



Internet Addiction and its Impact among Higher Educational Students from 10 Universities in the Indian State of Chhattisgarh

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Abstract

Background: Unwarranted internet use can lead to a multiplicity of issues in personal, social, and professional spheres. This phenomenon is known as internet addiction. Between 1989 and 2020, the number of internet users increased from 500 000 to 4.83 billion, suggesting a rising trend in the figure of persons who are digitally savvy. India had more than 718 million subscribers as of June 2020, second only to China, according to TRAI. The ground of this study is to scrutinize the magnitude of addiction, its impact, and related factors in universities located in the districts of Chhattisgarh's judicial capital, Bilaspur, and state capital, Raipur.

Methods: The "Personal Information Form" was used to gather data, which also contained synopses of internet usage, Young's "Internet Addiction Test (IAT)," and a questionnaire the researcher created called the "Impact Scale of Internet Addiction."

Results: Out of 937 professionals from different socio-economic backgrounds, 495 (52.82%) were male and 442 (47.18%) were females. The subject's mean age was 21.34 (SD 2.34). The study's findings indicate that the mean IAT score for IA among users was 67.15. Out of the total, 222 (23.69%) respondents were found to be severely addicted, 587 (62.64%) to be possible addicts, and 122 (13.02%) to be mildly addicted, respectively. Only six (0.64%) out of 937 people were considered to be completely safe or addiction-free. Comparing males' and females' outcomes in terms of social media usage, academic performance, tendencies, and purpose has proven to be highly significant.

Conclusion: Discuss the probability of addiction, protective factors, and preventive techniques based on these facts.

Keywords: Internet addiction, Criminology, Criminal psychology, Antisocial behavior, Self-injurious behavior, Social media addiction

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Introduction

Everybody may quickly access the internet, a global source of knowledge, using computers and quick databases. The United States Army developed a computer network project in the 1960s with an emphasis on defense and military purposes. The project expanded to contain all the happenings that were relevant to everyone during that decade, including trade, politics, entertainment, social communication, education, and research. The term "internet" was first used in 1982, but it only started to become extensively used in the mediocre of the 1990s. Research has established that the web is the electric technology that has evolved the fastest in human history from the start of the 21st century to the present.¹⁻³ The Internet is currently the biggest and most complete repository of knowledge available. Millions of minor computers spread over numerous sites worldwide are connected by the massive global computer linkage known

as the internet.

The phrase "Internet addiction," which was originally used by Dr. Ivan Goldberg in 1995, has been present for more than two decades, but it has just recently come to be recognized as a reality that is being attempted to be labeled with several labels.⁴ Exploration indicates that entities within the age ranges of 13 and 19 typically use the internet to play computer games, listen to music, and meet fresh acquaintances.⁵ Respondents are exhausting the internet more frequently every day, and this quick access to a wide variety of material has had several unfavorable effects.⁶ According to recent studies, Internet Addiction (IA) poses a serious risk to public health, given the enormous growth in Internet users worldwide in the 2000s.⁷ One may argue that computers, and especially the web, have equally constructive and harmful impacts on persons and society.⁸⁻¹¹ IA is one of the negative effects and detrimental outcomes.¹²



The Accessibility, Control and Excitement (ACE) Model developed by Young describes how accessibility, control, and excitement play a trivial role in the progress of internet compulsions.¹³ On the basis of this model, IA develops as dealings of three factors –accessibility: handiness of knowledge, jest, erotica, and others; control, the individual way of the online action and its apparent privacy; and excitement, the optimistic emotion and excitement related to utilization. Davis describes Problematic Internet Use (PIU) as a mental illness defined by incongruent ideas and unhealthy conduct. Davis bases this explanation on cognitive-behavioral theory.¹⁴ Additionally, it is a distinctive set of Internet-related thoughts and associated actions that have harmful consequences on survival.¹⁵

One-fifth of the respondents to Shek et al study of 6121 primary and secondary pupils in Hong Kong who displayed IA behavior could be classified as addicts.¹⁶ Choi et al¹⁷ discovered that 14.5% of the parental defendants frequently quarreled with their kids about issues they encountered online. Additionally, people's suicidal thoughts and depression symptoms appear to coexist with the IA symptoms. The Chinese YMCA of Hong Kong's Tsuen Wan Centre¹⁸ investigated IA among 976 students in Hong Kong in 2004 using the Young's 20-item Internet Addiction Test (IAT) questionnaire scale and discovered that 61.4% of senior primary school students, 37.0% of college students, 35.8% of secondary 6 to 7 students, 35.2% of secondary 1 to 3 students, and 18.8% of secondary 4 to 5 students could be classified as highly at danger of IA. China's condition is also quite stern. About 10 million teenagers, or 13.7% of adolescent users, fit the definition of internet addicts.⁷ Taiwan is currently facing a critical situation. Lin and Tsai¹⁹ discovered in their study that 11.8% of students from senior secondary pupils might be classified as Internet dependents.

The numeral of people with internet connection and users has been increasing annually. In the year of 2005, there were nearby one billion individual used the internet, two billion in 2011, three billion in 2015, and four billion in 2018, the frequency of individuals with access to and using the internet worldwide has been multiplying every year. People's demands and motivations have interacted with such rapid expansion. Internet World Stats²⁰ estimated that by June 2020, there will be 7.7 billion people on the planet, yet only 62.0% of those people—or 4 833 521 806 billion—use the Internet worldwide. From 2000 to 2020, the progress rate has improved by 11,239%. The internet is a relatively new phenomenon, and micro study has been done as an addiction on the global platform, pursuing the more well-known addictions, such as those to alcohol and drugs.

As far as we are aware, India has not yet unconfined comparable figures. Studies carried out in numerous nations have produced significant proof indicating that

this addiction poses a harm to the public, moreover number of noteworthy incidents that clearly demonstrate the severity this issue merits.²¹ As per Bangalore's National Institute of Mental Health and Sciences (NIMHANS), 73% of teenagers experience psychological distress, and youths between the ages of 13 and 17 are the most expected to become Facebook addicts. Because of this sensitivity, it has been witnessed that young people experience depression-related issues more frequently than adults do.²² After China, India has the second-highest number of internet users (718 million users as of June 2020), according to the report of Telecom Regulatory Authority of India Approximately 52.10 percent of Indians use the internet, and their growth rate has augmented by 11110 % between 2000 and 2020.²³

Internet connectivity is now regarded as one of the four essential requirements, along with food, shelter, and clothes and internet addiction is becoming a significant issue that affects entire generations over and above individual users. People who are addicted to the internet experience pain in all areas of daily life. The prevalence of addiction is rising every day, especially in Asia, according to two large research studies, which could serve as warning indicators for future prevention. First, 18 180 respondents from 23 nations were questioned as part of an IPSOS, study to see how the general public felt about technology.²⁴ More than two-thirds of those surveyed in the poll claimed they couldn't fathom living without a net. As it happened, India's population ratio was 82%, higher than that of the US (73%), the UK (78%), China (77%), and Japan (62%). Second, a 2015 Telenor Group²⁵-commissioned survey on "Worst Internet Habits" revealed that 33% of Indians dislike excessive selfie-takers and 40% of users propagate misinformation. 65% of Indians admit to being "Internet addicts." In four Southeast Asian nations with good internet access—India, Thailand, Singapore, and Malaysia—the Telenor Group performed an Internet behavior survey.

After JIO Telecom introduced the lowest-cost cellular data in the world, many Indian state administrations, including those of Chhattisgarh, Madhya Pradesh, and Uttar Pradesh, initiated a program to distribute free laptops and smartphones to children and young people. The internet is currently incredibly beneficial and handy for users to find knowledge for their modern, complex tasks. But today, individuals employ the internet not solely for the determination to acquire information but also to occupy their spare time and enjoy their independence. Internet addiction will thus become a very significant and offensive issue for all users in accumulation to generations if this situation doesn't get resolved. Therefore, the primary goal of this exploration is to analyze the origins and consequences of IA In addition to outlining its adverse repercussions in order to demonstrate the necessity and significance of the study. In addition, these explorations

are decisive for informing web users who are attentive to how to protect themselves against addiction, including parents and mentors. The goal of this research is to raise the target group's understanding of this issue so that they might try to manage their own affairs in the twenty-first century.

Theoretical foundation

The researcher made the following presumptions:

1. Ericson's first and most crucial presumption was that, as of September 5, 2016, Indians consumed 9.8 GB of internet data per month, the most of any nation in the world.
2. The majority of internet usage by users is for social media networking.
3. The most popular internet search engine among consumers is Google.
4. Facebook, TikTok, and Instagram are the three apps most to blame for user privacy problems.
5. Users utilize WhatsApp Messenger the most for instant messaging.
6. Users' positive progress towards their goals has been influenced by their excessive internet use.
7. The majority of internet users always check their smartphones first when they get up.
8. Many users never received instructions on how to stay safe online.

Aim of the study

The primary goal of the research is to determine how IA affects various variables, such as age, sex, amount of

online time, and purpose etc. To ascertain the degree and state of IA, it is important to evaluate its intensity and prevalence. Examining how addiction affects stress, depressive symptoms, criminal and antisocial behavior, academic performance, and other aspects is required to achieve this.

Methods and Techniques

Sample and sampling

A total of 937 higher educational students in the UG, PG, and Ph.D. grades from 10 prestigious universities and institutions from the Raipur and Bilaspur District of Chhattisgarh province (Figure 1) consented to participate utilized the internet for more than an hour every day. They were from a variety of socioeconomic backgrounds. To gather samples for the current study, the descriptive design technique and purposive sampling were both used. The researcher adhered to appropriate protocols in the selection of participants for the study, aiming to boost the representativeness of the samples in relation to the target population. Table 1 lists the characteristics of study participants.

Data collection and tools

The main information was gathered by the researcher using a "Personal Information Form" that included an overview of Internet usage, the "Impact Scale of Internet Addiction (ISIA)," which was created by the scholar in 2019 with approval from the appropriate Thesis Advisory Committee (TAC) authority, to gather data on the study's independent variables, and a standardized

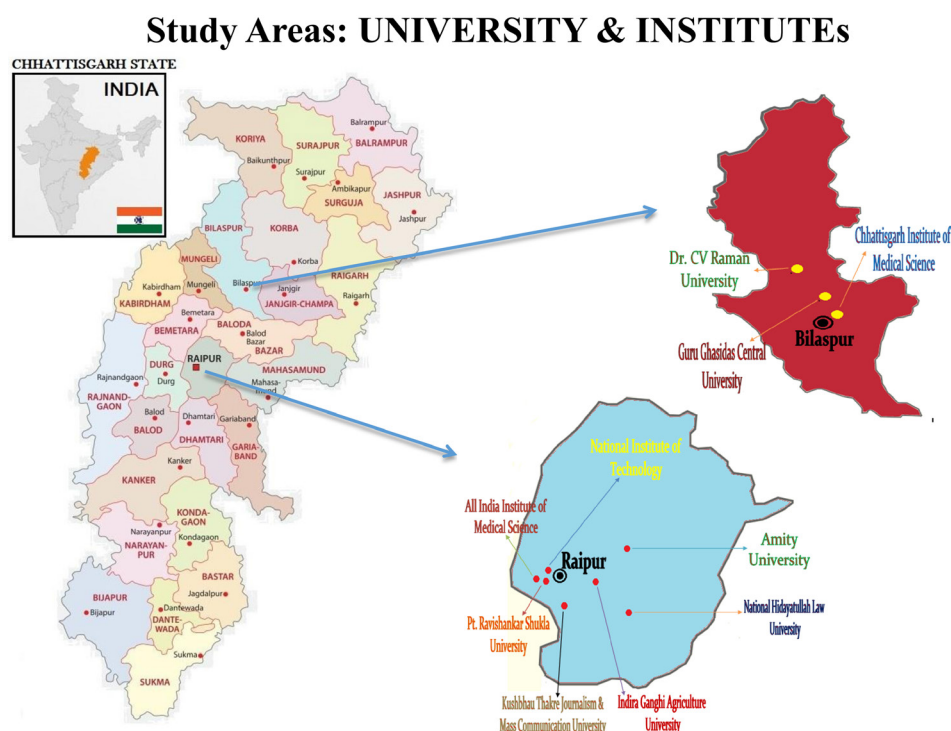


Figure 1. District-wise universities/institutes 2D mapping area in Chhattisgarh State

Table 1. The features of personages attending the study

Higher Educational students	Complete safe (n=06)	Average users (n=122)	Possible addicts (n=587)	Severe addicts (n=222)	Total respondents (n=937)
Age (y)					
18-31yrs	06 (0.6)	122 (13.0)	587 (62.7)	222 (23.7)	937 (100)
Sex					
Male	05 (0.8)	81 (66.4)	311 (53.0)	98 (44.1)	495 (52.8)
Female	01 (0.2)	41 (33.6)	276 (47.0)	124 (55.9)	442 (47.2)
Educational status					
Arts stream	00 (0.0)	18 (14.6)	43 (7.3)	37 (16.7)	98 (10.4)
Science stream	3 (50.0)	36 (29.5)	215 (36.6)	72 (32.5)	326 (34.8)
Commerce/management stream	00 (0.0)	09 (7.4)	38 (6.5)	08 (3.6)	55 (5.9)
Law professional	2 (33.3)	19 (15.6)	79 (13.5)	23 (10.3)	123 (13.1)
Medical professional	00 (0.0)	21 (17.2)	77 (13.1)	24 (10.8)	122 (13.0)
Journalism professional	1 (16.7)	07 (5.7)	55 (9.4)	24 (10.8)	87 (9.3)
Engineering/Tech professional	00 (0.0)	12 (9.8)	80 (13.6)	34 (15.3)	126 (13.5)
Universities/Institutes					
Pt. Ravishankar Shukla University, Raipur	1 (16.7)	8 (6.6)	87 (14.8)	34 (15.3)	130 (13.9)
National Institute of Technology, Raipur	00 (0.0)	11 (9.1)	70 (11.9)	32 (14.4)	113 (12.0)
Hidayatullah National Law Univ., Raipur	2 (33.3)	16 (13.1)	71 (12.1)	20 (9.0)	109 (11.7)
Indira Gandhi Agriculture Univ., Raipur	00 (0.0)	19 (15.6)	86 (14.7)	17 (7.7)	122 (13.0)
Kushabhau Thakre Journalism Uni., Raipur	1 (16.7)	07 (5.8)	55 (9.4)	24 (10.8)	87 (9.3)
All India Institutes of Medical Sc., Raipur	00 (0.0)	02 (1.6)	21 (3.6)	09 (4.0)	32 (3.4)
Amity University, Raipur	00 (0.0)	04 (3.2)	19 (3.2)	11 (5.0)	34 (3.6)
Guru Ghasidas Central University, Bilaspur	00 (0.0)	21 (17.2)	69 (11.8)	26 (11.7)	116 (12.4)
CG Institute of Medical Sciences, Bilaspur	00 (0.0)	19 (15.6)	56 (9.5)	15 (6.8)	90 (9.6)
CVRU, Bilaspur	2 (33.3)	15 (12.2)	53 (9.0)	34 (15.3)	104 (11.1)
How many hours per day spend on the internet?					
1-2 hours	1 (16.7)	10 (8.2)	100 (17.0)	74 (33.3)	185 (19.7)
3-4 hours	1 (16.7)	46 (37.7)	231 (39.4)	92 (41.4)	370 (39.5)
5-6 hours	2 (33.3)	26 (21.3)	138 (23.5)	22 (9.9)	188 (20.1)
7-8 hours	00 (0.0)	16 (13.1)	61 (10.4)	18 (8.1)	95 (10.1)
>8 hours	2 (33.3)	24 (19.7)	57 (9.7)	16 (7.2)	99 (10.6)
Check smartphone first after getting up in the morning?					
Always	4 (66.6)	63 (51.6)	216 (36.8)	52 (23.4)	335 (35.7)
Often	00 (0.0)	35 (28.7)	179 (30.6)	45 (20.3)	259 (27.6)
Sometimes	1 (16.7)	16 (13.1)	127 (21.6)	71 (32.0)	215 (23.0)
Rarely	00 (0.0)	07 (5.8)	50 (8.5)	29 (13.1)	86 (9.2)
Never	1 (16.7)	01 (0.8)	15 (2.5)	25 (11.2)	42 (4.5)
Got ever lessons for stay safe on internet??					
Yes	5 (83.3)	80 (65.6)	435 (74.1)	167 (75.2)	687 (73.3)
No	1 (16.7)	42 (34.4)	152 (25.9)	55 (24.8)	250 (26.7)
How many online friends do you have on social media platforms?					
Unclosed..... (N=937)		684.56 (Mean)		1522.77 (SD)	
How many online friends have you met in the real world before you knew?					
Unclosed..... (N=937)		12.35 (Mean)		49.22 (SD)	
How many times any online friend cheated you on the internet?					
Unclosed.....(N=937)		4.60 (Mean)		65.70 (SD)	

variety of the survey questionnaire of “IAT” Scale. It was formed by Young²⁶ and somewhat modified as per the current scenario and applicable language in Hindi. The questionnaire is divided into three sections: demographic information, such as age, sex, education level, and family details, and qualitative information, such as responses to questions about internet usage. ISIA included the following categories: criminal or antisocial behavior; psychological and social impact; physical and academic performance; and finally, the Young IAT questionnaire.

Data analysis

Frequencies, arithmetic means, standard deviations, ranges, and statistics analysis using the SPSS, version 21.0, were conducted in sequence to get the answers to the queries listed in the section on research objectives. A level of $P < 0.05$ was considered significant for all tests.

Statistical interpretation and findings

Following analysis to ascertain whether or not higher education students in the study group’s internet addiction levels differ according to independent factors, the results were presented and analyzed in this chapter’s tables.

Table 2 shows that Higher Education Institutions’ (HEIs) internet addiction and their impact scale levels are close to High.

IAT factors analysis

The factor-analysis of the Internet Addiction Test items identified six factors (salience, excessive use, neglect work, anticipation, lack of control, neglect social life), with decent inner reliability and parallel legitimacy (See Figure 2).

Discussion

The objective of this existing research is to better comprehend how HEI students in the state of Chhattisgarh

use the internet and how common internet addiction is. The study’s participants were 21.34 (SD 2.34 years) years old on average. In the current study, women (69.25, SD 14.29) used the internet more excessively and were more addicted to it than men (65.27, SD 15.87). Parallel upshots have already been established in a number of other investigations. In our social order, men were usually granted greater freedom and ingress to the internet and added belongings in private resources than women. However, it was shown that women in an ethnical province like Chhattisgarh were more addicted to the internet than users. The frequency of modest or potential internet addicts and severe addicts was 587 (62.64%) and 222 (23.69%), respectively, in the current study (Figure 3). Another study on adolescent Indians found that the regularity of moderate or potential internet addicts was 24.8% and that the pervasiveness of severe addicts was 0.7%.²⁷ The Table 1 depict in overall scenario, almost 594 63.3% respondents Often checked their smartphones first, after getting up in the morning (Figure 4).

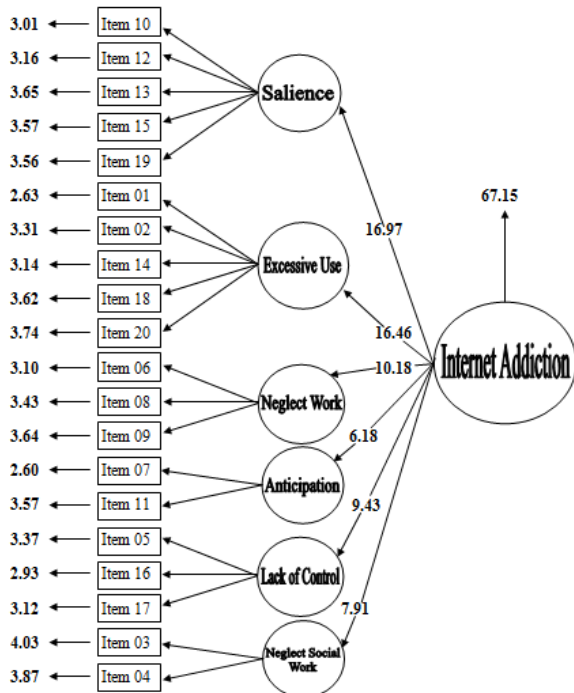
Additionally, the investigation has revealed that females 185 (41.85%) are more likely than males 197 (39.79%) to use the web for more than five hours every day (Figure 5). Men use the internet daily in the amount of 468 (94.54%) and women in the number of 414 (93.66%) practically exactly equally. Moreover, studies have specified that men use SMSs to converse 284 (57.37%) more frequently than women do, 209 (47.28%). In a same way, 493 (53.0%) of the total respondents uses net for chatting purpose mainly (Figure 6). According to Kawabe et al,²⁸ the frequency of online addiction rises as students’ grades rise. Consistently, Xin et al²⁹ found that older grade pupils were more susceptible to IA in a study involving 6468 Chinese teenagers. It is conceivable because getting a Master’s degree requires more effort in the standings of budget and internet availability. However, the majority of the undergraduate students in this exploration (85.53%) were professionals in the arenas of medicine, law,

Table 2. Higher Education Institutions’ (HEIs) internet addiction and their ISIA

Factors	N	Score		Range			Mean	Level	
		Min	Max	Low	Medium	High			
Internet Addiction Test	Salience	937	05	25	1.0–8.33	8.34–16.66	16.67–25.00	16.97	High
	Excessive use	937	05	25	1.0–8.33	8.34–16.66	16.67–25.00	16.46	Medium
	Neglect work	937	03	15	1.0–5.00	5.01–10.00	10.01–15.00	10.18	High
	Anticipation	937	02	10	1.0–3.33	3.34–6.66	6.67–10.00	6.18	Medium
	Lack of control	937	03	15	1.0–5.00	5.01–10.00	10.0–15.00	9.43	Medium
	Neglect social life	937	02	10	1.0–3.33	3.34–6.66	6.67–10.00	7.91	High
Internet addiction	937	20	100	1.0–33.66	33.67–67.32	67.33–100.0	67.15	Medium	
Impact scale of internet addiction	Antisocial behavior	937	01	11	1.0–3.66	3.67–7.33	7.34–11.00	9.07	High
	Psychological impact	937	01	11	1.0–3.66	3.67–7.33	7.34–11.00	8.37	High
	Physical impact	937	01	11	1.0–3.66	3.67–7.33	7.34–11.00	7.36	High
	Social impact	937	01	09	1.0–3.00	3.01–6.00	6.01–9.00	6.09	High
	Academic impact	937	01	07	1.0–2.33	2.34–4.66	4.67–7.00	4.60	Medium

technology, engineering, journalism, and management. This indicates that the group's ability to cover internet costs is significantly greater than that of students with other UG and PG degrees.

According to research by Goel et al,²⁷ addicts most frequently used the internet at work since there were fewer restrictions, there were coworkers around, and



Standardized parameter figure estimates for the 20-items by order with six-factor model (Model 6c) of the Internet Addiction Test.

Figure 2. Mean of 20 item IAT questionnaire and associated factors

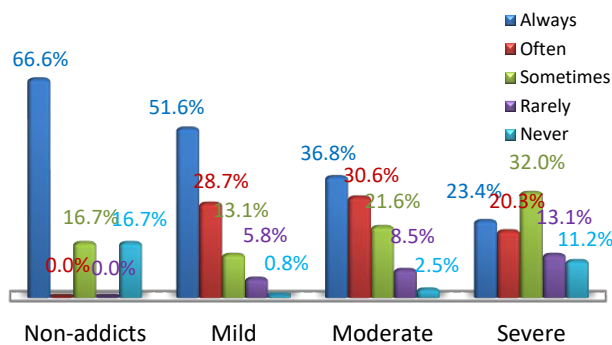


Figure 3. Distribution percentage of internet users

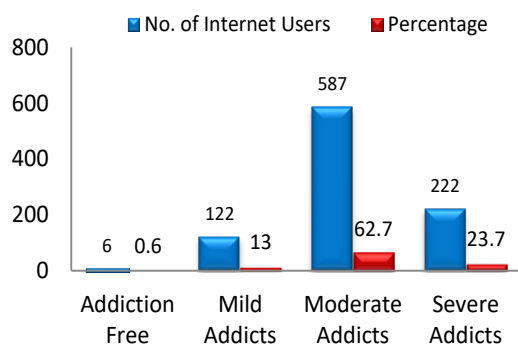


Figure 4. Check smartphones first after getting up

there was free internet available. These concerns may have contributed to this discovery. In contrast, 475 respondents (50.69%) in the contemporary study favored their own rooms above their homes and classes. The outcomes of the existing investigation showed a strong correlation between drug substance and alcohol use and the advance of IA. According to a meta-analysis of IA, those who have previously thrashed with drug substances are more likely to acquire an IA. Men also tend to use addictive substances more frequently than women.³⁰ Comparable outcomes have been witnessed in other research, where drinking and shame are accompanied by PIU or IA³¹; however, blackmailing mostly targets women's antisocial behavior as a weapon rather than men's.

A strong connection between IA and its psychological impacts was discovered by this study. 594 respondents (63.39%) acknowledged experiencing among the detrimental psychological effects like stress, anxiety, or depression. Bhandari et al³² discovered similar results in their investigation of 984 UG learners in Nepal. They found that 35.4% of the exploration illustration had IA in addition to poor sleep quality. In research of Indian teenagers who were internet addicts, a high notch for downheartedness was also noted.^{27,33,34} Unhappiness and IA are linked disorders. Because of the good emotions one experience while using the internet, such as exhilaration and happiness, during a period of time develops into a routine and eventually into an addiction. Negative emotions surface when an internet junkie isn't utilizing the web, and surfing the web is the sole way to replace

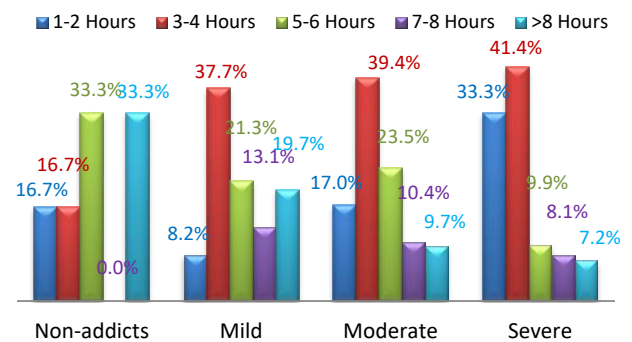


Figure 5. How many hours per day do you spend on the internet?

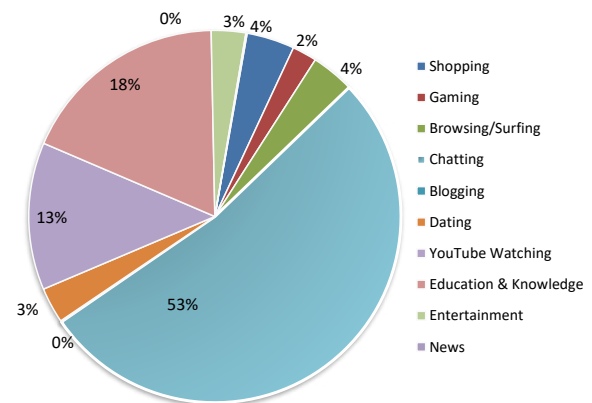


Figure 6. Purpose for usage internet by users mostly?

them with joyful feelings.³⁵

The researchers recommended parents and politicians to take attention to the findings given the significant implications mentioned above. These findings advocate for the industry to more strictly control the numeral of hours that users, mostly students and young people, can spend using social media. They have to work on the way strategies are now being established on social media safety guidelines. Families could also “want to think about when and where it’s acceptable to use social media and consider limitations on the utilization of mobile devices in bedrooms.” Only then will our future generation’s quality of life, outlook, and health prosper. The addiction rate is rising daily in Asia, especially in India, according to two large research surveys by IPSOS and Telenor group, and this is ominous evidence that needs to be addressed in the near future.

Conclusion and Recommendation

Many people have the impression that internet addiction is a very wide subject with few agreed-upon criteria and little guidance. To assess the true problem and take the necessary action to address the expanding issue, scholars ought to make an effort to present a consensus explanation of IA together with supporting data. According to the data, Internet addiction is a relatively new problem in modern society. The aim of this research was to investigate the impacts of internet addiction and its prevalence among students in HEL, with specific attention on the Raipur and Bilaspur districts in the Indian state of Chhattisgarh. The study’s sample consisted of 937 respondents, of whom 62.7% and 23.7% were determined to be potential and severely web addicted, respectively (See Figure 4).

This outcome was astonishing. When Reliance Inc., undertaking JIO Telecommunication, introduced the lowermost data plan in the world in India on 05 Sep. 2016, a significant number of users started to sign up quickly and used the service for roughly four to five hours every day (See Figure 5). A total of 63.39% of the respondents said they regularly or always checked their smartphones just after waking up. The respondents had, on average, 684 friends on social media platforms. Each user personally interacted with 12.35 people in the actual world before they were unknown to them. This conclusion was so unexpectedly anticipated. Our goals and the connection between IAT and the associating things that go along with them are therefore justified.

Additionally, the results revealed how addiction affected people differently depending on their sexual characteristics. In the circumstance of the ISIA, 35.11% of respondents acknowledged having criminal or antisocial behavior as an outcome of cheating, using drugs excessively, and viewing pornography, among other things, while 63.39% reported experiencing negative psychological impacts like melancholy, anxiety,

and stress. A total of 83.67% of respondents agreed that rumors and misleading information spread on social media were the key factors impacting society, 77.80% of respondents identified headaches and sleep disturbance as physical effects. 72.35% of the respondents believed that unwarranted web use had a destructive impact on their academic performance and distracted them from their educations. The study’s findings specify that IA has a wide spectrum of repercussions. Another objective’s existences, together with a connection between the IAT and ISIA, were also confirmed.

Recommendations

1. Comprehensive training programs must be scheduled often to increase the effectiveness of internet use across all user categories.
2. To address the issue of slow internet connections, the university community should get a high-speed internet connection with the most bandwidth possible.
3. To increase student access to the internet, the cost of browsing needs to be reduced.
4. The government must urgently enhance the nation’s current distribution of power.
5. The ability to print out study materials and other vital papers should be made accessible to users.

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Authors’ Contribution

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Competing Interests

There are no competing interests.

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