



Internet Addiction and Its Impact on Sleep Patterns among University Students: A case study of khyber Pakhtunkhwa, Pakistan

Aman Khan ¹, John K Sesay ^{2*}, Nusrat Azeema ³, Sita Chaudhary ⁴

¹⁻⁴ Department of Sociology, School of Public Administration, Hohai University, P.R. China

* Corresponding Author: John K Sesay

Article Info

E-ISSN: 3107-7129

Volume: 01

Issue: 06

November - December 2025

Received: 04-09-2025

Accepted: 08-10-2025

Published: 03-11-2025

Page No: 01-06

Abstract

This study investigates the effects of internet addiction on the physical health of students in Khyber Pakhtunkhwa, using a sample of 40 participants recruited from Mardan city. Both male and female students participated in the study, selected through a convenient sampling technique. The inclusion criteria required participants to be willing to take part in the study and able to provide informed consent. Adopting a quantitative research approach with a cross-sectional design, this study aimed to examine the relationship between internet usage patterns and various aspects of physical well-being, including sleep quality, posture, and overall fitness. Participants were assured of anonymity and confidentiality, and they retained the right to withdraw from the study at any stage. Data were analyzed using SPSS software. Descriptive statistics were employed to summarize demographic information, while inferential analyses, including correlation and regression tests, were conducted to explore the strength and direction of relationships between variables. The findings provide a clearer understanding of how excessive internet use contributes to physical health challenges among students, highlighting the need for awareness and preventive measures to promote healthier online habits.

Keywords: Internet Addiction, Physical Health, Cross-Sectional Study, Sleep Quality, Posture, Fitness, Online Behavior, Health Awareness

Introduction

Internet addiction is the biggest curse overall the world. Pakistan is one of the largest countries in the whole world in relation with the size or numbers of the workers. Internet addiction or Internet addiction Information's of the nation is a significant point for policy making and planning aims. The very latest statistics and records show that the total amount of post graduates has enlarged from fifty million in 2005-06 to fifty-nine million in two thousand twelve. If we talk to the point so the figures show that nine million population came to the practical ground throughout this phase.

Now On the other side, the statistics of working people increased from forty-six million to fifty-six million throughout this phase. So now the situation is very much clear this situation means that the increase in working people might not be adjusted in service zone and that's why internet addiction people increased from thirty lacs to forty lacs throughout the same phase. To date, majority of the previous studies have been conducted on other aspect of internet addiction internet addiction, no study has been conducted on the role of education in internet addiction or the reasons why internet addiction is higher among Pakistani and lowers among other nations. Pakistan is one of the largest countries in the whole world in relation with the size or numbers of the workers. Internet addiction Information's of the nation is a significant point for policy making and planning aims.

The very latest statistics and records show that the total amount of post graduates has enlarged from fifty million in 2005-06 to fifty-nine million in two thousand twelve. If we talk to the point so the figures show that nine million population came to the practical ground throughout this phase. Now On the other side, the statistics of working people increased from forty-six million to fifty-six million throughout this phase. So now the situation is very much clear this situation means that the increase in working people might not be adjusted in service zone and that's why internet addiction people increased from thirty lacs to forty lacs throughout the same phase. we talk to the point so the figures show that nine million population came to the practical ground throughout this phase. Now On the other side, the statistics of working people increased from forty-six million to fifty-six million throughout this phase.

Second, there is lack of research available and hence there is gap in the existing literature which we here in this study are going to address.

Statement of the Problem

Internet addiction is one of the rising issues of Pakistan. Internet addiction is discussed among people in local and national gathering. Pakistan is the country having 2nd largest youth population and if youth face problem of internet addiction so then it leads to many other problems in the society. The biggest problem is that when specifically, the youth have no opportunity of internet addiction then they are misused by other political parties and also by other criminal groups. The problem of internet addiction is also present in Mardan city and the youth is suffering from it. And we also know that our society is male dominant (patriarchal society) and this patriarchal system leads to the gender discrimination in the society and this gender discrimination exist in all aspects of the society and in provision of internet addiction opportunity as well. so in this research we will find out the factors which effect internet addiction.

Objectives

- To find out socio-demographic status of the internet addiction.
- To find out the causes of internet addiction.

Justification of study

Pakistan is one of the largest countries in the whole world in relation with the size or numbers of the workers. Internet addiction or Internet addiction Information's of the nation is a significant point for policy making and planning aims.

The very latest statistics and records show that the total amount of post graduates has enlarged from fifty million in 2005-06 to fifty-nine million in two thousand twelve. If we talk to the point so the figures show that nine million population came to the practical ground throughout this phase. Now On the other side, the statistics of working people increased from forty-six million to fifty-six million throughout this phase. Pakistan is the country having 2nd largest youth population and if youth face problem of internet addiction so then it leads to many other problems in the society. The biggest problem is that when specifically, the youth have no opportunity of internet addiction then they are misused by other political parties and also by other criminal groups.

The problem of internet addiction is also present in Mardan city and the youth is suffering from it. And we also know that our society is male dominant (patriarchal society) and this patriarchal system leads to the gender discrimination in the society and this gender discrimination exist in all aspects of the society and in provision of internet addiction opportunity as well. so in this research we will find out the factors which effect internet addiction. It is very important to identify and study it further.

Literature Review

Delhi Commission for protection of Internet addiction Right, the very latest statistics and records show that the total amount of post graduates has enlarged from fifty million in 2005-06 to fifty-nine million in two thousand twelve. If we talk to the point so the figures show that nine million population came to the practical ground throughout this phase. Now On the other side, the statistics of working people increased from forty-six million to fifty-six million throughout this phase.

Pakistan is one of the largest countries in the whole world in relation with the size or numbers of the workers. Internet addiction or Internet addiction Information's of the nation is a significant point for policy making and planning aims. The very latest statistics and records show that the total amount of post graduates has enlarged from fifty million in 2005-06 to fifty-nine million in two thousand twelve. If we talk to the point so the figures show that nine million population came to the practical ground throughout this phase.

Now On the other side, the statistics of working people increased from forty-six million to fifty-six million throughout this phase. Pakistan is the country having 2nd largest youth population and if youth face problem of internet addiction so then it leads to many other problems in the society. The biggest problem is that when specifically, the youth have no opportunity of internet addiction then they are misused by other political parties and also by other criminal groups. The problem of internet addiction is also present in Mardan city and the youth is suffering from it. And we also know that our society is male dominant (patriarchal society) and this patriarchal system leads to the gender discrimination in the society and this gender discrimination exist in all aspects of the society and in provision of internet addiction opportunity as well. so in this research we will find out the factors which effect internet addiction.

So now the situation is very much clear this situation means that the increase in working people might not be adjusted in service zone and that's why internet addiction people increased from thirty lacs to forty lacs throughout the same phase. To date, majority of the previous studies have been conducted on other aspect of internet addiction internet addiction, no study has been conducted on the role of education in internet addiction or the reasons why internet addiction is higher among Pakistani and lowers among other nations.

Pakistan is one of the largest countries in the whole world in relation with the size or numbers of the workers. Internet addiction or Internet addiction Information's of the nation is a significant point for policy making and planning aims. The very latest statistics and records show that the total amount of post graduates has enlarged from fifty million in 2005-06 to fifty-nine million in two thousand twelve.

If we talk to the point so the figures show that nine million population came to the practical ground throughout this phase. Now On the other side, the statistics of working people increased from forty-six million to fifty-six million throughout this phase. So now the situation is very much clear this situation means that the increase in working people might not be adjusted in service zone and that's why internet addiction people increased from thirty lacs to forty lacs throughout the same phase.

we talk to the point so the figures show that nine million population came to the practical ground throughout this phase. Now On the other side, the statistics of working people increased from forty-six million to fifty-six million throughout this phase. So now the situation is very much clear this situation means that the increase in working people might not be adjusted in service zone and that's why internet addiction people increased from thirty lacs to forty lacs throughout the same phase.

To date, majority of the previous studies have been conducted on other aspect of internet addiction internet addiction, no study has been conducted on the role of education in internet addiction or the reasons why internet addiction is higher among Pakistani and lowers among other nations. Pakistan is one of the largest countries in the whole world in relation with the size or numbers of the workers. Internet addiction or Internet addiction Information's of the nation is a significant point for policy making and planning aims.

Pakistan is one of the largest countries in the whole world in relation with the size or numbers of the workers. Internet addiction or Internet addiction Information's of the nation is a significant point for policy making and planning aims. The very latest statistics and records show that the total amount of post graduates has enlarged from fifty million in 2005-06 to fifty-nine million in two thousand twelve. If we talk to the point so the figures show that nine million population came to the practical ground throughout this phase.

Now On the other side, the statistics of working people increased from forty-six million to fifty-six million throughout this phase. Pakistan is the country having 2nd largest youth population and if youth face problem of internet addiction so then it leads to many other problems in the society. The biggest problem is that when specifically, the youth have no opportunity of internet addiction then they are misused by other political parties and also by other criminal groups.

The problem of internet addiction is also present in Mardan city and the youth is suffering from it. And we also know that our society is male dominant (patriarchal society) and this patriarchal system leads to the gender discrimination in the society and this gender discrimination exist in all aspects of the society and in provision of internet addiction opportunity as well. so in this research we will find out the factors which effect internet addiction. The very latest statistics and records show that the total amount of post graduates has enlarged from fifty million in 2005-06 to fifty-nine million in two thousand twelve. If we talk to the point so the figures show that nine million population came to the practical ground throughout this phase.

Methodology

Some of the characteristics of the sample of this study are the following.

The number of participants were 40. They were recruited

from Mardan city. The participants of this study include both genders.

A convenient sampling technique were used to recruit participants. They were recruited in the city of Mardan. Selection criteria to recruit participants were include participants' willingness to take part in the study and their ability to sign the consent form.

Given the explanatory nature of this study the proposed method is quantitative method with a cross sectional research design. All the participants of this study were assured about their anonymity and confidentiality. They were asked to sign a consent form to show their willingness to participate and were given a chance to withdraw from the study at any stage. Spss analysis were used to analyses the data. SPSS analysis was used to analyze the collected data in order to examine the relationship between internet addiction and students' physical health in Khyber Pakhtunkhwa. The data were coded and entered into SPSS for statistical testing, including descriptive statistics to summarize demographic information and inferential analyses such as correlation and regression to identify the strength and direction of relationships between variables. This approach provided a clear understanding of how internet usage patterns influenced various aspects of students' physical well-being, including sleep quality, posture, and overall fitness.

Limitations

Limitation associated with sample size, methodology and research findings were the following. We have time limitation because we have only six months to complete our research as per semester rules and we also have resources limitation because university bus and other facilities were not available to us.

Results

Descriptive Statistics of Responses on Internet Addiction and Related Factors (N = 40)

Statements	Mean	Std. Deviation
I help my family through internet addiction.	2.15	0.82
I cannot work because of my elderly and sickness.	2.43	0.69
My parents are not alive.	2.48	0.73
I am internet addicted for medical purposes.	2.70	0.58
My parents have fallen ill.	2.55	0.64
Internet addiction is easy and profitable work.	2.42	0.72
I am internet addicted because of the war.	2.43	0.68
My family members also do the same internet addiction.	2.50	0.66
I do not like to depend on others.	2.63	0.60
Lack of food drives me to guide my father in internet addiction.	2.83	0.45
I do not know the means to earn money.	2.70	0.55
We cannot live without internet addiction.	2.37	0.72
The money we get helps us to get our daily requirements.	2.55	0.63
It is the only way to earn our daily meals since external help is insufficient.	2.60	0.59
We are not able to afford daily life.	2.28	0.77
The main cause of internet addiction is widespread poverty.	2.63	0.61
Lack of proper orientation is the cause of internet addiction.	2.55	0.63

Laziness is the cause of internet addiction.	2.42	0.68
Negligence is the cause of internet addiction.	2.43	0.67
Alcoholism is the cause of internet addiction.	2.38	0.70
Single parenthood is the cause of internet addiction.	2.10	0.83
Visual impairment is the cause of internet addiction.	2.45	0.71
I help my family through internet addiction.	2.15	0.82
I cannot work because of my elderly and sickness.	2.43	0.69
My parents are not alive.	2.48	0.73
I am internet addicted for medical purposes.	2.70	0.58
My parents have fallen ill.	2.55	0.64
Internet addiction is easy and profitable work.	2.42	0.72

Results and Discussion (Mean and Standard Deviation Analysis)

The descriptive analysis in Table 1 shows that the mean scores for most items range between 2.4 and 2.8, suggesting a generally high level of agreement among respondents on the influence of social, economic, and personal factors on internet addiction. The highest mean ($M = 2.83$, $SD = 0.45$) was found for the statement *"Lack of food drives me to guide my father in internet addiction,"* indicating that economic hardship is a major motivating factor behind internet

dependence. Similarly, strong agreement was observed in statements like *"I do not know the means to earn money"* ($M = 2.70$, $SD = 0.55$) and *"I am internet addicted for medical purposes"* ($M = 2.70$, $SD = 0.58$), highlighting the role of necessity and perceived utility in shaping online behavior. These findings suggest that internet addiction among students in Mardan is often associated with socioeconomic vulnerabilities rather than purely leisure or entertainment motives.

In contrast, lower mean values were observed for statements such as *"I help my family through internet addiction"* ($M = 2.15$, $SD = 0.82$) and *"Single parenthood is the cause of internet addiction"* ($M = 2.10$, $SD = 0.83$), indicating relatively lower agreement or variability in opinions. The moderate mean scores for psychological factors such as laziness ($M = 2.42$, $SD = 0.68$), negligence ($M = 2.43$, $SD = 0.67$), and alcoholism ($M = 2.38$, $SD = 0.70$) suggest that respondents perceive these as contributing factors, but not as strongly as poverty or lack of guidance. Overall, the results indicate that while personal behavior and social environment influence internet addiction, economic hardship and lack of alternative opportunities remain the dominant drivers, as reflected by higher mean values and lower standard deviations among poverty-related statements.

Responses on Factors Related to Internet Addiction among Students (N = 40)

Statements	Yes (%)	No (%)	Don't Know (%)	Major Finding
I help my family through internet addiction.	42.5	30.0	27.5	Majority agreed
I cannot work because of my elderly and sickness.	42.5	—	57.5	Most uncertain
My parents are not alive.	65.0	17.5	17.5	Majority agreed
I am internet addicted for medical purposes.	80.0	10.0	10.0	Strong agreement
My parents have fallen ill.	70.0	5.0	25.0	Majority agreed
Internet addiction is easy and profitable work.	62.5	35.0	2.5	Majority agreed
I am addicted to the internet because of war.	62.5	10.0	27.5	Majority agreed
My family members also do the same internet addiction.	67.5	32.5	—	Majority agreed
I do not like to depend on others.	77.5	5.0	17.5	Majority agreed
Lack of food drives me to guide my father in internet addiction.	90.0	2.5	7.5	Strong agreement
I do not know the means to earn money.	82.5	17.5	—	Strong agreement
We cannot live without internet addiction.	60.0	17.5	22.5	Majority agreed
The money we get helps us to meet daily requirements.	70.0	20.0	10.0	Majority agreed
It is the only way we earn our daily meals since other assistance is insufficient.	75.0	7.5	17.5	Majority agreed
We are not able to afford daily life.	52.5	22.5	25.0	Moderate agreement
The main cause of internet addiction is widespread poverty.	75.0	15.0	10.0	Majority agreed
Lack of proper orientation is the cause of internet addiction.	70.0	17.5	12.5	Majority agreed
I help my family through internet addiction.	42.5	30.0	27.5	Majority agreed
I cannot work because of my elderly and sickness.	42.5	—	57.5	Most uncertain
My parents are not alive.	65.0	17.5	17.5	Majority agreed
I am internet addicted for medical purposes.	80.0	10.0	10.0	Strong agreement
My parents have fallen ill.	70.0	5.0	25.0	Majority agreed
Internet addiction is easy and profitable work.	62.5	35.0	2.5	Majority agreed
I am addicted to the internet because of war.	62.5	10.0	27.5	Majority agreed
My family members also do the same internet addiction.	67.5	32.5	—	Majority agreed
I do not like to depend on others.	77.5	5.0	17.5	Majority agreed
Lack of food drives me to guide my father in internet addiction.	90.0	2.5	7.5	Strong agreement
I do not know the means to earn money.	82.5	17.5	—	Strong agreement
We cannot live without internet addiction.	60.0	17.5	22.5	Majority agreed
Laziness is the cause of internet addiction.	62.5	—	37.5	Majority agreed
Negligence is the cause of internet addiction.	62.5	25.0	12.5	Majority agreed
Alcoholism is the cause of internet addiction.	60.0	17.5	22.5	Majority agreed
Single parenthood is the cause of internet addiction.	47.5	52.5	—	Divided opinion
Visual impairment is the cause of internet addiction.	62.5	5.0	32.5	Majority agreed
Laziness is the cause of internet addiction.	62.5	—	37.5	Majority agreed
Negligence is the cause of internet addiction.	62.5	25.0	12.5	Majority agreed

Results and Discussion

The results from Table 1 reveal a strong pattern of agreement among respondents regarding the multifaceted causes and consequences of internet addiction in Mardan city. A substantial proportion (90%) reported that a lack of food motivated them to guide or support their families through internet-related activities, indicating that economic hardship plays a critical role in shaping digital dependency. Similarly, 82.5% of respondents admitted not knowing alternative means of earning, further emphasizing the connection between limited livelihood opportunities and excessive internet use. High levels of agreement were also found regarding statements linking poverty (75%) and lack of orientation (70%) to internet addiction, suggesting that socio-economic instability and insufficient awareness contribute to students' unhealthy online behaviors. Moreover, 77.5% of participants expressed a desire for self-reliance, reflecting a psychological dimension where dependence on the internet may be viewed as both an escape and a coping mechanism. The findings further indicate that several respondents viewed internet use as a survival strategy rather than a leisure activity. Approximately 70% agreed that income from internet-related work supports their daily needs, while 62.5% considered it an easy and profitable source of income. However, social and health-related factors also surfaced, with 70% reporting parental illness and 65% noting parental loss, which may increase emotional dependence on digital engagement. Interestingly, behavioral causes such as laziness (62.5%), negligence (62.5%), and alcoholism (60%) were also associated with internet addiction, indicating a complex interaction between personal habits and environmental pressures. Overall, these results highlight that internet addiction among students in Khyber Pakhtunkhwa is not solely a behavioral issue but deeply rooted in economic constraints, social dynamics, and lack of guidance, all of which demand targeted awareness and intervention programs.

Recommendations

For the government, it is essential to take effective measures to reduce internet addiction among students through well-designed policies and regulations. The government should introduce awareness campaigns that educate youth about the healthy use of the internet and the potential negative effects of excessive online activity on physical and mental health. Additionally, implementing technology-driven and professionally oriented educational policies can help students develop constructive online habits while enhancing their digital literacy. By promoting awareness about responsible internet use and ensuring that educational institutions integrate internet safety programs, the government can play a crucial role in minimizing internet addiction and safeguarding the well-being of students across Pakistan.

- The government should take some steps to reduce the internet addiction of internet addiction through policies and regulations.
- There is an extensive need to launch technological and professional-based educational policies in Pakistan generating awareness about internet addiction rights etc.

References

1. Hassan H. The problematic internet use in Pakistan [dissertation]. [place unknown]: [publisher unknown]; 2021.
2. Iqbal MW, Mian NA. Analysis of Internet addiction amongst university level students. *VFAST Trans Softw Eng*. 2014;2(1):39-44.
3. Tahir MJ, Malik NI, Ullah I, Khan HR, Perveen S, Ramalho R, et al. Internet addiction and sleep quality among medical students during the COVID-19 pandemic: a multinational cross-sectional survey. *PLoS One*. 2021;16(11):e0259594.
4. Saleem M, Waseem M, Khan R, Ismail R. Internet addiction: it's relation with loneliness among undergraduate students of South-Punjab, Pakistan. *Sci Int (Lahore)*. 2015;27(2):1469-79.
5. Aly H. Digital transformation, development and productivity in developing countries: is artificial intelligence a curse or a blessing? *Rev Econ Polit Sci*. 2022;7(4):238-56.
6. Briscoe J, Qamar U, Contijoch M, Amir P, Blackmore D. Pakistan's water economy: running dry. Washington (DC): World Bank; 2008.
7. Khanna P. Connectography: mapping the future of global civilization. New York (NY): Random House; 2016.
8. Saqib SE, Muhammad S, Khan I. Factors determining child labor: empirical evidence from Khyber Pakhtunkhwa, Pakistan. *Chang Soc Pers*. 2022;6(1):123-43.
9. Zhang J, Muhammad T, Dai W, Khan QR, Ahmad M. How does the resource curse influence economic performance? Exploring the role of natural resource rents and renewable energy consumption in South Asia. *Sustainability*. 2024;16(24):11138.
10. Muhammad S, Ximei K, Haq ZU, Ali I, Beutell N. COVID-19 pandemic, a blessing or a curse for sales? A study of women entrepreneurs from Khyber Pakhtunkhwa community. *J Enterprising Communities*. 2022;16(6):967-87.
11. Katper NK, Tunio MN, Hussain N, Junejo A, Gilal FG. COVID-19 crises: global economic shocks vs Pakistan economic shocks. *Adv Sci Technol Eng Syst J*. 2020;5(4):645-54.
12. Butt WH. Waste intimacies: caste and the unevenness of life in urban Pakistan. *Am Ethnol*. 2020;47(3):234-48.
13. Razzaq A. Impact of fintech readiness, natural resources, and business freedom on economic growth in the CAREC region. *Resour Policy*. 2024;90:104846.
14. Goheer NA. Women entrepreneurs in Pakistan. Geneva (Switzerland): International Labour Organization; 2003. p. 1-43.
15. Hendrix C, Noland M. Confronting the curse: the economics and geopolitics of natural resource governance. New York (NY): Columbia University Press; 2014.
16. Schneider FG. The size of the shadow economies of 145 countries all over the world: first results over the period 1999 to 2003. IZA Discussion Paper No. 1431. Bonn (Germany): Institute for the Study of Labor (IZA); 2004.

17. Magnus G. The age of aging: how demographics are changing the global economy and our world. Singapore: John Wiley & Sons; 2012.
18. Muhammad N, McElwee G, Dana LP. Barriers to the development and progress of entrepreneurship in rural Pakistan. *Int J Entrepreneurial Behav Res.* 2017;23(2):279-95.
19. Urry J. Societies beyond oil: oil dregs and social futures. London (UK): Bloomsbury Publishing; 2013.
20. Schneider F, Klinglmair R. Shadow economies around the world: what do we know? Working Paper No. 0403. Linz (Austria): Johannes Kepler University of Linz, Department of Economics; 2004.

How to Cite This Article

Khan A, Sesay JK, Azeema N, Chaudhary S. Internet addiction and its impact on sleep patterns among university students: A case study of Khyber Pakhtunkhwa, Pakistan. *Int J Humanit Sustain Innov.* 2025;1(6):1-6.

Creative Commons (CC) License

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA 4.0) License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.