

Analysis of the Psychological and Social Factors contributing to the excessive usage of Internet among University Students

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ABSTRACT

Every field of life has been revolutionized due to the Internet, and the world has transformed into a global village. Now, any kind of knowledge and information spreads worldwide in a few seconds through the Internet. The Internet has also brought revolution in the education sector and changed the ways of teaching and learning. On the other hand, excessive internet usage has badly affected university students' physical health, psychological health, social relationships, and academic performance. This study aimed to explore the relationship between internet addiction and potential factors and to examine the relationship between internet addiction and the effects of internet addiction on university students. The research methodology used in this study was quantitative survey research design. The tool used in this research study for data collection was a personal questionnaire developed by the researcher. However, the study population consisted of all the BS students from the Faculty of Social Sciences of public sector universities in Punjab. The sample was selected through a random sampling technique, consisting of 250 students of the University of Sargodha. The study's results revealed that the factors that triggered university students to overuse the Internet included peer influence, institutional environment, anonymity feature of the Internet, escape from problems, and the flexible home environment. It was also concluded that a positive relationship existed between internet addiction and all other study variables. It was recommended that excessive Internet usage be controlled by engaging the students in alternative activities such as organizing certain exhibitions, competitions, and sports activities and encouraging regular library visits.

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INTRODUCTION

The contemporary era has been modernized and revolutionized due to the Internet. The invention of technology has triggered a profound shift in traditional lifestyles, as erstwhile mundane activities have been supplanted by digital dependencies (Chowdhury et al., 2022; Gorgich et al., 2018; Thomée, 2012). This technological proliferation has engendered a seismic transformation in interaction, vocation, entertainment, and communication modalities. Consequently, all aspects of life are being shifted to the online realm, rendering internet access an indispensable necessity and an integral facet of modern existence (John, 2015; Park, 2009). It must be added that technological innovations have ensured that all segments of life advance at the same fast pace in terms of the rate of communication as well as access to information. Moreover, global distances and location barriers have become irrelevant because this technology has effectively converted the world into a global village (Umair et al., 2021). Internet connectivity is also easily accessible in numerous public domains such as libraries, universities, restaurants, parks, and shopping malls (Moidfar & Gatabi, 2011).

Thus, dramatic change has been witnessed in the technological arena over the two-decade period (Talwar, 2019). Technology has also reconstructed our everyday lives, and we cannot imagine life without it at this point. These technologies include the curative use of Yahoo Messenger and Skype, emails, Viber and Facebook, and others that have dramatically changed how people communicate and get information. Technological development has enhanced these tools to be friendly, secure, frequently used, and personalized, building a bridge across distances and boundaries in the course of Instagram, IMO, Twitter, YouTube, and WhatsApp. Previously, internet services were scarce and costly; however, the global community currently enjoys internet services at extremely low charges. Particularly, in the middle of COVID-19, there was a significant increase in internet usage (Dong et al., 2020). This shift has affected education, especially learners, as estimates suggest that 1.575 billion learners in 191 countries were affected. As a result, online education has become the norm, with tools like Zoom, webinars, WhatsApp conference calls, and Google Meet becoming ubiquitous even in developing countries. While this increased reliance

on technology has its benefits, it is essential to maintain a balanced and moderate approach to technology use to ensure its benefits are equitably distributed.

Furthermore, the proliferation of mobile phones has rendered internet access more accessible and affordable for the masses. Indeed, android smartphones have supplanted computer technology, offering multi-functionality at a fraction of the cost. Consequently, the widespread availability of affordable Android devices has facilitated effortless internet access. However, this unprecedented level of internet penetration has led to an unbridled surge in usage, making it challenging to regulate. Prolonged intentional internet use heightens the likelihood of indulging in frivolous social media activities, thereby increasing the propensity for addiction (Chowdhury et al., 2022). As a result, people are vulnerable to spending significant time on social networking sites until they get addicted to it (Mercy & Oluwatosin, 2015).

REVIEW OF LITERATURE OF STUDY

The literature review provides an overview of internet addiction and its detrimental effects on university students, including physical health issues, poor academic performance, and psychological problems. It also points out possible causal characteristics that lead to high tendencies toward internet dependence and efficient ways to prevent negative impacts. The Internet has grown exponentially since its inception in the 1960s as a Defense Department project, developing into a global network with the advent of Internet Protocol (IP) technology. The National Science Foundation's development of NSFNet and the subsequent growth of the Internet have led to its widespread adoption, particularly during the COVID-19 pandemic (Dong et al., 2020). Online education and remote work in Pakistan have become increasingly prevalent, with internet services reaching remote areas. This digital age has witnessed an information explosion through various sources, including social media, smartphones, and online platforms. The past 200 years have seen significant technological innovations, including automobiles, radios, and computers, revolutionizing human history. However, internet technology has profoundly impacted society, transforming how we communicate, access information, and conduct our daily lives.

Internet Addiction, derived from the Latin term "addicere," meaning bound or enslaved, refers to a process where a behavior provides an escape from internal discomfort and pleasure (Wajanak, 2011). It can also signify a lack of control over a particular behavior. The Oxford Dictionary (1998) defines addiction as a state of being unable to resist a harmful and useless action. While substance and alcohol addiction has been recognized for centuries, other forms of addiction, such as television, radio, video games, and internet addiction, have emerged. Internet addiction, however, is distinct due to its open access, unlimited information, independence, privacy, control, and lack of time boundaries, making it more severe and risky (Agaj & Marku, 2015; McNicol & Thorsteinsson, 2017). Excessive internet use has become a significant area of research, with internet addiction defined as the inability to control internet use, leading to undesired outcomes. This phenomenon can hinder healthy development and growth, leading to physical, mental, social, and behavioral impairments (Li et al., 2015; Masud et al., 2016; Nduanya et al., 2018). The following are personal factors such as enjoyment, boredom, age, gender, family economic status, and self-discipline of study; social factors include peer group pressure and institutional environment (Krishnamurthy & Chetlapalli, 2015; Savci & Aysan, 2017; Fumero et al., 2018). Other contributing factors include avoidance of issues, cheap, home environment, ownership, ease of access, and anonymity. These factors must be well managed to lead a healthy life.

Pakistan is a developing country that suffers from various problems, such as unemployment, terrorism, corruption, and instability in the political situation; all of these factors negatively affect tertiary education. Amid the stated challenges, one has identified the menace of excessive internet utilization among university students. On the one hand, such network resources are good for study needs and communication; on the other hand, if a student uses the Internet too often, they completely leave behind such significant activities as leisure activities, physical training, and sports, which are important for self-development (Subrahmanyam et al., 2000; Nasreen & Mirza, 2023). This over-attachment hinders individuals' relations with human civilization and humanity and dehumans them into cyborgs. While students have to use the Internet for their academic work, using it to that extent negatively impacts the future careers of university students. There are few empirical studies conducted on internet addiction in Pakistan in terms of variables; age, gender, self-esteem, loneliness, and academic performance have been the main focus of studies (Lebni et al., 2020; Javaeed et al., 2020; Moldez et al., 2023). Consequently, this work examines internet addiction among university students in Uganda, examines why students use the Internet extensively, and recommends preventive measures to reduce the negative impacts of internet addiction.

THEORETICAL FRAMEWORK OF THE STUDY

The theoretical framework of the current research study is grounded in two theories. The first theory is the Uses and Gratification theory. This theory was introduced in 1940 to describe the mass media's purpose and the behavior of its users. The major assumptions of this theory revolve around the idea that media users are alert and

active regarding their choice of media content, and they make careful and deliberate decisions for selecting the media for usage among various alternatives by considering their particular requirements. In short, the media users select a particular media to achieve their goals and needs. It emphasizes that individuals prioritize using media that fulfils their purposes and needs. Moreover, the continuity of that media usage depends upon the gratifications they obtain from it. One of the major features of the Internet is that its users may hide their identity while using the Internet. So, the anonymity variable is well supported by the use and gratification theory as its users obtained the required gratification they were keen to get. The other theory is the Social Learning Theory. It was proposed by the psychologist Albert Bandura. This theory advocates that peers, media, family members, and various other social sources play a vital role in developing the behaviors through modeling from them. It is a fact that youngsters spend more time with their peers than their parents. As a result, this higher exposure might motivate the individuals to imitate the behaviors of their peers who have been engaged in the overuse of the Internet and have been rewarded positively from the games and Internet. This theory provides the theoretical foundation for the two significant variables of this research study: peer influence and institutional environment.

RESEARCH METHODOLOGY

The research methodology adopted in this study was a quantitative approach in nature, and a survey research design was used. The population for the current study was comprised of all the students of the BS program of the Faculty of Social Sciences, which were enrolled in the general public sector universities of Punjab. The study sample was selected through a random sampling technique, and it consisted of 250 students from the University of Sargodha.

DATA ANALYSIS

Pearson Correlation

The Pearson correlation was applied through SPSS (version 24) to measure the relationship among the major variables of the study, such as internet addiction, social factors, personal factors, contributing factors, and the effects of internet addiction on university students. The correlation matrix regarding internet addiction and other study variables related to the Internet are given as under.

Table 1: Correlation Matrix of internet addiction, potential factors and effects of Internet

Variables	N	Mean	SD	1	2	3	4	5
Internet Addiction	250	88.36	15.491	1				
Social Factors	250	46.79	8.172	.462***	1			
Personal Factors	250	37.07	7.527	.484***	.481***	1		
Contributing Factors	250	97.27	17.057	.495***	.513***	.573***	1	
Effects of Internet Addiction	250	81.35	14.932	.527***	.353***	.392***	.467***	1

***p ≤ 0.001

Table 1 reflected that the Pearson correlation was applied to study the relationship among internet addiction, potential factors, and the effects of internet addiction on university students. Additionally, it explained the nature of the relationship between the variables, i.e., whether they were positive or negative. It is indicated from the table mentioned above that internet addiction and social factors had a positive good correlation with the value $r = .462$, with $p = .000$. It showed that a good relationship existed between both variables. Similarly, the results also reflected that internet addiction and personal factors had a good positive correlation with the value $r = .484$ with $p = .000$. It indicated that a good relationship existed between both variables. Furthermore, the results also reported that internet addiction and contributing factors contained a positive good correlation with the value $r = .495$, with $P = .000$. Hence, it was concluded that a good relationship existed between internet addiction and contributing factors. Moreover, the results also showed that internet addiction and the effects of internet addiction on university students had a positive good correlation with the value $r = .527$, with $p = .000$. It reflected that both the variables had a good relationship between them.

Table 2: Correlations Matrix of internet Addiction and sub-variables of social factors

Variables	N	Mean	SD	1	2	3
1. Internet Addiction	250	88.36	15.491	1		
2. Peer Influence	250	23.59	4.943	.452***	1	
3. Institutional Influence	250	23.20	4.946	.311***	.366***	1

***p ≤ 0.001

Table 2 shows that the Pearson correlation was applied to explore the relationship between internet addiction and the sub-variables of social factors. The results reflected that internet addiction and the sub-variable of social factors, i.e., peer influence, have a positive good correlation with the value $r = .452$, with P value .000. It was revealed that a good relationship existed between both the variables. Likewise, the results also showed the correlation between internet addiction and the sub-variable of social factors, i.e., institutional environment. It was found that internet

addiction and the sub-variable institutional environment had a positive average relationship with the value $r = .3011$, with $p = .000$. Hence, it was concluded that an average positive correlation existed between both variables.

Table 3: Correlations Matrix of Internet Addiction and sub variable of personal factors

Variables	N	Mean	SD	1	2
Internet Addiction	250	88.36	15.491	1	
Enjoyment Purpose	250	37.07	7.527	.484***	1

*** $p \leq 0.001$

Table 3 reflected that the Pearson correlation was applied to determine the relationship between internet addiction and the sub-variable of personal factors, i.e., enjoyment purpose. The results reflected that the internet addiction and enjoyment purpose had a positive correlation with the value $r = .484$, with $p = .000$. Hence, it was concluded that both the variables, i.e., the internet addiction and the sub-variable enjoyment purpose, had a good positive relationship between them.

Table 4: Correlation Matrix of Internet Addiction and the sub-variables of other contributing factors

Variables	N	Mean	SD	1	2	3	4	5
Internet Addiction	250	88.36	15.491	1				
Accessibility	250	28.36	5.970	.342***	1			
Escape problems	250	21.55	5.893	.482***	.393***	1		
Anonymity	250	18.01	4.973	.360***	.242***	.405***	1	
Home Environment	250	29.35	6.593	.270***	.474***	.372***	.315***	1

*** $p \leq 0.001$

Table 4 indicated that the Pearson correlation was applied to determine the relationship between internet addiction and the sub-variables of contributing factors. The results reflected that internet addiction and the sub-variable of contributing factors, i.e., accessibility, had a positive average correlation with the value $r = .342$, with $p = .000$. Thus, it was concluded that a good relationship existed between both the variables such as the internet addiction and the sub variable accessibility. The results also reflected the nature of the correlation between internet addiction and the sub-variable of contributing factors, i.e., escape from problems. It was found that internet addiction and the sub-variable escape from problems positively correlated with the value $r = .482$, with $p = .000$. It showed that a good relationship existed between both variables.

However, the results also showed the correlation between internet addiction and the sub-variable of contributing factors, i.e., anonymity. It was indicated that internet addiction and the sub-variable anonymity positively correlated with the value $r = .360$, with $p = .000$. It showed that the average relationship existed between both variables. Likewise, the results also reflected the correlation between internet addiction and the sub-variable of contributing factors, i.e., home environment. It was found from the results that internet addiction and the sub-variable home environment had a positive average correlation with the value $r = .270$, with $p = .000$. It showed that an average positive relationship existed between both variables.

Table 5: Correlation Matrix of Internet Addiction and Effects of Internet Addiction

Variables	N	Mean	SD	1	2	3	4	5
Internet Addiction	250	88.36	15.491	1				
AcademicPerformance	250	26.53	7.297	.437***	1			
Psychologicalproblems	250	33.03	6.137	.496***	.378***	1		
Health problems	250	25.94	6.724	.344***	.469***	.391***	1	

*** $p \leq 0.001$

Table 5 shows that the Pearson correlation was applied to measure the relationship between internet addiction and the sub-variables of the effects of internet addiction on university students. The results indicated that internet addiction and the effect of internet addiction on the academic performance of university students had a positive good correlation with the value $r = .437$, with $p = .000$. Hence, it was concluded that a good and positive correlation existed between both variables. Furthermore, the results also reflected the correlation that existed between internet addiction and the psychological problems faced by university students due to internet addiction. It was also revealed from the results that internet addiction and psychological problems had a positive good correlation with the value $r = .496$ with $p = .000$. It showed that a good relationship existed between both variables. However, the results also reflected the correlation between internet addiction and the health problems faced by university students due to internet addiction. Therefore, it was revealed from the results that internet addiction and health problems had a positive average correlation with the value $r = .344$, with $p = .000$. Hence, it was concluded that an average positive relationship existed between both variables.

DISCUSSION

This study aimed to investigate the phenomenon of Internet addiction among university students, and it also explored the potential factors that lead university students toward the overuse of the Internet. These potential factors included the social factors, which comprised of the sub-variables peer influence and institutional

environment; the personal factors, which comprised the sub-variables enjoyment; and the other contributing factors, which comprised the sub-variables anonymity, escape from problems, accessibility, and home environment. Moreover, it also examined the relationship between internet addiction and academic performance, the psychological health, and the physical health of university students.

The study's major findings were very significant in that they provided insight into the phenomenon of internet addiction, its potential factors, and the effects of this phenomenon on university students. It was found that the variable internet addiction had a positive good relationship with other study variables such as the social factors, the personal factors, the other contributing factors, and the effects of internet addiction on university students. The results also reported that students' academic performance had been adversely affected due to Internet overuse. These results were consistent with a study conducted by Zainudin et al. (2013) on students from different universities in Malaysia, which found that internet addiction had adverse impacts on the academic performance of university students. On the contrary, the opposite results were reported by Sachitra (2015) in his research study regarding the relationship between the academic performance of university students and internet addiction. The results showed that a statistically significant negative relationship existed between academic performance and internet addiction. Internet usage motivated university students to become part of chat rooms and keep on using the Internet. Accordingly, such university students paid less attention in class, which caused their academic performance to decline (Leung & Lee, 2012; Hasan et al., 2024a; Zahid et al., 2024). However, another research study reflected that students' academic success depended on how they exploit the Internet, i.e., using it for non-educational or educational purposes (Li et al., 2015). Obviously, the academic performance of students who use the Internet mainly for educational purposes will not be affected. At the same time, the vice versa would occur if the students utilize the Internet for non-educational activities. Yeap et al. (2016) reported in their study that internet addiction adversely affects students' academic performance. On the contrary, Hasan et al. (2023) concluded that the other factors that might contribute to university students' academic success are their interest in studies and their right decision-making. Hence, if university students get addicted to the Internet, their academic performance will decrease, their absenteeism will increase, they will skip exams, and their study habits will decline.

It was also found that university students were facing certain health issues due to internet usage (Hasan et al., 2024b). The major health issues that existed among students due to the overuse of the Internet included eyesight issues, poor physical fitness, irregular sleeping time, memory loss, reduced attention span, obesity, headache, and backbone issues. The results also indicated that the academic performance of university students had been adversely affected due to excessive internet usage. Similarly, a research study conducted by Alam et al. (2014) found that certain physical health problems might result from excessive internet usage by university students, such as headaches and sleep pattern disruption. Some other physical health issues include eating in front of the computer, going to bed late, and skipping meals, which students might face due to Internet overuse. However, Dinesh & Chalawadi (2016) reported in their research study that needless and excessive internet usage might cause burning, numbness, wrists, backaches, pain in shoulders, dry eyes, hands, and elbows, eating irregularities, sleep disturbance and severe headaches.

The results also revealed that the most valuable techniques that could be effective for minimizing excessive internet usage among university students might include proper monitoring of internet use by the students, engaging students in alternative activities, developing mutual trust, encouraging self-writing among students, and motivating them to visit the library regularly. However, the related preventive strategies for minimizing Internet addiction were recommended by Wanajak (2011), who indicated that it is the responsibility of the government to provide and ensure a standardized and safe use of the Internet both at the community and university levels. Moreover, proper monitoring and supervision should be made by the parents, friends, and peers to keep students on the right track. Conversely, Loh et al. (2016) concluded that counselors might significantly minimize excessive internet use among university students. On the other hand, certain prevention strategies were also proposed by Goswami & Singh (2016) in their research study for decreasing the overuse of the Internet by university students, such as using reminder cards, using external stoppers, practicing the opposite, setting goals to develop adequate internet use schedule and use the external stoppers.

Internet addiction also had adverse outcomes on campus life and might lead to academic failure (Hasan et al., 2024c). Consequently, students with lower academic performance would drop out of colleges or universities (Li et al., 2015). In a research study conducted by Lebni et al. (2020) on medical students at the Army Medical College, it was found that if the students spent longer on the Internet, they would get lower marks in the professional examination. Likewise, another research study conducted on university students in South Korea found that the academic performance of students who used the Internet mainly for educational purposes was better. On the contrary, university students' exploitation of the Internet for recreational and social purposes leads to lower academic performance. However, Leung & Lee (2012) conducted a research study to examine the relationship between Internet addiction and academic performance. It was concluded that adolescents' misuse of the Internet

leads to lower social skills, and moreover, those students also overlook their classes. Similarly, it was reported that internet addiction adversely affected the academic performance of students (Zainudin et al., 2013).

CONCLUSIONS

Based on the results and findings of the study, the following conclusions were drawn.

It was also concluded that most university students' major purpose of using the Internet was to gain entertainment, communicate, and join various social media groups. The prominent attraction for students using the Internet is to spend maximum time viewing their favorite content. Correspondingly, their precious time gets wasted in purposeless activities while doing so.

It was concluded that internet use had become an unavoidable element of routine life, and it is equally beneficial for everyone. Moreover, multiple tasks could be performed through it, including online education, online banking, online shopping, online billing, etc. Internet usage has become common among individuals of all ages. Likewise, university students frequently use and manipulate the Internet for their studies.

It was also concluded that the trend of E-teaching and E-learning had increased. Moreover, due to the penetration of the Internet into every aspect of life, the teaching-learning process has also been transformed. At this time, the printed notes and books are not frequently used. Similarly, students and teachers do not visit the library regularly, which is necessary for effective learning and teaching. Moreover, the reliance on soft, readymade materials and technology has also increased.

It was also found that university students were facing certain health issues due to internet usage. The key health issues that exist among students due to the overuse of the Internet are eyesight issues, poor physical fitness, irregular sleeping time, memory loss, reduced attention span, obesity, headache, and backbone pain. When one keeps oneself engaged in using certain internet devices for hours and hours on a continuous basis, one's health is affected.

The results also revealed that due to excessive internet usage, the academic performance of university students was adversely affected. Further, it was found that the students responsible were not influenced much by the Internet. University students who were already weak in studies were greatly affected by internet use in terms of their academic performance. When those students became addicted to the Internet, they got worse results, and the situation worsened. Thus, we could say that the mediocre and slow learners were badly disturbed.

It was also concluded that a good positive relationship existed between the variable internet addiction and the potential factors leading university students toward the phenomenon of internet addiction. It inferred that the potential factors such as social, personal, and other contributing factors play a vital role in motivating an individual towards the overuse of the Internet. Likewise, it was also concluded that internet addiction and the effects of internet addiction had a positive correlation with each other. It revealed that there was a positive relationship between internet addiction and the effects of internet addiction. Hence, university students who use the Internet excessively would face health and psychological problems, and their academic performance would decline.

RECOMMENDATIONS

On the basis of the findings of the current research study, the following recommendations were made.

The government should frame such rules and policies that support controlling excessive Internet use among students in educational institutions. However, the government has introduced a security system and password system for internet usage and imposed a ban on forbidden websites on the premises of educational institutions. However, the need of the hour is for all these policies to be effectively implemented. Moreover, the government should also ban low-cost late-night Internet packages to minimize Internet overuse, especially among youth.

It is also recommended that the Higher Education Department launch some workshops and seminars in educational institutions to create awareness among university students and teachers regarding internet addiction and its adverse consequences. Moreover, electronic, social, and print media should be used to sensitize university students about the side effects of the misuse and excessive Internet use.

It is also suggested that teachers and parents should monitor students strictly. Likewise, limited access to the Internet should be provided to students at home and institutions. In addition, Internet overuse could be minimized by engaging the students in alternative activities from the university and family members. Encourage students to participate in healthy alternative activities such as sports and physical activities, arrange competitions, organize social gatherings, encourage hobbies, and engage in social work activities to reduce reliance on the Internet for entertainment or socializing.

Universities should also promote digital literacy to control excessive Internet use among university students. Likewise, universities should implement strategies to raise awareness about healthy internet usage and offer counseling services for students struggling with addiction or mental health issues. Additionally, digital detox programs and time management techniques should be implemented, and students should be encouraged to practice self-discipline, set limits on their internet use, and develop healthier habits to prioritize academic responsibilities and maintain a healthy work-life balance.

It is also recommended that further research studies be conducted with larger sample sizes and different populations in Pakistan. In this way, the new dimensions regarding the factors, effects, and intervention strategies for minimizing the overuse of the Internet could be further explored.

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