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A Cross Sectional Study of Internet Addiction Among Medical Students in Western Maharashtra

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ABSTRACT

Internet use is prevalent in medical students as they use it for academic, entertainment and social purpose. Inappropriate internet use can interrupt academic, occupational and social life. To study prevalence of the internet addiction in medical students and its association with mental health of students and also to study relationship between internet addiction and life of student. A cross sectional study was conducted in Department of Forensic Medicine and Toxicology, Dr. Vithalrao Vikhe Patil Foundation's Medical College, Ahmednagar. Total 399 medical students using internet more than one year and given written informed consent included in this study and samples were selected by random sampling method. Internet addiction Test and Supplementary questionnaires were used for data collection from students. Assessment of internet addiction in students done by Dr. Kimberly Young Internet addiction Test. In this study of 399 medical students 210 were normal, 199 were mild addicted, 58 are moderately addicted and 12 are severely addicted to internet use. Awareness should be created among undergraduate students about the drawback of the unnecessary use of the internet and promoting students to use the internet for academic purposes and collecting scientific info.

INTRODUCTION

With the dawn of technology, medical education has been transformed to the extent that internet has become a necessary part of it. Inappropriate and chronic internet use can interrupt occupational and public life^[1]. Young people with internet addiction can progress numerous mental health problems due to excess time spent on online shopping, gaming, chatting and pornographic sites etc. It is also associated with anxiety disorders and various mental health problems^[2-4]. Medical students are among the population affected by internet addiction. The medicos spends their major time in hospitals, lectures or studying. Rarely they have any time for person to person interaction. This results them to turn towards the substance abuse in order to ease their nerves. Psychological stress causes one-fifth of medical students to abuse at least one substance despite being aware of the ill effects^[5,6].

Aim and Objective:

- Incidence and prevalence of internet addiction in medicos
- To analyse the internet use and academic neglect
- To study times spend in internet use
- To correlate internet use with sleep and depression disorder
- To study purpose of internet use

MATERIAL AND METHOD

Present retrospective descriptive cross sectional study was carried out in under graduate medical students of Dr. VVPF's Medical College and Hospital, Ahmednagar, Maharashtra in the period of November, December 2022, after approval from Institutional Ethical Committee. Total 399 M.B.B.S students aged between 18-25 years were selected. The selected students were explained about the nature and purpose of the study. After obtaining informed consent and assuring confidentiality about the information collected, the data was collected by self-administering questionnaires in google form:

- The semi structured proforma that contains details regarding personal particulars, qualification and reasons for internet use, etc
- The internet addiction test it was developed by Dr. Kimberly Young and it is reliable tool to measure internet use

Sampling techniques:

- Simple random sampling

Inclusive criteria: Medical students from 1st year, 2nd year, 3rd year, Intern, using internet since last 12 months who gave written voluntary consent were included.

Exclusive criteria:

- Students not interested to participate
- Resident doctor (PG students), Faculty and Teachers

RESULTS

In this study out of 399 Medical students 51.6% were males and 48.4% were females Fig. 1.

Out of 399 students 113 i.e. (28.3%) students rarely use of data pack on what's app, Face book, You Tube, Instagram, and Netflix and 35 i.e. (8.8%) always use of data pack on what's app, Face book, You Tube, Instagram, Netflix and net-package get exhausted on this things (Table 1).

Out of 399 individuals, majority i.e. 91(22.8%) students occasionally feels their life without internet would be boring, empty, joyless, etc. While Least i.e., 30 (7.5%) answered they always feels their life boring, empty, joyless, etc without internet (Table 2).

Table 1: The use of data pack of students on WhatsApp, Facebook, You Tube, Instagram, Netflix

Grading of internet use for what's app, Face book, You Tube, Instagram etc.	Students	
	Number	Percentage
0 Does not apply	70	17.5
1 Rarely	113	28.3
2 Occasionally	92	23.1
3 Frequently	52	13
4 Often	37	9.3
5 Always	35	8.8

Table 2: Students fear of life without internet would be boring, empty, joyless results are as follows

Student life without internet-boring, empty, joyless etc.	Students	
	Number	Percentage
0 Does not apply	89	22.3
1 Rarely	90	22.6
2 Occasionally	91	22.8
3 Frequently	65	16.3
4 Often	34	8.5
5 Always	30	7.5

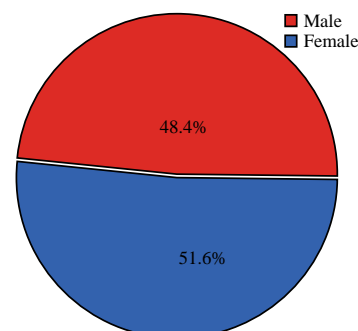


Fig. 1: Distribution of respondents

Table 3: Students lost sleep due to late night logins our study result as follows

Students lost sleep due to late night logins	Students	
	Number	Percentage
0: Does not apply	100	25.1
1: Rarely	102	25.6
2: Occasionally	88	22.1
3: Frequently	52	13
4: Often	45	11.3
5: Always	12	3

Table 4: Students feel depressed, moody or nervous when offline

Students feel depressed, moody or nervous when off-line	Students	
	Number	Percentage
0: Does not apply	144	36.1
1: Rarely	115	28.8
2: Occasionally	57	14.3
3: Frequently	46	11.5
4: Often	24	6
5: Always	13	3.2

Table 5: Internet addiction test

Medical students			
IAT scores	Category	Number	Percentage
0-30	Normal	210	52.63
31-49	Mild addiction	119	29.84
50-79	Moderate addiction	58	14.53
80-100	Severe addiction	12	3
Total students		399	100

Table 6: The purpose of internet use

The purpose of internet use	Students	
	Number	Percentage
1: Educational	167	41.9
2: Social networking	104	26.1
3: OTT like Netflix, YouTube, Hotstar etc.	108	27.1
4: Games	5	1.2
5: Others	15	3.7

Out of 399 students maximum 100 i.e. (25.1%) students said not lose sleep due to late night logins and only 12 i.e. (3%) students always lose sleep due to late night logins (Table 3). Gedam *et al.*^[8] study the student's gender and login status had significant association with internet addiction ($p < 0.05$), but no significant association was found among computer ownership, duration of internet use, preferred time of internet use, mode of internet access, location and purpose of use with internet addiction ($p > 0.05$).

Out of 399 students maximum 144 i.e. (36.1%) students said not feel depressed, moody or nervous when off-line and only 13 i.e. (3.2%) students feel depressed, moody or nervous when off-line (Table 4). Gedam *et al.*^[8] study reported significant association between internet addiction and psychiatric symptoms such as anxiety ($\chi^2 = 44.63$, $p = 0.0001$), depression ($\chi^2 = 40.51$, $p = 0.0001$), loss of emotional /behavioral control ($\chi^2 = 45.42$, $p = 0.0001$) and life satisfaction ($\chi^2 = 4.87$, $p = 0.028$). Many studies reported association between excessive use of internet and psychiatric problems like depression, anxiety, lower self-esteem and life satisfaction^[5-7]. Alavi *et al.* had also examined strong association between internet addiction and psychiatric symptoms.

Table 7: Place of internet use

Place of internet use	Students	
	Number	Percentage
1: Home/Hostel	333	83.5
2: Café	9	2.2
3: Library	23	5.7
4: Classroom	2	0.5
5: Others places	32	8

Table 8: Time of internet use

Time of internet use	Students	
	Number	Percentage
1: Morning	14	3.5
2: Afternoon	32	8
3: Evening	73	18.3
4: Night	165	41.4
5: Not specific time	115	28.8

Table 9: Internet use in MB/GB per day

Internet use in MB/GB per day	Students	
	Number	Percentage
1: 0-500 MB	47	11.8
2: 500-1 GB	128	32.1
3: 1-1.5 GB	142	35.6
4: 1.5-2 GB	62	15.5
5: More than 2 GB	20	5.1

In this study among 399 medical students, 210 (52.63%) were normal addicted, 119 (29.84%) mildly addicted, 58 (14.53%) moderate addicted, 12 (3%) severe addicted to internet use.

In our study among 399 medical students maximum 167 (41.9%) students use for educational purpose, 104 (26.1%) students use for social networking purpose. 108 (27.1%) students use for OTT like Netflix, YouTube Hotstar etc. 5 (1.2%) students use for Game purpose, 15 (3.7%) students use for other purposes (Table 5 and 6).

In present study among 399 medical students 333 i.e. (83.5%) using internet at home, 9 i.e. (2.2%) at café, 23 i.e. (5.7%) at Library, i.e. 2 (0.5%) in Classroom, 32 i.e. (8%) at other places (Table 7).

In present study among 399 medical students 14 i.e. (3.5%) using internet at morning, 32 i.e. (8%) at afternoon, 73 i.e. (18.3%) at Evening, 165 (41.4%) i.e. In night, 115 i.e. (28.8%) using internet not specific time (Table 8).

Among 399 medical students 47 i.e. (11.8%) use 0-500 MB internet, 128 i.e. (32.1%) use 500-1, GB internet, 142 i.e. (35.6 %) use 1-1.5 GB internet, 62 i.e. (15.5%) use 1.5-2 GB, 20 i.e. (5.1%) using internet more than 2 GB (Table 9).

DISCUSSION

In the our study out of 399 Medical students 51.6% were males and 48.4% were females. As per Gedam *et al.*^[8] results shows male in contrast to females were significantly more likely to be addicted $\chi^2 = 10.63$, $p = 0.0010$. Many students on internet addiction among adolescence reported similar result of male preponderance^[8-11].

In our study among 399 medical students maximum 167 (41.9%) students use for Educational purpose, 104 (26.1%) students use for Social networking purpose. 108 (27.1%) students use for OTT like Netflix, You Tube, Hot star etc., 5(1.2) students use for Game purpose, 15(3.7) students use for other purposes. As per Gedam *et al.*^[8] among 390 students students use internet for educational purpose 313 (28.87%), social networking 337 (31.08%), Recreational 198 (18.26%), Games 181 (16.69%), others 55 (5.07%)^[8].

In our study among 399 medical students 14 i.e. (3.5%) using internet at morning, 32 i.e. (8%) at afternoon, 73 i.e. (18.3%) at Evening, 165 (41.4%) i.e. in night, 115 i.e. (28.8%) using internet not specific time. As pr Gedam *et al.*^[8] study medical students morning (1.5%), Afternoon (2.6%), Evening (19.7%), Night (25.6%), other places (27.34%)^[8].

In our study among 399 medical students, 210 (52.63%) were normal addicted, 119 (29.84%) mildly addicted, 58 (14.53%) moderate addicted, 12 (3%) severe addicted to internet use. As per Lavadi *et al.* that 66.96% of the medical students have various levels of internet addiction, study showed that among 3rd year students mild level of internet addiction among those who lived with their parents while only 47.36% of them who lived as paying guests or in the hostel were addicted^[12]. The prevalence of internet addiction was 66.95% (mild, moderate, severe) among medical students. Overall girls were more likely to be addicted to the internet. There was more addiction (70.83%) reported among day scholars who lived with their parents. As per Ajay Shendarkar, Vijay Patil *et al.* study Good parenting is an effective tool for decreasing stresses in life and prevent internet addiction. A good parenting will undoubtedly play vital role to prevent internet addiction^[13].

In present study, Out of 399 students maximum 91 i.e. (22.8%) students answer were occasionally they feel about life without internet would be boring, empty and 30 i.e. (7.5%) students were always fear of that life without internet would be boring, empty.

As compared to Alok Ghanta *et al.*, In this study, Out of 399 students maximum 100 i.e. (25.1%) students said not lose sleep due to late night logins and only 12 i.e. (3%) students always lose sleep due to late night logins. As per Sandhya Gupta *et al.*^[14,15] study, while examining insomnia, we found that close to 38% of the participants had some degree of insomnia. Moderate to severe insomnia was noted in about 9% of the participants, which is comparable to other studies reported among university students^[14,15]. Further, insomnia was associated with the degree of internet addiction at statistically significant level after controlling for other scores; in accordance with the findings of other studies^[16,17]. Sleep problems could either be negative outcomes or manifestation of

complications of internet addiction^[18], but the reverse possibility cannot be ruled out as among young university students, sleep problems predict longer time spent on social networking^[19].

In present study Out of 399 students maximum 144 i.e. (36.1%) students said not feel depressed, moody or nervous when off-line and only 13 i.e. (3.2%) students feel depressed, moody or nervous when off-line. Our this findings are similar to Korkeila *et al.*^[14].

In our study among 399 medical students 333 i.e. (83.5%) using internet at home, 9 i.e. (2.2%) at café, 23 i.e. (5.7%) at Library, i.e. 2 (0.5%) in Classroom, 32 i.e. (8%) at other places. As per Seema Jain (North India) most common mode of access was by mobile internet (95.8), followed by broadband/data (3%), at home (26.45%), Café (3.19%), classroom (18.96%), library (23.95%), other places (27.34%)^[11].

In present study among 399 medical students 47 i.e. (11.8%) use 0-500 MB internet, 128 i.e. (32.1%) use 500-1 GB internet, 142 i.e. (35.6%) i use 1-1.5 GB, 62 i.e. (15.5%) use 1.5 GB-2 GB, 20 i.e. (5.1%) using internet more than 2 GB. As per Alok Ghanta *et al.* among total 49 students 0 to 1 GB 449 (64.1%), 1 to 2 GB 200 (28.6%), 2-4 GB 42 (6.0%), more than 4 GB 9 (1.3%), depressive symptoms found in 33.3% students using more than 4GB per day^[14].

In this study Out of 399 students 113 i.e. (28.3%) students rarely use of data pack on what's app, Facebook, YouTube, Instagram, and Netflix and 35 i.e. (8.8%) always use of data pack on whatsapp, Facebook, YouTube, Instagram, Netflix and net-package get exhausted on this things, this findings are in support with study of Krishnamurty *et al.*^[20,21].

CONCLUSION

In this study we observed that of all 399 medical students 210 (52.3%) were normal internet users, 119 (29.84%) were mild addicted, 58 (14.53%) were moderate addicted, 12 (3%) students severely addicted.

Numerous factors like stressful learning process, in security of living, home sickness, economic and mental stress may lead to depression or internet addiction among students. Behaviour change communication will be required to prevent internet addiction from hampering academic studies. Students who spend more time on the internet for learning purpose are protected from internet addiction and academic performance of students. Awareness should be created among undergraduate students about the disadvantage of the excessive use of the internet and encouraging students use the internet for academic researches and gathering scientific information.

Good communication and support by the parents can be effective vital tool for relieving the stress in their life. A comprehensive programme needs to be initiated for the strong medical and emotional build up

of medical students with significant involvement of their families; we feel it is the need of current time. Faculties must be trained to detect students at risk of addiction before it convert to pathological. Those sufferings with addiction can be offered counselling and cognitive behaviour therapy for internet addiction. Mentors can be appointed for each batch or group of students to daily routine access mental, family and social-economical background, periodic counselling of students as per need and convince should be done to prevent internet addiction.

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