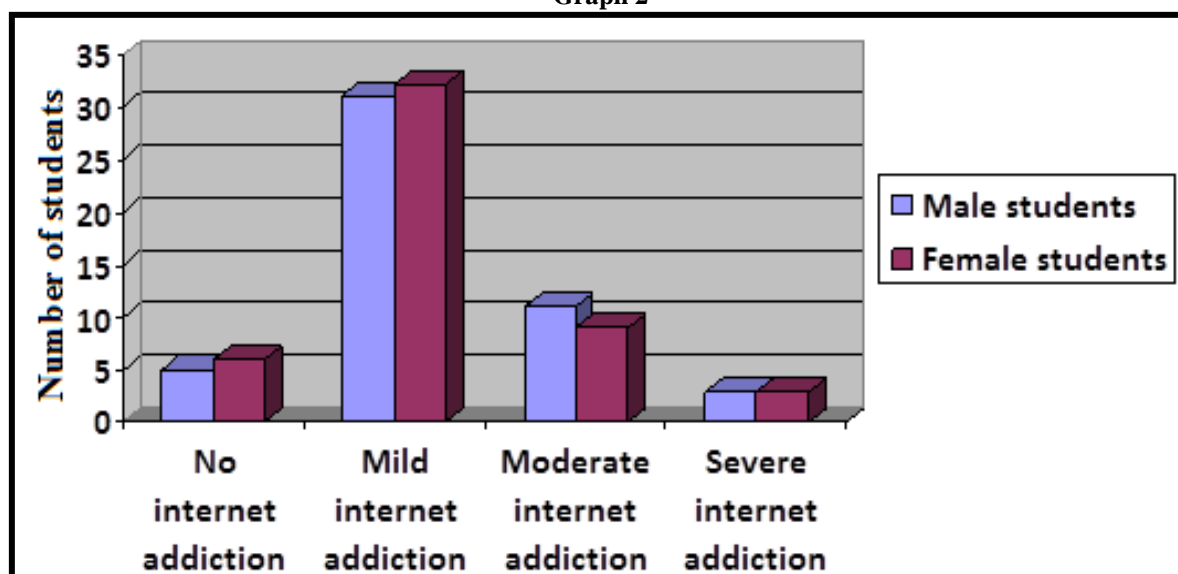


Approximately 63% of the participating students were suffering from mild Internet addiction, 20% were suffering from moderate internet addiction, 11% were suffering from no internet addiction and 6 % were suffering from severe internet addiction.

Table 3: Gender wise distribution of severity scale of Internet addiction (N=100)

Levels of Internet Addiction	Male students (N=50)		Female students (N=50)	
	Number	% of male students	Number	% of female students
None	5	10%	6	12%
Mild	31	62%	32	64%
Moderate	11	22%	9	18%
Severe	3	6%	3	6%

Graph 2



IV. Discussion

The present study investigated the problem of internet addiction among undergraduate medical students. It was observed that 89% of the medical students had internet addiction. (Table 2, Graph 1) The finding is much more greater than the prevalence of 56.6% as reported by Duraimurugan *et al.*^[10] in a study among college students from South India. They found 41.3% to be mild addicts while 15.2% to be moderate addicts while in the present study it was found that about 63% of the students were mildly and 20% moderately addicted to the internet. However, some studies have also shown lower prevalence of Internet addiction. A study on Turkish college students^[11] showed prevalence of internet addiction to be 9.7%.

In the present study, internet addict students were found to spend significantly greater amount of time on internet as compared to non-addicts. Greater expenditure of money and time among internet addicts may lead to financial problems and distraction from academic achievements. Using internet for social networking, watching videos, and visiting websites with sexual content were significantly associated with internet addiction. Anonymous nature of online interaction, achieving altered sense of personal identity online and need for developing intimate relationships can be the reasons for excess internet use.

There were no major gender difference in severity of internet addiction. (Table 3, Graph 2) Majority of both male and female medical students were suffering from mild internet addiction, but had control of the usage. Among the current participants 63% were suffering from mild internet addiction which is similar to most of the studies. Around 20% of the students were suffering from moderate internet addiction. Though this is a less number as compared to the numbers of mildly suffering students, these students are at increased risk of getting severely addicted. 6 % of the students were severely addicted. Only 11% of the students were found to be free from any type of Internet addiction.

The present study showed that 83% of the students had mild to moderate internet addiction. This study unfolds that internet addiction in the majority of the medical students is a dark reality that requires timely remedial action. Detection of internet addiction therefore assumes greater importance in professional institutions such as medical colleges. It needs to be emphasized that students will have to be educated in safe and healthy practices for internet use. Appropriate preventive and interventional strategies need to be developed to encourage rational use of internet in order to protect the physical and mental health of the users. Comprehensive program for students should be carried out to increase awareness of the internet addiction.

References

- [1]. Muniandy B. Academic use of internet among undergraduate students: a preliminary case study in a Malaysian University. *Int J Cyber Society Educ.* 2010;3(2):171-178.
- [2]. Majumder MAA, AzimMSS, Rahman S. Technology-enhanced learning in Asia: New educational possibilities for the tomorrow's doctors and tomorrow's cures. *South East Asia J Public Health.* 2013;4(2):50-53.
- [3]. Teong KV, Ang MC. Internet use and addiction among students in Malaysian public Universities in East Malaysia: some empirical evidence. *J Manage Res.* 2016;8(2):21-178
- [4]. Moraham-Martin, J. And. Schumacher, P. (2000). Incidence and correlates of pathological Internet use among college students. *Computers in Human Behavior*, 16, 13-29.
- [5]. Nienz K, Griffiths M, Banyard P. Prevalence of pathological Internet use among university students and correlations with self-esteem, the General Health questionnaire (GHQ), and disinhibition. *CyberpsycholBehav.* 2005;8(6):562-570.[PubMed]

- [6]. 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(9):1069-1073.
- [7]. Salehi M, Khalili MN, Hojjat SK, salehi M, Danesh A. Prevalence of internet addiction and associated factors among medical students from Mashhad, Iran in 2013. *Iran Red Crescent Med j*. 2014;16(5):e17256. [PMC free article] [PubMed].
- [8]. Laconi S, Rodgers R F, Chabrol H. The measurement of internet addiction: A critical review of existing scales and their psychometric Properties. *Computers in human behavior* 41. 2014: 190-202.
- [9]. Internet addiction test – Global Addiction. Accessed from www.globaladdiction.org/dldocs/GLOBALADDICTION-Scales-InternetAddictionTest.pdf. (On 09.03.2018)
- [10]. Paul AVR ,Ganapathi CK, Duraimurugan M, Abirami V, Reji E. Internet Addiction and Associated Factors: A study among College students in South India. DOI: <http://dx.doi.org/10.15520/ijmhs.2015.vol5.iss3.72.121-125>.
- [11]. Canan F, Ataoglu A, Ozcetin A, Icmeli C. The association between internet addiction and dissociation among Turkish college students. *Compr Psychiatry*. 2012;53:422-6.[PubMed]

D. Ade1. “Study of Internet Addiction In Undergraduate Medical Students.” *IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)* , vol. 17, no. 3, 2018, pp. 51-55