

Sleep Quality, Internet Addiction, Mental Health and Self-Esteem of Students

Saman Afzaal¹, Muneeb Ahmed Toor², Namra Shahzadi³

BS Student, Department of Psychology, University of Gujrat, Hafiz Hayat Campus.
Assistant Professor of Clinical Psychology, Department of Humanities and Social Sciences, International Institute of Science, Arts and Technology, Gujranwala.

Lecturer, Department of Psychology, University of Gujrat, Hafiz Hayat Campus

Correspondence: muneeb.toor786@gmail.com²

ABSTRACT

Aim of the Study: The current study investigates how university students' academic performance and mental health are impacted by their sleep patterns, internet use, and self-esteem.

Methodology: A cross-sectional survey research design was used. Convenience sampling (a non-probability sampling technique) was used to collect data from a sample of 400 participants.

Findings: There was a significant positive relationship between internet addiction, low sleep quality, and poor mental health. The relationship between mental health and self-esteem was non-significant. Self-esteem and academic achievement had a non-significant relationship.

Conclusion: It was concluded that the results in the Pakistani sample were no different than those already reported internationally.

Keywords: Sleep Quality, Internet Addiction, Mental Health, Self Esteem, University Students.

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Introduction

The current study investigates how university students' academic performance and mental health are impacted by their sleep patterns, internet use, and self-esteem. The objective of this study was to distinguish the elements that are affecting Pakistani youth's mental health. The academic performance and mental health of university students are declining due to a number of problems (Martinez et al., 2020; Rathakrishnan et al., 2021). Unfortunately, internet addiction exists to keep people from getting enough sleep (Çelebioğlu et al., 2020). Recent studies on internet addiction also revealed that internet addiction is largely to blame for the decline in social interactions, depression, loneliness, and lower self-esteem (Romero-López et al., 2021; Tian et al., 2021; Yang et al., 2022). Proper sleep is essential for good cognition, critical thinking, decision making, and memory (Mason et al., 2021).

According to Yong et al. (2016); It's acceptable to experience unpleasant emotions occasionally, but if they become persistent, interfere with your life, or are upsetting you, you should get help. You go through mood swings or unpleasant feelings like anxiety, depression, rage, or hopelessness. You notice that you wish to utilize more alcohol or drugs. You're losing interest in your old pals or past hobbies. You're having

relationship issues or recently ended a relationship. You require a confidant who will be supportive of your gender identity or sexual orientation. You genuinely want to express your feelings to someone.

Mood swings are just as vital as headaches or cramps, and mental health is just as crucial as physical health. We must comprehend how various factors affect mental health at various stages of life (Sheldon et al., 2021). Many students struggle to get enough sleep or experience sleep disturbances due to the stress of their schoolwork and a few other causes (Wang & B    , 2021). One of the causes of disturbed sleep is internet use and screen time before bed (Lan et al., 2020). Internet addiction is a current issue that requires serious attention for a secure future (Lozano-Blasco et al., 2022). Overuse of the internet is linked to sleep disruption (Singh et al., 2021). Lack of sleep can have harmful effects, including exhaustion and even a weakened immune system. When using a mobile device to access the internet while lying in bed, it can be harder for your thoughts to unwind, which would further prevent sleep. Additionally, it has been discovered that the electromagnetic radiation associated with mobile devices slows melatonin secretion (Reed, 2021). This study will clarify how these two important variables, along with self-esteem, affect the personal and academic lives of University of Gujrat's students.

Literature Review

In this research, sleep quality and variables influencing sleep quality were investigated. Personal characteristics survey and Pittsburgh Sleep Quality Index (Mollayeva et al., 2016) were used to perform descriptive study. It has been noted that there is a significant difference between the average PSQI score and the student's smoking behaviours, total sleeping hours, effective waking times, and average daily coffee intake. According to the research, there are no significant differences in age, gender, residential locations, morning class drowsiness, chronic illness status, and average daily tea consumption (Yilmaz et al., 2017).

The internet is vital to everyone's existence. College students are very vulnerable to the exploitation of internet addiction. To assess the combined prevalence of internet addiction among college students. As a study approach, a database of English-language literature produced from 2010 to 2020 is used. Based on the grading guidelines assessment, development, and evaluation criteria, the general quality of the evidence was evaluated as "moderate" (Joseph et al., 2021).

The purpose of the study by Kareem et al. (2021) was to investigate the prevalence of Internet addiction among middle school students and to determine the prevalence of Internet addiction in relation to various determinants. The investigation was conducted utilizing a questionnaire. During the 2019-2020 academic year, 300 middle school children from a variety of socioeconomic backgrounds were chosen at random to participate in the research. Internet addiction measures were used to collect data. For data analysis, descriptive statistics were used in conjunction with the Mann Whitney and Kruskal-Wallis H tests. Students in middle school were shown to have modest levels of online addiction, despite the consequences of internet addiction. Moreover, statistically significant differences were found between the amount of online addiction, level of maternal education, class level, smart phone privilege, and approach to the mobile internet (Kareem et al., 2021).

Mental health issues are extremely prevalent among college students (Lee et al., 2021). Universities might be an ideal setting for providing evidence-based treatment through the Internet.

Mental Health International College Students initiative, this planned study and meta-analysis aggregated data on the effectiveness of Internet-based treatments for the mental health of college students. Through April 30, 2018, a thorough search was undertaken of bibliographical databases for randomized trials assessing psychological therapy for the mental health, well-being, and functioning of university students. Internet-based therapy for the mental health of university students may have small-to-moderate benefits on a range of disorders. Therefore, additional research is necessary to identify student subgroups for whom Internet-based treatment is most effective and to discover ways to enhance treatment efficacy (Harrer et al., 2019).

Problem Statement

In recent years, the global landscape of education has witnessed a significant transformation with the integration of technology and increasing academic demands. This paradigm shift, particularly in the context of Pakistani students, has given rise to concerns regarding their overall well-being. This study aims to investigate the intricate relationships among sleep quality, internet addiction, mental health, and self-esteem among students in Pakistan.

Significance of the Study

Understanding the complex interplay between sleep quality, internet addiction, mental health, and self-esteem is crucial for informing educational policies in Pakistan. Insights gained from the study can contribute to the development of evidence-based guidelines and interventions to create a more conducive learning environment for students.

The study's focus on mental health is particularly pertinent in a cultural context where mental health issues may be stigmatized. By shedding light on the factors influencing mental health among students, the research can contribute to the development of targeted mental health awareness campaigns and support systems.

Study Objectives

The main objective of the study was to investigate how sleep quality, internet addiction, and self-esteem influence academic achievement among students. The other objective was to determine the relationships between sleep quality, internet addiction, self-esteem, academic achievement, and mental health.

Methodology

The purpose of this study was to investigate the influence of sleep quality, internet addiction, and self-esteem on academic performance and mental health. Poor sleep quality, internet addiction, and low self-esteem were anticipated to contribute to poor academic performance and declining mental health.

Research Design

This study used the cross-sectional survey approach for its design. Through the questionnaire, quantitative data were obtained.

Method

This research addressed university students from the University of Gujrat. The research was done on the Hafiz Hayat campus of the University of Gujrat in several disciplines. Included were management sciences, information technology, zoology, botany, and political science, among others.

The research validated the moral issues and confidentiality of the permission form. The permission forms were completed by the respondents, who were assured that the information would be kept private and used for research purposes only. All participants were given the option of whether or not to participate in the study. The participant provided informed permission to ensure absolute confidentiality of personal information.

Population and Sample

For the present research, a total sample of 400 students ranging in age from 18 to 26 years old was collected. Non-probability sampling is a method for picking units from a population using a subjective process. Several strategies exist for non-probability sampling; however, the technique of convenience sampling was chosen in this investigation.

Measurement Tools

This study report utilizes the following instruments: Demographic form, sleep quality assessment (PSQI), internet addiction test, patient health questionnaire (PHQ-9) and Rosenberg self-esteem scale.

Data Analysis

After finishing the process of data collecting, data were imported into the statistical programme for social science and analyzed to calculate findings. First, a descriptive statistical analysis was performed to determine the frequencies and proportions of demographic variables. In addition to examining the normality of the scales, Skewness and kurtosis analyses were also conducted. The Cronbach's alpha measure of scale reliability was done. A regression analysis was carried out.

Results

The ongoing review was attempted to investigate the rest quality, web habit, and confidence as indicators of psychological well-being and scholastic accomplishment among students. This section gives examination of information that had been gathered from students of University of Gujrat, Hafiz Hayat Grounds, Punjab, Pakistan. Distinct examination of segment information was directed through computation of frequencies and level of 400. Correlation coefficient was utilized to quantify the relationship among rest quality, web dependence, confidence, scholarly accomplishment and psychological well-being. The data of 400 University students studying in the University of Gujrat was analyzed to test the hypothesis of the current study. Table 1 shows the demographic characteristics of the respondents. The table reveals information about the gender, age, residential area, faculty, awakening mode and usage of internet for work. The majority (88.8%) of the participants belonged to the age bracket (18-22 years), the percentage of women (68.0%) exceeded their opposite gender men (32.0%), most of the students (56.3%) belonged to the urban life style, faculty of Sciences has majority (35.8%) as compared to faculty of Arts (23.5%), faculty of management science (18.0%), faculty of social science (13.0%), faculty of engineering (5.0%), and faculty of information technology (4.8%). And majority (38.3%) students use self-awakening mode (35.5%) woke up with alarm (26.3%) are awakened by other people. Maximum (94.0%) used internet for work few of them (6.0%) was not using internet for work. Table 2 shows that there is significant positive relationship between internet addiction, low sleep quality and poor mental health. Relationship between mental health and self-esteem is non-significant. Self-esteem and academic achievement has non-significant relationship.

Table-1: *Demographic Characteristics of the Sample*

Variable	Segregation	F	Percentage %
Gender	Male	128	32.0%
	Female	272	68.0 %
Age	18-22 Years	355	88.8 %
	23-26 Years	45	11.3 %
Living	Rural	174	43.5%
	Urban	225	56.3 %
Faculties:	Engineering	20	5.0 %
	Arts	94	23.5 %
	Information technology	19	4.8 %
	Management Sciences	72	18.0%
	Sciences	143	35.8%
	Social Sciences	52	13.0%

Wake up mode			
	Self-awakening	153	38.3 %
	Awakening by alarm	142	35.5 %
	Awakening by other people	105	26.3%
Do you use internet for work?			
	Yes	376	94.0%
	No	24	6.0%

Table-2:Correlation

	Variables	1	2	3	4	5
1	PSQI	-	.30**	.42**	.05	.071
2	IDT	-	-	.42**	.07	-.02
3	PHQ	-	-	-	.08	.107*
4	RSS	-	-	-	-	.017
5	GPA	-	-	-	-	-
	M	16.92	42.00	11.31	12.27	3.20
	SD	6.48	15.42	5.20	3.50	.44
	A	.57	.78	.72	.50	.61

Note:*p<.05, **p<.01, PSQI= Pittsburgh Sleep Quality Index, IDT= Internet Addiction Test, PHQ= Physical Health Questionnaire-9, RSS= Rosenberg Self-esteem Scale, GPA= Grade Point Average, M= Mean, SD=Standard deviation.

Table 3: Summary of Independent Sample T-test analysis of Sleep quality, Internet Addiction, Mental Health and Self-esteem in 18-22 and 23-26 age group of University students (N=400).

	18-22 (n=355)	23-26 (n=45)	95% CI				
Variable	M (SD)	M (SD)	df	T	p	LL	UL
Pittsburgh Sleep Quality Index	16.81 (6.44)	17.75 (6.81)	52.93	1.15	.387	-2.30	8.52
Physical Health Questionnaire	11.35 (5.19)	11.00 (5.33)	55.10	.425	.672	-1.32	2.04
Rosenberg Self-esteem Scale	12.24 (3.42)	12.48 (4.10)	52.05	-.386	.701	-1.52	1.03

Discussion

The current study was undertaken in order to explore the effect of sleep quality, internet addiction, self-esteem on academic achievement and mental health. The main purpose of this study was to find out the relationship between sleep quality, internet addiction, self-esteem, academic achievement and mental health. Another aim of this study was to find out were all these variables significant or non-significant between gender, residential area, and two age groups (18-22, 23-26). The analysis identifies there is significant positive relationship between internet addiction, low sleep quality, and poor mental health. These results shows that internet addiction is the cause of bad sleep quality and poor mental health, higher the level of internet addiction higher would-be bad sleep quality and poor mental health. Relationship between mental health and self-esteem is non-significant. There is no effect of mental health on self-

esteem, both of them have no relationship. Self-esteem and academic achievement has non-significant relationship. The analysis reveals that self-esteem is not playing any role in academic achievement.

The data suggests that there is non-significant mean difference of mental health in both age groups, which indicates that both age groups (18-22, 23-26) are facing same level of mental health problems. Sleep quality and self-esteem has non-significant mean difference on the basis of age groups. Results shows that there is significant mean difference of internet addiction between males and females, which means use of mobile phone and usage of internet is higher in male as compared to females in university. It is revealed that there is non-significant relationship between sleep quality, mental health and self-esteem in both residential areas, it was predicted that there would be difference in sleep quality, mental health, and mental health in urban and rural areas. Results shows that there is non-significant mean difference in the self-esteem of students of the urban and rural area. Sleep quality has non-significant mean difference in both groups.

Previous studies show that there is substantial relationship between stress and poor sleep quality (Gardani et al., 2022). Another research by Hershner (2020) reveals that better quality, longer duration, and greater consistency of sleep are strongly linked with better academic performance. Important relationship was observed between sleep quality with mental health (Musshafen et al., 2021). All these researchers were conducted in different cultures but current study shows same results in Pakistani culture. It suggests that better sleep quality will lead to good mental health and better academic performance.

According to a research in Nigeria by Olawade et al. (2020), level of internet addiction was higher in males than females. Another study identified notable interrelation was found between psychopathology and internet addiction (Afolabi et al., 2022). The important factors of internet addiction were sleeping hours less than 6, dead of night as the presiding time for using the internet for the intention of entertainment. Sleep problems were related to high internet use. Internet addiction reduces one's self confidence, academic self- efficacy, social self-efficacy, self-esteem and triggers loneliness.

This study explains that there is positive relationship between internet addiction, low sleep quality, and poor mental health. And there is significant mean difference of internet addiction in males and females.

Conclusion

In conclusion, this study set out to investigate the intricate dynamics between sleep quality, internet addiction, self-esteem, academic achievement, and mental health among university students in Pakistan. The findings revealed a significant positive relationship between internet addiction, low sleep quality, and poor mental health. The data suggest that higher levels of internet addiction correspond to worsened sleep quality and compromised mental well-being. However, the study also highlighted non-significant relationships, such as those between mental health and self-esteem, as well as self-esteem and academic achievement.

Further analysis explored variations based on gender, age groups, and residential areas. Notably, males demonstrated a higher level of internet addiction compared to females, indicating a gender-based disparity in mobile phone and internet usage. Contrary to expectations, age groups showed a non-significant mean difference in mental health, suggesting similar mental health challenges for both groups (18-22 and 23-26). The urban and rural divide did not yield significant differences in sleep quality, mental health, or self-esteem, challenging initial predictions.

Comparisons with existing research in different cultures, such as Nigeria, corroborated the findings that internet addiction is associated with reduced self-confidence, academic self-efficacy, social self-efficacy, self-esteem, and increased loneliness. This study aligns with global research emphasizing the crucial link between sleep quality, internet use, mental health, and academic performance. It underscores the need for targeted interventions to address internet addiction and promote holistic well-being among university students in Pakistan, acknowledging the cultural context influencing these dynamics.

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Conflict of Interest


Authors declared NO conflict of interest.


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ORCID iDs

Saman Afzaal ¹  <https://orcid.org/0009-0001-1086-7033>

Muneeb Ahmed Toor ²  <https://orcid.org/0000-0002-0798-5346>

Namra Shahzadi ³  <https://orcid.org/0000-0001-6021-8755>

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