

# Prevalence of Internet Overuse among Undergraduate Students of a Private University in South India

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## Abstract

Internet use in India has gone up in recent years. By December 2013 approximately 213 million internet users will be there in the country. With the increase in number of internet use the number of internet addiction or problematic internet use is also on a rise in the country. In our study on the undergraduate students of a private University in South India we got almost 100% prevalence of internet use. 7.8% students were found to be overusing the Internet with 1.3% were found to be addicted according to Kimberley Young's IA criteria. Positive association was found between the Internet overuse and Internet Addiction, and also male gender and Internet Addiction.

**Keywords:** Internet, Internet Addiction, Internet Overuse, University students

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achieve the same 'high'. Youth (18-24 yrs) is the most vulnerable age group to get the addiction. They get addicted to various social networking sites, gambling, games etc. Internet addiction can lead to poor impulse control, reduced socializing, time distortion, dissociation, procrastination<sup>2,3,4</sup>. Prevalence rate of Internet Addiction varies from 1.5% and 8.2% according to the surveys conducted in United States and Europe, the variation in the rates may be due to the fact that the diagnostic criteria and assessment questionnaires used for diagnosis vary between countries. High co-morbidity of Internet addiction has been reported with psychiatric disorders including depression, anxiety disorders and attention deficit hyperactivity disorders<sup>5</sup>. In India not much of community based studies are done to know about the prevalence of internet use, overuse and addiction. Therefore this study was planned in the Under Graduate students of our University to find out the prevalence of internet over use and addiction among them.

## MATERIAL AND METHODS

The above study was planned among the undergraduate students of a Private University, with the total undergraduate population of 3240. Assuming the proportion of internet addiction is 15% in India the

sample size was estimated to 550 for a relative precision of 20% at a 5% significance level. By applying Stratified Sampling Method, the respective colleges of University were divided into strata and 128 students were selected from Medical College, 303 from Engineering College, 85 from Dental College, 25 from Nursing college and 10 from Physiotherapy college. Simple random sampling using lottery method was used to choose the above sample size from each college. Prior consent was taken from the students and a Predesigned and pre-tested questionnaire was used to collect the information. Internet use was evaluated using the Young Internet Addiction

Test<sup>6</sup>. Statistical analysis was done using SPSS soft ware version 17, proportions and chi-square were used for analysis.

## OBSERVATION

Out of the total 550 participants 55% were males and 45% were females. The students were of 17-26 yrs of age with mean age of 19.29 years (SD 1.362). Except for one participant all others 549 participants were internet users. So internet use prevalence was almost 100%. Majority of the students (56.5%) have started accessing internet from the age group of 10-15 yrs (Table 1).

**Table 1:** Distribution of the students based on the age at which students started using internet

Age	Frequency	Percentage
LESS THAN 10 YEARS	8	1.5%
10-15 YEARS	311	56.5%
MORE THAN 15 YEARS	231	42.0%
<b>Total</b>	<b>550</b>	<b>100.0%</b>

Laptop or desktop was the main source for accessing internet for more than 2/3<sup>rd</sup> (75.6%) of the students, followed by cell phone (6.9%) and browsing center (2.4%). Average time spend on the internet was found to be 2.57 hr/ day (SD 1.983). 7.8% of the students were found to be overusing the internet (more than 6 hrs per day). Remaining 92.2% of the students were browsing net for less than 6 hrs per day (Table 2).

**Table 2:** Distribution of students according to number of hours of internet usage

Hours	Frequency	Percent
0-5	508	92.2%
6-11	40	7.4%
≥12	2	0.4%

11% of the students often and 9.8% always lost sleep due to late night log ins. 13.6% committed that they often find it hard to cut down the amount of time they spend online while 5.1% always found it hard. 9.1% felt often and 5.1% always felt some depression or nervousness when they are not able to access internet. Almost half (52.2%) of the students were found to be average online users, while one fourth (25.8%) of the students were found to be experiencing frequent or occasional problems 1.3% of the students were found to be having significant problems according to Kimberley and Young's Criteria of Internet Addiction (Table 3).

**Table 3:** Distribution of study population according to Kimberly Young IA scoring 6

SCORE	Interpretation	Frequency	Percentage
Less than 20		114	20.7
20-49	Average online user	287	52.2
50-79	Experiencing frequent or occasional problems	142	25.8
80-100	Causing significant problems	7	1.3
<b>Total</b>		<b>550</b>	<b>100.0</b>

More than one third of the boys (34.4%) were found to be experiencing frequent or occasional problems as compared to only 15% of girls and 1.6% of the boys were found to have significant problems as compared to only 0.9% of the girls. The difference was found to be statistically significant (38.278, p value 0.000) (Table 4).

**Table 4:** Association of K. Young scores with the gender of the study population

Sex	Kimberly s young scoring				Total
	Less than 20	20-49	50-79	80-100	
Male	41 (13.4%)	154 (50.4%)	105 (34.4%)	5 (1.6%)	305 (55.5%)
	73 (29.7%)	133 (64.8%)	37 (15.1%)	2 (0.8%)	245 (44.5%)
<b>Total</b>	<b>114</b>	<b>287</b>	<b>142</b>	<b>7</b>	<b>550</b>

Chi square – 38.278, p= 0.000

Addiction was found to be high in students of Dental college, followed by Medicine and Engineering college students, none of the nursing and physiotherapy students were found to be addicted, the difference was found to be statistically significant (47.828, p value 0.000). This difference may be due to the fact that students in different colleges come from different socio-economic strata of the society (Table 5).

**Table 5:** Association of K. Young IA scoring the various disciplines of the University.

College	Kimberly's young scoring				TOTAL
	Less than 20	20-49	50-79	80-100	
Engineering	39(12.8%)	177(58.4%)	85(28.1%)	2(0.6%)	303
Medicine	37(29.1%)	56(44.1%)	33(25.9%)	1(0.7%)	127
Dental	23(27.0%)	35(41.1%)	23(27.0%)	4(4.7%)	85
Nursing	12(48%)	13(52%)	0(0.0%)	0(0.0%)	25
Physiotherapy	3(30%)	6(60%)	1(10%)	0(0.0%)	10

Chi square value 47.828, p value =0.000

Internet addiction was found significantly more in the students who were overusing the net (more than 6 hrs per day) (Table 6).

**Table 6:** Association of K. Young IA scoring and the number of hrs of internet use

Internet use Hours/day	Kimberly's young scoring				TOTAL
	LESS THAN 20	20-49	50-79	80-100	
0-6 hrs	114 (21.9%)	279 (53.5%)	125 (23.9%)	3 (0.01%)	521
>6hrs	0 (0%)	8 (27.5%)	17 (58.6%)	4 (13.7%)	29
<b>Total</b>	<b>114</b>	<b>287</b>	<b>142</b>	<b>7</b>	<b>550</b>

Chi square value 60.360, p value =0.000

## DISCUSSION

Almost half (52.2%) of the students were found to be average online users, while one forth (25.8%) got occasional problems while 1.3% were found to be addicted. Sinkkonen HM *et al*<sup>7</sup> reported higher percentage of mild and moderate to serious over users in their study on Finnish Adolescents (14.3% were normal users, 61.5% were mild over-users and 24.2% were moderate or serious over-users). Pramanik T *et al*<sup>8</sup> has also reported higher mild to moderate overuse among Nepal's Medical students (40% mild addiction, 41.53% of Moderate addiction and 3.07% of severe addiction), the high prevalence of addiction may be due to the study in only Medical students, in our study we have included the various other disciplines. Average time spend on the internet was found to be 2.57 hr/ day (SD 1.983) while Anderson KJ<sup>9</sup> has reported average use of 100 minutes (1.6 hrs/day) per day in American college students. In our study addiction rate was 1.3% while Tang J *et al*<sup>10</sup> reported a high prevalence rate of internet addiction (6.0%) among adolescent internet users from school students in Wuhan, China. Deepak Goel *et al*<sup>11</sup> reported addiction of 0.7% in students of various disciplines in Mumbai by using Young's original criteria <sup>6</sup>. Berner JE *et al*<sup>12</sup> has reported that 11.5 % were problematic internet users among Chilean Medical Students. The prevalence rates of potential internet overuse and internet addiction were 14.8% and 3%, respectively reported by Yoo YS *et*

*al*<sup>13</sup> among Korean middle and high school students. Various studies has reported quite a different range of internet addiction, depending on the region of the world from where the study was done, different social, cultural and economic backgrounds of the students. In our study addiction was found more in males than in females, which was similar to the study done on Mumbai college students<sup>11</sup> however a study done on high school students (13-18 years) in China revealed no significant difference between gender and Internet Addiction<sup>14</sup>. In our study Internet addiction was found significantly more in the students who were overusing the net but Goel *et al*<sup>11</sup> reported no significant difference between Internet Addiction and hours of internet use per day in their study done in Mumbai college students. 20% of the students often to always lost sleep due to late night logins, 19% often to always found it hard to cut down the amount of time they spend online and 14% felt depressive or nervous when they were not able to access internet. Pramanik T *et al*<sup>8</sup> has reported higher percentage in all the above three categories (31%, 25% and 31% respectively). Again the fact may be our study was done on the students in different disciplines while Nepal study was done exclusively on Medical college students.

## CONCLUSION

Various studies from different parts of the world has reported some or the other numbers for internet addiction.

In our study to we got 1.3% addiction and 7.8% overuse. More and more people are adopting internet in the coming days, and the adolescent and the youth are the most vulnerable. It is high time we should start awareness regarding internet addiction and overuse, the problems associated with it. In the beginning of the study we had a doubt how many students will be using internet every day, but we found out that almost 100% were using internet moreover prevalence of over usage of Internet was found to be 7.8% which is quite high and addiction rate among them was 1.3%. Further studies are required to see what adverse effects are being caused due to the addiction. Moreover some awareness campaign should be started to make the younger generation aware about the addiction and effects of overuse of internet use.

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