Prevalence of Internet Addiction and its Consequences among MBBS Students of MP Shah Medical College, Jamnagar, Gujarat

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Abstract:

  Introduction: Internet is one of the most essential elements in everyday life of everyone. Simultaneously, it's an emerging public health issue also, especially in our country. Excessive and undisciplined use of internet may lead to many physical, social, psychological and behavioral disorders. Medical students have not only lengthy syllabus but also hefty study hours and internet addiction may affect their scholastic pattern and learning. Therefore, this study was designed to assess prevalence and pattern of internet addiction and its consequences among them. **Objectives:** The aim of this cross-sectional study is to determine prevalence and pattern of internet addiction and its ill-effects among medical students of M P Shah Government Medical College, Jamnagar. **Method:** We included all medical students (n=600) of all semesters of MP Shah Medical College and collected data using Dr. Kimberly Young's Internet addiction scale from October 2019 to December 2019. Informed Consent was taken. Results: We observed that majority of students (82.67%) were average online users. The mean score of internet usage for male and female medical students was 44.22 and 38.48 respectively. Sleep disturbance, impulsiveness, anxiety, emotional liability, lack of interest in study were some of the major consequences of internet addiction among students observed in our study. The study also observed that students tried several methods like Yoga, meditation etc. to get rid of the internet addiction and concentrate on studies. **Conclusion:** Periodic screening of students should be carried out to identify internet addicts and a comprehensive program or strategies should be formed at institutional level for support and counselling of such students and to avert and cope up with ill effects of internet addiction.

Key words: Internet addiction, Medical students, Prevalence, Young's Scale

Introduction:

The internet has now become a significant tool for not only recreational purpose and social interaction, but also for teaching, training, communication and information sharing for the last few years especially in India. Easy access and relatively inexpensive data plans has led the community, particularly adolescents at risk of internet addiction. Internet addiction refers to individual's inability to control use of internet which eventually causes him or her marked distress and functional impairment in daily life.[1] Research studies in Western and Asian contexts suggests that the risk of internet addiction among young people is increasing.[2,3]

According to the last census data (in 2011), the Indian population is approximately 1.2 billion, and in this exponentially growing population, youth and young adults occupy a significant number.[4] It is estimated that in India, about 34.45% the general population are active Internet users and most are young adults.[5] Therefore, as the internet usage soars, its negative effects also increases, and there is increasing concern across the world with regard to the Internet addiction.

Internet addiction can have many negative consequences on people's health, especially young and adolescents. It may lead to poor scholastic performance, sleep disturbances, social problems, impulsiveness, psychological disturbances etc.[6] Surveys in US and Europe have also indicated alarming

How to cite this article: Misra S, Pithadia P, Parmar D, Makwana N, Unadkat S. A Study on Prevalence of Internet Addiction and Its Consequences among Medical Students in a Medical College at Jamnagar District, Gujarat. Healthline. 2020;11(2):89-93.

prevalence rates between 1.5% and 8.2% respectively.[7]

Method:

This cross-sectional study is aimed to determine prevalence and pattern of internet addiction and its ill-effects among medical students of M P Shah Government Medical College, Jamnagar. We included all medical students (n=600) of all the semesters of the college. The students aged between 17 and 20 years. We collected data from October 2019 to December 2019. Ethical Committee approval and written consent was obtained before enrolment of students.

Questionnaire was distributed to the participants in classroom settings at a predetermined time and was collected onsite. The questionnaires were unlinked, anonymous and self-administered. Teachers or supervisors left the classrooms just after distributing questionnaire sheet to avoid any bias, influence, or hesitancy.

The questionnaire contained brief socio-demographic information and Young's Internet Addiction Test (IAT).[8] Young's IAT, developed for screening and measuring levels of Internet addiction, has been the most widely used and well-tested for its psychometric properties.[9] It was applied to determine the prevalence of Internet addiction among students. It is a 20-item questionnaire measured on the five-point Likert Scale.

Average Online User (Score 20-49)
Possible Internet Addict (Score 50-79)
Internet Addict (Score 80-100)

After all the questions have been answered, numbers for each response are added to obtain a final score. The higher the score range, the higher the level of addiction.

Results:

We observed that out of total 600 students 56.8% were male whereas 43.16% were female. (Table 1) Mean score for internet addiction of those 56.8% male was 44.2 and of those 43.16% female was 38.48. Mean Score of Internet Addiction was maximum (47.37%) among males of second year whereas maximum (40.77%) among females of first year. (Figure 1)

Majority (82.66%) of the MBBS students were average online users with a score ranging from 20-49 and remaining fall in possible internet addiction and internet addiction category.(Figure 1)

Sleep disturbances, Social withdrawal, Study Negligence, Impulsiveness, Emotional liability, Anxiety, Depression were some of the major consequences of internet addiction among students observed in our study. Sleep disturbances was the major psychological consequence among students clinically but it is not statistically significant whereas all the other factors were statistically significant. (Table 3)

The study also observed that students (Possible Internet addicts & Internet addicts) tried several methods like Yoga, meditation etc. to cope up with internet addiction and concentrate on studies and majority of students (46.83%) didn't use any method while 29.83% students were using some sort of phone application to monitor their daily internet activity.(Figure 2)

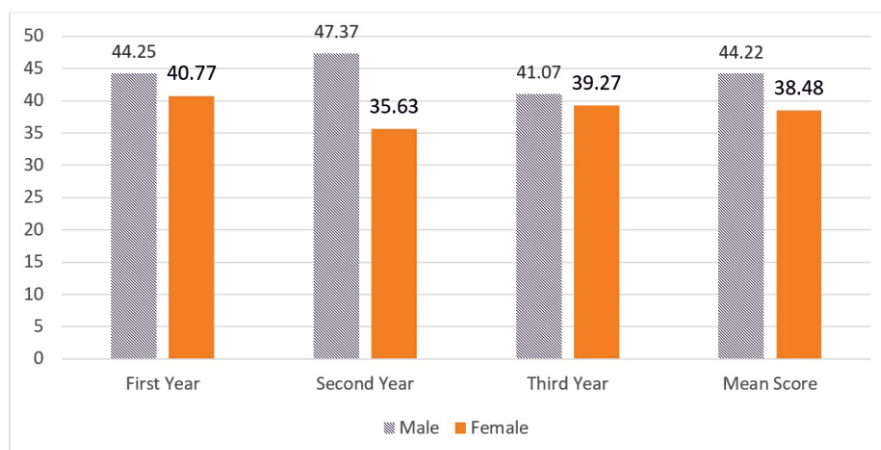**Figure 1: Mean score of internet addiction among medical students**

Table 1: Gender and batch wise distribution of Medical students

MBBS batch (Year)	Male No. (%)	Female No. (%)	Total Numbers No. (%)
First MBBS	133 (60.4)	87 (39.5)	220
Second MBBS	108 (54.0)	92 (46.0)	200
Third MBBS	100 (55.55)	80 (44.4)	180
Total	341 (56.8)	259 (43.16)	600

Discussion:

The young's Internet addiction scale classifies subjects into three categories - average online users (score 20-49), possible internet addiction (score 50-79) and internet addict (score 80-100). Our study finds that majority of students (82.66%) were average online users, whereas 16.16% students has been classified as possible internet addicts. 1.16% students had severe internet addiction. So majority of students are average online user and their purpose of using internet were for academic purpose. Several studies have estimated the prevalence of Internet addiction with varying results (0.9-38%) depending on the criteria used and the sample studied.[10,11] A study

Table 2: Assessment of severity of internet addiction among medical students (n=600) as per Young's internet addiction scale.

Score	Scale of internet addiction	First Year Male No. (%)	First Year Female No. (%)	Second Year Male No. (%)	Second Year Female No. (%)	Third Year Male No. (%)	Third Year Female No. (%)	Total Score
20-49	Average Online user	101 (75.93)	75 (86.2)	70 (64.81)	87 (94.56)	88 (88.0)	75 (93.75)	496 (82.66)
50-79	Possible Internet addict	31 (21.67)	12 (13.79)	32 (29.62)	5 (5.43)	12 (12.0)	5 (6.25)	97 (16.16)
80-100	Internet addict	01 (0.6)	0 (0)	6 (5.55)	0 (0)	0 (0)	0 (0)	7 (1.16)

Table 3: Association between internet addiction and psychological factors among students

Psychological factors	Average online users	Possible addicts and internet addicts	p-value
Anxiety	122 (24.59)	49 (47.11)	<0.01
Depression	98 (19.75)	41 (39.42)	<0.01
Emotional liability	188 (37.9)	67 (64.42)	<0.01
Sleep disturbances	328 (66.12)	81 (77.88)	0.19
Social withdrawal	76 (15.32)	72 (69.23)	<0.01
Impulsiveness	139 (28.02)	69 (66.34)	<0.01
Study Negligence	177 (35.68)	70 (67.3)	<0.01

Figure 2: Methods adopted by students (Possible Internet addicts & Internet addicts) to cope up with internet addiction
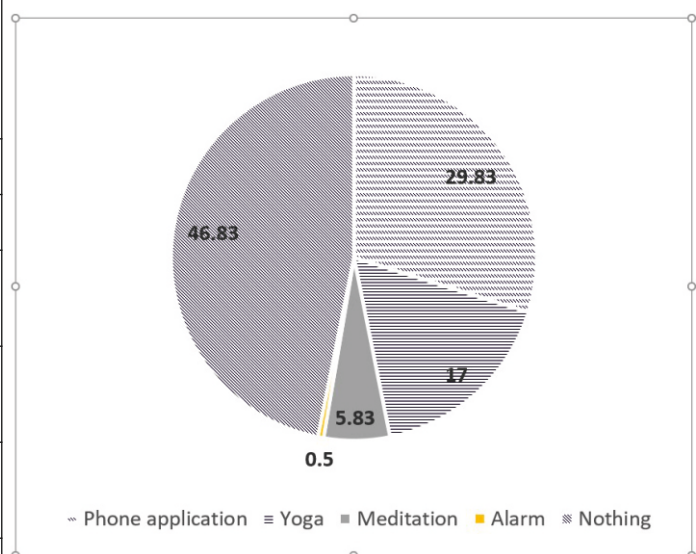
conducted in Western Maharashtra, who also used Young's Scale, estimated that mild internet addiction was present in 51.4% students, whereas moderate addiction (Young Score 50-79) was present in 7.4%.In a study conducted by Arvind Sharma et al who also used Young's internet addiction scale, 57.3% students were normal users, 35.0% as having mild internet addiction, 7.4% moderate internet addiction and 0.3% having severe Internet addiction.[12]

This study revealed that male students had higher average score of 44.22 compared to female students having average score of 38.48. Available data from some of the community and online surveys as well as clinical samples also suggest that Internet addiction appears to have a male preponderance.[12-17] A study by Lam LT about Internet addiction among adolescents revealed 50% increased odds for males to be addicted to the Internet (OR=1.5, 95% CI=1.1–2.2) when compared with females.[18]

The mean age of students in this study is 18.44 years (+1.38). A study by Arvind Sharma in Jabalpur also had mean age of 19.02 (±1.450) years and there was no significant difference in internet addiction between different age groups.[12] Mashhor Al-hantoushi et al. reported mean age 17 years and also reported no significant difference in internet addiction between different ages.[19] Several Studies have found that the Internet addiction usually manifests itself in the late 20s or early 30s.[20,21]

Our study observed that majority of students (77.88%) had a problem of sleep disturbance. Other common problems are impulsiveness, study negligence, emotional liability, anxiety, depression, social withdrawal etc. A study from India too reported that those who were dependent on Internet would delay their work to spend time online, lose sleep due to logging in till late night, feel lonelier, and feel life would be boring without the Internet as compared with non-dependent subjects.[22] In a study carried out by Yadav et al, among high school students in Ahmadabad India, there was a strong positive correlation between internet addiction and depression, anxiety and stress.[23]

Our study showed that majority of students (around 60%) were using internet for educational purpose, while one fifth were using for social networking. A study in Guntur, Andhra Pradesh showed that medical students used the internet mostly for social networking (59.7%), downloading media files (18.9%), online gaming (12.3%), and academic purposes (0.1%). About 63% of the medical students were using mobile phones to access the internet.[6]

Conclusion:

Majority of the students fall in the category of average users and also majority of them were using it for academic purpose. Excessive and undisciplined internet usage particularly for non-academic purpose mainly in young adolescents is an alarming public health problem in India. Periodic and regular screening and supervision of students regarding internet usages should be carried out to identify internet addicts and a comprehensive program or strategies should be formed at institutional level for support and counselling of such students and to avert and cope up with ill effects of internet addiction.

Recommendation:

Comprehensive Program for students (who fall in possible internet addict and internet addict category) should be prepared to increase the awareness of ill-effect of over usage of Internet and also to detect students at risk before it becomes problematic.

Limitation

As study was carried out only among 1st, 2nd and 3rd yr of medical students, caution needs to be applied before generalizing the results to entire students of college. Due to the use of self measurement scales, individual's response may be exaggerated by their interest in self presentation or self expression. It might be affected by their opinions.

Declaration:

Funding: Nil

Conflict of Interest: Nil

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