

Smartphone Addiction of College Students in West Bengal

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Abstract

Background: *Smartphone addiction is a common problem, especially among college students. Ultimately, smartphone addiction has negative impacts on college students learning and overall performance. Excessive Smartphone use of directly or indirectly affects the daily life of human beings.*

Objectives: *The present study aims to find out the difference in smartphone addiction of college students of South 24 Parganas district as rural area and Kolkata as urban area of west Bengal in regard to gender, habitat and streams wise (B.A., B.Sc. and B.Com).*

Methods: *The college students of South 24 Parganas district as rural area and Kolkata as urban area of west Bengal have been considered as the population in this study, from where a total number of 300 college students are selected as a sample through simple random sampling technique. A self-made smartphone addiction scale was used by the investigators to collect responses from the respondents and descriptive survey research design method was adopted by the researchers' to conduct this study. Descriptive statistics like mean, standard deviation and inferential statistics like 't' test and ANOVA have been implemented in the research work of the researcher.*

Results: *The finding of this study revealed that there is no significant difference exists in smartphone addiction between male and female college students of South 24 Parganas district as rural area and Kolkata as urban area of west Bengal. Another finding of this study also showed that there is significant difference between rural and urban areas of college students of South 24 Parganas district as rural area and Kolkata as urban area of west Bengal regarding their smartphone addiction. Others findings of this study revealed that there is no significant difference exists in smartphone addiction among streams wise (B.A., B.Sc. and B.Com) college students of South 24 Parganas district as rural area and Kolkata as urban area of west Bengal.*

Conclusion: *Smartphone addiction has negative impacts on college students learning and overall performance.*

Key words: *Smartphone addiction, College students, West Bengal.*

Introduction

Smartphone is a handheld electronic device that provides a connection to a cellular network. Although they were originally meant to allow individuals to communicate via phone and email, smartphone now allow people to access the internet, play games, and send text messages in addition to making phone calls and sending emails. Smartphone addiction is an important issue of 21st century. Specifically, college students are a high-risk group for smartphone addiction. Adolescents are strongly attached to their smartphone, and they regard a smartphone as their second self. Many smartphone users have reported that they would not be able to live without a smartphone. Smartphone addiction is the compulsive and

harmful overuse mobile apps, or other mobile devices. It can involve scrolling endlessly on social media apps and compulsively checking text messages to the point where our use of smartphone disrupts our daily life. As a subset of internet and technology addiction, a smartphone addiction can lead to changes in the brain that over time compromise our ability to focus, prioritize, regulate our mood, and relate to others. Excessive smartphone addiction can result in mental health related issues like stress, anxiety, phobia, depression and decreased study habit. The present study will examine the smartphone addiction of college students.

Review of Literature

Jaiswalet al. (2024) stated that there was no direct effect of gender on Smartphone addiction during lockdown ($B = -0.059$, $t = 0.887$, $P < 0.001$).

Gayen and Mahato (2023) revealed a statistically significant positive correlation between the various dimensions of smartphone addiction, including overuse, tolerance, withdrawal, daily-life disturbances, positive anticipation, and cyberspace-oriented relationships among postgraduate students.

Nehra and Mehrotra (2022) suggested two important aspects to understand the influence of Smartphone addiction on the academic performance of adolescents.

Gangadharan, Borle & Basu (2022) conducted a study on smart phone addiction as an emerging behavioral form of addiction among higher secondary school students. The objective of the study was to determine the prevalence of smartphone addiction among higher secondary school students and kits associated risk factors among higher secondary school students. The findings of the study was the mean time spent on smart phones was significantly higher among those with addiction but no significant gender difference was found between time spent on phones and addiction.

Patel, S., D&L., Shwetha, K.T.(2022) Studied on the level of addiction with smart phone and its relation with anxiety, stress, loneliness and depression. Studies showed that smart phone addiction is associated with psychological distress like anxiety, stress, loneliness, and depression.

García-Santillán & Espinosa-Ramos (2021) conducted a study on smartphone addiction of high school students of public sector institution in the Port of Veracruz, Mexico and discovered no statistically significant difference between male and female students in smartphone addiction.

Jabeen, Sarvat, and Hashmi (2021) discovered no discernible impact of smartphone addiction on family communication. Furthermore, compared to other age groups, those between the ages of 18 and 20 had a higher smartphone addiction.

Pandya, Christian, and Patel (2021) conducted a study on smartphone addiction among late adolescents and young adults (ages 15-24) in Ahmedabad, Gujarat, India. They discovered notable differences in the age group, daily smartphone usage, common smartphone usage purposes, streams, and monthly smartphone recharging expenses of these individuals. During the COVID-19 epidemic

Raza, et al., (2020) findings concluded that smart phone addiction decreases academic performance of students as students lower their focus on academic learning and get addicted to smart phones for cyber loafing. Therefore, the universities should make policy regulations for students regarding the use of smart phones in the classroom. Also, students should be provided awareness about the negative impact of smart phone addiction on their personal and academic life, and also on their health through a variety of awareness seminars.

Bavli, Katra and Gunnar (2018) found that all participants used Smartphone's and the most common reason for Smartphone use was determined as "browsing social networks.

George and others (2017) found that, dependency on mobile phones is increasing and 41% commented that life without mobile will be boring and 25% said that they will feel alone or unsafe. They also commented that, as dependence is increasing with the excessive use of mobile phones, some interventions are required to motivate the youth against it.

Bhutia and Tariang (2016) studied Mobile phone addiction among 159 college students. The aim of the study was to find out the mobile phone addiction based on gender and the stream students are enrolled in. The data for the study were collected from Shillong, Meghalaya by using a psychological scale titled as, Mobile Phone Addiction Scale (MPAS) developed by A. Velayudhan and S. Srividya. Statistical techniques Mean, SD, t-test and Pearson's Product-moment Correlations were the used and found that was found that students moderately addicted to mobile phone. The researchers were found no gender and stream impact on the mobile phone addiction.

Kumcagic and Gunduz (2016) revealed the relationship between the level of psychological well-being and use of Smartphone addiction.

Bhardwaj and Ashok (2015) conducted a study on mobile phone addiction & loneliness among 100 teenagers (N=100, 50 boys, 50 girls) of Mumbai, India. The ages of the subjects were ranged between 13 to 17 years and were recruited for the study through random sampling method. This study used survey method and data were collected by using personal information form, Mobile phone addiction scale by Dr. A. Velayudhan & Dr. S. Srividya and Loneliness Inventory by Uma, Meenakshi R. & Prof. K. Krishnan. This study has treated the data through statistical method, like, correlation, t test. The study found high level of mobile phone addiction among teenagers, but no gender difference was found to be existed on mobile phone addiction. Besides, the result also highlighted that in terms of loneliness, though high level of loneliness was found among teenagers, but no gender differences was found there. Finally, it was indicated that mobile phone addiction was significantly associated with loneliness ($r=.456$).

Kibona and Mgaya (2015) focused on had undertaken a study a study in Ruaha Catholic University – Iringa, Tanzania with an aim to find out the impact of smart phones on academic performance of higher learning students. The study was carried out on 100 students who were having smart phones. The result of the study concluded that the smart phone bring negative results or progression on students' performance academically in Tanzania.

Hayat, Arshad, and Hussain (2014) conducted a study on the impact of mobile phone on academic achievement. The sample size of the study was 120, i.e. 60 male and 60 female. The samples were drawn from two departments, Sociology and Chemistry Department of Government College, Faisalabad by using simple random sampling technique. An interviewing schedule was prepared to get the required information. The result revealed that usage of mobile phone was satisfactory technology as mobile phone gave more information regarding their study and duration of exams. Majority of the subjects also stated that the usage of mobile phone did not affect much on the academic performance as they turned off their mobile phone during the examination period.

Emeka Ezemenaka (2013) stated that, the internet enabled phone usage does not affect the academic performance of the students but distractions by the usage of phone were notably admitted. In a study among the medical students of a college of Kerala.

Kwon et al. (2013) stated that Smartphone addiction based on the experts diagnoses despite those aforementioned limitations.

Aoki and Downes (2003) focused on the behavioral and psychological aspects of cell phone usage among college students. They tried to find the reasons behind why a technology is adopted in a particular way.

The Research Gaps Identified

From the above studies, researcher has identified the following gaps. The skills and cognitive abilities of the students needed for academic success is negatively affected by excessive smartphone use. Education should be such that it inculcates in the college students such experiences which may help them to grow physically, mentally, socially, emotionally, intellectually and morally. The current research work is different from the rest of the studies such as there is little research conducted in West Bengal relating to smartphone addiction of college students. So that the current research work makes an earnest attempt to review the researches on smartphone addiction of college students.

Objectives of the Study

1. To study the difference in the smartphone addiction of college students on gender basis (male and female).
2. To study the difference in the smartphone addiction of college students with respect to habitat (rural and urban).
3. To study the difference in the smartphone addiction of college students according to their streams wise (B.A., B.Sc. and B.Com).

Hypotheses of the Study

In this study objective wise hypotheses are-

Ho1: There is no significant difference in the smartphone addiction of college students on gender basis (male and female).

Ho2: There is no significant difference in the smartphone addiction of college students with respect to habitat (rural and urban).

Ho3: There is no significant difference in the smartphone addiction of college students according to their streams wise (B.A., B.Sc. and B.Com).

Significance of the study

Smartphone addiction among college students will not only affect their own mental health and learning attitude, but it will also significantly affect their future academic performance, academic emotion and academic engagement. Smartphone addiction on the overall performance of college students. Risk factors for Smartphone addiction include lack of awareness or education, age, personal, mental health conditions, lack of alternative coping mechanisms and social influence.

Research Methodology of the Study**Operational Definition of the Key Terms / Variables*****Smartphone addiction***

Smartphone addiction is a disorder involving compulsive overuse of mobile devices, usually quantified as the number of times users access their devices and/or the total amount of time they are online over a specified period.

College students

In this study college student means B.A., B.Sc. and B.Com, under-graduate students under the University of Calcutta of South 24 Parganas district as rural area and Kolkata as urban area of west Bengal.

Habitat

In this study rural area from South 24 Parganas district and urban area from Kolkata district has been selected of the west Bengal.

Research Design

Study falls under the descriptive survey research design has been implemented in the research work of the researcher.

Variables***Independent Variable***

- A) Gender (males and females)
- B) Habitat (rural and urban areas)
- C) Streams wise (B.A., B.Sc. and B.Com).

Dependent Variable

Smartphone addiction

Sample Size

300 college students in West Bengal of both sexes of rural and urban areas have been selected in the research work of the researcher as sample. All samples have been selected from South 24 Parganas district as rural area and Kolkata as urban area of west Bengal. The constitutions of the sample are as follows:-

Habitat	Streams wise						Total
	B.A.		B.Sc.		B.Com.		
Rural area	Male 25	Female 25	Male 25	Female 25	Male 25	Female 25	300
	Male 25	Female 25	Male 25	Female 25	Male 25	Female 25	
Urban area	Male 25	Female 25	Male 25	Female 25	Male 25	Female 25	
Total	100		100		100		

Sampling Techniques

For the student's selection, stratified random sampling technique has been implemented in the research work.

Research Tools

A self-made structured questionnaire has been used to collect the data from 8 colleges comprising of 300 students of South 24 Parganas district as rural area and Kolkata as urban area of west Bengal.

Procedure

The procedure of the study which has been followed by the researcher is as follows: Step 1. At first the questionnaire of smartphone addiction prepares. Step 2. Selection of colleges as well as selection of students Step 3. Selection and local adaptation of tools for the study. Step 4. a) Primary data collected from the selected sample groups by the questionnaire. b) Tabulation of test data to meet the requirement of hypothesis testing.

Population

Student's selection of streams wise (B.A., B.Sc. and B.Com) of both sexes of rural and urban areas in the West Bengal has been implemented in the research work of the researcher.

Collection of Data

Data have been collected through data collection questionnaires from rural and urban areas in West Bengal. From South 24 Parganas district as rural area and Kolkata as urban area have been taken into consideration.

Method of Analysis of Data

The data have been collected to suitable statistical analysis descriptive statistics like mean, standard deviation and inferential statistics like 't' test, ANOVA have been implemented in the research work of the researcher.

Results

Results based on the objectives, the results of the data are demonstrated in the different tables and its interpretation are given below:

Objective 1

To study the difference in the smartphone addiction of college students on gender basis (male and female).

Table 1: Smartphone addiction of college students on gender basis (male and female).

Variable	Male(N=150)	Female(N=150)	t-value	Significant t/not significant
Smartphone addiction	Mean=42.56 S.D.=6.17	Mean=44.94 S.D.= 7.28	1.90	Not significant at 0.05 level

Table 1 illustrates that the mean, S.D. and 't' scores of the college students of both males (N= 150) and females (N= 150). Though the mean score of females indicates high score (M= 44.94) than the males (M= 42.56), the 't' score (t= 1.90) with degrees of freedom is 298 clearly indicate that there is no significant difference (table value of 't' at 0.05 level is 1.96) between females and males in college students. So the null hypothesis is H01 is accepted. Thus, there is no significant difference in the college students on gender basis. Therefore, male and female college students are equal in terms of smartphone addiction.

Objective 2

To study the difference in the smartphone addiction of college students with respect to habitat (Rural and Urban).

Table 2: Smartphone addiction of college students with respect to habitat (Rural and Urban).

Variable	Rural (N=150)	Urban (N=150)	t-value	Significant/not significant
Smartphone addiction	Mean=43.35 S.D.= 5.19	Mean=39.36 S.D.= 4.52	1.97	Significant at 0.05 level

Table 2 illustrates that the habitat wise (rural and urban areas) differences in mean, S.D. and 't'-value of college students in West Bengal. Though the mean score is high of rural areas than urban areas but the t-value (t=1.97) with degrees of freedom is 298 showed significant difference in college students of smartphone addiction the two groups (rural and urban areas). So the null hypothesis H02 is rejected. Thus, there is significant difference in the college students in respect to habitat. Therefore, rural and urban college students are not equal in terms of smartphone addiction.

Objective 3

To study the difference in the smartphone addiction of college students according to their streams wise (B.A., B.Sc. and B.Com).

Table 3: Smartphone addiction of college students according to their streams wise (B.A., B.Sc. and B.Com).

	SS	df	MS	F	P-value	F crit	Significant/not significant
Between Groups	30.35045	2	16.62417217	0.98050 62247	0.48280687	4.0316420	Not significant at 0.05 level
Within Groups	4066.072	295	18.51875021		5	2	
Total	4096.422	297					

The above mentioned table 3 shows the ANOVA: Single Factor P value =0.482806875 ($P > 0.05$) is not significant at 0.05 level and H_0 is accepted. It means that there is no significant difference among the streams wise (B.A., B.Sc. and B.Com) college students of Smartphone addiction. Therefore, streams wise (B.A., B.Sc. and B.Com) college students are equal in terms of smartphone addiction.

Delimitation of the Study

The present study has been delimited to the following:-

- The study has been delimited to three independent variables - Gender (males and females), Habitat (rural and urban areas), Streams wise (B.A., B.Sc. and B.Com) and one dependent variable - Smartphone addiction.
- The study has been delimited to the different general degree college students of South 24 Parganas district as rural area and Kolkata as urban area only.
- Sample has been also delimited to a fixed sample size of 300 (three hundred) only.

Findings of the Study

- In this study, the investigator found that there is no significant difference in the smartphone addiction of college students of male and female students.
- The study reveals that there exists a significant difference in the smartphone addiction of college students between rural and urban areas. This study reported a high prevalence of smartphone addiction of South 24 Parganas district and the prevalence was significantly higher in rural areas than in urban areas college students. Four factors - peer group, number of smartphones accessed, major purpose of smartphone use and type of internet connection was significantly associated with smartphone addiction in rural areas.
- At last but not least, the investigator found that there is no significant difference among B.A., B.Sc. and B.Com college students by smartphone addiction.

Conclusion

From the findings of the study it can be realized that policy makers must realize the need for availability of smartphone in the college as part of the teaching aids to improve learning. A smartphone is important technologies enhancing people to connect and communicate easier and faster. It causes health problems, poor family relationship, poor social interaction, and poor academic performance. It also leads to decreased study habit general degree college students. To deal with this problem, parents and young people should be acquainted regarding the consequences of using smartphone through various media channels. Therefore the present study aims to find out the no significant difference in the smartphone addiction of college students on gender basis (males and females) of West Bengal and found significant difference in the smartphone addiction of college students with respect to habitat (rural and urban areas). No significant difference in the smartphone addiction of college students according to their streams wise (B.A., B.Sc. and B.Com).

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