

Smart Phone Overuse among Senior Secondary School Students in relation to Stream and Academic Achievement

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Abstract

Smartphones have become a necessary tool for communication and education for adolescents. The use of smartphones has become so ingrained in the lives of young people that concerns have been raised about how it can affect their academic achievement. The present research aims to investigate smartphone overuse among senior secondary school students of district Kangra in relation to their stream and academic achievement. Descriptive survey method was used in the investigation and the sample was selected by Simple random sampling technique. The study included 200 students (100 male and 100 female) from 5 government and 5 private schools in the district of Kangra, Himachal Pradesh. The sample of 200 students was further divided into streams, in which 50 males and 50 females from the science stream, 50 males and 50 females from the arts stream participated in the study. The study employed the smartphone addiction scale which was developed and standardised by Vijayshri and Masaud Ansari (2020). Academic achievement of the students was measured through their previous year result. The data was analysed using the Pearson product moment correlation coefficient. The findings of the study demonstrate a weak negative relationship between senior secondary school students' smartphone overuse and academic achievement. The research also discovered a modest negative association between senior secondary school science students' smartphones overuse and academic achievement. Additionally, the study found that senior secondary school students in the arts stream had a weakly negative correlation between their smartphone overuse and academic achievement. There is no statistically significant correlation between senior secondary school pupils' excessive smartphone use and academic achievement. It is recommended that students use their smartphones for learning in a responsible manner. Although smartphones can be helpful for learning, making excessive use of them can harm students' academic achievement.

Keywords: Smart Phone Overuse, Stream, Academic Achievement, Schools Students.

Introduction

A smart device is an innovative mobile phone gadget made to address common issues with accessibility. In addition to texting and making calls, smartphones have an abundance of other features. Smartphones' ability to carry out both basic and sophisticated computing tasks has made them a very popular device. These days, a single touch can alleviate any problem. For this reason, in the modern world, they have become necessities because people can't imagine their lives without them. For a variety of users, including students, smartphone use offers excellent performance and rapid access to knowledge and pleasure. Features like emailing, mobile conference calls, audio and video chats, and convenient access to the internet are just a few of the benefits. Social networking and amusement are two other uses for it. But smartphones have also made life easier for students. By e-learning and m-learning, they can access school information on the device and learn anything they want (Ali et al., 2018). But the attraction of social media and entertainment can result in addiction, which can harm academic performance, moral principles, and physical and mental well-being (Deb & Rao, 2023). WHO (World Health Organisation Expert Committee, 1964) defined addiction as dependence: the ongoing use of a substance for relaxation, ease, or excitement that frequently results in desires when the substance is gone? Addiction falls into one of two main categories: chemical addiction (such as "drugs or alcohol addiction") or behavioural addiction (such as "mobile phone addiction") (Kim, 2013). One of the forms of obsessive usage of "a mobile phone" that adolescents worldwide experience is mobile phone dependence, overuse, or misuse. Health policy makers around the world are currently being forced to consider this quickly developing issue due to a new type of health disorder among teenagers that falls under this category: "smartphone addiction/abuse/misuse" (Davey & Davey, 2014). One of the most widespread non-drug addictions in the history of mankind is an addiction to smartphones, which affects people of all ages worldwide. Many people, nevertheless, are unaware of the seriousness of a smartphone dependency and how it can negatively impact a person's ideas, actions, habits, emotions, and general sense of wellness. Furthermore, it may increase the likelihood of experiencing stress, isolation, despair, and sleep difficulties. Those suffering from depressive symptoms, tiredness, lack of enthusiasm or happiness, regret or feeling of worthlessness, interrupted sleep or hunger, and inadequate focus are listed by the Mental Health Foundation in the United Kingdom. Two major prevalent conditions that are extremely frequent worldwide are depressive disorders and anxiety (Kahar & Kashyap, 2021). An addiction to smartphones has a detrimental effect on students' academic achievement. The

majority of students have low academic performance, eating disorders, obesity, lack in energy and physical activity, and sleep disturbances. Smartphones greatly victimise young people (Alosaimi et al., 2016 & Aljomaa et al., 2016). Thus, the present study aims to investigate smartphone overuse among senior secondary school students of district Kangra in relation to their stream and academic achievement.

Studies have indicated that adolescent academic performance is significantly impacted by smartphone addiction. Numerous research endeavours have been carried out to assess the correlation between academic achievement and addiction to smartphones among college students (Kaur & Singh, 2020). Samaha and Hawi (2016) examined the connections between strain, life satisfaction, use of smartphones and academic achievement. The findings indicate that while dependence on smartphones has an adverse relationship with academic achievement, it has a favourable correlation with life satisfaction. To improve the research's ability to be generalised the authors of the investigation suggested that future investigators do additional research beyond cultural boundaries. Paul and Dharni (2019) found that 73.1% of teenagers have internet-connected cell phones. The usage of mobile phones had a moderate effect on 70.3% of teenagers, a minor effect on 23.4%, and a severe effect on 6.3% of them. The influence of using mobile phones on teenagers' academic achievement, mental, social, physical, and financial well-being was found to be strongly positively associated at the $p > 0.01$ degree of significance. According to the study's conclusions, there is a significant adverse effect of using cell phones among teenagers. Kaur and Singh (2020) carried out a study to investigate the relationship between secondary school pupil study habits and academic achievement in numerous of Ludhiana-area schools. The study habits and academic performance were found to have a negative correlation ($r = -0.32$), and the t-test confirmed that there is a significant difference ($p < .05$) between the two variables. However, no significant gender differences were found. The research findings of Verma and Panda (2021) indicate a robust inverse relationship between smartphone addiction and university students' academic achievement. The research's implications point to the necessity of awareness campaigns and interventions to address smartphone addiction among college students. Banerjee (2022) revealed in her study that the majority of pupils, or 62.19%, have been found to use smartphones at a high level, 34.49% to an average level, and 3.32% to a low one. The study clarifies that there is a detrimental relationship between academic achievement and smartphone use. Therefore, it may be concluded that there is a substantial variation in the impact of smartphone usage on teenagers' academic achievement. Bajamal et al. (2023) investigation

revealed that students were using their cell phones excessively, with nearly half of them (50.4%) reporting to check their devices one to ten times an hour. In addition, 90.2% of the respondents said they use each month's data plans, and 97.7% of respondents said they use their cell phones frequently. In addition, 75.9 percent of students said they used their phones for searching or taking notes in class. Because a large portion of the people who participated stated that they used their phones primarily for purposes related to education, the data did not demonstrate a significant connection between educational achievement and smartphone excessive usage.

Objectives:

1. To investigate the significance of relationship between smart phone overuse and academic achievement of senior secondary school students
2. To investigate the significance of relationship between smart phone overuse and academic achievement of science senior secondary school students
3. To investigate the significance of relationship between smart phone overuse and academic achievement of arts senior secondary school students

Hypotheses:

H₀₁: There will be no significant relationship between smart phone overuse and academic achievement of science senior secondary school students

H₀₂: There will be no significant relationship between smart phone overuse and academic achievement of science senior secondary school students

H₀₃: There will be no significant relationship between smart phone overuse and academic achievement of arts senior secondary school students

Material and Methods

The study was quantitative in nature because it was based on variables measured with numbers and analyse with statistical procedures. In this study descriptive survey method was used because the study intended to Smart Phone Overuse among Senior Secondary School Students in relation to Stream and Academic Achievement. The sample for present study was drawn

from Government and Private Senior Secondary Schools of Himachal Pradesh. In the present study, five government and five private Senior Secondary Schools from Kangra district of Himachal Pradesh was selected randomly. Further for selecting students the simple random sampling technique was used and 200 students (100 male and 100 female) were taken for sampling. From 200 students, 50 males and 50 females from the science stream and 50 males and 50 females from the arts stream were selected as a sample of the study. The following tools were used by the researcher for collecting relevant data-Smartphone Addiction Scale SAS-VAM developed and standardized by Vijayshri and Masaud Ansari (2020). This scale consists of 23 items divided into Six Dimensions I. Compulsion II. Forgetfulness III. Lack of Attention IV. Depression and Anxiety V. Disturbed Hunger/Sleep VI. Social Withdrawal. The researcher collected the previous year of student's result to measure the academic achievement of senior secondary school students. In order to achieve the objectives of this study, Pearson Product Moment Correlation Coefficient statistical technique was used for analysing and interpreting the data.

Result and Discussion

H₀1: There will be no significant relationship between smart phone overuse and academic achievement of senior secondary school students

Table 1

Relationship between Smartphone Overuse and Academic Achievement of senior secondary school students

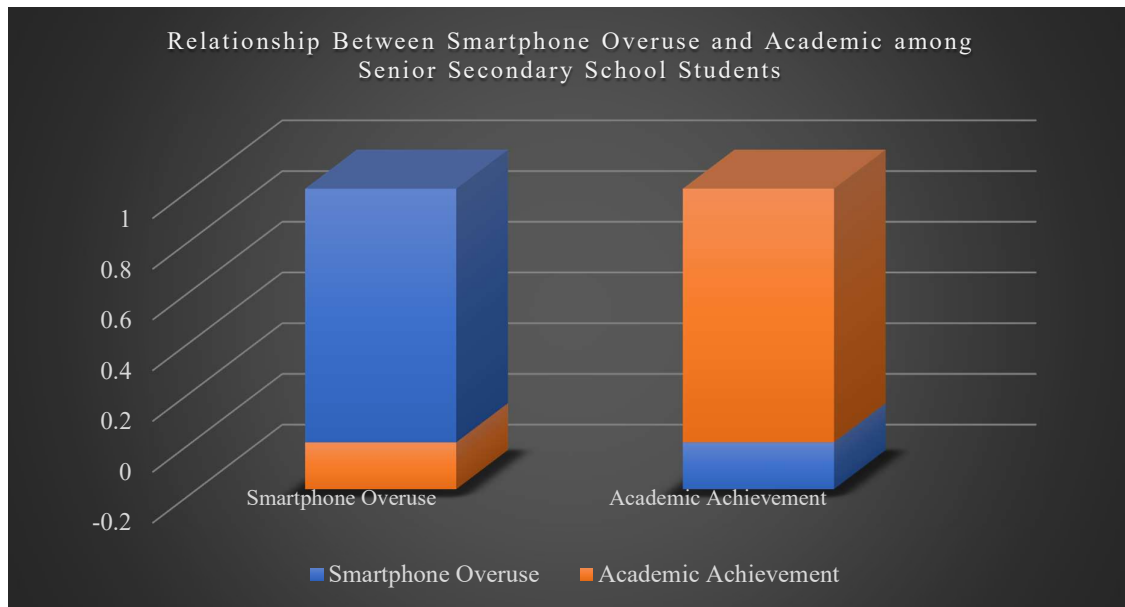
S. No.	Variables	Degree of freedom	Computed Correlation (r)	Critical value (r)	Level of significance
1.	Smartphone Overuse	198	-0.183	0.138	Not Statistically Significant at 0.05 level
2.	Academic Achievement				

Table-1 indicates that the calculated coefficient of correlation value between smartphone overuse and academic achievement is -0.183 which is negative and lower than critical value of 0.138 for 198 degree of freedom at 0.05 level of significance. This indicates that there is a weak negative correlation between smart phone overuse and academic achievement of senior secondary school students. The relationship between smart phone overuse and academic

achievement of senior secondary school students is not statistically significant. Therefore, the null hypothesis is accepted.

Figure 1

Bar diagram illustrating Relationship Between Smartphone Overuse and Academic Achievement of Senior Secondary School Students



H₀₂: There will be no significant relationship between smart phone overuse and academic achievement of science senior secondary school students

Table 2

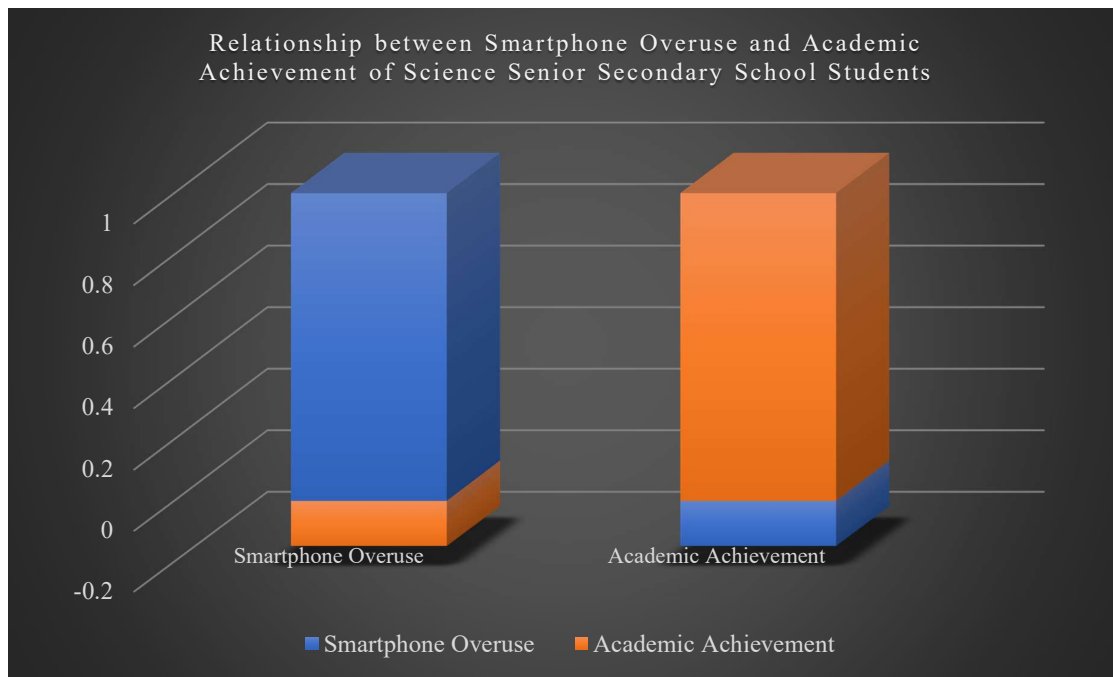
Relationship between Smartphone Overuse and Academic Achievement of Science Senior Secondary School Students

S. No.	Variables	Degree of freedom	Computed Correlation (r)	Critical value (r)	Level of significance
1.	Smartphone Overuse	98	-0.148	0.195	Not Statistically Significant at 0.05 level
2.	Academic Achievement				

Table-2 indicates that the calculated coefficient of correlation value between smartphone overuse and academic achievement is -0.148 which is negative and lower than critical value of 0.195 for 98 degree of freedom at 0.05 level of significance. This indicates that there is a weak negative correlation between smart phone overuse and academic achievement of science senior secondary school students. The relationship between smart phone overuse and academic achievement of science senior secondary school students is not statistically significant. Therefore, the null hypothesis is accepted.

Figure 2

Bar diagram illustrating Relationship Between Smartphone Overuse and Academic Achievement of Science Senior Secondary School Students



H₀₃: There will be no significant relationship between smart phone overuse and academic achievement of arts senior secondary school students

Table 3

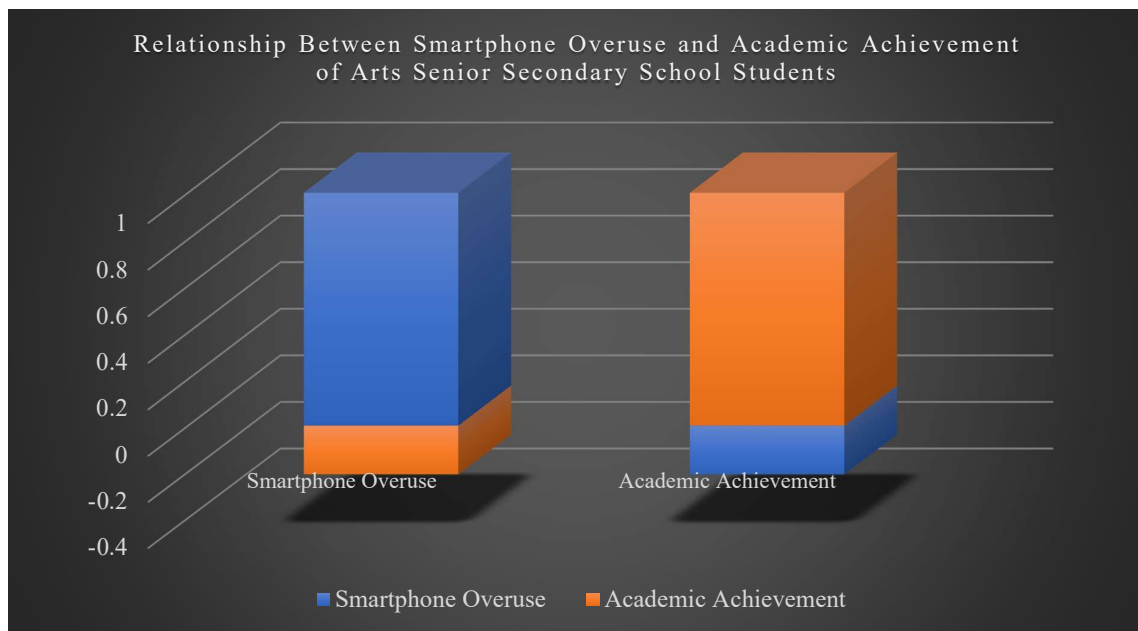
Relationship between Smartphone Overuse and Academic Achievement of Arts Senior Secondary School Students

S. No.	Variables	Degree of freedom	Computed Correlation (r)	Critical value (r)	Level of significance
1.	Smartphone Overuse	98	-0.188	0.195	Not Statistically Significant at 0.05 level
2.	Academic Achievement				

Table-3 indicates that the calculated coefficient of correlation value between smartphone overuse and academic achievement is -0.188 which is negative and lower than critical value of 0.195 for 98 degree of freedom at 0.05 level of significance. This indicates that there is a weak negative correlation between smart phone overuse and academic achievement of arts senior secondary school students. The relationship between smart phone overuse and academic achievement of arts senior secondary school students is not statistically significant. Therefore, the null hypothesis is accepted.

Figure 3

Bar diagram illustrating Relationship Between Smartphone Overuse and Academic Achievement of Arts Senior Secondary School Students



Conclusion

Today's digital age has seen the widespread use of smartphones, particularly among teenagers, which has had a significant impact on individual's educational environment (Olutoyin, 2024).

The study's conclusions indicate a weak negative relationship between senior secondary school students' academic performance and excessive smartphone use. The research also showed a modest negative relationship between senior secondary school science students' academic performance and excessive smartphone use. Additionally, the study found that arts senior secondary school pupils' academic achievement and excessive smartphone use have a weakly negative link. Overuse of smartphones and senior secondary school pupils' academic performance do not statistically significantly correlate. It is recommended that students use their smartphones for learning in a responsible manner. Although smartphones are helpful for learning, using them excessively can harm students' academic performance. However, for pupils to gain from using smartphones, they require close supervision, counselling, and training. When offering appropriate counselling services, the school counsellor should concentrate on students' use of smartphones and how it affects their academic achievement. Zhang and Zeng (2024) also revealed in their investigation that there is a significant adverse relationship between smartphone addiction and academic performance.

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