

# Excessive Smartphone Use, Interference of Technology, and Its Association with Social Relationships Among Young Adults

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## Abstract

The present study explored the relationship between excessive smartphone use, interference of technology, and social relationships among young adults of Varanasi. The study aimed to examine gender differences and interrelationships among smartphone addiction, interference of technology, and social relationships. A sample of 200 students (100 males and 100 females) from various colleges of Varanasi was selected through purposive random sampling. Findings revealed that male students showed significantly higher smartphone addiction and interference compared to female students. Social relationship scores were comparatively healthier among female students. Smartphone addiction showed a positive relationship with technofence and a negative relationship with social relationships. The findings indicate excessive smartphone use interrupting interpersonal interaction and weakened healthy social adjustment.

## Introduction

Smartphones have become one of the most influential technological innovations of the twenty-first century. Modern youth rely heavily on smartphones for communication, entertainment, education, gaming, online shopping, and social networking. The phenomenon of excessive smartphone use has been associated with psychological dependency, emotional disturbance, sleep problems, loneliness, social withdrawal, academic decline, and interpersonal conflicts. Researchers have increasingly focused on the concept of “interference of technology,” which refers to interruptions in interpersonal communication caused by technological devices. Interference of technology negatively affects family interaction, peer communication, emotional closeness, and social bonding. Constant engagement with mobile devices reduces direct communication and creates emotional distance between individuals.

Social relationships refers to patterns of interpersonal interaction, cooperation, empathy, adjustment, communication, and social participation within society. Healthy social relations help individuals maintain positive relationships and psychological well-being. However, excessive smartphone use may weaken emotional sensitivity, reduce social participation, and increase isolation among youth.

Students in urban educational settings are particularly vulnerable to problematic smartphone usage due to academic pressure, social networking dependency, and entertainment-oriented internet engagement. The present study attempts to investigate the influence of smartphone use and interference of technology on social relationships among young adults, college students. The study also examines gender differences in smartphone dependency and interpersonal functioning.

## Review of Literature

Studies have consistently shown that excessive smartphone use and behavioural dependence negatively affect individuals' emotional stability, sleep quality, interpersonal relationships, communication patterns, and social interactions, often leading to compulsive digital engagement, social isolation, and reduced relationship satisfaction due to phenomena such as phubbing and technological interference (Kwon et al., 2013; Griffiths, 2014; Roberts & David, 2016).

Research studies have demonstrated that problematic smartphone use is significantly associated with anxiety, depression, poor emotional regulation, reduced face-to-face social interaction, lower academic concentration, and decreased social participation among students and young adults (Elhai et al., 2017; Lee et al., 2018; Singh & Kumar, 2019). Hawi and Samaha (2019) found that smartphone addiction leads to poor self-esteem, loneliness, and interpersonal dissatisfaction among youth.

Recent research studies have further highlighted that excessive smartphone use and interference of technology negatively affect family communication, emotional bonding, social behaviour, interpersonal adjustment, and psychological well-being, while also increasing virtual dependency and social withdrawal among young adults and adolescents (Przybylski & Weinstein, 2020; Panda & Pandey, 2021; Verma & Sharma, 2023).

## Objectives of the Study

1. To study the level of excessive smartphone use among young adults.
2. To examine interference of technology among male and female young adults.
3. To investigate social relationships among young adults.
4. To examine the relationship between excessive smartphone use, interference of technology, and social relationships.

## Hypotheses

1. Male young adults would exhibit significantly higher level of excessive smartphone use in comparison to female young adults.
2. Male young adults students would show significantly higher interference of technology in comparison to female young adults.
3. Female young adults would show healthier social relationships in comparison to male young adults.
4. Excessive smartphone use would positively correlate with interference of technology and negatively correlate with social relationships.

## Research Design

The present investigation employed a descriptive correlational research design. The study examined relationships among excessive smartphone use (ESU), interference of technology, and social relationships among young college students. Gender differences were also analyzed using independent sample t-tests. Quantitative methods and standardized psychological tools were utilized for collecting reliable and valid data from participants.

## Sample

The sample consisted of 200 students from colleges and universities of Varanasi, including 100 male and 100 female students. Participants were selected through purposive sampling. The age range of participants

was 18–25 years. Students belonged to different academic streams and socio-economic backgrounds, ensuring representative participation for examining smartphone use and social behaviour.

**Tools Used**

1. **Smartphone Addiction Scale** -The Smartphone Addiction Scale (Hindi Version) was developed by **Singh & Srivastava (2021)**. This scale was applied to assess excessive smartphone dependency among students. The scale includes 57 items. It was developed and validated for Indian adolescents and youth populations. The scale possesses satisfactory reliability and validity coefficients. Cronbach alpha is 0.86
2. **Technology Device Interference Scale**—The Technology Device Interference Scale was developed by **McDaniel & Coyne (2016)**, It measures the extent to which digital devices interrupt social interaction and communication. It consists four items and the Hindi-translated version was used in the present study to ensure better understanding among participants. Cronbach alpha is 0.67.
3. **Bergen Social Relationship Scale** - The Bergen Social Relationship Scale was developed by **Mittlemark (2004)**, employed to assess social relationships and interpersonal functioning. It consists six items and the Hindi-translated version was used in the present study to ensure better understanding among participants. Cronbach alpha is 0.93.

**Procedure**

The participants were first contacted at their place and informed about the purpose of the study. The consent was obtained. The questionnaires were distributed, and the instructions were given properly. The assurance of confidentiality was given and then the responses were collected.

**Results and Interpretation**

**Table 1 Mean, SD, t-value and Significance Level of Excessive Smartphone Use among Male and Female young adults.**

Variables	N	Mean	Sd	t value	significance
Male	100	176.42	24.35	4.36	.01
Female	100	162.18	21.47		

The obtained t-value (4.36) indicates a significant gender difference in excessive smartphone use. Male young adults showed a higher level of excessive smartphone use scores than female young adults.

**Table 2 Mean, SD, t-value, and significance level of Interference of Technology among male and female young adults.**

Students	N	Mean	SD	t-value	Significance Level
Male	100	32.76	6.52	3.89	Significant at .01
Female	100	28.41	5.94		

The obtained t-value (3.89) shows a significant gender difference in the interference of technology. Male young adults experienced greater interference of technology compared to female young adults.

**Table 3 Mean, SD, t-value and Significance Level of Social Relationships among Male and Female young adults**

Group	N	Mean	SD	t-value	Significance Level
Male	100	21.35	4.87	5.12	Significant at .01
Female	100	26.44	5.11		

The obtained t-value (5.12) indicates a significant gender difference in social relationships. Female young adults demonstrated healthier social relationships than male young adults.

**Table 4 Relationship between Excessive Smartphone Use, Interference of Technology, and Social Relationships among young adults**

Variables	Excessive Smartphone Use	Interference of technology	Social Relationships
Excessive Smartphone Use		.68**	-.59**
Interference of technology			-.53**

**p < .01**

Excessive smartphone use showed a strong positive correlation with interference of technology and a significant negative correlation with social relationships. Interference of technology also negatively correlated with healthy social interaction.

### Discussion

The present study was conducted to examine the relationship among excessive smartphone use, interference of technology, and social relationships among young college adults. In the contemporary digital era, smartphones have become an integral part of students’ daily lives for communication, entertainment, academic work, and social networking. Although smartphones provide several benefits, excessive use has increasingly created psychological, behavioural, and interpersonal concerns among young adults. The findings of the study provide important insight into the psychosocial impact of problematic smartphone use on students’ interpersonal functioning and social adjustment.

The findings revealed that male college students demonstrated significantly higher levels of excessive smartphone use compared to female students. This suggests that male students are more involved in activities such as online gaming, social media use, internet browsing, and entertainment-based applications, which may contribute to compulsive smartphone behaviour. Excessive smartphone dependency often leads to behavioural addiction characterized by withdrawal symptoms, emotional discomfort, irritability, and continuous checking behaviour. These findings are consistent with earlier studies reporting greater smartphone dependency among male adolescents and university students due to higher engagement in digital entertainment and online activities (Griffiths, 2014; Kwon et al., 2013; Singh & Kumar, 2019).

The study further revealed that excessive smartphone use negatively affects students’ academic concentration, emotional stability, sleep quality, and interpersonal communication. Students who spend prolonged time on smartphones often demonstrate reduced attention span, lower productivity, and

decreased face-to-face interaction. Overdependence on virtual communication gradually weakens healthy social relationships and emotional bonding.

Another important finding of the study was that male students experienced significantly higher levels of interference of technology than female students. Interference of technology refers to interruptions in interpersonal interaction caused by excessive engagement with technological devices such as smartphones and social media. Frequent checking of notifications, messages, and online platforms during conversations reduces communication quality and emotional attentiveness. Excessive technological interference weakens empathy, active listening, and emotional closeness in relationships. These findings support previous research suggesting that smartphone interruptions negatively affect relationship satisfaction and communication quality (Przybylski & Weinstein, 2020; Roberts & David, 2016).

Findings also demonstrated that female students reported healthier social relationships compared to male students. Female students showed better interpersonal adjustment, emotional sensitivity, communication quality, and social connectedness. Healthy social relationships are essential for emotional well-being, empathy, and effective interpersonal functioning. In contrast, students with excessive smartphone dependency often experience reduced social participation, loneliness, emotional dissatisfaction, and weaker interpersonal bonding. These findings are supported by previous studies indicating that excessive smartphone use negatively influences emotional adjustment and social participation among university students (Hawi & Samaha, 2019; Panda & Pandey, 2021).

Correlation analysis further revealed a significant positive relationship between smartphone addiction and interference of technology, indicating that students with higher smartphone dependency experience greater technological interference during social interaction. Excessive smartphone use encourages habitual checking behaviour and divided attention, reducing communication continuity and emotional involvement in conversations. Additionally, smartphone addiction showed a significant negative relationship with social behaviour, suggesting that excessive digital engagement weakens interpersonal adjustment and face-to-face interaction. Similarly, interference of technology was negatively associated with social relationships, indicating that continuous digital interruptions reduce emotional intimacy, empathy, and communication satisfaction. These findings are consistent with studies reporting that problematic smartphone use contributes to social withdrawal, emotional imbalance, and poor interpersonal functioning among adolescents and young adults (Elhai et al., 2017; Verma & Sharma, 2023).

Overall, the findings of the present study clearly demonstrate that excessive smartphone use and interference of technology negatively influence social relationships among college students. The study highlights the importance of balanced technological use and healthy interpersonal communication for maintaining psychological well-being and social harmony among young adults. Educational institutions, parents, and teachers should encourage digital discipline, emotional awareness, and increased participation in face-to-face social activities to reduce excessive smartphone dependency and promote healthier social functioning.

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