

MENTAL HEALTH IN RELATION TO INTERNET ADDICTION AMONG INDIAN UNIVERSITY STUDENTS

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ABSTRACT

In the past few years, Internet addiction among university students has gained more popularity than leading to various mental health issues among them. Low self-esteem, poor sleep quality, suicide, and mood disorder are the common health problems faced among university students due to excessive use of the Internet. Internet addiction (IA) is considered a major concern among the students of Indian universities. The mental health of the students is associated with the addition of the Internet. Internet addiction is defined as the poorly controlled behaviors of university students regarding the use of computers and the use of the Internet that lead to distress and impairment. Internet addiction among university students is on the lines of substance abuse. Internet addiction among university students leads to depression, stress, and anxiety. The Internet has been considered as one of the good sources for getting knowledge; however, the addition of the Internet among university students makes them lazier and diverts them from their purpose. The study deals with the negative consequences of the Internet among university students.

Keywords: Internet addiction, mental health, University students, depression, and stress.

Introduction

In the digital era, the Internet plays an important role in everyone's life as it has become an integral part of life. More than 3.8 billion people depend on the Internet for their work. Over the past few years, mental stress among university students has increased due to Internet addiction. Internet addiction among university students is defined as an impulse control disorder that doesn't involve an intoxicant (Gupta et al. 2018). Internet addiction is defined as psychological dependence on the Internet regardless of the activities done on it. Accessing the internet leads to Internet addiction that leads to psychiatric and psychosocial disorders among university students. Yoga and mindfulness meditation is considered effective and addiction n strategy to cure patients suffering from IA. It has been assumed that more than 600 million users are present who regularly use the Internet. Among university students, pathological Internet use(PIU) is a common problem that has affected their mental health. Internet addiction is the situation when the person uses the Internet in an uncontrollable manner that creates social, psychological, and works problems in one life. As per Nagaur (2020), in India Internet addiction among university students varies from 1.975 to 34.7%. The use of different instruments, samples,

diagnostic criteria, and research designs are the factors used to explain the findings. A large section of the Internet is used by university students. The Internet acts as a major source of information that helps them in gaining their academic knowledge. Despite getting large benefits from the Internet, the Internet has several negative consequences that affect the mental health of the students. The article covers the mental health issue among University students due to Internet addiction

Literature review

Factors that contribute to Internet addiction among the University students

The usage of the Internet has become an essential part of life as it is considered a major source of Information. Every section of society is dependent on the Internet for a different purpose. Advancement in the Smartphone is one of the major reasons that has made access to the Internet easier among students (Kumar et al. 2018). Easy access to the Internet provides major support to university students by becoming a major source of knowledge. However, researchers have shown concerns regarding the easy access to the Internet among University students. Internet addiction among students has become a major problem among the students as it has affected the mental health of the students.

Internet addiction is the situation when the person starts misusing the Internet instead of using it from the right perspective. Internet addiction among university students is common due to various reasons. According to Bisen and Deshpande (2020), the syllabus of the University is quite difficult for which students to take the support of the Internet to clear their doubts as well as for solve the problems. However, their physical interaction with their friends and teachers is less that diverts them from their goal. Most university students use the internet more for entertainment purposes rather than educational purposes. Another reason for becoming Internet-addicted among university students is the easy availability of mobile phones (Jaiswal et al. 2020).

Smartphones have become the basic needs of the students that have made the students more Internet-addicted. In the university, most of the students take higher pressure of the vast syllabus as well as find it difficult to understand the topics. To reduce the pressure of study most of the students started using Internet surfing that makes them more addictive.

Impact of Internet addiction on mental health.

Internet addiction among university students creates psychosocial disorders among the students. The psychosocial disorder has various characteristics including withdrawal symptoms, tolerance, problems in social relations, and affective disorder. According to Anand et al. (2018), psychological difficulties are also faced by the person who is addicted to the Internet. Pathological Internet users cause social, academic, and interpersonal problems. The heightened level of psychological arousal is created by the excessive usage of the Internet. This psychological arousal results in little sleep, limited physical activity, failure to eat for a long time as well as resulting in depression, anxiety, and low family relationships.

Internet addiction creates various mental issues among people as the Internet-addicted people start avoiding the real world and become a part of the virtual world (Gezgin et al. 2018). This makes them unaware of the

practical k of society his interest from the real world shifted to the virtual world. In the various studies, it has been found that excessive usage of the Internet is responsible for a higher risk of mental problems such as depression, stress which later become the reason for suicide. In the various studies, it has been informed by the researchers that the person who is addicted to the Internet feels more lonely and isolated. Addiction to the Internet makes the person more inadequate about life or appearance (Sharma and Sharma 2018).

The person believes rather than reality as the Internet makes him isolated from the person. Addiction to the Internet makes the people emotionally challenged as he found no one attractive in the real world that creates feelings of ignorance in him. Human beings are considered social animals who need a face-to-face conversation with people to be mentally fit, however, the people who excessively use the Internet get isolated from the real world that makes them mentally ill. Internet addiction leads to various psychiatric disorders that are associated with low esteem impulsivity, mood disorder, poor sleep quality, and suicide. Integrative therapeutic approaches are used to comorbid psychiatric disorders (Anand et al. 2018).

Materials and method

A descriptive cross-sectional study was carried out at the dental university in Indore. The students of the first semester were involved in the study. Students who were in the Internship were also involved. In the final analysis, 384 students from different academic years were involved in the study. As per (Sharma and Sharma (2018), the Ethical committee of the related institution reviewed the study protocol and granted ethical clearance. The participants were informed regarding the objective of the study and written consent was provided by the participants. The students who had signed the informed consent were present on the day of conduct of the study. Those students were excluded from the study who were not present on the day of conduct of the study. Determination of the sample size was done through a pilot study. Sample size calculation

was done through G*Power 3.1 statistical software.

The findings of the pilot study help to keep the power of the study at 80%. Young's Internet addiction test was done to assess Internet addiction. Good internal consistency reliability has been found in the previous studies through Internet addiction tests. 20 items were present in the Internet addiction test based on a 5 point Likert scale. The range of the total was between 20 to 100. The students were considered as Internet addicted whose scores were equal to great 50. Depression among the students was measured through Beck's depression Inventory. 21 items were comprised in the questionnaires that assess symptoms of depression and attitudes that include a sense of failures, pessimism, guilt, self-dissatisfaction, self-dislike, social withdrawal, suicidal ideas, body image, indecisiveness, weight loss, loss of libido, and preoccupation (Anand et al. 2018).

A 4-point Likert scale was used for rating the items that ranged from 0 to 3. 10 was considered as a baseline for measuring depression and not having depression among the students. Demographic characteristics, patterns of Internet usage as well as the

duration of use were also involved in the questionnaires. Based on the percentage of marks obtained in the previous university exams. As per the Indian academic rule, the students were classified in the first division who got more than 60 percent (Bahara et al. 2018). Students' classes were used for collecting the data. Interns related data were collected from clinical postings. The students were allowed to fill the preformed under the guidance of investigators. Investigators were allowed to solve the doubt arising from the students. Students were not allowed to confer with each other. Questionnaires were collected from the students after 20 minutes. SPSS v 20 was used for analyzing the gathered data. To identify the predictors for Internet addiction Logistic regression analysis was done. A P-value less than 0.05 was considered statistically significant.

Result and Discussion

384 dental students were involved in the study 1.19 was considered as the mean age of the study population. 87.1% of the students were female and 98.9% of the students were unmarried.

Variables	Categories	1st-year students	2nd-year students	3rd-year students	4th-year students	Interns Numbers (%)	Total numbers (%)
Age	Less than 21 years	95.9%	89%	65.1%	30.3%	6.1%	57.8%
	More than 21 years	4.1%	11%	34.7%	68.5%	923.7%	40.3%
Gender	Male	19.5%	10%	8.6%	5.7%	17.5%	11.9%
	Female	78.5%	88%	90.3%	93.1%	80.4%	80.5%
Marital status	Married	0%	1.3%	1.3%	1.3%	1.4%	1.0%
	Unmarried	100%	97.6%	97.6%	97.6%	97.6%	98.7%

Table 1: Demographic characteristics of the study population
(Source: created by author)

13.87 were considered as the overall mean Internet addiction score. In the study, it has been found the students who were in the first year were more addicted to the Internet. 15.65 students in the fourth year are addicted to the Internet. Among all the year's students who were in the third year showed minimum addiction on the Internet. 9.62 was the mean score of the third-year students. In the mean, a

significant difference was found among the Internet addiction scale in students of all the years (Singh et al. 2020). In the study population, 6% was considered as the prevalence of Internet addiction. Between the prevalence of Internet-addicted students, no significant differences were found in the given table 2.

Study year	Internet Addiction score (Mean)	Addicted Number (%)	Not addicted number (%)
First-year	16.41	7.2%	90.79%
Second-year	12.91	3.1%	94.89%
Third-year	8.62	1.9%	96.10%
Fourth-year	14.65	1.9%	96.10%
Interns	11.46	11.3%	96.10%
Total	12.87	5.0%	86.69%
P value	<0.0001*a	0.081b	94.0%

Table 2: Mean Internet addiction score and distribution according to the study year (Source: created by author)

11.27 was considered a mean depression score. The students of different professional years of dental studies have shown significant differences found in the mean difference score. According to Singh et al. (2020), the least depression score was found among the students of the second year. 21.50% prevalence of depression was found among the years of students. A higher prevalence of depression was found among third-year and fourth-year students.

Study year	Depression score	Depressed number	Secure / not depressed
First-year	6.72	11.30%	86.69%
Second-year	5.63	10%	88.0%
Third-year	6.37	35.20%	62.79%
Fourth-year	10.86	30.89%	67.9%
Interns	7.91	15.89%	82.9%
Total	8.36	20.49%	77.49%
P-value	<-0.0001*a	0.012*b	

Table 3: Mean Depression score and distribution according to the year of the study (Source: created by author)

38.70 % of students were using the internet to chat whereas 27.90 % of the students were using the Internet for social networking. 65.0% of students were accessing the Internet through their phone and 61% of the students were using

the Internet for more than 5 years (Saikia et al. 2019). It has been found that 80% of the students got more than 60% in the examination.

Variables	Categories	Number (Percentage)
Different purposes of Using Internet	Social networking	36.89%
	Chatting	37.80%
	Entertainment	11.90%
	Email	8.70%
	Surfing website	2.59%
	Educational purposes	6.70%
The primary method of access	Personal computer	59%
	Mobile phone	64%
	Internet cafe	80%
Duration for using the Internet	Less than 5 years	38%
	More than 5 years	60%
Marks obtained in the last exams	Less than 60%	19%
	Above 60%	80%

Table 4: Pattern of Internet use and academic performance of the study population (Source: created by author)

The factors associated with Internet addiction in dental students were identified through the bivariate analysis (Jain et al. 2020). The mental status of the students and academic

performance of the students were associated with Internet addiction. P-value less than 0.0001* shows the mental status of the students. 17.3% of the students were addicted

to the Internet as 2.90% of the students were not addicted to the Internet. 18.60% of students scored less than 60% in the university exam that has been shown in table 5.

Variables	Categories	Addicted Number	Non-addicted Number	P-value
Year of study	1st year	8.19%	90.79%	0.089
	2nd year	3.10%	94.89%	
	3rd year	2.89%	97.9%	
	4th year	2.89%	97.9%	
	Interns	2.89%	87.69%	
Gender	Male	2.19 %	92.79%	0.878
	Female	2.19%	93.40%	
Age	Less than 21 years	5.89%	86.69	0.251
	More than 21 years	5.89%	93.10%	
Marital status	Married	0.0%	92.40%	0.611
	Unmarried	6.9%	92.90%	
Duration of Internet use	Less than 5 years	6.0%	93%	<0.00001
	More than 5 years	4.30%	95.60%	
Marks obtained	Less than 60 percent	17.60%	17.60%	0.314
	More than 60 percent	2.89%	1.90%	
Depression status	Depressed	16.3%	16.3%	<0.000001
	Non-depressed student	16.3%	2.89%	

Table 5: Association of Internet addiction with different factors (Source: created by author)

According to Asokan et al. (2019), the strength of association was identified through the logistic regression analysis. It has been found that academic performance and depression status was highly affected by the addiction to the Internet. . 6% of students were depressed as

well as received fewer marks than 60% in the examination. These students were more addicted to the Internet as compared to non-depressed students that as been shown in table 5.

Variables	Categories	Adjusted odds ratio	Confidence Interval	p-value
Depression status	Depressed	6.00	2.28-15.66	<0.00001*
Marks obtained	Greater than 60%	6.69	2.54-17.53	<0.00001

Table 6: Logistic regression analysis with Internet addiction as a dependent factor to identify the strength of association (Source: created by author)

Discussion

The study was conducted to know the prevalence of Internet addiction among university students. The study has focused on finding the relationship between addiction to the Internet to the mental health of the students (Asokan et al. 2019). Young's Internet addiction questionnaire was done to analyze the addiction of the Internet among the students

and the mental health-related issues faced by them. Beck's depression scale has been used to measure the rate of depression among the students. In the study, it has been found that university students are one of the major sections who use the Internet for different purposes. In western and non-western countries the occurrence of internet addiction among students ranged from 1.97% to 34.7%. Among

the students of university 6.00% got below 60% marks.

In the prevalence of internet addiction in all the academic years no significant difference was observed. The difference in the sample size, research design, and diagnostic criteria leads to variations in the result. It has been found from the study that mental health problems are caused due to addiction to the Internet among students. The study has shown the students from the third year were most addicted to the Internet and after that 4th students were more addicted to the Internet. The reason found behind the Internet addiction among the third-year and fourth-year students was the high prevalence and high mean of depression (Sharma et al. 2018).

Workload and academic pressure were maximum among the students of the third year and fourth year students. Mobile phones were mostly used by students that make them more addicted to the Internet. Fewer students were using university computers for their use as maximum students used mobile phones. Students were using the Internet for Chatting and social networking. The strength of the association was identified through the analysis of logistic regression. From the result, it has been clear that academic performance and depression status were associated with Internet addiction (Biedron et al. 2021). It can be seen that online education has become popular in the university due to the pandemic. Most of the

students become Internet addictive during this period that has put negative impact on their mental health. The students who were habituated for offline study were failed to understand the concept of online education that divert them from achieving their goal and become Internet addictive by playing game or chatting with friends.

Conclusion

From the study, it has been clear that the prevalence of Internet addiction among university students was 6.0%. Mean internet addiction score was found maximum for the first-year student. The majority of the students were using mobile for accessing the Internet and it was found as a major cause for Internet addiction among the students. Third-year, as well as fourth-year students, were more addicted to the internet due to academic pressure and workload. Psychological counseling can help the students to prevent Internet addiction. Psychological counseling helps to reduce the mental stress of the students by improving their performance of the students. It is clear from the study; the university students were more addictive to Internet due to their academic pressure as well as vast syllabus. Most of the students use Internet for the purpose of chatting, social networking and for the other entertainment purposes.

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