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Prevalence and determinants of internet addiction among undergraduate medical students of Rewa, M.P.

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Abstract
Background: *Recent increase in ease to internet availability, its low cost and emergence of many social media apps have jointly resulted in exponential increase in use of internet specially among youngsters like medical students due to their social and academic needs.*
Objectives: *To assess prevalence of Internet addiction among undergraduate medical students & to assess determinants of internet addiction.*
Materials and Methods: *This was a cross sectional study conducted among 150 undergraduate medical students of SS Medical College Rewa, MP. This study was conducted between 1/7/2017 to 31/8/2017 Study subjects were selected randomly & asked to complete Youngs IAT questionnaire in lecture theatre.*
Results: *Among 150 study participants, 50.6% were males and 49.4% were females. The prevalence of internet addiction among the study subjects in the present study was 93.3%. 38.7% had mild internet addiction, 49.3% had moderate internet addiction & 5.3% had severe internet addiction. 6.7% students reported normal internet usage. Difference in prevalence of internet addiction among males and females was found statistically non significant (p=>0.05). Factors associated with internet addiction were staying in hostel and living single, usage of smart phone, preferring online shopping and online studying.*
Conclusion: *Undergraduate medical students have an increased prevalence of internet addiction. Efforts to increase awareness about bad effects of internet addiction and intervention measures to prevent this is urgent need of time.*
Keywords: *Internet Addiction, Youngs IAT score, Medical Students.*

Introduction

In the new generation, the internet has become an important tool for education, entertainment, communication, and information-sharing. Recent increase in ease to internet availability has resulted in exponential increase in use of internet specially among students due to their social and academic needs. Easy access and social networking are two of the several aspects of the Internet fostering addictive behaviour.[1] In tandem with the splurge in access to the Internet globally, with the rise of new-generation gadgets, the risk of "internet addiction" is emerging as a significant behavioral addiction pandemic to be tackled worldwide.[2] The developing countries are not spared either due to extreme infiltration of technology even into the remotest corners.

The fascinating world of internet originated in the 1960's, when the United States used it for military purposes for the first time .[3] Today, in terms of internet usage, India ranks second with 354 million internet users, ahead of many other countries including the United States (280.7 Million)[4]. Internet addiction is a growing problem and is known by different terms such as pathological internet use[5], Problematic internet use[6], compulsive internet use[7] and Internet Overuse[8]. Among the different age groups, students who struggle to cope up with academic performance or have peer and behavioral concerns are more susceptible to internet addiction. The overall global prevalence of internet addiction as 6%[9], while it is 0.7%[10] to 18.88%[11] in India. There is a paucity of large sample studies on internet addiction and its determinants from India, a country with huge adolescent population.

India is the second largest online market in the world ranked only behind china. As of January 2017 India had 462.1 million internet users, of which 442.7 million were mobile internet users. By 2021 there will be about 635.8 million internet users in india.[12] Recent increase in ease to internet availability, its low cost and emergence of many social media apps have jointly resulted in exponential increase in use of internet specially among youngsters like medical students due to their social and academic needs.

Material and Methods

Definitions: Internet users: An internet user is defined as "someone aged 2 years and above who went online in the past 30 days". The definition is based on the International Telecommunication Union (ITU) definition as quoted by Internet World Stats (2014)[13].

Internet Addiction by Young's IAT: The severity of impairment is based on the final score obtained by summation of the individual scores and classified as internet addicted.

The study instrument was a questionnaire with three part:

1. Socio-demographic information.
2. Details regarding patterns and determinants of internet use.
3. Young's Internet Addiction Test (IAT).

Young's internet addiction test is a self-rated scale developed for screening and measuring level of internet addiction and has been used extensively for this purpose worldwide. It contains twenty questions related to internet usage to be scored on Likert scale from 1 (rarely) to 5 (always). A total score of <20 represents normal user, between 20 and 49 represents mild addiction, between 50 and 79 represents moderate addiction, between 80 and 100 represents severe addiction. The validity and reliability of Young's internet addiction scale has been tested in many studies.[14,15] Its reliability in Indian population and college students has also been established.[16,17]

This was a cross sectional study conducted among 150 undergraduate medical students of SS Medical College Rewa, MP. This study was conducted between 1/7/2017 to 31/8/2017. Study subjects were selected randomly & asked to complete a pre-designed proforma which included socio-demographic variables and Youngs IAT questionnaire in lecture theatre. Subjects with Youngs IAT score of <20 were classified as having no internet addiction, score 20-49 as mild, score 50-79 as moderate and score >80 was classified as severe or high internet addiction. Subjects with known psychiatric disorders, not having any kind of personal internet mode (i.e. no personal smart phones ,no laptops, no tablets) and not willing to participate were excluded from the study. Students who were absent on the day of data collection were also excluded.

Random sampling technique was done for selecting the target study participants. In case of doubt, they were clarified and students were made to complete the questionnaire by them self. All students were assured that the information collected would be treated confidentially, and anonymity will be maintained.

Statistical Analysis

Statistical analysis of data was carried out by using SPSS and Chi-square test to analyze

qualitative variables and one-way ANOVA to analyse quantitative variables. A value of $P < 0.05$ was considered significant for all statistical correlations. Sociodemographic variables and patterns of Internet use have been denoted by frequency tables. The prevalence of Internet addiction were described in terms of percentage. Descriptive statistics were used to examine the association of factors of the questionnaire with Internet addiction.

Result

Socio demographic Characteristic of the study population and pattern of Internet use are depicted in [Table 1] and [Table 2].

Table 1 Socio demographic characteristics of study participants

Socio demographic variable	No.	%
1. Gender		
Male	76	50.6%
Female	74	49.4%
2. Fathers occupation		
Government	80	53.3%
Private	22	14.7%
Self employed	18	12%
Professional	6	4%
Business	24	16%
3. Mothers occupation		
Government	18	12%
Private	8	5.3%
Self employed	2	1.3%
Professional	0	0
Business	0	0
Home Maker	122	81.3%
4. Place of stay		
Home	12	8%
Paying guest	34	22.7%
Hostel	54	36%
5. Living status		
Alone	40	26.7%
sharing room	110	73.3%

Table 2 Patterns and modes of internet Use

Variables	N (%)
Years of internet use	
1-5y	118(78.7%)
6-10y	30(20%)
11-15y	2(1.3%)
Expenditure on internet per month	
<Rs. 300	110(73.3%)
300-600	40(26.7%)
>Rs. 600	0(0%)
Most Commonly used gadget for accessing internet	
Tablet	0(0%)
Smart phone	150(100%)
Laptop and smart phone	28(18.7%)
Desktop and smart phone	2(1.3%)
Login status	
Log in and off occasionally during the day	46(30.7%)
Permanently online	104(69.3%)
*Most commonly used App for internet use	
Face Book	141(94%)
Messenger	98(65.3%)
Whats app	150(100%)
Google searching	150(100%)
yahoo chatting	49(32.7%)
Others	61(40.7%)

* multiple choices

Among 150 study participants, 50.6% were males and 49.4% were females. The prevalence of internet addiction among the study subjects in the present study was 93.3%. 38.7% had mild internet addiction, 49.3% had moderate internet addiction & 5.3% had severe internet addiction. 6.7% students reported normal internet usage.

Table 3 Distribution of participants as per IAT Score

Scale & category of internet addiction	Male (N=) %	Female(N=) %	Prevalence (CI 95%)
Normal (0- 19)	(4)5.3%	(6)11%	(10)6.7%
Mild (20- 49)	(34)45%	(24)32.4%	(58)38.7%
Moderate (50 -79)	(32)42.1%	(44)59.4%	(76)49.3%
Severe (80 – 100)	(6)7.9%	(0)0%	(6)5.3%
Total	(76)	(74)	(150)100%

Amongst the various causes for internet addiction, chatting, You tube users, Pornography, Online movies, academic work, online games, online friendship, online shopping are found as the main factors associated with internet addiction. Percentage of addiction amongst the users is depicted in table 4.

*Table 4: causes of internet addiction

Variable	Normal	Mild IA	Moderate IA	Severe IA	Total
Chatting	10(6.7%)	58(38.7%)	76(50.6%)	6(4%)	150(100%)
Using internet for academic work	6(5.7%)	40(38.4%)	52(50%)	6(5.7%)	104(69.3%)
Games	4(6.5%)	7(11.3%)	47(76%)	4(6.4%)	62(41.3%)
Online friendship/relationship	5(3.5%)	20(14.1%)	45(32%)	6(4.3%)	141(94%)
Shopping	1(1.1%)	39(45%)	42(48.3%)	5(5.7%)	87(58%)
Pornography	0(0%)	5(22.7%)	16(72.7%)	3(13.6%)	22(14.7%)
You tube	10(6.7%)	58(38.7%)	76(50.6%)	6(4%)	150(100%)
Online Movies	2(2.12%)	20(21.3%)	66(70.2%)	6(6.4%)	94(62.7%)

*multiple choices

Many factors were found to be associated with internet addiction like staying in hostel and living single, usage of smart phone, preferring online shopping and studying.

Difference in prevalence of internet addiction among males and females was found statistically non significant (p=>0.05).

Conclusion

Undergraduate medical students have an increased prevalence of internet addiction. Efforts to increase awareness about bad effects of internet addiction and intervention measures to prevent this is urgent need of time.

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