Internet Addiction Pattern among High School Students of Jaipur City: A Descriptive Study

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Abstract— *This present study was conducted on high school students to find out patterns of internet use and prevalence of Internet addiction among high school students. Seven hundred students of three English medium schools of Jaipur city were selected by convenient sampling technique who returned the completed forms. Young's Internet Addiction Test (IAT) Internet addiction or problematic Internet use was considered when IAT score was ≥50. Out of these 700 students surveyed, 250 (28.57%) students were having Internet addiction. Internet Addiction was found significant more ($p < 0.05$) in males, prolonged users, and younger age of exposure to Internet and high socioeconomic status than their counterparts. In near future Internet addiction may be an important clinical entity. It needs extensive research. All high school students must be screened for Internet addiction and vice versa.*

Keywords: Internet, Students, Internet Addiction Test

I. INTRODUCTION

Human is a social animal, he/she develops social networks to fulfill its needs and to make life easy. Social networking kept changing its forms with time according to available technology. Life got changed drastically with the birth of the electronics and Internet technology. People can communicate using chatting, messaging, e-mail, news groups and discussion groups. Growth of Internet has been very fast since its origin. The growth of Internet users has been exponential. Kimberly Young reported Internet addiction at the meeting of the American Psychological Association.[1] This Internet addiction has been described in literature as "problematic Internet use/PIU" also.[2-3]

Internet addiction has possibility that a new kind of compulsive activity is on the rise.[4] People who are addicted to Internet can develop many types of disorder and one of the disorders that are common for the modern day is Internet Addiction Disorder.[5]

Young said that "Internet dependence" is based on seven criteria adopted from definition of pathological gambling: withdrawal, tolerance, pre-occupation with the Internet, heavier or more frequent use of the Internet than intended, persistent desire to use the Internet more, loss of interest in other activities and disregard for the known negative consequences of the heavy Internet use. Considering the exponential rise of "e" phenomenon worldwide, that is why probably DSM 5 kept 'Internet Use Disorder' as a diagnostic entity in its appendix under substance related disorders, section III for further research.[6]

Research has also explored the connection of PIU and social phobia, depression, anxiety, substance abuse, self harm and ADHD.[7-9] Research about PIU amongst school students are scanty especially from developing countries.

So this study was conducted to find out patterns of internet use and prevalence of internet addiction in high school students in a developing country i.e. India.

II. METHODOLOGY

This school based descriptive analytic observation study was conducted under Department of Psychiatry, SMS Medical college, Jaipur. After taking approval from institutional ethics committee, this study was conducted in high schools of Jaipur city.

Literature showed prevalence of Internet addiction ranging from 0.7% to 55%, so an average 11.8% prevalence of Internet addiction in 11^{th} and 12^{th} class students was taken. Sample size was calculated 609 subjects at 95% confidence limit and 20% relative allowable error. So for study purpose 700 students were included in this study.

A convenient sampling method was used for selection of schools. Three schools gave consent to conduct the study. Respective principals and students of the 11^{th} and 12^{th} standard were explained the whole study and they signed the consent and assent forms respectively. Students were approached in their classrooms. Anonymity and confidentiality were stringently maintained. First of all a semi structured pro-forma was given containing socio-demographic variables of age (in years), gender, education standard, Internet use variables, father's monthly income (in ₹), education, occupation. Questions regarding Internet use included of place of access, Internet use (hours/day) and types of frequent web activities to be chosen from chatting, cyber relations, pornography, gaming, gambling, shopping, information searching, web surfing and social networking. Young's Internet Addiction Test (IAT), a 5-point Likert scale was used to gauge Internet addiction in the second questionnaire. This 20 item instrument encompasses the extent to which Internet use affects a subject's thoughts, feelings, behaviors, sleep patterns and functioning, and its validity has been established.[10] Scores varied from 0 to 100. Students with score <20 score were considered non-users, 20–49 depicting an average online user who has complete control over their usage. IAT score ≥50 indicates Internet addiction or Problematic Internet Use. Score 50-79 indicates user having frequent problems due to Internet usage and 80–100 score signifying a user having a serious impact of Internet on his/her life.

Modified Kuppuswamy's Socioeconomic Scale was used to stratify the students according to socioeconomic status.[13] Descriptive statistics were used to describe the data, frequencies and percentages for categorical variables and mean values with standard deviations for continuous variables.

III. RESULTS

3.1 Description of Study Population:

As this study was conducted on students of high schools so age range was 14 years to 19 years with the mean of 15.78±0.8413. Males were slightly predominated over females i.e. 57.57% and 42.42% respectively. Three hundred sixty (51.42%) students belonged to 11^{th} standard and 340 (48.57%) students belonged to 12^{th}. Fathers' monthly income was ₹ <16020 in 211 (30.14%) students whereas 289 (41.28%) students' fathers' monthly income lies between ₹ 16020-32049 and 200 (28.57%) students had fathers' monthly income more than ₹ 32049. Nuclear type was the most common type (63.85%) of family, followed by joint family (33.14%) and nuclear extended (3%). (Table 1).

Table 1
Distribution of Study Population

Variables		Students (N=700)	
		No.	%)
Sex	Male	403	57.57
	Female	297	42.43
Education	11^{th}	360	51.43
	12^{th}	340	48.57
Father's Income (₹/month)	<16020	211	30.14
	16020-32049	289	41.29
	>32049	200	28.57
Father's Occupation	Professional/Semiprofessional	185	26.43
	Retired Pensioner	100	14.29
	Skilled/ Semiskilled	196	28.00
	Shop Owner/ Farmer	91	13.00
	Others	128	18.29
Father's Education	Up To Primary	44	6.29
	Up To Higher Secondary	288	41.14
	Graduate/ Postgraduate	368	52.57
Type of Family	Nuclear	447	63.86
	Joint	21	3.00
	Nuclear Extended	232	33.14

3.2 Study Variables related to Internet uses

Age of onset of using Internet varied from 8 years to 17 years with the mean of 12.71±1.78. Internet use everyday ranged from 0.25 hours/day to 12 hours/day with the mean of 1.892±1.846 hours/day. Score of IAT varied from 1 to 90 with the mean score 35.94±22.12. (Table 2)

Table 2
Associated variables related to Internet use with Problematic Internet Use (PIU)

Variables	Mean	SD	Range
Age of Onset of Using Internet	**12.71**	**1.78**	**8-17**
Exposure to Internet (in Years)	**2.78**	**1.82**	**0.5-6**
Rate of Internet Use (in Hours/Day)	**1.89**	**1.85**	**0.25-12**
IAT Score	**35.94**	**22.12**	**1-90**

Out of total 700 students, 180 (25.71%) were having IAT score <20 and they were consider in non user group whereas 320 (45.71%) students were average user (IAT score 20-49), 152 students were having IAT score 50-79 and were having frequent PIU and 48 (6.86%) were experiencing significant PIU (IAT Score >80). So Problematic Internet uses (PIU) was found in 200 (28.57%) students. (Figure 1&2)

Majority of students (69.85%) were using internet for social network followed by for Academic purpose (9.8%), downloading media files (8.14%), gaming (6.42%), online shopping (4.57%), pornography (0.71%) etc. (Figure 3)

Students who were surfing social sites, maximally (48.71%) use Face book followed by Whatsapp (14.71%), Google (14.28%), Youtube (8.71%), Wikipedia (2.85%), Gmail (1.71%) etc. (Figure 4)

Figure 1

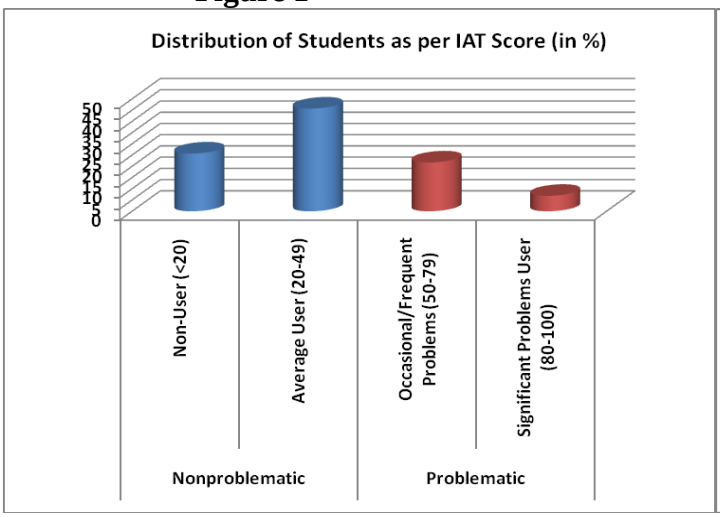


Figure 2

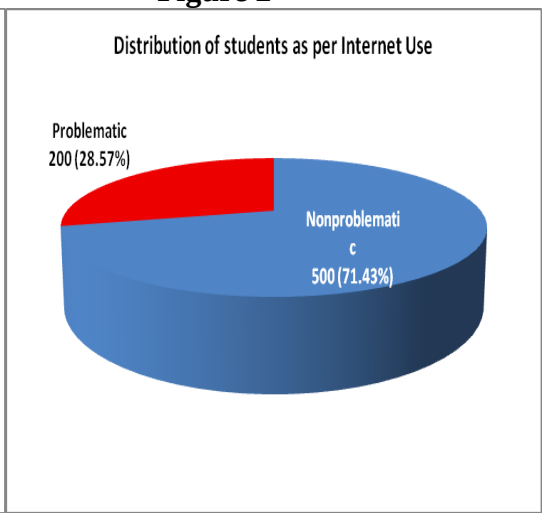


Figure 3

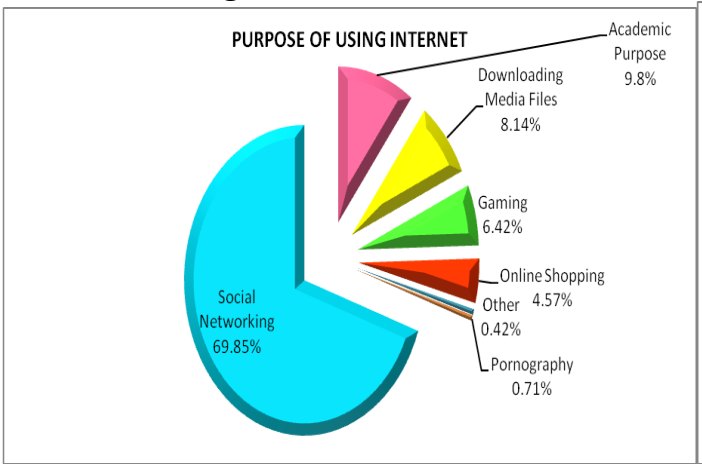
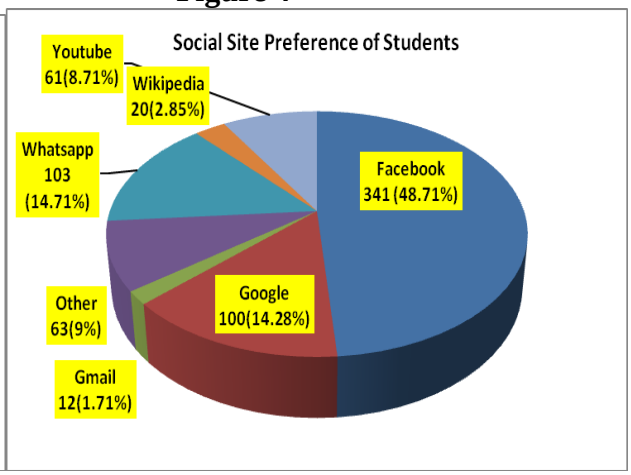


Figure 4



3.3 Associated variables related to Internet use with Problematic Internet Use (PIU)

Study variables related to internet use were studied were; Age of onset of using Internet, total years of exposure of internet use and rate of Internet use. Internet addiction/PIU was consider when IAT score is >50. When these variable related to internet use were analyzed to found out its association with PIU it was found that earlier the age of starting internet use more are chances to develop PIU. Likewise more years of exposure of internet use or more the rate of use of internet more probability to develop PIU. (Table 3)

Table 3
Associated variables related to Internet use with Problematic Internet Use (PIU)

Variables		Problematic Internet use (PIU)		Unpaired 't' Test at 698 DF	P Value
		Yes (N=200)	No (N=500)		
Age of Onset of Using Internet (in Years)	Mean	11.62	13.15	11.100	<0.001
	SD	1.836	1.566		
Exposure to Internet (in Years)	Mean	4.48	2.512	15.223	<0.001
	SD	1.834	1.413		
Rate of Internet Use (in Hours/Day)	Mean	3.69	1.174	20.674	<0.001
	SD	1.944	1.205		

IV. DISCUSSION

4.1 Prevalence

It was found that Internet addiction was present amongst 28.57% high school students. Prevalence of Internet addiction in our study was in line with studies reported by other authors.[14-15] Use of different diagnostic scales for Internet addiction, different population characteristics, presence of comorbidities and failure to demarcate recreational use from essential use of net are responsible for varying prevalence of Internet addiction in different studies.

4.2 Internet usage patterns

Students, who were problematic Internet users, use average Internet for 3.69 hours/day (25.83 hours/week), while students who were not problematic Internet users use Internet for 1.17 hours/day (8.19 hours/week) **(p<0.0001)**. This finding was consistent with other studies which found that the number of hours using the Internet could be an indicator of Internet over-use and/or PIU.[16-17]

Use of Internet between social networking and other purpose was found to be statistically significant of Internet addiction in our study. Social networking comprises 84% of the web audience in India and takes up 21% of all time spent online.[18] Research across countries and continents has suggested that social networking and online chatting are among the highest ranked online activities and are associated with Internet addiction.[16-19] Need for socialization as evidenced by social enhancement in extroverts and social compensation in introverts may be a reason behind the teeming use of social networking sites.[18] Also loneliness, social anxiety and shyness that are positive correlates of Internet addiction may drive an individual to such means of communication online owing to the comfort of anonymity, nullification of need of non verbal communication and ease of approach. Probably for the fact that the majority of students accessed the net via home and were thus under parental constraints and financial limitations, cybersex, gambling and shopping were not found significant in this work, that is in dissonance with other studies.[20-21]

V. CONCLUSION

Internet addiction was found in more than one fourth of students. Duration of exposure of internet use, age at onset of starting internet use, rate of Internet use etc more important role in developing internet addiction. Internet is increasing so the Internet addiction seems to rise in future. So interactive activities such as chatting over social networking sites and gaming are the key factors that may influence problematic Internet use it should be under control.

CONFLICT

None declared till date.

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