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## Influence Of Smartphone Addiction on Behavioural Problems Among Senior Secondary School Students in Rohtak District

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**Abstract:** This analytical study investigates the influence of smartphone addiction on behavioural problems among senior secondary school students in Rohtak district. Behavioural problems are studied through attention difficulty, aggression, social withdrawal and impulsivity. The analytical draft dataset includes 520 students from Classes XI and XII. Results show that students in the high smartphone-addiction group have higher behavioural-problem scores than students in the moderate and low groups. Smartphone addiction is positively correlated with attention problems, impulsivity, social withdrawal and aggression. Regression analysis indicates that smartphone addiction significantly predicts behavioural problems after controlling for demographic factors. The findings suggest that problematic smartphone use may weaken self-control, increase irritability, reduce face-to-face participation and disturb classroom attention. The paper recommends a school-based behavioural support model involving early identification, phone-use rules, counselling, parent collaboration and positive reinforcement.

**Keywords:** smartphone addiction, behavioural problems, attention difficulty, impulsivity, aggression, adolescents, Rohtak district

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### INTRODUCTION

Behavioural problems among adolescents are often visible in classrooms before deeper emotional problems are recognised. A student may appear distracted, impatient, aggressive, withdrawn or unwilling to complete tasks. In the present digital environment, smartphone addiction may be one of the important factors contributing to such behavioural patterns. Senior secondary students frequently use smartphones for communication, social media, online classes, gaming and entertainment. When use becomes uncontrolled, it may weaken attention span and self-control.

Smartphone addiction may influence behaviour through repeated reward-seeking. Notifications, short videos, games and social-media feedback give quick stimulation. Over time, students may become less patient with slow classroom processes, reading tasks and teacher explanations. They may also become irritated when the phone is restricted. Behavioural problems should therefore be studied not only as discipline issues but also as outcomes of digital habits.

Existing studies support a link between problematic smartphone use and psychological problems. Kwon et al. (2013) conceptualised smartphone addiction as involving daily-life disturbance and loss of control. Sohn et al. (2019) linked problematic smartphone use with stress, poor sleep and other mental-health outcomes. Since emotional strain and poor sleep often affect behaviour, it is reasonable to examine behavioural problems as a related outcome among school students.

This paper focuses on senior secondary students in Rohtak district and presents a full analytical model. The analysis includes descriptive statistics, ANOVA, correlation and regression. The purpose is to provide a journal-ready empirical structure that can be verified with real field data.

## REVIEW OF RELATED LITERATURE

Kuss and Griffiths (2011) reviewed online social networking and addiction from a psychological perspective. Their work helps explain why adolescents may develop repetitive checking, social comparison and dependence on online approval. These patterns may appear in school behaviour as impatience, distraction or emotional reactivity.

Haug et al. (2015) studied smartphone use and smartphone addiction among young people and showed that problematic use is present in youth populations. Demirci et al. (2015) connected smartphone-use severity with poor sleep, depression and anxiety. These conditions can indirectly increase behavioural difficulty because tired and emotionally disturbed students may have lower tolerance, reduced attention and higher irritability.

Davey and Davey (2014) highlighted the Indian adolescent context and suggested that smartphone addiction is a growing issue with social and health consequences. In Indian schools, strict academic expectations and family pressure may combine with uncontrolled smartphone use to create conflict. Students may hide phone use, resist restrictions and lose regular study routines.

The literature shows enough evidence to study behavioural problems, but district-level school studies remain necessary. Rohtak district includes different school types and family backgrounds, making it suitable for analysing behavioural outcomes in relation to smartphone addiction.

## OBJECTIVES

- To study behavioural problems among senior secondary school students in Rohtak district.
- To compare behavioural-problem scores among low, moderate and high smartphone-addiction groups.
- To examine the relationship of smartphone addiction with attention difficulty, aggression, social withdrawal and impulsivity.
- To assess whether smartphone addiction predicts behavioural problems after demographic controls.
- To suggest behavioural support strategies for schools and parents.

## HYPOTHESES

- H01: There is no significant difference in behavioural problems among low, moderate and high smartphone-addiction groups.
- H02: Smartphone addiction is not significantly related to attention difficulty, aggression, social withdrawal and impulsivity.
- H03: Smartphone addiction does not significantly predict behavioural problems after demographic controls.

## METHODOLOGY

The paper uses a descriptive survey and analytical design. The analytical draft dataset contains 520 senior secondary students from Rohtak district. Behavioural problems are represented through attention problems, aggression, social withdrawal and impulsivity. Smartphone addiction is divided into low, moderate and high groups as mentioned in Table 1. Mean, standard deviation, ANOVA, Pearson correlation and multiple regression are used for statistical analysis.

**Table 1. Operational definition and measurement plan**

Variable	Operational meaning	Measurement logic	Role in analysis
Smartphone addiction	Compulsive and uncontrolled smartphone use	Composite score from 10-60	Independent variable

Attention problem	Difficulty sustaining attention in classroom or study	Domain score; higher score means more difficulty	Dependent indicator
Aggression	Anger, argument and irritability	Domain score; higher score means more aggression	Dependent indicator
Social withdrawal	Avoidance of face-to-face interaction and group activity	Domain score; higher score means more withdrawal	Dependent indicator
Impulsivity	Quick reaction, poor delay of gratification and restless behaviour	Domain score; higher score means more impulsivity	Dependent indicator

### RESULTS & DISCUSSION

Table 2 shows that behavioural problems increase with smartphone-addiction level. Students in the high-addiction group show the highest mean behavioural-problem score. The difference is important because behavioural issues directly affect classroom learning, teacher-student interaction and peer relations. A student who is constantly checking the phone or thinking about online content may find it difficult to sit patiently in class.

**Table 2. Behavioural-problem scores by smartphone-addiction group**

Addiction group	N	Mean behavioural-problem score	SD	Standard error
Low	115	19.87	3.66	0.341
Moderate	285	24.49	3.35	0.198
High	120	29.68	3.42	0.312

**Table 3. ANOVA for behavioural problems across addiction groups**

Source	df	F	p value	Decision
Between groups	2	240.68	0.000	Reject H01
Within groups	517			
Total	519			

The ANOVA result in Table 3 is statistically significant, so the null hypothesis of no group difference is rejected. This result indicates that behavioural problems are not equally distributed across addiction groups. The high-addiction group requires special attention from teachers and counsellors. Punishment alone may not solve the issue because the behaviour may be connected with self-control, sleep, stress and peer dependence.

Table 4 shows that smartphone addiction is positively related to all behavioural domains. The strongest relationship appears with attention problems. This is expected because smartphone platforms train students to move quickly from one stimulus to another. Impulsivity is also strongly related, suggesting that repeated instant rewards may reduce delay tolerance. Aggression and withdrawal show slightly lower but still meaningful associations, indicating that students may react angrily to restriction or reduce face-to-face social participation.

**Table 4. Correlation between smartphone addiction and behavioural domains**

Behavioural variable	r	p value	Interpretation
AttentionProblem	0.660	0.000	Significant

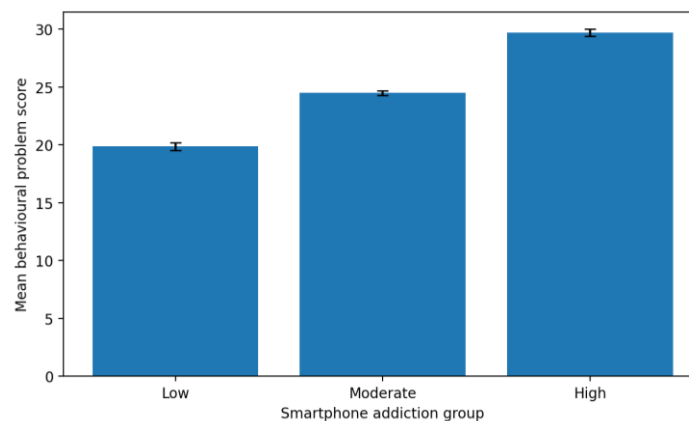
Aggression	0.381	0.000	Significant
SocialWithdrawal	0.491	0.000	Significant
Impulsivity	0.530	0.000	Significant
BehavioralProblem	0.770	0.000	Significant

**Table 5. Multiple regression predicting behavioural problems**

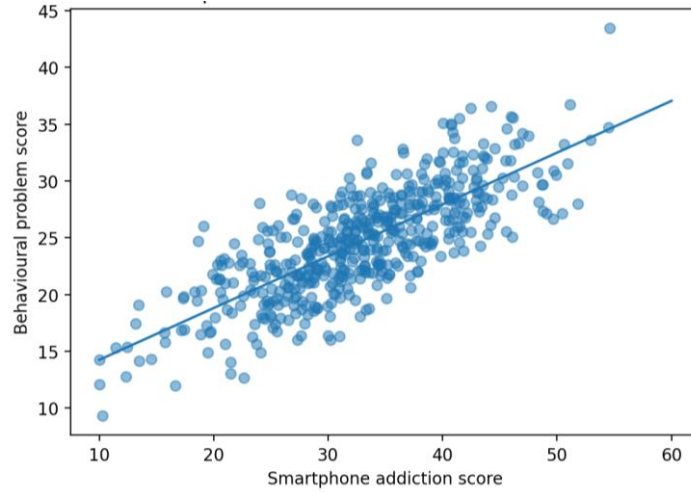
Predictor	B	SE	t	P
const	10.06	0.825	12.19	0.000
SmartphoneAddiction	0.475	0.029	16.42	0.000
MentalHealthRisk	-0.026	0.045	-0.574	0.566
Gender_Male	-0.503	0.270	-1.86	0.063
School_Private	-0.084	0.269	-0.314	0.754
Locale_Urban	0.148	0.268	0.555	0.579
Stream_Commerce	-0.566	0.351	-1.61	0.108
Stream_Science	-0.093	0.308	-0.300	0.764
Class_XII	0.392	0.267	1.47	0.143
Model R-squared	0.601			
Adjusted R-squared	0.594			

The regression analysis in Table 5 shows that smartphone addiction predicts behavioural problems even after mental-health risk and demographic variables are included. Mental-health risk also contributes to behavioural problems, which shows that emotional condition and smartphone addiction operate together. The finding supports an integrated school approach: behaviour management, counselling and digital-use education should work together.

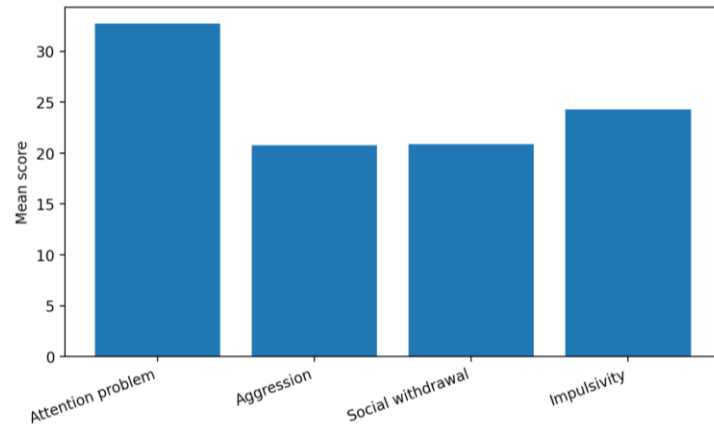
The figures make the pattern easy to understand. Figure 1 shows the rise in behavioural problems by addiction group. Figure 2 shows a positive trend between addiction score and behavioural-problem score. Figure 3 indicates that attention difficulty is the most serious behavioural indicator in the analytical dataset. Figure 4 shows that behavioural domains are interrelated, meaning that students with attention problems may also show impulsivity or irritability.



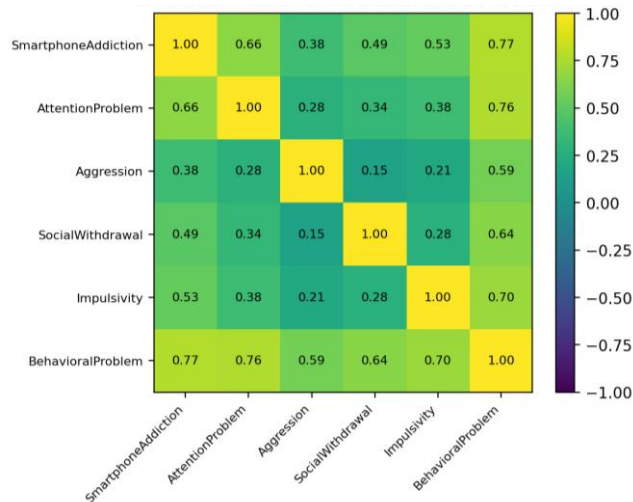
**Figure 1. Mean behavioural-problem score across smartphone-addiction groups.**



**Figure 2. Scatter plot showing relationship between smartphone addiction and behavioural problems.**



**Figure 3. Mean profile of attention problem, aggression, social withdrawal and impulsivity.**



**Figure 4. Correlation pattern among smartphone addiction and behavioural indicators.**

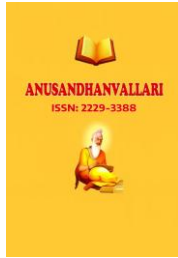
The findings of the study show that behavioural problems increase as smartphone addiction increases among senior secondary school students. Students with high smartphone addiction are more likely to show attention problems, poor self-control, irritability, aggression, impulsive behaviour, and social withdrawal. Among these behavioural dimensions, attention problems show the strongest relationship with smartphone addiction. This indicates that excessive smartphone use disturbs students' concentration, classroom attention, homework completion, and ability to remain focused on academic tasks. Impulsivity is also positively related to smartphone addiction because students may feel a repeated urge to check messages, social media, games, or videos. Aggression and irritability may increase when students are stopped from using smartphones or when their online activities interfere with daily routine. Social withdrawal is another important concern, as excessive smartphone use may reduce face-to-face interaction with family, teachers, and classmates. The analysis further indicates that smartphone addiction remains a significant predictor of behavioural problems even after controlling mental-health risk and demographic variables. This means smartphone addiction has an independent role in shaping behavioural difficulties. Therefore, schools should not depend only on punishment or strict mobile bans. They should combine digital-use rules with counselling, awareness programmes, behavioural support, parent guidance, and classroom-based monitoring to promote healthy and responsible smartphone use among students.

**CONCLUSION**

The study concludes that smartphone addiction has a significant influence on behavioural problems among senior secondary school students in Rohtak district. The behavioural impact is most visible in attention difficulty and impulsivity, but aggression and withdrawal are also relevant. Schools should create clear phone-use policies, introduce phone-free learning periods, train teachers to identify digital-behaviour risk, involve parents in consistent rules and provide counselling for students with high dependency. Behavioural correction should be supportive rather than only punitive. Students need help in building self-control, study discipline and healthy peer interaction.

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