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Original Research Article

INTERNET ADDICTION AMONG MEDICAL UNDERGRADUATES IN GOVERNMENT MEDICAL COLLEGE OF INDORE: A CROSS –SECTIONAL STUDY

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ABSTRACT

Background: The rapid proliferation of the internet has revolutionized communication, education, and entertainment. While these advancements offer numerous benefits, they have also introduced challenges, particularly among students. Medical undergraduates, due to their rigorous academic schedules and high-stress environments, are increasingly susceptible to internet addiction—a condition characterized by excessive and compulsive use of the internet, leading to negative impacts on daily life, academic performance, and mental well-being. The objective is to estimate the prevalence of internet addiction among medical undergraduates. (2) To estimate the pattern of internet use among medical undergraduates. (3) To determine the association of internet addiction with socio- demographic variables.

Materials and Methods: A cross-sectional study conducted out in Government Medical College of Indore in Indore district M.P. over 3 months. The subjects included 264 Undergraduate Students selected by simple random sampling. Pre designed semi structured questionnaire were administered to the study participants. Data was entered into Microsoft Excel and analysed by using JAMOVI software. Necessary appropriate statistical tests were applied.

Results: The majority of participants were male (54.55%), indicating a slightly higher participation rate among male students. The majority of participants were in the 18–20 years age group (51.14%). The majority of students fall into the mild addiction category (56.44%) followed by moderate addiction (30.30%) and severe addiction (2.65%). The prevalence of internet addiction among medical undergraduates is found to be 32.95%. The majority of students used the internet for watching movies/news (89.02%), social media (79.92%), chatting (79.17%), and shopping (77.65%), indicating high usage for entertainment and social interaction. Online study was reported by 75%, showing significant but slightly lower academic use. Online gaming was also common (65.15%).

Conclusion: As per the study results Internet addiction was significantly associated with MBBS professional years and current residence being more common in 1st-year students and those living in hostels or rented places. No significant association was found with age, gender, or internet expenditure.

Keywords: Internet addiction, Government Medical College, Online gaming.

INTRODUCTION

The Internet was originally designed to facilitate communication and research activities. However, the dramatic increase in the use of internet has led to its addiction. It is the problem not only in India but also worldwide. Among medical students, the implications of this addiction can be particularly profound. The rigorous nature of medical education demands focused attention, extensive study, and a balanced lifestyle. However, the allure of the internet can lead to procrastination, reduced academic performance, and negative impacts on mental and physical health. India now has the world's second –

largest national digital population with approximately, 120 million Internet users in 2011, 354 million Internet users in 2015 and 751 million active Internet users by 2023.[1,2] The term "Internet Addiction" was proposed by Dr. Ivan Goldberg in 1995 for pathological compulsive Internet use.[3,4] Internet addiction a condition characterized by excessive or poorly controlled preoccupations, urges, or behaviours regarding internet use that lead to impairment or distress, has emerged as a significant concern. So, we have conducted this study to assess the internet addiction among the medical under graduates in Government Medical College in Indore.

MATERIALS AND METHODS

This Cross-sectional study was carried out in Indore the state of Madhya Pradesh by the Department of Community Medicine MGM Medical College & MY Hospital, Indore, M.P. over a period of 3 months. The study participants were undergraduate students of Government Medical College (MGM Medical College) of Indore district. Based on the formula n = Z2pq / d2 taking expected prevalence (p) as 61.8% and margin of error (d) as 6.18%, considering non-response rate of 10%, sample size came out to be 261.1, rounded off to 264 using the simple random sampling method. After taking informed consent from the patients, interpersonal interview using a pre-designed semi structured questionnaire was carried out. Data were entered into Microsoft Excel spread sheet and analysed by using JAMOVI software. Appropriate statistical tests were applied wherever necessary. Descriptive statistics employed to establish sociodemographic characteristics. Descriptive data was presented in terms of means and percentages. Chi square test was applied to compare categorical data p value < 0.05 was considered statistically significant.

RESULTS

The present study was conducted among 264 participants including 144 males and 120 females to estimate the prevalence of internet addiction and the pattern of internet use among medical undergraduates. In addition, this study also tried to determine the association of internet addiction with socio- demographic variables.

[Table 1] shows out of total 264 subjects covered in the study 135(51.1%) subjects were between 18-20 years of age, 103(39%) subjects were between 21-23 years of age and rest 26(9.9%) were between 24-26 years of age. The mean age of study participants was 20.76±0.29(Years). Participants were equally distributed across the three academic years of the MBBS program, with 33.3% each from 1st, 2nd, and 3rd professional years (88 students in each year). Regarding their current place of residence, 98(37.1%) of the students were residing at home, whereas a majority, 166(62.9%), were staying in hostels or rented accommodations. When looking at monthly expenditure, 102(38.6%) of the participants reported spending less than ₹300 per month, 131(49.6%) spent between ₹300 and ₹600, and 31(11.7%) reported monthly expenses of more than ₹600.

From [Table 2] it was observed that out of the 264 medical students assessed for Internet addiction, the majority 149 (56.44%) were found to have mild Internet addiction, followed by 80 (30.30%) of students who had a moderate level of addiction and 7 (2.65%), exhibited severe Internet addiction. Only 28 (10.61%) of the participants showed no signs of Internet addiction, indicating that a large proportion of students experience some degree of problematic Internet use.

[Table 3] shows among the 264 medical students surveyed, the most commonly reported activity for which the Internet was used was watching movies and news, with 235 (89.02%) of participants engaging in this activity. Social media usage was also prevalent, reported by 211 (79.92%) of the students, closely followed by chatting, which was reported by 209 (79.17%). Online shopping was another frequent activity, with 205 (77.65%) of participants indicating they used the Internet for this purpose. Additionally, 198 (75.00%) of the students used the Internet for online study, reflecting the academic use of digital platforms. Lastly, 65.15% (n=172) of participants reported engaging in online gaming. These findings highlight that entertainment, social interaction, academic activities, and e-commerce are the primary reasons medical students access the Internet.

From [Table 4] it was observed that Age was not significantly associated with Internet addiction (p = 0.265). Among those aged 18–20 years, 86.7% (117 out of 135) had Internet addiction, while similar trends were observed in the 21–23 and 24–26 age groups. Gender also showed no significant association (p = 0.488). Internet addiction was present in 88.2% of male students (127 out of 144) and 90.8% of female students (109 out of 120). A statistically significant association was found with MBBS professional year (p = 0.002). The prevalence of Internet addiction increased with academic seniority—80.7% in 1st-year students, 90.9% in 2nd-year, and 96.6% in 3rd-year students. Current residence showed a significant association with Internet addiction (p = 0.006). Students living in hostels or rented accommodations had a higher prevalence of addiction (93.4%) compared to those living at home (82.7%). Monthly expenditure did not show a significant association with Internet addiction (p = 0.217). The prevalence was fairly high across all expenditure categories.

Table 1: Socio-demographic Profile of U.G. Medical Students

Socio demographic	Total	Percentage (%)
Age (in Years)		
18-20	135	51.14
21-23	103	39.01
24-26	26	9.85
Gender		
Male	144	54.55
Female	120	45.45
MBBS Prof		
1st prof	88	33.33
2nd prof	88	33.33
3rd prof	88	33.33
Current residence		
Home	98	37.12
Others (Hostel/Rented)	166	62.88
Expenditure (in Rupees)		
<300	102	38.64
300-600	131	49.62
>600	31	11.74

Table 2: Grade of Internet addiction among medical students (n=264).

Grading of Internet addiction	Frequency	Percentage
No addiction (<20)	28	10.61
Mild addiction (20-49)	149	56.44
Moderate addiction (50-79)	80	30.30
Severe addiction (80-100)	7	2.65

Table 3: Pattern of Internet Use among U.G. Medical Students (n=264)

Activity	Frequency	Percentage
Watching movies and news	235	89.02
Online study	198	75.00
Social media	211	79.92
Online Gaming	172	65.15
Shopping	205	77.65
Chatting	209	79.17

Table 4: Association of internet addiction with socio demographic characteristics

Socio demographic	Internet addiction		Total	P value
	Present (n=236)	Absent (n=28)		
Age				
18-20	117	18	135	0.265
21-23	96	7	103	
24-26	23	3	26	
Sex				
Male	127	17	144	0.488
Female	109	11	120	
MBBS Prof				
1st prof	71	17	88	0.002 (sig)
2nd prof	80	8	88	
3rd prof	85	3	88	
Current residence				
Home	81	17	98	0.006 (sig)
Others (Hostel/Rented)	155	11	166	
Expenditure (in Rupees)				
<300	87	15	102	0.217
300-600	121	10	131	
>600	28	3	31	

DISCUSSION

In the present study, majority 51.14% participants belonged to 18–20-year age group whereas in the study conducted by Adhikari K.et al. in Bharatpur 75% participants were between 16–20-year age group.

In the present study 54.55% participants were male and 45.45% were female whereas in the study conducted by Adhikari K. et al. in Bharatpur 58.7% were male and 41.3% were female.[6]

In the present study, a higher prevalence of 89% internet addiction was found among study subjects, similar to 76.8% reported by Subhaprada et al. in Kurnool and 94.5% by Madhusudan et al. in Kerala.[7,8]

In the present study, 56.44%, 30.30% and 2.65% respondents were suffering from mild, moderate and severe form of Internet addiction respectively

whereas in the study conducted by Abbas H. et al. in New Delhi 54.6%, 32% and 3.3% were suffering from mild, moderate and severe addiction respectively.[9]

CONCLUSION

IA is a prevalent public health concern among medical students in Indore, with a majority of participants being addicted to some extent. There is a significant association between academic year of the participant and the internet addiction as the academic year of the participant increases there is an increase in Internet addiction. There is a significant association between residence of the participant that is whether living in hostel or at home with Internet addiction as the participant living in hostel have more internet addiction than those living in the home. The study highlights the need for recognizing IA as a public health concern and further research to understand its impact on the youth.

Recommendation Based on the findings of the present study, the following recommendations are proposed to address and mitigate Internet addiction among medical students:

1. **Awareness and Sensitization Programs.**

Regular workshops and awareness campaigns should be conducted within medical colleges to educate students about healthy Internet use, the signs of Internet addiction, and its adverse effects on mental health, academic performance, and personal well-being.

2. **Integration of Digital Wellness into Curriculum**

Incorporating modules on digital literacy and self-regulation within the medical curriculum can equip students with skills to balance their academic and recreational use of the Internet.

3. **Counselling and Mental Health Support**

Institutions should strengthen access to counselling services and mental health professionals who can support students dealing with stress, anxiety, and dependency behaviours, including Internet addiction.

4. **Promotion of Healthy Coping Mechanisms**

Students should be encouraged to engage in physical activities, hobbies, peer support groups, and mindfulness practices as alternatives to excessive screen time.

5. **Monitoring and Self-Regulation Tools**

Encouraging the use of time-tracking and app-limiting tools can help students monitor and manage their Internet usage more effectively.

6. **Parental and Faculty Involvement**

Parents and faculty members should be sensitized to recognize early signs of Internet addiction in students and provide guidance and support accordingly.

7. **Improving Hostel Environment**

Hostels and rented accommodations should foster a more structured environment, with planned group activities and study schedules to reduce idle time that often leads to excessive Internet use.

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