

Original Research Article

Comparison of internet addictions and its mental effects in medical and engineering students of a private university at Pune

Sujata K. Murarkar^{1*}, Shraddha N. Sava², Jayashree S. Gothankar¹

¹Department of Community Medicine, ^{1,2}Bharati Vidyapeeth (DTU) Medical College, Pune, Maharashtra, India

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*Correspondence:

Dr. Sujata K. Murarkar,

E-mail: sujata.murarkar@gmail.com

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ABSTRACT

Background: There has been explosive growth in the use of the internet. Internet addiction is upcoming problem and less researched entity. Study is conducted to compare internet addiction in engineering and medical students.

Methods: A self-administered pretested predesigned questionnaire was used for data collection. Total 303 medical and engineering students were participated in the study. Young's internet addiction test and DASS scale is used to measure internet addiction and psychological variables.

Results: 23% were normal users, 59.1% were mild internet addicts, 17.4% were moderate internet addicts and 0.3% were severe internet addicts. There was strong positive relation between internet addiction and depression anxiety and stress.

Conclusions: Internet addiction is a growing problem so it is important to create awareness among students to have a healthy lifestyle.

Keywords: Internet addiction, Medical and engineering students, Mental effects

INTRODUCTION

In last few years internet usage has grown tremendously on large scale. In spite of the widely perceived merits of this tool, psychologists and educators have been aware about the negative impacts of its use, especially the over or misuse and related physical and psychological problems.¹ It has enable flow of information, including entertainment, news, financial and academic material.

It has brought people closer together by enabling various forms of interpersonal communication, notably email, instant messaging, video conferencing and social networking. In a very short period it has become difficult for most of us to imagine a world without instant and continuous access to the internet.²

There have been growing concern worldwide for what has been labelled as "Internet addiction". Internet

addiction can be defined as inability to control ones use of the internet and led to negative consequences in daily life. The terms 'compulsive internet use', 'pathological internet use', 'problematic internet use', etc. were usually considered as the synonyms of internet addiction ,although their views maybe different.³ Young Internet users were more at risk of becoming an internet addicts then elder people.⁴

Adolescents are usually considered as risk groups. They have a natural affinity towards the internet and their conspicuous internet literacy has been linked to internet addiction, encouragement given from the university staff to use different internet applications for educational activities, increased internet accessibility, social anxiety or shyness in face-to-face situations. Transition from high school to college life with associated stress and anxiety, long periods of un-structured time and freedom from parental control also contribute to the problem. However

excessive use of internet has also been found to be significantly associated with some psychiatric disorders such as anxiety, stress and depression.⁵ When it comes to students of professional course that is engineering and MBBS the scenario will be different in consideration of lack of excess time with the students. It would be interesting to know the levels of internet addiction and various mental health problems among these students. In this context present study was planned to compare internet addictions and its mental effects in medical and engineering students.

METHODS

Cross sectional study was done on Engineering and Medical students within the age group 17-19 years. All students present at the time of data collection were selected as sample. Approval from Institutional Ethics Committee (IEC) was taken before start of the study. Data was collected by self-administered predesigned and pretested questionnaire.

Inclusion criteria

Students using internet since last six months were included.

Tools

Predesigned and pretested questionnaire related to anxiety, depression and stress were used. Predesigned and pretested questionnaire for internet use and internet addictions which includes demography, purpose of using the internet, money spent per month, place of access, the time of day when the internet is accessed the most and the average duration of use per day.

Internet addictions

Young's 20-item scale for Internet addiction was used. All the responses was added to the final score. The higher the score range, the greater the level of addiction. Various Grades are: normal range: 0-30 points, mild: 31-49 points, moderate: 50-79 points, and severe: 80-100 points.

Stress, anxiety and depression

All these symptoms were assessed by even-item anxiety subscale of the depression anxiety stress scales (DASS).

Statistical analysis

Frequency and percentage were calculated for duration and time spent on internet. Chi-square test was used for categorical values. Mean and Standard deviation was calculated for depression, anxiety and stress.

RESULTS

A total of 303 students were participated in the study. Out of these 303 students, 147 (48.5%) were medical students and 156 (51.4%) were engineering students. Participants were in the age group between 17-20 years. Mean age group was 18.8 years. All the students accessed internet through mobile phones and laptops with only 2.1 (6 students) has accessed via cybercafé.

Table 1 shows distribution of participants according to duration of internet use. About 68.65% participants use internet for 1-2 hours per day, 31.02% use for 4-6 hours/day.

Table 1: Distribution of participants according to duration of internet use.

Duration	Number (%)
1-2 hours	208 (68.65)
4-6 hours	94 (31.02)
7-12 hours	1 (0.33)
Total	303 (100)

Maximum i.e. 53.2% engineering students and 61.9% medical students use internet at night (Table 2).

According to young's original criteria the users were divided into various groups. 23.10% were normal users, 59.07% mild addicts, 17.49% were moderate users, 0.33% as severe addicts (Table 3).

Table 2: Distribution of participants according to time of the day for internet use.

	Morning N (%)	Evening N (%)	Night N (%)	Total (%) N (%)
Engineering	12 (7.7)	61 (39.1)	83 (53.2)	156 (51.48)
Medical	7 (4.8)	49 (33.33)	91 (61.9)	147 (48.52)
Total	19 (6.28)	110 (36.30)	174 (57.42)	303 (100)

Table 3: Distribution of participants according to grades of internet addiction.

	Normal N (%)	Mild N (%)	Moderate N (%)	Severe N (%)	Total N (%)
Engineering	28 (17.94)	98 (62.82)	29 (18.58)	1 (0.64)	156 (51.48)
Medical	42 (28.57)	81 (55.10)	24 (16.32)	0 (00.00)	147 (48.52)
Total	70 (23.10)	179 (59.07)	53 (17.49)	1 (0.33)	303 (100)

It can be observed that those addicted to internet had high scores of all three variables that is depression, anxiety and stress. It can be seen that the addicted group had moderate levels anxiety, stress and depression. It was also observed that there was no significant differences in level of anxiety, depression and stress among in engineering students and medical students (Table 4 and 5).

Table 4: Relation between non internet addicts and psychological variables.

Non internet addicts	Medical Mean (S.D)	Engineering Mean (S.D)	P value
Depression	4.5 (5.2)	4.9 (5.4)	0.757
Anxiety	4.6 (5.08)	4.5 (5.23)	0.93
Stress	6.5 (5.4)	5.3 (5.6)	0.37

Table 5: Relation between internet addicts and psychological variables.

Internet addicts	Medical Mean (S.D)	Engineering Mean (S.D)	P value
Depression	14.6 (12.4)	15.4 (12.2)	0.591
Anxiety	11.5 (8.8)	12.6 (7.02)	0.257
Stress	15.7 (9.3)	16.2 (10.4)	0.674

DISCUSSION

A number of studies have been conducted across the world, especially among adolescents with respect to internet addiction. Present study was conducted to study the extent of internet addiction and its effects like depression and anxiety and stress among engineering and medical college students.

In the study, the prevalence of severe internet addiction was 0.33% with was in accordance with studies done by Goel et al and Xie et al.^{6,7} In a methodologically rigorous study that involved a telephone survey of 25/3 adults aged 18 years and older and employed for criteria sets prevalence rates varied from 0.3 to 0.7%.⁸ The only published study from India, which evaluated internet addiction by using Davis online Cognition scale in school going children aged 16 to 18 years reported a prevalence of 18%.⁹ The reasons for this variability in prevalence rates could be the heterogeneity of the subject population, the influence of co-founding factors such as stress and psychological co-morbidity and a difference in the evaluation of methodology of studies.

Lower age of initiation of internet use was found to be associated with internet addiction. Researchers have mentioned that early exposure to internet activities can increase risk of internet addiction.

In the present study, internet addicted students found to spend significantly greater amount compared to non addicts. This relates with previous studies.¹⁰ Students

with internet addiction had twice the odds of spending more than 35 hours per week, as compared to non addicts. "Although time is not a direct function in diagnosing internet addiction, early studies suggested that those classified as dependent online users were generally excessive about their online usage spending anywhere from 40 to 80 hours per week, with sessions that could last upto 20 hours" found that respondents with five or more symptoms of internet addiction averaged 35 hours a week online compared to 27 hours for those with fewer symptoms.¹¹

As expected, depression, anxiety and stress were predicted positive in internet addiction. Anxiety and stress are predictors of internet addiction while depression shows a trend towards significance. Recent studies on internet addiction demonstrated that internet addiction related positively to decrease social interactions, depression, loneliness and low self -esteem.¹¹

CONCLUSION

Internet addiction is growing problem among students which have psychological and physical impact on their life. Hence internet addiction among students should be given more attention. It is important to create an awareness among students to improve ability to reduce the occurrence of internet addiction and behavior promoting healthy lifestyle.

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