



RESEARCH ARTICLE

INTERNET ADDICTION AND DEPRESSION AMONG MEDICAL STUDENTS, GURUGRAM

Dr. Manish Kundu, Dr. Manisha Singh, *Dr. Shalini Ray and Dr. Priyanka Sachdeva

SGT Medical College, Faculty of Medical and Health Sciences, Gurgaon

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ABSTRACT

Introduction: Internet use in India is increasing globally and has become a major part of daily life. Use of technology by health professionals for education and clinical care is evolving interest. College students are vulnerable to developing dependence on internet due to ease of use, unlimited access, limited supervision. They use internet for social media, email and online medical records. With this background the present study was conducted to assess the pattern of internet use and internet addiction among 130 medical students of Gurugram and also to find any association between depression and internet addiction among them. Youngs internet addiction scale and Becks depression scale along with a predesigned semistructured questionnaire was used.

Results: The mean age of participants was 20.15 ± 1.89 years. Majority, 83% belonged to 17-20 age group. About 23.08% were severely addicted to internet. Most common gadget used by participants for internet access was mobile. 11.54% reported of being online more than 6hrs. About 8.46% were severely depressed. Gender was significantly associated with internet addiction, girls being more addicted than boys ($p < 0.05$). Significant association was also found between internet addiction and depression ($p < 0.05$).

Conclusion: All teachers, health care providers should pay closer attention to students who show internet addiction and depression. For the detection of high-risk students, it is important to regularly screen. In order to prevent the transition to addiction there is need to develop preventive interventions including counselling.

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INTRODUCTION

The extensive use of internet in the last decade has become a major concern. Internet use is growing worldwide as it is a fast and user friendly source of information. Over the last decade, internet use has changed radically with a substantial number of people working online, using social media round the clock. Paralleling the rapid growth in internet access is a rise in internet addiction, especially among college students; gaining increased attention from popular media, govt authorities and researchers (Christakis and Moreno, 2009). In 1995, Ivan Goldberg, MD, first proposed the term Internet addiction in a satirical hoax, which soon became popular (Miller, 2013). Recent reports indicated that some online users were becoming addicted to the Internet in much that same way that others became addicted to drugs or alcohol, which resulted in academic, social, and occupational impairment. Numerous terms have been used to describe this problem such as Internet overuse, problematic computer use, pathological computer use, I Disorder, etc. Internet addiction is defined as "a

psychological dependence on the Internet, regardless of the type of activity once logged on" (Kandell, 1998). The use of technology by health professionals for education and clinical care is a topic of evolving interest. They use internet for social media, email and online medical records (Torous et al., 2014). Various studies show the seriousness of internet addiction and it demands immediate attention. College students are especially vulnerable to developing dependence on the Internet, more than most other segments of the society. This can be attributed to several factors including the following: Availability of time; ease of use; unlimited access to the Internet; the psychological and developmental characteristics of young adulthood; limited or no parental supervision; the Internet offering a route of escape from exam stress (Kandell, 1998), all of which make Internet overuse a significant cause of concern for parents and faculty. Given the easy accessibility to internet in different universities and colleges, this study was conducted among the medical undergraduate students of a medical college in Gurugram.

Objectives

1. To assess the pattern of internet usage among medical undergraduate students.

*Corresponding author: Dr. Shalini Ray,
SGT Medical College, Faculty of Medical and Health Sciences, Gurgaon

- To find out the prevalence of internet addiction and associated risk factors among them.
- To find association (if any) between internet addiction and depression among them

MATERIALS AND METHODS

A cross-sectional survey was conducted among medical undergraduate students of SGT Medical College during the period November 2016-March 2017. The study was conducted after obtaining approval from the Ethics committee of concerned university. Undergraduate students from all the four academic years, who were using internet since at least last six months and were willing to participate were taken for the study. Of the total participants 12 student’s data were excluded from the study as they were incorrect or incomplete and among them only one student rejected to participate in the survey due to unknown reason. There was no reward for participation. Thus a total of 130 students were included in our study. The students were evaluated as groups in classrooms and necessary instructions were given.

Information was collected using a pretested self administered questionnaire consisting of three parts:

- Part 1: Socio demographic details.
- Part 2: Pattern of internet usage including use of gadgets, duration of internet use, usual time of internet use, login status, type of internet connection accessibility and purpose of internet use.
- Part 3: Young’s Internet Addiction Test: It is a 20-item 5-point likert scale, developed by Dr. Kimberly Young. It is self-reported questionnaire and measures the severity of internet addictive behavior. Cronbach’s computed of this scale was 0.889 by Frangos. The total scores of questionnaire range from 20 to 100. The students were divided into three levels based on their scores, i.e., less than 50 as normal, 50–69 as mild and more than 70 as severe addicts (Young, 1998).
- Part 4: Beck’s Depression scale: This scale was developed in 1961 by Beck and colleagues. The scale consists of 21 Likert-type questions. Each question contains four options, which are scored from 0 (none) to 3 (severe). The total score ranges from 0 to 63 points. Students with scores of 17 points or more are suspected of having depression. (Dabson and Mohammadkhani, 2007)

RESULTS

The mean age of the study participants was 20.15+1.89 years. Majority of the participants, 66.92% belonged to 17 to 20years age group (Table 1).

Table 1. Age distribution of study participants

AGE GROUP	No.(N= 130)	Percent
17-20yrs	87	66.92%
20-23yrs	40	30.77%
>24yrs	3	2.31%

92.35% subjects reported of using mobile phones for internet and 23.85% were using laptop on a daily basis. 88% students were using internet since >2years duration, 9% were using since 1-2years and rest 3% were using since < 1year duration

(Figure 1). It was found that all subjects were using internet daily. However, 48% reported of being online for 2hrs-4hrs/day, 40% were online for <2hrs/day. Only 12 % reported of staying online for >4hrs/day (Figure 2)

Figure 1: DURATION SINCE WHEN USING INTERNET

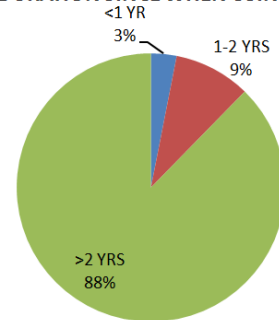


Figure 2: DURATION OF INTERNET USE/DAY

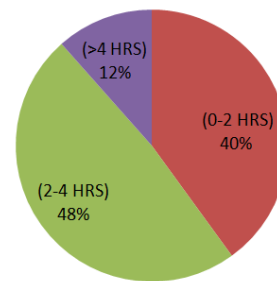
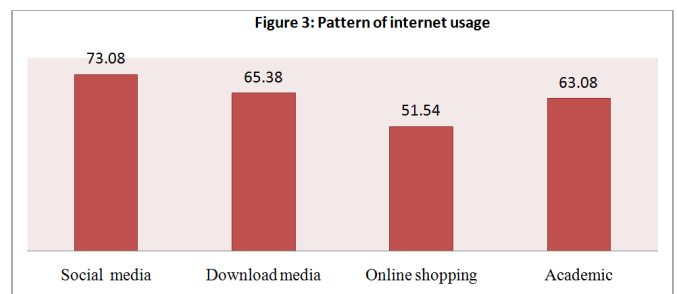


Figure 3: Pattern of internet usage



On assessing the purpose of internet use, majority 73.08% students used internet for social media, 65.38% for downloading mediafiles, 63.08% for academic purpose and 51.54% used internet for online shopping. (Figure 3)

As shown in Table 2, the overall prevalence of severe internet addiction was found to be 23.07% and mild addiction was 59.2%.

About 40.6% males were severely addicted and 56.2% were mildly addicted. However the prevalence of mild addiction among females was 60.2% and severe addiction was 17.34%. This difference in addiction among both genders was found to be statistically significant (p=0.004)

Table 2. Association between gender and internet addiction

Gender	Internet addiction			Total
	No addiction	Mild addiction	Severe addiction	
Male	1(3.12%)	18(56.25%)	13(40.6%)	32
Female	22(22.4%)	59(60.2%)	17(17.3%)	98
Total	23(17.6%)	77(59.23%)	30(23%)	130
X ² =10.8,p =0.004				

Depression was assessed using Becks depression scale. (Table 3) The overall prevalence of severe depression was found to be 8.46%. Surprisingly, 63.85% subjects were having mild depression. As shown in Table 3, about 77.9% of those with mild internet addiction were depressed and 83.4% of those with severe addiction were depressed. The prevalence of depression among those not addicted to internet was 39.1% which was lower than those addicted to internet. This was found to be statistically significant ($p=0.0004$)

Table 3. Association between internet addiction and depression

Internet addiction	Depression		Total
	Depression present	Depression absent	
No addiction	9(40.9%)	14(60.8%)	23
Mild addiction	60(78%)	17(22%)	77
Severe addiction	25(83.4%)	5(16.6%)	30
TOTAL	94(72.3%)	36(27.7%)	130

$X^2=15.68, p=0.0004$

DISCUSSION

The prevalence of mild internet addiction was 59.23% and severe internet addiction was 23.08%. In a study done in Iran (Bahrainian *et al.*, 2014), the prevalence of internet addiction was 40.7%. In Ghamari *et al.* study (Ghamari *et al.*, 2011), prevalence of internet addiction was 10.8% and moderate and severe internet addictions were 8.1% and 2.8%, respectively. In Lam *et al.*'s study (Lam *et al.*, 2009), moderate internet addiction prevalence was 10.2% and severe internet addiction was 0.6%. The present study showed that internet addiction was significantly higher in male than in female students. A few studies have reported higher rates in female students (Chou *et al.*, 2005), the results of the present study are consistent with those of most of the previous studies, suggesting that male gender is a predictor of IA (Byun *et al.*, 2009; Frangos *et al.*, 2010; Tsai *et al.*, 2009); In a study carried out by Choi *et al.* in 2008, it was reported that the case of Internet addiction was more common in male students compared to female students, and in 2001, Hahn and Jerusalem reported that males used the Internet more than females; however, the Internet usage levels of females have increased in recent years. (Sahin, 2011) In a study done by, Young (2004) concluded that depression assessment should be done in suspected cases of problematic internet use. It is not clear whether depression precedes the development of internet abuse or it is a consequence, yet assessment of the same is necessary. In the present study a significant association was found between internet addiction and depression. Recent studies on Internet addiction have shown that Internet addiction leads to a decrease in social interactions, depression and loneliness (Ko *et al.*, 2005; Kraut *et al.*, 1998).

Conclusion

Internet addiction is advancing rapidly even without its official recognition as a separate and distinct behavioral addiction. Globally, a number of studies have been conducted to analyze risk factors associated with Internet addiction. The present study is an attempt to provide evidence to support the findings of prior research from an Indian context. The results imply that

Internet addiction is a prevalent public health issue, having multiple risk factors and depression can be a consequence. The need of the hour is to create awareness, plan public health policies with regard to this behavioral addiction, and conduct further research to support the same.

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