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Prevalence and Patterns of Internet Addiction among Undergraduate Medical Students in Bangladesh

Imranul Haider Chowdhury[1*], Sajid Salman Hamid[2], Abdullah Enam[3], Dipak Mitra[4]

[1]Medical Director, Department of Hospital Operation, AMZ Hospital Ltd, Dhaka, Bangladesh
[2]Senior Lecturer, Department of Community Medicine and Public Health, Ashiyan Medical College Hospital, Dhaka, Bangladesh
[3]Technical Coordinator, System Strengthen & Research, Department of Hospital Operations, AMZ Hospital Ltd, Dhaka, Bangladesh
[4]Dean, Department of School of Health and Life Sciences, North South University, Dhaka, Bangladesh

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***Corresponding author:** Imranul Haider Chowdhury
Medical Director, Department of Hospital Operation, AMZ Hospital Ltd, Dhaka, Bangladesh

Abstract **Original Research Article**

Background: Each year, medical students join with clear goals and a commitment to serve humanity. While technology and the Internet have improved daily life, excessive use can lead to addiction, showing symptoms similar to substance abuse. Internet use is common among medical students for academics and leisure, but overuse can affect mental health and academic performance. This study aims to assess the prevalence and patterns of internet addiction among Bangladeshi medical students and identify associated factors. ***Methods:*** A cross-sectional study of 196 undergraduate students at Shaheed M. Monsur Ali Medical College, Dhaka, assessed internet addiction using Young's Internet Addiction Test (IAT, 1998). Students without internet access, incomplete questionnaires, or on certain medications were excluded. Data were analyzed with SPSS v25 using descriptive statistics and Chi-square tests ($p < 0.05$). ***Results:*** Among 196 medical students (49% male, 51% female), most were from rural areas (60.7%) and nuclear families (87.2%), with employed fathers (87.2%) and mostly unemployed mothers (80.1%). Facebook was the main platform used (95.9%), mainly during free time, and 9.7% reported social media addiction. Behavioral factors included 32.1% smokers, 17.3% physically active, 58.7% with normal sleep, and 30.1% with depression. The mean IAT score was 59.06 ±16.27, with 34.7% classified as addicted. No socio-demographic factor was significantly associated with internet addiction. ***Conclusion:*** Internet addiction affects 34.7% of undergraduate medical students, with behavioral factors like high social media use, living alone, low physical activity, and depression contributing more than socio-demographic factors. The findings align with global studies, emphasizing the need for awareness, mental health support, and interventions to promote healthy internet use among medical students.

Keywords: Internet Addiction, Undergraduate, Medical Students.

INTRODUCTION

Each year, students enroll in medical colleges with clear goals and a dedicated mindset. They are committed to serving humanity wherever they are placed, regardless of location [1]. The Internet of Things connects devices using advanced computing and networking, enabling new capabilities, business opportunities, and raising security and privacy concerns [2]. Rapid technological advances are driving a range of applications that can enhance daily life, making IoT a growing focus for researchers and industry worldwide [3]. While technological progress has made life easier and more enriched, excessive internet use can have negative effects, potentially leading to misuse and addictive behavior [4].

In the past decade, research on Internet addiction has grown significantly. Classified as a behavioral addiction, it produces symptoms similar to substance addictions, including mood changes, tolerance, withdrawal, conflict, and relapse, supported by neurobiological evidence[5].Griffiths proposed seven criteria for Internet addiction—tolerance, excessive time online, prioritizing online activities, neglecting social/recreational life, continued use despite problems, failed attempts to cut down, and withdrawal—with a diagnosis suggested if three or more are present[6]. The Internet is widely used by medical students for both academic purposes and leisure, offering an accessible way to relieve stress through games, videos, or social networking. Excessive or inappropriate use increases the risk of addiction, prompting research into the predictors

of internet addiction among medical students in public universities [7].

Globally, multiple studies have documented that internet addiction is common among undergraduate medical students. For instance, Internet addiction and its determinants among medical students found a prevalence of 58.9% among 282 medical students[8].Another study, A cross sectional study of Internet addiction among first year medical students (2017), reported that 23.1% of participants met criteria for internet addiction[9].A meta-analysis, Prevalence of Internet Addiction in Medical Students: a Meta-analysis (2016), combining data from 3,651 medical students across countries, estimated a pooled prevalence of about 30.1%[10] .These studies show that a substantial proportion of medical undergraduates worldwide exhibit problematic internet use, underscoring the need for preventive measures and further research.

In Bangladesh, the rate of internet addiction among university students is similar to other Asian countries. With increasing internet access, the prevalence of problematic use is high, ranging from 24% to 79.4% in previous studies [11]. For example, a private medical college and university in Chittagong found that most students were classified as mild users, while a substantial proportion showed moderate to severe levels of internet addiction [12]. The aim of this study was to assess the prevalence and patterns of internet addiction among undergraduate medical students in Bangladesh. It also sought to examine the behavioral, socio-demographic, and academic factors associated with excessive or problematic internet use, with the goal of understanding how internet use impacts students' daily lives, mental health, and academic performance.

METHODOLOGY

Study Design

A cross-sectional quantitative study was conducted to assess the prevalence and patterns of internet addiction among undergraduate medical students. This design allowed for the simultaneous evaluation of internet use behaviors and associated factors within the study population.

Study Setting and Population:

The study was carried out at Shaheed M. Monsur Ali Medical College, Uttara, Dhaka, Bangladesh, from November 2019 to February 2020. The study population included all undergraduate students enrolled at the college during the study period. A total of 196 students were recruited using a convenience sampling method, based on willingness to participate and fulfillment of the inclusion criteria.

Inclusion criteria:

- Undergraduate medical students who voluntarily agreed to participate.

Exclusion criteria:

- Students without internet access.
- Incomplete questionnaires.
- Students on medications for depression, anxiety, chronic insomnia, or thyroid disorders.

Data Collection Tools

Data were collected through face-to-face interviews using a structured questionnaire. The questionnaire captured socio-demographic characteristics, behavioral and health-related factors, and patterns of internet use.

Internet Addiction Assessment:

The Internet Addiction Test (IAT), developed by Young (1998), was used to measure internet addiction. The 20-item scale assesses compulsive internet use, with total scores ranging from 20 to 100. The young score has been defined as follows-

20 – 39: an average online user who has complete control over the usage.
40 – 69: signifies frequent problems due to internet usage
70 – 100: means that the internet is causing significant problems

For analysis, participants were further classified as normal users or addicted (combining moderate and severe categories).

Data Analysis

Data were entered and analyzed using SPSS version 25. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were calculated. The Chi-square test was used to assess associations between internet addiction and categorical variables, with statistical significance set at $p < 0.05$.

RESULT

Table-1 shows Table 1 shows the preferred time of social media use was during free time for 58.2% of students, followed by before sleep (34.2%) and university hours (7.7%). Facebook was the most frequently used platform (95.9%). Only 9.7% reported feeling addicted to social media. Table-2 shows Physical comorbidities were present in 22.4% of participants. About 32.1% were smokers, and only 17.3% reported regular physical activity. Normal sleep (6–8 hours/day) was reported by 58.7%, while 41.3% reported sleep outside the normal range. Depression was present in 30.1% of students. Table-3 shows the mean Young Internet Addiction score was 59.06 ± 16.27 (range 21–94), corresponding to moderate use. Based on Young's categorization, 65.53% were normal users, 27.91% moderate, and 6.56% severe users. Table-4 shows that that no socio-demographic factor, including gender, residence, parental occupation, family type, or

relationship status, was significantly associated with internet addiction (all $p > 0.05$). However, trends suggest slightly higher addiction among males, urban residents, and students from joint families. Overall, socio-demographic characteristics do not appear to be strong predictors of internet addiction in this population. Fingure-1 shows that when grouped into normal vs addicted categories (moderate + severe), 34.7% of students were considered addicted.

Table-1: Internet and Social Media Use Patterns

Variable	Category	n	%
Preferred time of SNS use	During free time	114	58.2
	During university time	15	7.7
	Before sleep	67	34.2
Most used SNS platform	Facebook	188	95.9
	WhatsApp	8	4.1
Self-reported addiction	Yes	19	9.7
	No	177	90.3

Table -2: Behavioral and Health-Related Factors

Variable	Category	n	%
Physical Comorbidity	Yes	44	22.4
	No	152	77.6
Smoking Status	Yes	63	32.1
	No	133	67.9
Regular Physical Activity	Yes	34	17.3
	No	162	82.7
Sleeping Status	Normal (6–8 h/day)	115	58.7
	Less than normal	41	20.9
	More than normal	40	20.4
Stressful Life Event	Yes	17	8.7
	No	179	91.3
Daily SNS Usage	<2 h/day	154	78.6
	2–5 h/day	30	15.3
	>5 h/day	12	6.1
Living Alone	Yes	122	62.2
	No	74	37.8
Depression Status	Yes	59	30.1
	No	137	69.9

Table-3: Internet Addiction Based on Young Scale (N = 196)

Young Score Category	n	%
Normal (20–39)	128	65.53
Moderate (40–69)	55	27.91
Severe (70–100)	13	6.56
Total	196	100

Table-4: Association of Socio-Demographic Factors with Internet Addiction Among Undergraduate Medical Students (N = 196)

Variable	Category	Normal Students n (%)	Addicted Students n (%)	P-value
Gender	Male	57 (59.38)	39 (40.63)	0.087
	Female	71 (71.00)	29 (29.00)	
Permanent Residence	Rural	69 (71.13)	28 (28.87)	0.09
	Urban	59 (59.60)	40 (40.40)	
Father's Occupation	Employed	109 (63.74)	62 (36.26)	0.229
	Unemployed	19 (76.00)	6 (24.00)	
Mother's Occupation	Employed	22 (56.41)	17 (43.59)	0.192
	Unemployed	106 (57.52)	51 (32.48)	
Monthly Family Income (BDT)	20,000–40,000	10 (66.67)	5 (33.33)	0.784

	40,001–60,000	31 (64.58)	17 (35.42)	
	60,001–80,000	54 (68.35)	25 (31.65)	
	80,001–100,000	22 (57.89)	16 (42.11)	
	Above 100,000	9 (56.25)	7 (43.75)	
Family Members	≤3	41 (70.69)	17 (29.31)	0.305
	>3	87 (63.04)	51 (36.96)	
Family Type	Nuclear	111 (64.91)	60 (35.08)	0.762
	Joint	17 (68.00)	8 (32.00)	
Only Child	Yes	29 (63.04)	17 (36.96)	0.712
	No	99 (66.00)	51 (44.00)	
Relationship with Family	Good	117 (65.00)	63 (35.00)	0.763
	Avoiding	11 (68.75)	5 (31.25)	
Relationship with Friends	Good	98 (62.42)	59 (37.57)	0.089
	Avoiding	30 (76.92)	9 (23.07)	
Relationship Status	Single	106 (65.83)	55 (34.17)	0.737
	Partner	22 (62.85)	13 (37.15)	

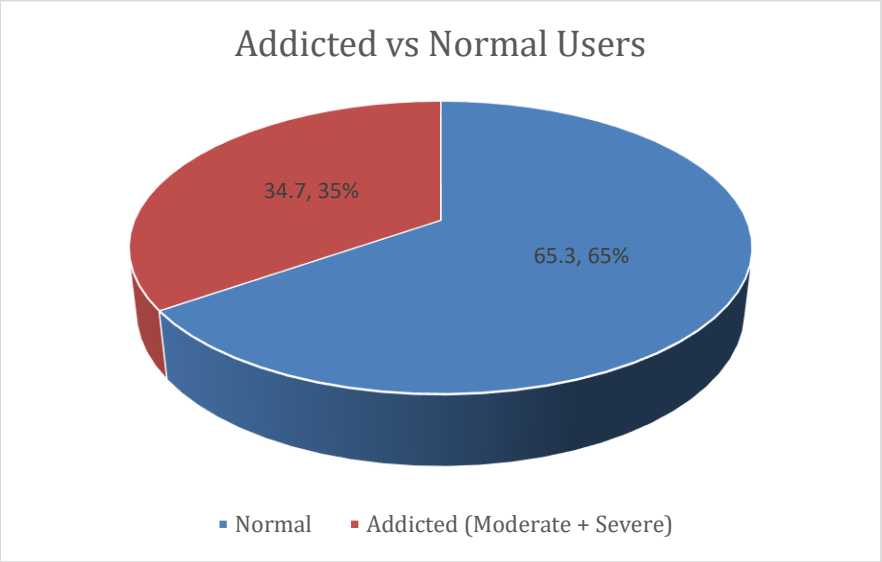

Figure 1: Internet Addiction Status

DISCUSSION

This present cross-sectional study investigated the socio-demographic, behavioral, health-related related factors as well as the social platform related factors which is a very common phenomenon related to internet addiction in Bangladeshi perspective. As very few studies have been conducted relating this issue, this will be important evidence for the public health perspective. This study also looked for the association between internet addiction and different sociodemographic and internet-usage-related variables along with health-related factors in-depth manner. In this cross-sectional study, permanent residence, access to SNS, SNS uses per day, preferred uses time and sleeping duration were found to be associated with Internet Addiction in this study. P-value was considered for ($P > 0.05$). Row percentage was calculated for each category in the table above. Other variables were not found to be significant in this study.

In this study, overall, IA prevalence was found to 34.70% which is higher compared to recent two studies conducted in Bangladesh where the prevalence was 27.1% and 24% respectively [13,14]. However, the prevalence of IA varied across different sociodemographic and internet-use related variables in their study. The rate (34.70%) is although was lower than the rates obtained in different Middle East countries like Jordan (40%) [12] and Iran (39.6%) [15] but relatively higher than the studies conducted among British (18.3%) [16] and Taiwanese samples (17.4%) [17]. Besides cultural factors, these differences may be attributed to variations in the diagnostic criteria and assessment questionnaires used for diagnosis. In addition, studies often use highly selective samples of online surveys.

Males were more prone to internet addiction (40.63%) than female (29%), which corresponds with previous literatures [15,18]. It may be because males are generally more passionate regarding knowing the unknown or exploring new inventions or they are usually

more attracted to addictive objects such as pornography, cybersex, and online gaming compared with the female [13,14]. On the other hand, people living with family members usually get more time to spend with family members which ultimately gives them support against problematic use of the internet. In our analysis, living setup was found as a strong determinant in our adjusted regression and chi-square analysis. Internet addiction was also found to be more common among those who had a family relationship detachment. Previously conducted researches also suggest that the breakdown of a close relationship is associated with poor mental health by growing gloominess and defeating mentality, which might manifest addictive behaviors as a consequence [15,19]. Internet addiction was also significantly higher among respondents who had a smoking habit or did not involve in a considerable amount of physical activity.

CONCLUSION & RECOMMENDATION

This study demonstrates that internet addiction is a significant concern among undergraduate medical students, with 34.7% classified as addicted (moderate to severe). While socio-demographic factors such as gender, residence, family type, and parental occupation were not significantly associated with addiction in this population, behavioral and lifestyle factors—including daily social media use, living alone, low physical activity, and depression—appeared more influential. Comparisons with previous national and international studies indicate that prevalence rates vary but consistently highlight the vulnerability of medical students to problematic internet use. These findings underscore the need for awareness programs, mental health support, and interventions targeting healthy internet habits to reduce potential academic, social, and psychological consequences among medical undergraduates.

REFERENCES

1. Srijampana VV, Endreddy AR, Prabhath K, Rajana B. Prevalence and patterns of internet addiction among medical students. Medical Journal of Dr. DY Patil University. 2014 Nov 1;7(6):709-13.
2. Rose K, Eldridge S, Chapin L. The internet of things: An overview. The internet society (ISOC). 2015 Oct 15;80(15):1-53.
3. Xia F, Yang LT, Wang L, Vinel A. Internet of things. International journal of communication systems. 2012 Sep 1;25(9):1101.
4. Chaudhari B, Menon P, Saldanha D, Tewari A, Bhattacharya L. Internet addiction and its determinants among medical students. Industrial psychiatry journal. 2015 Jul 1;24(2):158-62.
5. Kuss DJ, Griffiths MD, Binder JF. Internet addiction in students: Prevalence and risk factors. Computers in Human Behavior. 2013 May 1;29(3):959-66.
6. Capetillo-Ventura N, Juárez-Treviño M. Internet addiction in university medical students. Medicina universitaria. 2015 Apr 1;17(67):88-93.
7. Ching SM, Hamidin A, Vasudevan R, Sazlyna MS, Wan Aliaa WS, Foo YL, Yee A, Hoo FK. Prevalence and factors associated with internet addiction among medical students-A cross-sectional study in Malaysia. Med J Malaysia. 2017 Feb 1;72(1):7-11.
8. Chaudhari B, Menon P, Saldanha D, Tewari A, Bhattacharya L. Internet addiction and its determinants among medical students. Industrial psychiatry journal. 2015 Jul 1;24(2):158-62.
9. Subhaprada CS, Kalyani P. A cross-sectional study on internet addiction among medical students. Int J Community Med Public Health. 2017 Mar;4(3):670-4.
10. Zhang MW, Lim RB, Lee C, Ho RC. Prevalence of internet addiction in medical students: a meta-analysis. Academic Psychiatry. 2018 Feb;42(1):88-93.
11. Islam MA, Hossin MZ. Prevalence and risk factors of problematic internet use and the associated psychological distress among graduate students of Bangladesh. Asian J Gambl Issues Public Health. 2016;6(1):11. doi:10.1186/s40405-016-0020-1
12. Mostafa A, Hoque R, Chakraborty R, Haque M, Munna MS. Internet use and addiction: a cross-sectional study to ascertain internet utilization level for academic & non-academic purpose among medical and university students of Bangladesh. Konuralp Medical Journal. 2019;11(3):404-15.
13. Hassan, T., Alam, M.M., Wahab, A. *et al.,*Prevalence and associated factors of internet addiction among young adults in Bangladesh. J. Egypt. Public. Health. Assoc. 95, 3 (2020). https://doi.org/10.1186/s42506-019-0032-7
14. Al-Gamal E, Alzayyat A, Ahmad MM. Prevalence of internet addiction and its association with psychological distress and coping strategies among university students in Jordan. Perspect Psychiatr Care. 2016;52(1):49–61.
15. Ataee M, Ahmadi JT, Emdadi SH, Hatamzadeh N, Mahboubi M, Aghaei A. Prevalence of internet addiction and its associated factors in Hamadan University of medical college students. Life Sci J. 2014;11(spec. issue 4):214–7.
16. Niemz K, Griffiths M, Banyard P. Prevalence of pathological internet use among university students and correlations with self-esteem, the General Health Questionnaire (GHQ), and disinhibition. CyberPsychology Behav. 2005;8(6):562–70.
17. Ha YM, Hwang WJ. Gender differences in internet addiction associated with psychological health indicators among adolescents using a national web-based survey. Int J Ment Health Addict. 2014;12(5):660–9.
18. Tsai HF, Cheng SH, Yeh TL, Shih CC, Chen KC, Yang YC, *et al.,* The risk factors of Internet

addiction–a survey of university freshmen. Psychiatry Res 2009; 167:294-9.
19. Young K. Internet addiction: Evaluation and treatment. Stud Br Med J 1999; 7:351-2.