

A Study on the Impact of Smartphone Addiction on Students "Mental Health".

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ABSTRACT

Smartphones have become an integral part of students' daily lives, serving as tools for communication, education, entertainment, and social interaction. However, excessive smartphone use has emerged as a growing concern due to its potential negative impact on students' mental health. This research paper investigates the effects of smartphone addiction on students' mental health, focusing on indicators such as stress, anxiety, depression, sleep quality, academic performance, and social relationships. The study adopts a descriptive research design. Primary data were collected from 52 students using a structured questionnaire and a convenience sampling technique. Secondary data were obtained from books, journal articles, research papers, and other relevant sources. The collected data were analyzed using SPSS, employing descriptive statistics and the Chi-square test to examine the relationship between smartphone addiction and mental health. The findings reveal that many students spend several hours each day using their smartphones and experience increased stress, anxiety, poor sleep quality, reduced concentration, and lower academic performance. The Chi-square analysis indicates a significant association between smartphone addiction and students' mental health, suggesting that higher levels of smartphone addiction are linked to poorer psychological well-being. The study recommends promoting responsible smartphone use, digital well-being education, and healthy lifestyle practices to reduce the negative effects of smartphone addiction on students' mental health.

INTRODUCTION

Smartphones have become integral to everyday life in today's society as they have greatly changed how people communicate, learn, work, and access information. This is due to the fast pace of developments in mobile technology and the internet and the widespread use of many mobile applications. Smartphones are popular among the youth and especially students since their use has shifted from being just devices for calling and texting people to tools for online learning, socializing, entertaining, playing games, shopping, storing money, and obtaining educational materials. Therefore, smartphones have been increasingly used by students during the last ten years.

In education, smartphones have many advantages. They help students to attend online classes, to read e-books and electronic publications, to look for information, to contact teachers and their peers, and to do their assignments. The emergence of different educational apps, e-books, online video-lectures, and other e-learning tools makes education more efficient than in the past. Nonetheless, with the increase in dependence on mobile devices comes a worry about misuse and addiction to smartphones. Smartphone addiction is defined as the behaviour of using portable devices in a way that has a negative impact on both daily life and relationships, education, and health. Excessive smartphone use is common among young people, who spend too much time on social networks, playing games, watching videos, and communicating via text messaging. This misuse leads to many issues in terms of behaviour and emotions.

When discussing mental health, it is necessary to clarify that without it people cannot enjoy a healthy lifestyle. It may influence the way people think, feel, act, and deal with their daily stresses. Students experience various problems associated with their studies and other daily activities. Excessive smartphone use contributes to a number of mental issues like stress, anxiety, depression, loneliness, bad mood, low self-esteem, and sleep problems. Too much time spent on social networks, under constant pressure to compare oneself with others online, being a victim of cyberbullying, etc. contribute to worsening mental health among students.

The extent to which smartphone addiction affects sleep quality is one of its major issues. Most students use smartphones late at night for social media browsing, video watching, or gaming, which is believed to affect sleep patterns negatively leading to sleepiness, poor concentration, and low academic performance. Overuse of smartphones may also have a negative impact on interpersonal communication leading to social isolation. Smartphone addiction is a growing problem on the global scale especially among young adults and college students. Politicians, researchers, public health professionals and educators are increasingly interested in understanding smartphone usage and its relationship to mental health. Several studies conducted earlier have identified that smartphone addiction is related to increased levels of stress and anxiety, improved levels of depression, and low levels of psychological health.

Mysuru, one of the notable educational hubs of Karnataka, boasts a plethora of universities, colleges, and vocational institutions. Here, one can observe students relying heavily on their smartphones, both in classrooms and outside of it. While smartphones have been great facilitators of learning, they can allow for some serious psychological issues when students depend on them too much. Hence, it is crucial to gain an understanding of the smartphone addiction aspect and its effects on students' psychological state to create a working solution to this problem. Therefore, this study focuses on the effects of smartphone addiction on students' mental health, aims to identify the relationship between smartphone usage and students' stress, anxiety, depression, emotional well-being, quality of sleep, academic performance and others as well as define what factors affect the level of smartphone addiction in students and find ways to make them use smartphones responsibly.

REVIEW OF LITERATURE

Kwon et al. (2013) created the Smartphone Addiction Scale (SAS) and discovered that excessive usage of smartphones is related to the behaviour that indicates addiction leading to interference in students' activities and psychological health. **Kim et al. (2015)** stated that using smartphones excessively by students is positively associated with stress, anxiety, and depression. **Demirci et al. (2015)** claimed that excessive smartphone usage has negative effects on sleep quality and correlates with greater levels of depression and anxiety among students. **Yildirim and Correia (2015)** pointed out that smartphone addiction and nomophobia negatively impact students' mental state and affect their mental stability. **Samaha and Hawi (2016)** suggested that smartphone addiction negatively impacts academic success and academic satisfaction of students as well as increases psychological stress. **Elhai et al. (2017)** noticed that problematic uses of smartphones correlate with emotional distress, loneliness, and poor mental health among young people. **Cha and Seo (2018)** indicated that over-reliance on smartphones diminishes self-control capabilities and leads to anxiety and social isolation symptoms among students. **Horwood and Anglim (2019)** added that high frequency of smartphone use results in emotional distress and damages emotional health and good relations with others. **Busch and McCarthy (2021)** affirmed that smartphone dependence lowers general mental health in students, leading to such conditions like depression, anxiety, and worsening mental state. **Yildirim and Correia (2015)** pointed out that being dependent on a smartphone and having the fear of being offline (nomophobia) are consequences of mobile phone use that must be considered by students.

STATEMENT OF THE PROBLEM

Smartphone use has increased rapidly among students, which has impacted their communication, learning, information searches, and leisure activities. Smartphones are vital for students' everyday life due to their convenience and functionality. However, although smartphone use brings plenty of advantages to education, communication, and leisure, its excessive use leads to worries about smartphone addiction.

Smartphone addiction of students has become a serious problem because many of them spend a lot of time engaging in various activities such as social networking, playing online games, watching videos, and using messaging software. The overuse of smartphones may harm students' mental health and create problems such as stress, anxiety, depression, sleep issues, loneliness, and problems with attention.

In Mysuru, students in colleges and universities typically use smartphones for academic and non-academic purposes. While smartphones help in communication and learning, dependence on them can lead to mental and emotional problems. For this reason, it is important to know how much students are addicted to smartphones and how it affects their mental health. The present study aims at studying the impact of smartphone addiction on the mental health of students in Mysuru. It will study the relationship between smartphone addiction and the mental health problems, including stress, anxiety, depression, quality of sleep, emotional health, and academic performance. The study will give valuable insights to parents, educators, and policymakers to promote the use of smartphones and improve the mental health of students.

NEED FOR THE STUDY

The rise in smartphone use among student community has transformed their daily habits, means of communications, thinking, and socializing. Smartphones have gained notable popularity in education, entertainment, and information access. Nonetheless, excessive use of smartphones has raised worries concerning the phenomenon termed as smartphone addiction because of its possible effects upon students' mental health.

Students tend to spend a lot of time on social media, games on the Internet, video streaming, and messaging applications that can affect their well-being, concentration, sleep, and success in studies. Since mental health is a decisive factor for student achievement both personally and academically, it is necessary to comprehend the effects of smartphone addiction on students' psychological wellness.

It is necessary to conduct this research to find the correlation between smartphone dependency and mental health of students. It will help find out the degree of smartphone usage and its impact on anxiety, stress, sleeping habits, and the overall well-being of the students. The results of the research will help students, teachers, and government create effective solutions for rational smartphone usage.

OBJECTIVES OF THE STUDY

- To analyse the level of smartphone addiction among students in Mysuru.
- To examine the impact of smartphone addiction on students' mental health, including stress, anxiety, depression, sleep quality, and emotional well-being.
- To evaluate the smartphone addiction levels of students in Mysuru.

HYPOTHESIS

- **Null Hypothesis (H_0):** There is no significant relationship between smartphone addiction and students' mental health.
- **Alternative Hypothesis (H_1):** High levels of smartphone addiction are significantly associated with poorer mental health outcomes in students.

RESEARCH METHODOLOGY

In research methodology, researchers use a systematic approach to gather, analyze, and interpret data to accomplish their objectives. This study is descriptive by nature and focuses on identifying the influences of smartphone addiction on the mental health of the students. The data is collected from both primary and secondary sources and is analyzed in detail.

Research Design: This research follows a descriptive research method focusing on understanding the effects of smartphone addiction on students' mental health.

Research Approach: The data required is collected using the following methods:

- Structured questionnaire
- Personal contact with the respondents

SOURCES OF DATA

Primary Data: The primary data was obtained directly from the students using questionnaires and personal interaction.

Secondary Data: The secondary data was collected from books, journals, research articles, websites, newspapers, and other published sources relevant to smartphone addiction and mental health.

Sample Size: The sample size of 52 respondents was used in the study.

Sampling Technique: The purpose of convenience sampling techniques in the selection of the respondents.

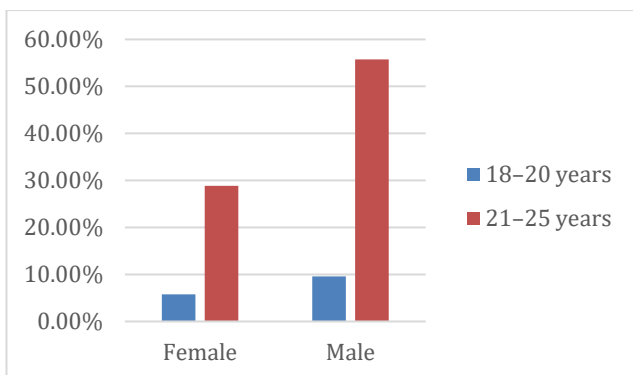
LIMITATIONS OF THE STUDY

- The research encompasses only those students in the pre-determined research region.
- The research is founded upon the response and opinion of the participating individuals.
- The restrictions in time and resources might have impacted the results.
- The research results may not be applicable to all student communities.
- The research is limited to the impact of smartphone addiction on the well-being of students.

DATA ANALYSIS

1. Demographic Question

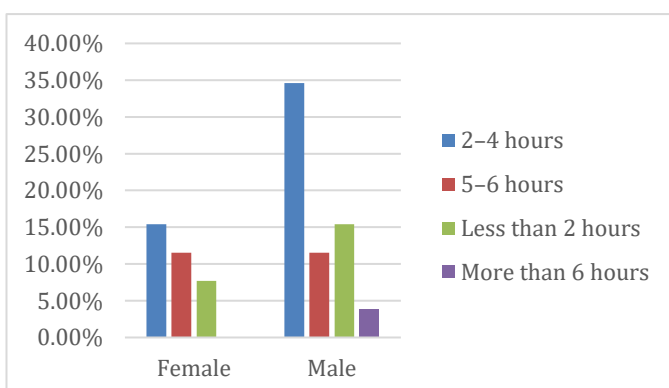
Age Group			
Gender	18–20 years	21–25 years	Grand Total
Female	5.77%	28.85%	34.62%
Male	9.62%	55.77%	65.38%
Grand Total	15.38%	84.62%	100.00%



Interpretation: The survey sample is made up of males, mainly within the 21–25 years age range, implying the group is the most represented. Given that there is an underrepresentation of the younger age group (18–20 years), the findings of the research may be biased towards the opinions and experiences of the 21–25 age group of the respondents.

Analysis: The findings show that most respondents are male (65.38%), while females account for 34.62%. Most responses are given by those in the age group (21–25 years) with males in this age bracket forming the majority cluster (55.77%) followed by females in the same age group (28.85%). Very few respondents belong to the age group (18–20 years) since they account for only 15.38% of the entire data.

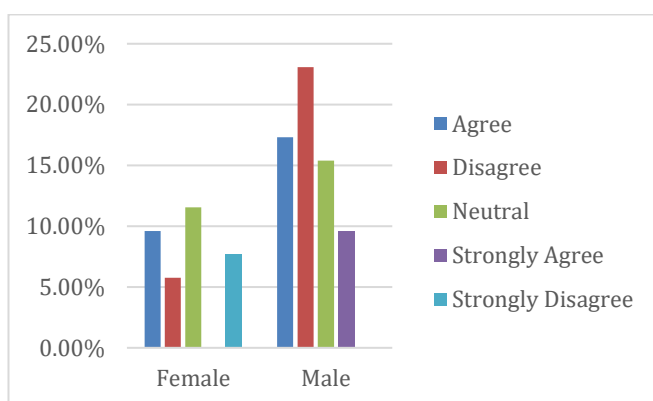
2. Average Daily Study Hours (Excluding Screen Time)					
Gender	2–4 hours	5–6 hours	Less than 2 hours	More than 6 hours	Grand Total
Female	15.38%	11.54%	7.69%	0.00%	34.62%
Male	34.62%	11.54%	15.38%	3.85%	65.38%
Grand Total	50.00%	23.08%	23.08%	3.85%	100.00%



Interpretation: The results suggest that a majority of students observe a moderate length study routine and study 2-4 hours a Day, with only a very few students studying more than 6 hours a day. This indicates that most students prefer to have a balanced study schedule and the number of students spending extremely long hours studying may be limited..

Analysis: The table reveals that 50.00% of participants study between 2-4 hours a day, which is the most common duration of study for participants. 23.08% study for 5-6 hours, 23.08% study for less than 2 hours, and only 3.85% study for more than 6 hours. Among the respondents, male participants were the most at studying between 2-4 hours with 34.62% of male respondents, while there are no female respondents studying for more than 6 hours.

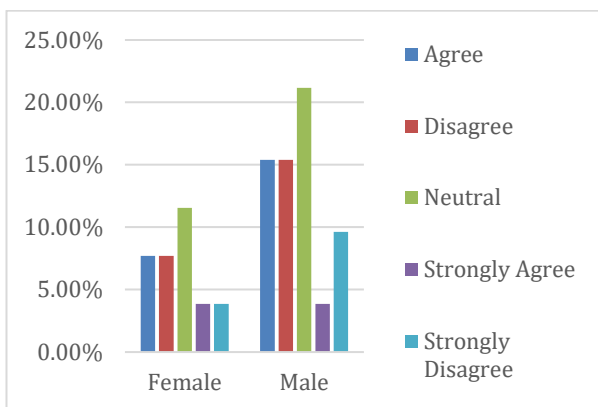
3. My smartphone use interferes with my academic responsibilities and study time.						
Gender	Agree	Disagree	Neutral	Strongly Agree	Strongly Disagree	Grand Total
Female	9.62%	5.77%	11.54%	0.00%	7.69%	34.62%
Male	17.31%	23.08%	15.38%	9.62%	0.00%	65.38%
Grand Total	26.92%	28.85%	26.92%	9.62%	7.69%	100.00%



Interpretation: The results reveal that most respondents do not consider the use of smartphones as a serious hindrance while studying since maximum responses were negative claiming that smartphones do not have any impact on their learning. Still, the close rates of agreement and indifference point out that the usage of smartphones affects studies of many students indicating that their experience differs as well.

Analysis: The responses indicate divided opinions about the effect of smartphones on study process. The largest percentage of negative responses was noted (28.85%), followed by positive ones (26.92%) and indifferent answers (26.92%). The least number of respondents provided extreme evaluations (positive- 9.62%; negative- 7.69%). Males provided larger percentages of responses in general compared to females.

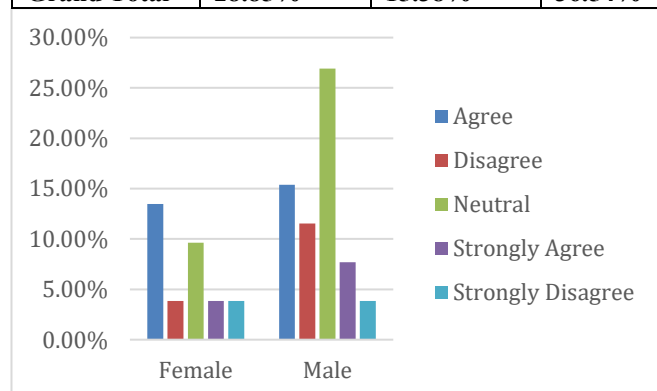
4. I frequently experience high levels of stress or anxiety during the academic week.						
Gender	Agree	Disagree	Neutral	Strongly Agree	Strongly Disagree	Grand Total
Female	7.69%	7.69%	11.54%	3.85%	3.85%	34.62%
Male	15.38%	15.38%	21.15%	3.85%	9.62%	65.38%
Grand Total	23.08%	23.08%	32.69%	7.69%	13.46%	100.00%



Interpretation: The outcome illustrates that students are divided in their views on whether they have stress or anxiety when they are in an academic week. Given that the majority of respondents opted for the Neutral answer, it can be said that a significant number of them may only experience stress on rare occasions or are not entirely sure how bad it may be. In general, results show that academic stress does have an impact on some of the students, but not to great extent.

Analysis: The table indicates that the most chosen response (32.69%) for people on whether they face high levels of stress during the academic week, is Neutral. Agree and disagree options have equal shares of the responses (23.08%). The majority of people either strongly agree (7.69%) or disagree (13.46%). When it comes to gender, these statistics show that males have a higher rate of responses than females in all rows.

5. I feel confident in my ability to manage emotional difficulties and academic pressure.						
Gender	Agree	Disagree	Neutral	Strongly Agree	Strongly Disagree	Grand Total
Female	13.46%	3.85%	9.62%	3.85%	3.85%	34.62%
Male	15.38%	11.54%	26.92%	7.69%	3.85%	65.38%
Grand Total	28.85%	15.38%	36.54%	11.54%	7.69%	100.00%



Interpretation: The data indicates that students are not very confident when it comes to dealing with emotions and pressures brought upon by school because the greatest percentage of respondents chose the neutral position. While there are still less respondents who said they were sure (some agreed or strongly agreed) the fact that there is still disagreement shows that some students lack proper means to manage academic difficulties.

Analysis: Information in the table reveals that massive percentage of respondents (36.54%) chose Neutral, meaning they are not confident in managing stress in terms of emotions or school demands. Among the rest

of the respondents, 28.85% of them agreed with the statement while 15.38% of them disagreed. There were 11.54% of respondents who strongly agreed with the statement as well as 7.69% of respondents who strongly disagreed with the statement.

Hypothesis Tests

Hypothesis Test Summary

6	The categories of 6. I feel anxious or restless when my smartphone is out of reach. occur with equal probabilities.	One-Sample Chi-Square Test	.000	Reject the null hypothesis.
7	The categories of 7. I lose track of time and spend more hours on my phone than intended. occur with equal probabilities.	One-Sample Chi-Square Test	.007	Reject the null hypothesis.
8	The categories of 8. My smartphone use interferes with my academic responsibilities and study time. occur with equal probabilities.	One-Sample Chi-Square Test	.024	Reject the null hypothesis.

N Par Tests

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum	Percentiles		
						25th	50th (Median)	75th
6. I feel anxious or restless when my smartphone is out of reach.	52	2.81	.864	1	5	2.00	3.00	3.00
7. I lose track of time and spend more hours on my phone than intended.	52	2.83	1.080	1	5	2.00	3.00	4.00
8. My smartphone use interferes with my academic responsibilities and study time.	52	3.02	1.129	1	5	2.00	3.00	4.00

Chi-Square Test

Frequencies

6. I feel anxious or restless when my smartphone is out of reach.			
	Observed N	Expected N	Residual
1	3	10.4	-7.4
2	14	10.4	3.6
3	27	10.4	16.6
4	6	10.4	-4.4
5	2	10.4	-8.4
Total	52		

7. I lose track of time and spend more hours on my phone than intended.

	Observed N	Expected N	Residual
1	6	10.4	-4.4
2	14	10.4	3.6
3	18	10.4	7.6
4	11	10.4	.6
5	3	10.4	-7.4
Total	52		

8. My smartphone use interferes with my academic responsibilities and study time.

	Observed N	Expected N	Residual
1	4	10.4	-6.4
2	15	10.4	4.6
3	14	10.4	3.6
4	14	10.4	3.6
5	5	10.4	-5.4
Total	52		

Test Statistics

	6. I feel anxious or restless when my smartphone is out of reach.	7. I lose track of time and spend more hours on my phone than intended.	8. My smartphone use interferes with my academic responsibilities and study time.
Chi-Square	41.654 ^a	13.962 ^a	11.269 ^a
Df	4	4	4
Asymp. Sig.	.000	.007	.024

FINDINGS

- **Smartphone Usage:** A considerable number of students revealed their daily, extensive use of mobile phones, ultimately showing their dependency on smartphone phone technology.
- **Social Performance:** Many of those surveyed confirmed that their heavy use of mobile phones gets in the way of learning, concentration, and their studies.
- **Emotional Health:** A large group of students confessed to feeling stress, anxiety, and emotional hardships connected with their enhanced use of mobile phones.
- **Quality of Sleep:** Quite a few students noticed that their extended use of mobile phones negatively affects the quality and quantity of their sleeping patterns.
- **Emotional Stability:** Certain students claimed that they are capable of controlling emotional distress, while many others expressed neutral opinions, meaning they have no idea how to cope with academic pressure and the implications of mobile phone dependency.
- **Overall Impact:** The results showed that mobile phone addiction has a significant impact on emotional health, academic performance, and everyday life.

CONCLUSION

According to the research, smartphone addiction significantly affects the mental health of the students. Overuse of smartphones leads to increased levels of stress, anxiety, concentration problems, disturbed sleep, and ineffective academic behaviour. Even though smartphones are considered a must-have tool for communication and learning, excessive use of them has adverse effects on students' mental state. As a result, taking care of the right balance of smartphone use is very important in order to ensure the improvement of students' academic performance.

SUGGESTIONS

- **Promotion of Digital Well-being:** Colleges must conduct awareness programs about smartphone use and digital well-being.
- **Conducting Healthy Behaviours:** The students must be encouraged to reduce the screen time and indulge themselves in physical activities.
- **Mental Health Assistance:** Educational institutions must provide counselling services and stress management workshops to the students.
- **Time Management for Academics:** Students must adhere to their study routine and use smartphone usage tracking apps to minimize distractions.
- **Guidance from the Side of Parents and Educational Institutions:** Parents and educational institutions must assist students to maintain balance between smartphone use and other activities.

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