

## Internet Addiction and Associated Factors among Medical Students: A Cross Sectional Study

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### Abstract

**Background:** The internet has ingrained itself into our daily lives. It is utilised for many different things, including communication, information searching, playing games, keeping track of health programmes, and the list goes on. Medical students are one of the vulnerable groups whose academic activities may be negatively impacted by increased internet usage. Hence this, study aims to determine the factors associated with Internet Addiction and to estimate the prevalence of Internet Addiction among medical students.

**Materials and Methods:** Internet Addiction Test (IAT) scale questionnaire was used to collect data from all the Medical students of ESIC Medical College and hospital, through self-administered questionnaire. Over a period of 3 months a total of 283 responses were received. Further analysis was done using SPSS version 28.0.

**Results:** The prevalence of Internet Addiction was found to be 36.70%. A statistically significant association was found between duration spent with internet and Internet Addiction, but no other statistically significant association was found between Internet Addiction and other factors.

**Conclusions:** Internet addiction is an emerging problem of modern era, which has an impact on mental health. It is need of the hour for early recognition of internet addiction and thereby takes appropriate measures to manage and reduce it.

**Key-words:** Internet Addiction, Prevalence, Medical students, IAT

### Introduction

The introduction of the internet has completely changed how people utilise technology, whether or just to pass the time and it has become essential component of daily life. The way individuals use the internet has undoubtedly evolved. India is currently the second-largest internet user in the world. India's

use of the internet has been growing rapidly, with 665.31 million internet users in 2019<sup>1</sup>. Internet usage has been personalized. To complete a planned task within a fair amount of time without experiencing any mental or behavioural pain is the healthy way to use it, only few use judiciously and others not. Because of its easy availability and passive entertainment has the potential risk of internet addiction.

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Internet addiction is characterized by excessive or poorly controlled preoccupations, urges or behaviours regarding mobile or computer use and internet access that lead to impairment or distress. Misuse of internet has become a health concern worldwide and growing exponentially. Medical students are one of the vulnerable groups for Internet Addiction, as they have academic pressure, so when they spend time on internet for relaxation, they get addicted which reflects on their academic performance. From the various studies conducted previously on Internet Addiction among medical students the prevalence of Internet Addiction is found to be high among medical students<sup>2-11</sup>. Hence, the study was undertaken to estimate the prevalence of Internet Addiction among medical students and its associated factors.

### Materials and Methods

This is a cross sectional study conducted among 283 medical students of ESIC Medical College, Kalaburagi over a period of 3 months from June - August 2022. All the medical students from first year to final year, who are willing to participate, were included in the study after obtaining their consent. Internet Addiction Test (IAT) scale was used to collect data from the medical students. IAT scale is a validated self-administered questionnaire consisting of 20 questions designed to measure internet addiction. The IAT total score is the sum of the ratings given by the examinee for the 20 item responses. Each item is rated on a 5-point scale ranging from 0 to 5. The maximum

score is 100 points. The higher the score is the higher is the severity of the problem. Total scores that range from 0 to 30 points are considered to reflect a normal level of Internet usage; scores of 31 to 49 indicate the presence of a mild level of Internet addiction; 50 to 79 reflect the presence of a moderate level; and scores of 80 to 100 indicate a severe dependence upon the Internet. Each question was given a score of 0 (not applicable) to 5 (always). The responses obtained were scored appropriately to derive results. Further Microsoft excel was used to calculate frequency, percentage and chi-square test was used for determining statistical significance.

### Results

The study population comprised of total of 283 study subjects among whom 126 (44.53%) were male and 157 (55.47%) are females. Majority of the participants were females (55.5%), hostellers (87.6%), most of them would sleep for 6-7hrs (62.2%), physical activity for 1-2 times a week (49.5%) and duration spent on internet was 1-3hrs (54.1%) [Table 1]. The prevalence of Internet Addiction (IA) was found to be 36.70% (Mild IA-22.12%, Moderate IA-13.18%, Severe IA-1.40%) and normal level of internet usage was found to be 63.30% [Fig 1].

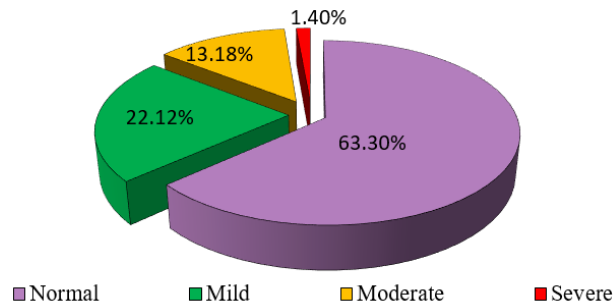
A statistically significant association was found between duration spent with internet and Internet Addiction, but no other statistically significant association was found between Internet Addiction and other factors [Table 3].

**Table No.1: Distribution of respondents with baseline characteristics (n=283)**

		Frequency [n]	%
Gender	Male	126	44.53
	Female	157	55.47
Accommodation	Day scholar	35	12.36
	Hosteller	248	87.64
Sleep hours	≤3hrs	3	1.08
	4-5hrs	55	19.43
	6-7hrs	175	61.83
	≥8hrs	50	17.66
Physical activity per week	Nil	47	16.60
	1-2times	140	49.46
	3-4times	54	19.08
	5times and above	42	14.86

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		Frequency [n]	%
Duration spent with internet	1-3hrs	154	54.41
	4-6hrs	106	37.45
	7-9hrs	17	6.00
	>9hrs and above	6	2.14



**Table No.2: Prevalence of Internet Addiction among medical students (n=283)**

IAT scoring	[n]	%
Normal internet usage	180	63.30%
Mild IA	63	22.12%
Moderate IA	36	13.18%
Severe IA*	4	1.40%

\*IA- Internet Addiction

**Fig No 1: Prevalence of internet addiction (n=283)**

**Table No.3: Association of Internet Addiction with baseline demographic characteristics(n=283)**

Factors		Internet Addiction status					p-value
		Yes		No		Total	
		(n=103)	%	(n=180)	%		
Gender	Male	52	41.30%	74	58.70%	126	0.3
	Female	51	32.48%	106	67.52%	157	
Accommodation	Day scholar	17	48.57 %	18	51.43%	35	0.4
	Hosteller	86	34.67%	162	65.33%	248	
Sleep hours	≤3hrs	1	33.34%	2	66.66%	3	0.1
	4-5hrs	26	47.28%	29	52.72 %	55	
	6-7hrs	59	33.72%	116	66.28 %	175	
	≥8hrs	17	34.00%	33	66.00%	50	
Physical activity per week	Nil	21	44.68%	26	55.32%	47	0.8
	1-2times	51	36.42%	89	63.58%	140	
	3-4times	15	27.77%	39	72.23%	54	
	5times and above	16	38.09%	26	61.91%	42	
Duration spent with Internet	1-3hrs	42	27.27%	112	72.73%	154	0.0001*
	4-6hrs	45	42.45%	61	57.55%	106	Significant
	7-9hrs	12	70.58%	5	29.42%	17	
	>9hrs and above	4	66.66%	2	33.34%	6	

\*A statistically significant association was found between duration spent with internet and internet addiction.

**Discussion**

The present study focused on the problem of internet addiction. The majority of study subjects were females (55.47%). Most of them stayed in hostel

(87.64%) which is comparable to the study conducted by Ranganatha S C et al<sup>1</sup> (58%).

In our current study, the prevalence of Internet Addiction was found to be 36.70% which is less than

the study conducted by Jain S et al<sup>2</sup> (70.6%), Ade et al<sup>3</sup> (89.0%), Duraimurugan et al<sup>4</sup>(56.6%) and Chaudhari et al<sup>5</sup>(58.7%). In the present study, mild, moderate and severe addiction were found to be 22.12%, 13.18% and 1.40% respectively which is less than the study conducted by Jain S et al<sup>2</sup> (38.4%, 29.6% and 2.58%), Ade et al<sup>3</sup> (64.0%, 22.0%, and 6.0%).

Gender difference was observed in the present study, where the prevalence of internet addiction was found to be slightly more in males(41.30%) than females (32.48%), which is similar to the study conducted by Jain S et al<sup>2</sup> (male -74.7%, female - 65.5%) and Ranganatha S C et al<sup>1</sup> (male - 45%, female - 55%). On the contrary, the study done by Ade et al<sup>3</sup>, no gender difference was found. No statistical association was found between gender and internet addiction which is similar to the study conducted by Jain S et al<sup>2</sup>, Ranganatha S C et al<sup>1</sup>, Setty et al<sup>6</sup>.

Internet Addiction among day scholar (48.57%) was observed to be apparently more compared to the hostellers (34.67%), which is similar to the study conducted by Ranganatha S C et al<sup>1</sup> (day scholar - 52%, Hosteller - 48%), but no statistically significant association was found between accommodation and Internet Addiction which is in contradiction to the study by Ranganatha S C et al<sup>1</sup>, Chaudhari et al<sup>5</sup> where statistical significance was found.

Among the Internet addicts, duration spent with internet in hours per day, majority of them used for 4-6hrs (42.45%) which is similar to the study conducted by Ranganatha S C et al<sup>1</sup>(50%). A statistically significant association was found between duration spent with internet and internet addiction which is similar to the study by Jain S et al<sup>2</sup>.

### Conclusion

Internet addiction is an emerging problem of modern era, which has an impact on mental health. It is need of the hour for early recognition of internet addiction and thereby takes appropriate measures to manage and reduce it.

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**Conflict of Interest:** None

**Ethical clearance:** Obtained

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