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A Study of the Level of Smartphone Addiction among College Students in Tripura and Its Relationship with Academic Achievement

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Abstract

The present study investigated the level of smartphone addiction among college students in Tripura and its relationship with academic success. In this study, a total of 300 students of Government General Degree Colleges in Tripura were selected as a sample using a simple random selection method. The study followed the Descriptive Survey Method. To measure the smartphone addiction of students, Dr. Vijayashree and Dr. The standard Smartphone Addiction Scale formulated by Masood Ansari was used and the results of previous tests of students were considered to determine academic success. Frequency, Percentage, Mean, Standard Deviation and Pearson's Product-Moment Correlation were used in the analysis of the collected data. According to the results of the study, a maximum of 42. 00% of students are at the average level of smartphone addiction and 34%. 00% of students are positioned at the average level of academic success. The correlation analysis found a weak but statistically significant negative relationship between smartphone addiction and educational success ($r = -0.214$, $p<0.001$). As a result, the zero-assumption has been rejected. The results indicate that students' smartphone addiction scores tend to decline with an increase in their scores. The study emphasizes the importance of responsible smartphone use by students, effective time management, and the proper use of technology in educational work. It also highlighted the need for further research in the future to explore other aspects related to the academic success of college students in Tripura.

Keywords: Smartphone Addiction, Educational Success, College Student, Smartphone Use, Tripura

1. Introduction

Smartphones are currently an important technological tool in the daily lives of students. Its use in communication, information search, online education, social networking, entertainment and various educational activities has continuously increased. (Chan *et al.*, 2014) [3] College students can use online classes, e-books, educational videos, digital notes, websites, and various educational applications through smartphones. As a result using smartphones in education has become easy for students in situations. However using smartphones much can cause another kind of issue. Spending a lot of time on smartphones, for media, games, videos, fun or other non-school activities can take away time that students should spend on their studies. (Iqbal & Bhatti 2020) At the time there can be distractions not wanting to study, a habit of putting things off and breaking regular study routines. In this context, smartphone addiction refers to a problematic behavioural trend, where a person experiences difficulty controlling the level of smartphone use, and its use can affect daily life, social activities or educational work. (Akçay *et al.*, 2023) [2] However, using a smartphone cannot be called addiction. It is important to consider the level of use, the ability to control, and the changes that are taking place in the day-to-day operations as a result of use. (Panova & Carbonell, 2018) [6] Studies on university populations suggest that such patterns of excessive use can influence students' emotional, cognitive, and educational outcomes, which makes the distinction between frequent use and problematic use an important one for educators to examine (Rodríguez *et al.*, 2020) [5]. On the

other hand, academic achievement is an important indicator of the results or success achieved in a student's educational activities. (Wahyudi *et al*., 2023) [7] It can usually be determined through test results, marks obtained, or educational evaluations. Educational achievement can be influenced by a variety of personal, family, social, and educational factors. While smartphones can be an effective tool for learning, overuse can also create competing time-use problems with students' studies. Therefore, examining the relationship between smartphone addiction and educational achievement is relevant in education. This study attempted to examine the level of smartphone addiction among college students in Tripura and its relationship to academic achievement. In the context of higher education in Tripura, an analysis of the data based on local data can provide a more specific understanding of students smartphone usage patterns and their relationship to educational outcomes.

2. Research Background

As a result of the rapid spread of digital technology, the way students learn and use information has changed. Smartphones simultaneously provide various facilities for communication, information search, entertainment and education. As a result smartphones have become an widespread part of college students lives. College students can use smartphones to gather information view online educational materials and communicate with classmates and teachers. However at the time there is also an opportunity for college students to spend long hours on social media, gaming, entertainment videos and other applications. When the level of smartphone use gets out of the student's control and conflicts with regular study, sleep, social networking, or other responsibilities, it can lead to problematic smartphone use. One possible consequence of this for students is a change in study time and attention. Educational attainment is an important outcome of the student's educational life. Therefore, it is necessary to check whether there is any relationship between the level of smartphone addiction and educational achievement.

3. Problem Statement

The problem with the present research is:
"Smartphone Addiction Levels and Its Relationship to Educational Achievement among College Students in Tripura: A Study"

4. Objectives of the research

1. To determine the level of smartphone addiction among college students in Tripura.
2. To determine the level of academic achievement of college students in Tripura.
3. Find out the relationship between smartphone addiction and educational achievement in college students.

5. Research hypothesis

HO_1: There is no significant relationship between smartphone addiction and educational achievement among college students in Tripura.

6. Research Methodology

In the present study follows the Descriptive Survey Method. With the help of this method, the level of smartphone addiction among college students in the state of Tripura is assessed and the relationship between smartphone addiction and educational achievement is examined and analyzed the relationship between two variable. Students studying in Government General Degree Colleges in the State of Tripura are considered as the current research population. The research samples are selected according to the prescribed sample selection procedure from the students belonging to this population.

6.1 Sample and Sampling Technique

In the present study, a total of 300 college students were included as a sample. A simple random sampling technique was followed for sample selection. In this method, every eligible student of the assigned population has an equal chance of being selected in the sample. Based on the data from the selected sample, the level of smartphone addiction of college students in Tripura and its relationship to educational achievement were analyzed.

6.2 Research Variables

The present study considers two main variables:
Independent Variable: Smartphone Addiction.
Dependent Variable: Academic Achievement.

6.3 Research Tools: A standardized Smartphone Addiction Scale developed by Dr. Vijayshri, and Dr. Masaud Ansari is used to measure smartphone addiction and the results obtained by students in previous exams are used to measure educational achievement.
The collected data has been analyzed using Frequency, Percentage, Mean, Standard Deviation, Pearson's Product-Moment Correlation.

7. Analysis and Interpretation

7.1 Objective 1: To determine the level of smartphone addiction among college students in Tripura.

Table 1: Smartphone Addiction Level Determination According to Z-Score

Z-score Range	Raw Score Range	Smartphone Addiction Level
≥ +1.26	129 and above	Extremely High
+0.51 to +1.25	119–128	Above Average
−0.50 to +0.50	105–118	Average
−1.25 to −0.51	95–104	Below Average
< −1.25	65 and below	Extremely Low

7.2 Interpretation: Based on the Z-score in Table 1, the scores of 300 students on smartphone addiction are classified into five levels. The average score of the students is 111.46 and the standard deviation is 13.73. According to the determined Z-score range, students are divided into five levels i.e. Extremely High, Above Average, Average, Below Average, and Extremely Low. Through this classification, it is possible to determine where each student's score is compared to the average score of the sample.

Table 1.1: Level-wise distribution of smartphone addiction to students

Raw Score Range	Smartphone Addiction Level	Frequency (N)	Percentage (%)
129 and above	Extremely High	33	11.00
119–128	Above Average	43	14.33
105–118	Average	126	42.00
95–104	Below Average	75	25.00
65 and below	Extremely Low	23	7.67
Total		300	100.00

7.3 Interpretation

According to the data given in Table 2, out of a total of 300 students, the highest number of 126 (42. 00%) students are at the average level of smartphone addiction. This is followed by 75 (25. 00%) students are Below Average and 43 (14. 33%) students are included in the Above Average level. On the other hand, 33 (11. 00%) students are in Extremely High and 23 (7. 67%) students are at Extremely Low level.

The results suggest that the highest distribution of scores of smartphone addiction among selected students is concentrated at the Average level. At the same time, 11. 00% of students rank at the Extremely High level indicating a relatively high score. Overall, there are differences in the tiered distribution of smartphone addiction to students, and most students are included at the average level.

7.4 Objective 2

To determine the level of academic achievement of college students in Tripura.

Table 2: Determining the level of Academic Achievement according to Z-score

Z-score Range	Academic Achievement Level
≥ +1.26	Extremely High
+0.51 to +1.25	Above Average
−0.50 to +0.50	Average
−1.25 to −0.51	Below Average
< −1.25	Extremely Low

7.5 Interpretation

Through this classification, each student's Academic Achievement score is determined by which position it is compared to the average of the sample. The positive value of the Z-score is higher than the average and the negative value indicates a lower score than the average. In this method, it is possible to present the overall distribution of students' academic achievement at five specific levels.

Table 2.1: Level-wise distribution of Academic Achievement to students

Raw Score Range	Academic Achievement Level	Frequency (N)	Percentage (%)
77.0 and above	Extremely High	31	10.33
67.4–76.7	Above Average	66	22.00
54.8–67.2	Average	102	34.00
45.4–54.0	Below Average	62	20.67
45.0 and below	Extremely Low	39	13.00
Total		300	100.00

7.6 Interpretation

As per Table 2.1, out of a total of 300 students, 102 (34. 00%) students have an average Academic Achievement Score. In addition, 66 students (22. 00%) Above Average, 62 (20. 67%) Below Average, 31 (10. 33%) Extremely High and 39 (13. 00%) is at the Extremely Low level. This distribution implies that there is diversity in students Academic Achievement scores, although most student scores are concentrated at the Average level.

7.7 Objective 3

Find out the relationship between smartphone addiction and educational achievement in college students.

HO_1: There is no significant relationship between smartphone addiction and educational achievement among college students in Tripura.

Table 3: Relationship between Smartphone Addiction and Academic Achievement

Variables	N	R	p-value	Level of Significance	Remarks
Smartphone Addiction	300	−0.214	< 0.001	Significant at the 0.01 level	Negative correlation
Academic Achievement					

7.8 Interpretation

Table no. 3 shows that the value of the correlation between smartphone addiction and academic achievement is -0.214, which is statistically significant compared to the critical value obtained at the 5% significance level. The calculated correlation coefficient is higher than the value of 0.113 at the 5% level of significance. The p-value is than 0.001, which shows that the relationship is statistically significant at the 0.01 level. Because of this the null hypothesis is rejected. The findings show a negative correlation, between smartphone addiction and academic achievement.

8. Educational Implications

The results of the research suggest that it is important to develop the habit of balanced use of smartphones and academic responsibilities among college students. For this, various programs can be organized to make students aware of the potential impact of excessive smartphone use in college. Besides, students should be encouraged to create regular study schedules, reduce unnecessary notifications, and limit the use of recreational smartphones during studies.

On the other hand, smartphones should be encouraged to be used as effective tools of learning rather than just as a medium of entertainment. With the help of e-books, online classes, digital notes and other educational materials, students can make their learning more effective. In this regard researcher suggest to the teachers and parents can help students grow digital habits and give them the learning help they need. Students who struggle to keep smartphone use in check can receive counseling and support to manage their time. Above all, extensive research is needed in the future to better understand the relationship between academic motivation, study habits, sleep, and the social environment with smartphone addiction.

9. Conclusion

The present study found a weak but statistically significant negative relationship between smartphone addiction and academic achievement in a selected 300 college students in Tripura. The results indicate that higher smartphone addiction scores tend to lower educational success scores. However, because of the weak level of the relationship, smartphone addiction cannot be considered the sole determinant of educational success. The findings of the study provide important information in understanding the relationship between smartphone use habits and academic success of college students. In addition to using smartphones as an effective medium of education, it is necessary to control the use of smartphones by students and align them with academic responsibilities. At the same time, other factors related to student academic success should also be considered in future research. This study offers a better understanding of the relationship between smartphone addiction and academic success in the context of higher education in Tripura and highlights the need for more extensive research in this field.

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