

## Prevalence of Internet Addiction and the Effect of Internet Usage on Lifestyle of College Students of Haryana during COVID 19 lockdown period

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### Abstract:

**Introduction:** Since 1990, internet usage is increasing day by day and availability of smart mobile phones and electronic gazettes like tablet, laptop etc. has given it an exponential rise. During COVID-19 lockdown period, internet usage pattern has changed a lot as per behaviour of students studying in schools, colleges, educational and coaching institutes etc. **Objective:** To study the prevalence of internet addiction and the effect of internet usage on lifestyle of college students of Haryana. **Method:** Total 1035 students, of various educational streams in various colleges of Haryana state were included in the study and data was collected by pretested self-designed questionnaire and young's internet addiction test questionnaire was used to assess its effect on life style. **Results:** Out of 1035 students, 436(42%) participants were below average users of internet, followed by 369(36%) average users and 230(22%) excessive users of internet. Average of total score of young internet addiction questionnaire was 27.72. Various life style factors like feeling stressed while working, neglects other activities, miss a diet, checks internet many times, obsessed with phone and internet usage per day were found significantly associated with internet addiction( $p < 0.05$ ). **Conclusion :** Excessive internet usage during COVID-19 pandemic may lead to various abnormal behavior changes which cause negative effect on various aspects of students like emotional, hyperactivity, depression, sleeping disorder etc.

**Keywords :** COVID 19, Internet Addiction, Lockdown, Smartphone

### Introduction:

Since 1990, internet usage is increasing day by day and availability of smart mobile phones and electronic gazettes like tab, laptop etc. has given it an exponential rise. During COVID-19 lockdown period, internet usage pattern has changed a lot as per behavior of students studying in schools, colleges, educational and coaching institutes etc. They are totally dependent upon internet media for their study as well as for other entertainment purposes.

The Internet use is a crucial component of business, telecommunications, its industries, education, social media and entertainment. It is present globally and is used to find-out various purposes like information, emails, financial give and take, retail sales, porn industries and gaming, among many other uses. over usage has appear after its growing popularity in recent time and thus a new illness called, InternetAddiction (IA).<sup>[1]</sup>

Internet Addiction is a decline in the control of its use, manifested as a set of behavioural, cognitive,

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and physiological symptoms. That is, the person is "net dependent", making excessive use of the Internet, which generates a perversion of her/his personal, family or professional goals.<sup>[2]</sup> Researchers have also found that adolescents' addiction to the Internet has resulted in many negative consequences including academic failure, poor family relationships, impaired social functioning, emotional problems, and psychiatric problems.<sup>[3]</sup> In India also, there has been a rise in the use of Internet by all age groups especially adolescents and university students.<sup>[4]</sup>

This study was carried out to assess the prevalence of Internet addiction among various educational streams of college students and to determine if there is any relationship of excessive Internet use with depression and academic performance among university students.

#### **Method:**

A cross sectional study was conducted using conventional sampling method. Study was conducted from April 2021 to September 2021. Study participants were college students of various institutions/colleges in Haryana aged 18 years and above.

Sample size: As per the internet addiction prevalence<sup>[5]</sup> (25.3%) in India, Sample size of 1035 was calculated as by using the formula as  $N=4PQ/L^2$ . The sample size was calculated by taking prevalence of 25.3% and absolute error (L) of 2.65%.

#### **Inclusion and exclusion criteria**

Inclusion criteria: All undergraduate and post graduate students studying any degree course from any college of Haryana were eligible to participate in the study, Both male and female students of age groups 18 years and above were included in the study.

Exclusion criteria: Students who were not having a smart phone or not using internet by any means and students who were not willing to give consent to participate in the study.

#### **Data collection:**

Google form link of the questionnaire was sent to students through Whats App and email. Formal consent was obtained from the participants before filling this questionnaire. The study tool was a self-designed pretested questionnaire which has two parts; first part consists of various factors affecting the life style of study participants during COVID- 19 lockdown period April 2021 to September 2021. Second part consist of Internet Addiction Test (IAT) which is a reliable and valid measure of addictive use of Internet<sup>[6,7]</sup> It consists of young's internet addiction test (IAT) having a sum of 20 items ranging from 0 to 100. Internet addiction scores were calculated; the higher the score, the greater level of addiction is present. Based upon scoring, subjects were classified into <20: below average internet users, 20–49 points: an average internet user, above 50: excessive internet users.<sup>[6,7]</sup>

#### **Statistical analysis:**

The data was entered in excel sheet and analysed using SPSS version 28.0. Qualitative variables were expressed as proportions and percentages. Quantitative variables were expressed as mean and standard deviation. Finally, Chi-square test was used to establish association (if any) among qualitative variables. Association between the various quantitative variables was established using t-test or ANOVA test as per data collected, p value <0.05 was considered significant at 95% confidence interval.

Ethical consideration: Final approval from the Institutional Ethics Committee was taken.

#### **Results:**

Out of 1035 students, 65.3% were female and 34.6% were male. Majority 97% were of below 25 years age group, Majority 52.5% were of science stream followed by 28.5% from Commerce, 17% from Arts stream. Total 57.7% were from rural area and 42.2% were from urban area. Majority 97% were of smart phone users. Around 58% spent 100-300 Rs. per month for internet usage followed by 38% spent

**Table 1: Association of Socio demographic profile with Internet usage among study participants (n=1035)**

Variables	Below average (n=369)	Average (n=436)	Excessive (n=230)	Total (n=1035)	p value
<b>Age group (Mean Age=20.45±2.59)</b>					
Below 25	19(59.4%)	6(18.8%)	7(21.9%)	32(3.09%)	<b>0.009*</b>
Above 25	350(34.9%)	430(42.9%)	223(22.2%)	1003(96.9%)	
<b>Gender</b>					
Female	243(35.9%)	279(41.3%)	154(22.8%)	676(65.3%)	0.72
Male	126(35.1%)	157(43.7%)	76(21.2%)	359(34.6%)	
<b>Stream</b>					
Arts	78(44.6%)	54(30.9%)	43(24.6%)	175(16.9%)	<b>0.034*</b>
BCA	4(28.6%)	6(42.9%)	4(28.6%)	14(1.35%)	
Commerce	94(31.9%)	129(43.7%)	72(24.4%)	295(28.5%)	
Management	1(14.3%)	3(42.9%)	3(42.9%)	7(0.67%)	
Science	192(35.3%)	244(44.9%)	108(19.9%)	544(52.5%)	
<b>Qualification</b>					
Postgraduate	66(36.9%)	62(34.6%)	51(28.5%)	179(17.3%)	<b>0.033*</b>
Undergraduate	303(35.4%)	374(43.7%)	179(20.9%)	856(82.7%)	
<b>Residence</b>					
Rural area	218(36.5%)	259(43.3%)	121(20.2%)	598(57.7%)	0.197
Urban area	151(34.6%)	177(40.5%)	109(24.9%)	437(42.2%)	

\*Statistically Significant

300-600 Rs. Per month. Age group, stream of education and qualification were significantly associated with internet addiction (Table 1)

369(36%) participants were below average users of internet, followed by 436(42%) were average users, 230(22%) were of excessive users of internet as found in study results.

Various life style factors like feeling stressed while working, neglects other activities, miss a diet, checks internet many a times, obsessed with your phone and internet usage per day were found significantly associated with internet addiction (p<0.05) as shown in Table 2. The study was found out as the commonest purpose of using Internet shown in figure 1.

**Discussion:**

Present study was conducted to know the extent of Internet Addiction (IA) among college students in Haryana during the period of Lockdown due to COVID-19. In this study, excessive internet users were more in Arts (24.5%) and Commerce stream (24.4%) as compared with science stream (19.8%) which were similar to the results found by Kumar N et al (2018)<sup>[9]</sup> and it may be due to more study materials/books in science curriculum and number of competitive exams they had to take, hence science students had less free time to spend on the internet.

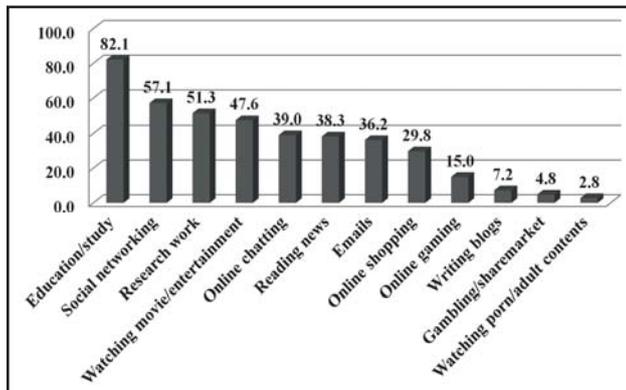
In present study majority (97%) of study participants were smart phone users. Majority

Table 2: Various life style factors associated with internet addiction (N=1035)

Variables	Below average (n=369)	Average (n=436)	Excessive (n=230)	Total	p value
				(n=1035)	
<b>Whether obsessed with your phone</b>					
Never	142(51.2%)	104(37.7%)	31(11.1%)	277(26.7%)	<0.001*
Often	17(19.1%)	37(41.5%)	35(39.4%)	89(8.6%)	
Sometime	197(31.8%)	285(46.1%)	136(22.1%)	618(59.8%)	
Very Often	13(25.4%)	10(19.7%)	28(54.9%)	51(4.9%)	
<b>Feeling stressed while working</b>					
Never	142(48.4%)	112(38.2%)	39(13.4%)	293(28.3%)	<0.001*
Often	24(25%)	37(38.5%)	35(36.5%)	96(9.4%)	
Sometime	193(32.2%)	271(45.2%)	136(22.6%)	600(57.9%)	
Very Often	10(21.7%)	16(34.7%)	20(43.6%)	46(4.4%)	
<b>Neglect other activity</b>					
Never	198(47.4%)	171(41.1%)	48(11.5%)	417(40.2%)	<0.001*
Often	24(21.8%)	48(43.6%)	38(34.6%)	110(10.6%)	
Sometime	136(29.4%)	201(43.5%)	125(27.1%)	462(44.8%)	
Very Often	11(23.9%)	16(34.7%)	19(41.4%)	46(4.4%)	
<b>Miss diet</b>					
Never	272(41.4%)	284(43.4%)	100(15.2%)	656(63.3%)	<0.001*
Often	12(19.6%)	25(40.9%)	24(39.5%)	61(5.8%)	
Sometime	78(26.7%)	118(40.5%)	96(32.8%)	292(28.4%)	
Very Often	7(26.9%)	9(34.6%)	10(38.5%)	26(2.5%)	
<b>Check internet how many time</b>					
Multiple Times in a Day	31(19.6%)	64(40.2%)	64(40.2%)	159(15.3%)	<0.001*
Daily	175(33.2%)	248(47.1%)	104(19.7%)	527(50.9%)	
Every Week	83(47.9%)	59(34.2%)	31(17.9%)	173(16.9%)	
Every Month	40(40.4%)	37(37.3%)	22(22.3%)	99(9.5%)	
Once Every Three Months	40(51.9%)	28(36.4%)	9(11.7%)	77(7.4%)	
<b>Change in internet usage during COVID-19 pandemic</b>					
Decreases Than Before	62(41.3%)	60(40%)	28(18.7%)	150(14.4%)	0.074
Increases Than Before	232(32.9%)	302(42.8%)	170(24.3%)	704(68.0%)	
No Change	75(41.4%)	74(40.9%)	32(17.7%)	181(17.6%)	
<b>Cost of internet</b>					
Less than 100	16(48.4%)	12(36.3%)	5(15.3%)	33(3.1%)	0.043*
100-300	231(38.4%)	246(40.9%)	124(20.7%)	601(58.0%)	
300-600	121(30.7%)	172(43.7%)	100(25.6%)	393(37.9%)	
Above 600	1(12.5%)	6(75%)	1(12.5%)	8(1%)	
<b>Internet usage per day</b>					
1-2 hours	73(48.7%)	62(41.3%)	15(10%)	150(14.5%)	<0.001*
2-4 hours	135(43.0%)	128(40.8%)	51(16.2%)	314(30.3%)	
4-6 hours	151(28.7%)	226(42.9%)	150(28.4%)	527(50.9%)	
More than 6 hours	10(22.7%)	20(45.5%)	14(31.8%)	44(4.3%)	

\*Statistically Significant

**Figure 1: Internet usage pattern among study participants in percentage (n=1035)**



(75%) of study participants used mobile data for internet surfing while (25%) used broadband data for doing internet work. Majority (58%) of study participants spent 100-300 Rs. per month for internet usage. Similar results were observed in a study conducted by Surwase K et al(2017)<sup>[11]</sup> & Krishnamurthy Set al(2015)<sup>[12]</sup> where Expenditure done on internet usage per month was <300 Rs per month in 81% of students. Similar results with most common mode of internet access was mobile internet (78.22%) as per study as well as most commonly used gadget for internet use is smart phone in 81.63% case as seen in Surwase et al (2017).<sup>[11]</sup>

A study conducted by Jain et al(2020)<sup>[13]</sup> in Jaipur, Rajasthan, India had reported that IA has a significant association with the educational qualification of the respondents as similar with this study. Study finding shows that, 22% of internet users show below excessive internet usage and 36% users shows average internet usage. An earlier published study from India by Nalwa K et al(2003),<sup>[14]</sup> which evaluated IA using the Davis Online Cognition Scale in school-going children aged 16-18 years, reported a prevalence of 18%. In the study of Goeld et al, (2013)<sup>[15]</sup> (by using young's criteria), 74.5% of internet users were moderate users, 24.8% were possible addicts and 0.7% were addicts. In the study of Sharma A et al(2014)<sup>[16]</sup> (IAT scoring), 57.3% were normal users, 35.0% were mild, 7.4% were moderate and 0.3% were severely addicted to the internet,

while a low rate of internet addiction was expected due to the still limited access. Most Indian students uses less internet as compared with Western countries, and may be due to differences in cultural and social traditions in India and others. Excessive internet users may be the possible addict of internet. The purpose of internet usage among college students was educational/study purpose (82%), social networking (57%), research work (51%), watching movies/serial/entertainment (47%), online chatting(39%), news reading(38.2%) and online shopping (30%) as found in our study. Niranjjan Ret al(2017)<sup>[17]</sup> studied the internet usage purpose in medical students in Pondicherry, India and also found similar results as in this study.

**Conclusion:**

Internet addiction among college students was significantly associated with age, stream, qualification, and cost of internet usage. Excessive internet usage during COVID-19 pandemic lockdown period was significantly associated with feeling stressed while working, miss a diet, neglects other activity, obsessed with phone and internet usage per day which causes negative effect on various aspects of students. To avoid these negative consequences, we should guide them to use internet only for their academic purposes.

**Declaration:**

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Conflict of Interest: Nil

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