



PREVALENCE AND FACTORS ASSOCIATED WITH INTERNET ADDICTION AMONG STUDENTS IN A CITY OF NORTH-WESTERN RAJASTHAN

Dr. Isha Choudhary

Junior Resident, Department of Psychiatry, Sardar Patel Medical College, Bikaner, Rajasthan.

Dr. Harful Singh

Professor, Department of Psychiatry, Sardar Patel Medical College, Bikaner, Rajasthan.

Dr. Radheshyam

Medical Officer (Psychiatry), JLN Hospital, Nagaur, Rajasthan.

Dr. Aditi Mahajan*

Junior Resident, Department of Psychiatry, Sardar Patel Medical College, Bikaner, Rajasthan. *Corresponding Author

ABSTRACT

Background- Internet has become an integral part of everyone's life including adolescents and children. Internet addiction is defined as heavily disproportionate amount of time spent when surfing the internet and as the incompetency in controlling the use of internet. This could detrimentally impact familial and interpersonal relationships, academic achievement, and emotional development in adolescents. **Aim-** To assess the pattern of internet use among school going students in a city in North Western Rajasthan, and the factors associated with severity of internet addiction. **Methodology-** This cross-sectional observational study was conducted after taking approval from ethical committee of the college and permission from school principals. Students willing to participate were requested to fill a semi-structured proforma for socio-demographic details and factors associated with internet addiction. Internet Addiction Test was filled by them after being explained. **Results-** In this study maximum number of students were in normal range (0-30) i.e. 57.8%, while 31.3% were in mild (31-49) level of internet addiction test score, 10.1% were in moderate level and only 0.5% were in severe level of internet addiction test score. Severity of internet addiction showed statistically significant association with age of starting internet use, hours spent on internet including gaming and abnormal behaviour. **Conclusions-** The findings of our study suggest us to make the adolescents aware about ill effects of excessive internet use and educate them about good internet use practices.

KEYWORDS : Internet Addiction, Adolescents, IAT (Internet Addiction Test)

INTRODUCTION

Internet has become an integral part of everyone's life including adolescents and children. The term "internet addiction" was proposed by Dr. Ivan Goldberg in 1995 for pathological compulsive internet use. Internet addiction is defined as heavily disproportionate amount of time spent when surfing the internet and the inability in controlling the internet use.^[1] Internet use can be seen as a two-edged sword, especially with the increasing online academic platforms, but at the same time the unsupervised use of internet especially at a younger age increases the chance of addiction stress.^[2]

The population of India is around 1.4 billion as of 2022 census, of which the number of Internet users (both urban and rural) is around 833 million (59.5% of population) which is second highest, after China.^[3] The easy access to mobile and internet services, the inbuilt social networking platforms as well as the pandemic have played an important role in significantly rising number of internet users.^[4] It has become a primary medium for communication and academic purpose especially in adolescents.^[5]

The warning signs of Internet Addiction include preoccupation with online activities, increasing time spent online, unsuccessful attempts to control use, restlessness and mood changes while reducing usage, jeopardizing relationships or opportunities, lying to conceal involvement, using the internet as an escape, feeling guilty and defensive, experiencing euphoria during online activities, and physical symptoms like carpal tunnel syndrome, dry eyes, backaches, headaches, sleep disturbances, and weight changes.^[6]

Various risk factors have been associated with Internet Addiction, some of which are gender, lifestyle in metropolitan areas, low parental involvement, parental unemployment^[7], low educational level of parents. Other user-based risk factors include early age of starting internet, excessive time spent on social media and gaming sites etc.^[8]

METHODOLOGY

Aims and Objectives

To assess the pattern of internet use among school going students in a city in North Western Rajasthan, and the factors associated with severity of internet addiction.

Study settings

After taking prior permission from the school principals, this study was conducted among 1002 students. Students willing to participate were requested to fill a semi-structured proforma including socio-demographic details and factors associated with internet addiction. Internet Addiction Test was filled by them after being explained.

Study Design

Cross sectional, Observational study.

Inclusion Criteria

1. School going students of age group 13 to 16 years willing to participate in the study.

Exclusion Criteria

1. Not willing to participate in the study.

Study Tools

- 1) A semi-structured self-administered proforma consisting of socio-demographic details and factors associated with internet addiction.
- 2) The Internet Addiction Test (IAT; Young, 1998): is a 20 items 5-point Likert scale that measures the severity of self-reported compulsive internet use. The Internet Addiction Test (IAT) is the first validated instrument to assess internet addiction. The psycho-metric properties of the IAT show that it is reliable and valid measure that has been used to further research on internet addiction.^[1]

Normal Range: 0-30 points.

Mild Range: 31-49 points.

Moderate Range: 50-79 points.

Severe Range: 80-100 points.^[1]

METHODOLOGY

After a brief introduction about the study, the students were handed over the semi-structured proforma consisting of socio-demographic details etc. The proforma also included IAT (Internet Addiction test). IAT was explained to the students before filling. The test measures the extent of involvement with the Internet and classifies the addictive behaviours as mild, moderate or severe impairment.

Confidentiality was maintained throughout the process to safeguard the privacy and anonymity of participants. Participants were assured that their information would be used solely for research purposes and would not be disclosed to any third party.

After all the questions were answered, the numbers for each response were added to obtain a final score. A higher score range indicates a greater level of addiction.

Ethical approval

Approval from the ethical committee of the college and permission from school principal was taken.

Statistical Analysis

Data was compiled and analysed in Microsoft Excel.

RESULTS AND OBSERVATION

Table 1: Sociodemographic Details of Participants (N = 1002)

Sociodemographic details (N = 1002)		n (%)
Age	13-14 years	672(67.0)
	15-16 years	330(32.93)
Gender	Male	630(62.8)
	Female	372(37.1)
Class	8th	478(47.7)
	9th	386(38.5)
	10th	138(13.7)
Number of siblings	0	226(22.5)
	1	546(54.4)
	> 1	230(22.9)
Type of family	Joint	528(52.6)
	Nuclear	474(47.3)
Age at which started using mobile	<5 years	48(4.79)
	5-10 years	492(49.1)
	> 10 years	462(46.1)
Age at which started using internet	<5 years	22(2.19)
	5-10 years	428(42.7)
	> 10 years	552(55)

Table 1: A total number of 1002 students participated in the study of which 672 (67.0%) were 13-14 years old and 330 (32.93%) were 15-16 years old. 8th class had the highest participation with 478 students (47.7%), followed by 9th class with 386 (38.5%) and 10th class with 138 students (13.7%). Among the participating students most of them had one sibling (54.4%) and belonged to joint family (52.6%). Maximum number of students started using mobile phones at the age of 5-10 years (49.1%) and internet at age of more than 10 years (55%)

Table 2: Internet Usage Patterns and Outdoor Games Participation Among Students

		Number of students		Percentage		Combined %
		Males	Females	Males	Females	
Number of hours spent on internet after school	<1 hour	56	170	5.58%	16.9%	22.5%
	1-3 hours	346	280	34.5%	27.9%	62.4%
	>3 hours	110	38	10.9%	3.7%	14.7%

Activities done on internet	WhatsApp	310	324	30.9%	32.4%	63.2%
	Facebook & Instagram	234	266	23.3%	22.5%	49.9%
	Gaming	372	198	37.12%	19.76%	56.8%
	Academic purpose	306	332	30.5%	33.13%	63.6%
Outdoor games (days per week)	Absent	54	67	5.38	6.68	12.1%
	1-3 days per week	210	96	20.95	9.58	30.5%
	>3 days per week	370	203	36.9	20.25	57.2%

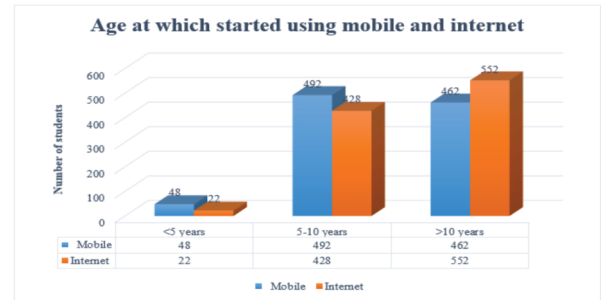


Figure 1: Age at which started using mobile and internet

Table 2: Most of the students (62.4%) spent an average of 1-3 hours daily on internet. As reported by the students, academic purpose (63.6%) followed by WhatsApp (63.2%), gaming (56.8%) and Facebook and Instagram (49.9%) were the reasons for internet use. Around 57.2% of students played outdoor games >3 days per week.

Table 3: Impact of Internet Usage on Various Aspects of Students' day to day activities

Sno.	Questions	No. Of students	Percentage
1.	Change in sleep schedule felt due to internet use	400	39.9%
2.	Change in behaviour felt due to mobile and internet	402	40.1%
3.	Had any uncomfortable experience on internet	220	21.9%
4.	Stressful event due to internet	294	29.3%
5.	Negative effect on studies	562	56.0%
6.	Negative effect on relations with family members	504	50.2%
7.	Negative effect on routine activities	486	48.5%
8.	Negative effect on interaction with friends	182	18.1%
9.	Substance use	50	4.9%

Table 3: The study found out that 56% students reported negative effect on studies, 50.2% reported negative effect on relations with family members, 48.5% in routine activities due to internet and 40.1% reported change in their behaviour due to excessive mobile and internet use.

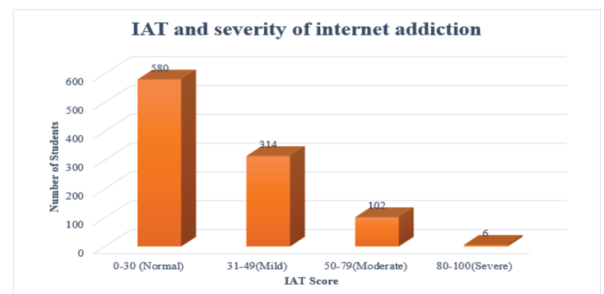


Figure 2: Severity of Internet addiction according to Internet Addiction Test (IAT)

In our study 57.8%(n=580) students had no internet addiction, 31.3% (n=314) had mild internet addiction, 10.1% (n=102) had moderate internet addiction and only 0.5% (n=6) had a severe internet addiction.

DISCUSSION

On the basis of the results obtained in this study, various factors contribute to the severity of internet addiction like early age of starting mobile and internet use, greater time spent on online gaming and lesser time spent playing outdoor games and studying.

A total of 1002 students participated in the study, among which 672 (67.0%) were in age group 13-14 years and 330 (33%) were 15-16 years. Findings similar to this study were present in a study conducted by *Tsitsika et al.* in a European population.^[8]

Out of these, 630 (62.8%) were boys and 372 (37.1%) were girls. This finding is in line with the study by *Mane DS et al.* in Pune, Maharashtra where maximum number of students with internet addiction were boys around 61%. They studied that this gender disparity is explained partly based on indulgence in different online activities by males and females. Boys exhibit a higher tendency to utilize the internet for entertainment purposes, such as gaming and cybersex, activities that are notably linked with compulsive internet use.^[11]

Students reported negative effect on studies and routine activities due to internet usage. Besides this, change in their behaviour and temperament is also reported due to excessive mobile and internet use. They further reported being more irritable, short tempered and having difficulty in concentrating.^[10] Several students reported being stressed out due to adult content appearing on the screen which is inappropriate for their age and some even reported getting vulnerable to searching such content and later getting addicted to watching that.^[11]

As reported by the students, major reasons for excessive internet use were academic purpose followed by WhatsApp and gaming. Research conducted by *Casey et al.* revealed that online communication applications, specifically instant messaging and chatting, possess a greater potential for addiction compared to other internet applications.^[9] Study by *Durkee T et al.* showed that the most highly ranked online activities included watching videos, participating in chatrooms, and engaging in social networking. Notably, males exhibited significantly higher rates of playing games, while females showed increased participation in social networking.^[7]

Due to increase in the online academic platforms and increasing academic competitiveness, students spend more time on internet for academic purposes thereby spending lesser time on outdoor games. This is further worsened by the fact that nowadays parents are unable to spend quality time with their children due to their own hectic and busy schedule, which children take advantage of and find it easier to spend even more time on internet, especially online gaming, social networking platforms during night hours.^[12] Thus, children create their own online virtual world and remains preoccupied with that, which significantly impacts their real life. Study by *Durkee T et al.* found that the highest relative risks were observed among students who were not residing with a biological parent, had minimal parental involvement, and experienced parental unemployment.^[7]

Although our study shows majority of students falling in the no addiction group, the increasing number seen in the recent years supports the idea that we should think of various ways in which students should be counselled and taught about correct

and appropriate internet use. Parents should also be made aware of how their involvement can help reduce the addiction and how they can play a pivotal role in moderating the internet usage of their children.

CONCLUSION AND FUTURE DIRECTION

This study shed light on some factors contributing significantly to internet addiction such as age of starting mobile use, age of starting internet use, hours spent on internet, time spent on internet gaming, number of days of week outdoor games played, playing outdoor game and hours spent on studies everyday apart from school hours.

Many students reported being stressed and being negatively affected by the excessive use of internet. These effected have been associated with psychological and behavioural problems like stress, anxiety, depression, suicidal tendencies, violent behaviour etc.

Internet addiction can be prevented and reduced with the help of education about safety of internet, screening of media, adequate parental control, mental health promotion, public awareness on internet addiction etc. These steps should be put in action for adolescents and parents.^[11]

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Conflict Of Interest- Nil

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