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# The Impact of Smartphone Addiction on Students' Academic Learning at the Intermediate Level

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## Abstract

Smartphone addiction is becoming a worrisome trend among students. In contemporary society, smartphones have become an integral part of daily life, especially among college students. It has significantly impacted students' lives. The foremost motive of this study was to examine the effects of smartphone addiction on students' academic learning at intermediate level. The research objectives for this study were; to examine the effects of smartphone addiction on students' academic learning, to compare class wise students' perceptions regarding effects of smartphone addiction on students' academic learning, to compare Locality wise Students perceptions regarding effects of smartphone addiction on students' academic learning. Quantitative research design was used for the current study to examine its descriptive nature. This research method helped in achieving the objectives of the study. All the intermediate students of district Sialkot and Narowal of public male colleges were comprised the population of the study. Sample of the study was collected through simple random sampling technique and total sample for the study was 857 intermediate students. Statistical techniques of frequency, percentage, mean score, standard deviation and t test was used for analysis. It is concluded from the study that educational apps, relevant information and virtual field trips enhances students learning. It is also concluded that excessive use of smartphone misleads the learners towards academic dishonesty and decline in cognitive skills.

*Keywords:* Smartphone, Addiction, Contemporary Society, Academic Learning.

## Introduction

The prevalence of advanced technology has transformed lifestyles globally, with technology-based tools becoming ubiquitous. Smartphone is one of the most modern tools of technology. The usage of smartphone has become ubiquitous among the people especially college students. This serves as an essential tool for communication, entertainment, and academic activities. However, the pervasive use of smartphones has also led to concerns about the potential for addiction. Smartphone addiction is characterized by an excessive, compulsive need to use the device, often at the expense of other important activities. Studies have shown that excessive smartphone use can interfere with students' academic responsibilities, leading to procrastination and a decline in academic performance (Sayaf et al., 2022).

Numerous studies on smartphone use have looked at both the advantages and disadvantages of mobile devices. Consequently, investigators have endeavored to explore the various outcomes, advantageous and detrimental, associated with smartphone use. Noteworthy features of smartphones, such as text-to-speech, GPS, and social media platforms, serve as examples that facilitate seamless integration of individuals into society. Leveraging these features, the targeted user group can

effectively communicate their needs, seek assistance, and maintain continuous connectivity with society. In the fast-paced contemporary world, smartphones have played a pivotal role in enabling constant connection with friends and family. Remaining consistently connected to the internet through smartphones becomes a valuable tool for individuals, particularly ensuring the safety of children attending schools or venturing outside. While traditional mobile phones have long provided this kind of connectivity, smartphones make this even better by adding handy capabilities that allow you to stay in constant contact with your kids and keep an eye on their whereabouts. With the help of smartphones, anybody may now act as journalists on demand and give society access to real-time information. People can record movies at any time and share them with their social networks via a variety of online platforms thanks to features like the camera, video capture, social media access, and constant internet connectivity (Sarwar & Soomro, 2013).

The addiction to smartphones is having a profound impact on social, academic, and family life, introducing strains and conflicts into various aspects of our daily existence. The accessibility afforded by smartphones enables students to access inappropriate content, the working community to browse social media and irrelevant materials, and youth to explore the internet for unsuitable content. Global research indicates connections between excessive smartphone use and low psychological health, anxiety, and loneliness in college students. People who become behaviorally addicted to smartphones frequently overlook their other obligations, which lowers their quality of life. It is imperative to look at college students' problematic smartphone use, looking into factors like academic procrastination and quality of life as potential predictors. It is critical to look at the negative effects of smartphone addiction and comprehend how various content kinds affect academic achievement and lead to smartphone addiction. But rather than being viewed as a single issue, the intricate interactions between smartphone content consumption, its part in the development of addiction, its negative effects on academic performance, and the possible moderating role of physical activity are complex issues that require nuanced consideration. (Albursan et al., 2022).

**Statement of the Problem**

In contemporary society, smartphones have become an integral part of daily life, especially among college students. While previous research has explored the impact of smartphone addiction on various aspects of individuals' lives, including academic performance, a significant gap remains in understanding how smartphone addiction specifically affects students' academic learning. Studies like Kwon et al. (2013) have highlighted the connection between smartphone addiction and academic performance, yet there is limited research focusing on the direct effects of smartphone addiction on students' learning processes. Therefore, this study aims to examine the effects of smartphone addiction on students' academic learning at the college level.

**Research Objective**

- To examine the effects of smartphone addiction on students' academic learning.
- To compare class wise students' perceptions regarding effects of smartphone addiction on students' academic learning
- To compare Locality wise Students perceptions regarding effects of smartphone addiction on students' academic learning

**Scope of the Study**

This study holds significant value for various stakeholders. For college students, it offers insights into how smartphone addiction may directly impact their academic learning and provides strategies to mitigate its negative effects. By understanding the relationship between smartphone addiction and academic performance, students can make informed decisions about managing their smartphone use to improve their learning outcomes. This research will be valuable to policymakers and educational institutions in developing targeted strategies and interventions to address smartphone addiction among students. These interventions can foster an environment that supports better academic performance and learning experiences.

**Delimitation of the Study**

Owing to budgetary and scheduling limitations, the research was restricted to the following topics;

District Sialkot and Narowal

Male Public Colleges

Intermediate students of Public Male Colleges

**Literature Review**

The widespread rise in smartphone use offers advantages as well as and negative implications for individuals across all age groups. Over the past decade, smartphone usage has dramatically risen among people of various ages, encompassing both younger and older users. Currently, the global number of smartphone users stands at 6.92 billion, representing 86.11 percentage of people worldwide that own a smartphone. On the positive side, smartphones offer convenience and provide access to a myriad of entertainment options, online shopping, virtual socializing, and more. Along with the advantages, there is mounting data showing that excessive smartphone use can have both beneficial and detrimental consequences on one's general well-being and mental health. Overuse of digital media, especially cellphones, has been linked to a number of mental health issues. Recognizing the roles of both positive and negative reinforcement is essential to understanding how problematic smartphone use develops and persists. Positive and negative reinforcement strategies are designed to boost positive emotions, alleviate negative emotions, and elevate the probability of recurring behaviors. Addiction driven by negative reinforcement is often described as avoidance conditioning, affect regulation, or self-medication, where users attempt to alleviate negative feelings (Pausch, 2023).

The smartphone has become a defining characteristic of the younger generation, occupying a central role in their lives and functioning as a trademark of their identity. This dependence is clearly evident, as the technologically savvy generation heavily

relies on advanced touchscreen technology. The mere touch of a smartphone application provides instant access, aided by continuous internet availability throughout the day. The global use of smartphones has diverse impacts on people and societies, influencing various aspects such as learning, working, and communication. With its multiple features, the smartphone has brought about increased convenience, enabling users to effortlessly manage their daily tasks with a simple click. It facilitates faster and easier communication and allows users to access a variety of information through online resources. Because smartphones are so common in our society, excessive use and even addiction have become major global concerns. Despite the fact that a large number of research have examined the relationship between mobile phone use and academic outcomes, their conclusions have frequently been contradictory. Young adults are finding it difficult to limit their smartphone use as a result of this constant use. Examining the connection between smartphone addiction and learning is crucial because college students are prone to it (Sunday et al., 2021).

The dominant trend in ICT use is reflected in the growing dependence on mobile-connected devices, extending beyond daily tasks to include their utilization in educational settings. Using smartphones for educational purposes allows students to access course materials, facilitates teacher-student sharing and discussion sessions, and retrieves performance data on individual students. As such, the usage of smartphones by students has the potential to greatly impact and improve their academic performance, adding to the richness of the teaching and learning process. The increasing use of smartphones has brought about changes in various aspects of students' lives. Students now utilize smartphones to expand their learning knowledge, enabling them to access information anytime and anywhere. This technological shift encourages students to engage more actively in learning activities, emphasizing the role of technology in broadening students' academic prospects (Singh & Samaha, 2021).

However, studies such as a self-report survey looking into students' use of mobile phones in class, highlight certain disadvantages. The results indicate that mobile phone use, particularly during texting, distracts students from the learning process, leading to disruptions in their classroom experience. Students, engrossed in texting, often fail to pay attention to their class lectures, resulting in lower academic scores and difficulties recalling information from the lecture. Although cellphones have the potential to be used for education, students do not completely utilize them for learning objectives. Rather, they primarily use their smartphones for internet browsing, photo capturing, and phone calls. Balancing academic responsibilities with the need for social support poses challenges for students, as they often prioritize updating their social media statuses on platforms like Facebook over completing class assignments. When used for educational reasons, they provide pupils with access to a wealth of knowledge by introducing them to a world of knowledge at a single click. Even if cellphones are beneficial in the classroom,

extended or constant use can be harmful to one's health. Frequent calls and texts can generate headaches and disruptions that impair students' ability to concentrate and finish their assignments, which can have a detrimental effect on their academic achievement (Sing & Samaha, 2021).

It has been discovered that obsessive internet use causes pupils to lose focus on academic tasks, resulting in significant time loss and poor academic performance. It is increasingly acknowledged that DA poses a serious risk to the upbringing and education of future generations. Students of all ages are more susceptible to digital addiction (DA) and its detrimental effects, which include mental, psychological, physical, social, and educational deficits, since they are growing up in a society where they engage, play, communicate, and learn using digital devices. College students are becoming more and more aware of the problem of mobile phone addiction (MPA), as they are a rapidly expanding and highly impacted group of mobile phone users. China's internet penetration rate was 71.6% in June 2021, according to the 48th statistical report on internet development in China published by the China Internet Network Information Center (CNNIC). Of these users, 99.6% accessed the internet via mobile devices, with students making up 21% of the total. It is expected that the number of users in this age group will increase, making the problem of MPA among college students urgently need to be addressed (Samaha & Hawi, 2016).

## Research Methodology

A quantitative research approach was employed, focusing on gathering and analyzing numerical data to understand, predict, and control phenomena (Gay, Mills & Airasian, 2012). All the Inter level students of public boys' colleges in district Sialkot and Narowal constituted the population in according to the official website of Punjab colleges (https://cis.punjab.gov.pk/). The sample was chosen at random from the study population by the researcher using a random sampling procedure. Ten percent intermediate students from each district were selected as a sample. They were 857 students who were selected as a sample. The researcher used research techniques to accomplish the study's aims and chose the questionnaire as one of those tools, the researcher created a self-constructed questionnaire for the students. The researchers selected the SPSS software, which was used to test the reliability of the test items in the study's instrument. Reliability coefficient alpha =.75 showed a statistically significant correlation between the even and odd test item scores, demonstrating the validity and reliability of the study instrument. Through personal visits and use of carrier/post service, researcher send 900 questionnaires to secondary school science teachers of Pakistan, pass on instructions regarding the tool, and request them to fill the questionnaires. After that the researcher received the 857 questionnaires from respondents.

### Analysis and Interpretation

The study employed descriptive statistics, which employ statistical techniques such as factor analysis, frequency, percentage, mean score, and standard deviation, to achieve its objectives. The t test was employed by the

researcher to compare students' perceptions based on their class and location.

**Table No.1**

*Overall perceptions of students regarding effects of smartphone addiction on students academic learning*

| Statement | Category | Frequency | Per% | Mean Score | SD |
|---|---|---|---|---|---|
| Effects of smartphone addiction on students academic Learning | SA | 267 | 31.2% | 4.14 | .704 |
| | A | 449 | 52.4% | | |
| | UD | 129 | 15.1% | | |
| | DA | 11 | 1.3% | | |
| | SDA | 1 | 0.1% | | |

Table 1 reveals the information through the statistical tests of frequency, percentage, mean score and standard deviation. The respondents (83.6) have agreed behavior towards, “Effects of smartphone addiction on students academic learning”, while the respondents (15.1%) having undecided view. On the other hand, the respondents (1.4%) are disagreed towards, “Effects of smartphone addiction on students academic learning”. While the standard deviation (0.704) indicated that the majority of respondents agreed with the assertion, the mean score (4.14) value indicated that respondents had agreed behavior toward the above-said statement. The majority of the students' perceptions are therefore distributed around the mean, as indicated by the standard deviation. Additionally, the majority of respondents support the notion that smartphone addiction has a significant negative impact on college students' ability to learn. This is indicated by the mean value and percentage distribution.

**Table 2**

*Comparison of class wise Students perceptions regarding effects of smartphone addiction on students’ academic learning*

| Statement | Class | | Mean | S. D. | t-value | *Sig.* |
|---|---|---|---|---|---|---|
| Effects of smartphone addiction on students’ academic Learning | 1st Year | 429 | 4.14 | .688 | .084 | .580 |
| | 2nd year | 428 | 4.13 | .721 | | |

The disparities between first-year and second-year students' assessments of how smartphone addiction affects academic learning are displayed in Table 4.2. According to analysis, first-year students' perceptions (M=4.14, SD=.688) and second-year students' perceptions (M=4.13 SD=.721) are comparatively similar. Additionally, there may be a difference in the mean behavior scores of first-year and second-year students, as indicated by the t-value (0.084). The significance value (0.580) is greater than the commonly used threshold of 0.05. Therefore, the observed difference in perceptions between 1st year and 2nd year students is not statistically significant.

**Table 3**

*Comparison of Locality wise Students perceptions regarding effects of smartphone addiction on students' academic learning*

| Statement | Locality | N | Mean | S. D. | t-value | Sig. |
|---|---|---|---|---|---|---|
| Effects of smartphone addiction on students' academic learning | Urban | 470 | 4.17 | .733 | 1.583 | .001 |
| | Rural | 387 | 4.09 | .667 | | |

The disparities between urban and rural students' opinions of how smartphone addiction affects academic stress at the college level are displayed in Table 4.3 Perceptions of rural students (M=4.09, SD=.667) and urban students (M=4.17, SD=.733) are shown by analysis. Additionally, the t-value (1.583) indicates that there is a difference between the mean behavior scores of pupils in urban and rural areas. The generally used threshold of 0.05 is exceeded by the significance value of 0.001. As a result, there is a statistically significant variation in opinions between pupils in urban and rural areas.

**Findings**

I. According to the survey, 83.6% of participants concur that smartphone addiction has high impacts on college students' ability to learn.

II. First-year and second-year students' assessments of how smartphone addiction affects academic learning are not significantly different from one another.

III. The perceptions of urban and rural pupils differ statistically significantly, with the former having a somewhat higher mean score (4.17) than the latter (4.09).

- Colleges may encourage the use of educational apps, virtual field trips, and digital resources that enhance students' learning experiences in a positive and constructive manner.
- College management may talk to parents about how their kids' social and academic life are affected by using smartphones

**Conclusion**

This study has explored the impact of smartphone addiction on academic learning among college students. The findings suggest that while smartphones offer significant benefits in enhancing learning opportunities, such as providing access to educational apps, facilitating quick access to information, and improving digital learning skills, their excessive use also presents considerable challenges. A majority of respondents acknowledged the positive impact of smartphones on learning, including the ability to access educational resources, enhance digital skills, and participate in virtual field trips. However, there was a strong consensus that smartphone addiction negatively affects students' cognitive abilities, academic engagement, and overall academic performance. Many participants believed that smartphone addiction leads to laziness in academic pursuits, decreases the quality of class discussions, and may even contribute to academic dishonesty.

The study also revealed that while first-year and second-year students did not differ significantly in their views on the impact of

smartphone addiction on learning, urban students perceived a slightly higher negative impact compared to their rural counterparts. The results emphasize the need for students, educators, and policymakers to address the adverse effects of smartphone addiction on academic learning, suggesting that a balanced approach to smartphone use is essential to enhance learning outcomes while minimizing potential distractions and negative consequences.

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