

Impact of Smartphone Addiction on Mental Health among Adolescents

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ABSTRACT

This study highlights the impact of smart phone addiction on mental health among adolescents. Smart phones have become an integral part of everyday life and are one of the primary means of communication in modern society. Its usage has increased rapidly in recent years, particularly with the advancement of smart phones. These devices now play a vital role in students work, social interactions, academic performance, entertainment, leisure activities, and even their family life. However, excessive mobile phone use can result in dependence, addiction, and poor academic performance, physical and mental related issues. The growing prevalence of excessive smart phone use and its harmful consequences. It highlights how smart phone addiction negatively affects academic achievement, mental health, and physical well-being, emphasizing the urgent need for effective intervention strategies. The study synthesizes existing evidence demonstrating the substantial impact of smart phone addiction on dietary habits and lifestyle choices, while also exploring the complex relationship between mobile phone usage patterns and mental health outcomes. The review further suggests that strategies such as mindfulness practices, self-awareness, and professional counselling may help reduce problematic smart phone use. In conclusion, the review stresses the need for smart phone use on academic success and overall well-being. It also recommends identifying adolescents for targeted interventions and encouraging responsible smart phone use to minimize negative outcomes. Overall, the smart phone addiction and implementing measures that promotes use of healthy technology, meaningful social interactions, and balanced life styles among adolescents.

Keywords: *Smartphone Addiction, Mental Health, Addiction effect, Well-being, Adolescents*

The use of mobile phones has increased rapidly over recent years, particularly following the development of smart devices. Smart phones have become integral to daily life, serving purposes related to work, social interaction, entertainment, and family communication. However, excessive usage can result in dependence, addiction, and heightened anxiety in adolescents. Problematic smart phone use as a form of psychological or behavioural dependence closely linked to other digital addictions such as internet or social media addiction. Conversely, other scholars argue that labelling smart phone use as an

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addiction may create conceptual and stigmatization issues, suggesting the more neutral term problematic smart phone use.

Problematic use is characterized by excessive preoccupation with mobile communication, disproportionate time or financial investment, and inappropriate usage in social or physically unsafe contexts, such as while driving. Such behaviour may negatively affect interpersonal relationships, mental and physical health, and can lead to anxiety when individuals are separated from their devices or experience poor network connectivity. Young adults and preschool-aged children are considered particularly vulnerable to problematic smart phone use.

Smartphone addiction refers to a condition characterized by the compulsive and excessive use of mobile devices, commonly measured by the frequency of device checking or the total duration of use within a given time period. Compulsive smart phone use represents one form of technology-related addiction, often described as phone addiction, which involves an obsessive reliance on smart phones. This behavioural dependence is frequently associated with nomophobia, defined as the irrational fear of being without access to a mobile phone. The term nomophobia was introduced in the United Kingdom in 2009 and originates from the expression “no-mobile-phone-phobia.”

The 21st century is often described as the age of science and technology, marked by rapid and continuous technological advancement. In this context devices originally designed solely for communication have undergone significant transformation. Over the past two decades, mobile phones have evolved into smart phones, becoming powerful and highly influential tools. Today, smart phone usage is widespread across all age groups, from children to older adults. No longer limited to communication, smart phones now serve multiple purposes, including entertainment, education, scientific access and the simplification of everyday activities. As a result, smart phones hold a dominant position in the market and exert a strong influence on daily life. Furthermore, many individuals now view smart phones not only as functional devices but also as symbols of fashion and personal interest.

Smartphone usage has risen substantially since the late 2000s, with global user penetration reaching approximately 41.5% of the world’s population in 2019. Rapid technological advancement has contributed to increased overuse, especially in Asian countries such as China, where nearly 700 million users were recorded in 2018. Excessive engagement with digital media has also been associated with ocular health issues, particularly among younger populations. Estimates suggest that by 2050, nearly half of the global population may be affected by myopia due to prolonged digital media exposure.

Based on growing evidence of the negative consequences of excessive technology use, mobile phone overuse has been proposed as a subset of digital addiction or digital dependence, reflecting rising compulsive behaviours related to technological devices. Although such behaviours have been discussed in clinical contexts since the mid-1990s, smart phone overuse has not yet been formally recognized as a diagnosable disorder in the Diagnostic and Statistical Manual of Mental Disorders. However, gaming disorder has been included in the International Classification of Diseases (ICD-11). The absence of formal classification is largely due to limited empirical consensus, evolving diagnostic criteria, and methodological challenges in studying behavioural addictions.

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Mental health refers to an individual's overall emotional, psychological, and social well-being. It influences how people think, feel, behave, cope with stress, relate to others, and make decisions throughout all stages of life. According to the World Health Organization (WHO), health is defined as a condition of complete physical, mental, and social well-being, rather than simply the absence of illness. The WHO emphasizes that mental health is an essential component of overall health, stating that there can be no health without mental health.

Mobile phone addiction, sometimes referred to as problematic mobile phone use, is a behavioural addiction thought to be similar to that of an Internet, gambling, shopping, or video game addiction and leads to severe impairment or distress in one's life. Psychiatrists considered mobile phone addiction to be an Obsessive-Compulsive Disorder (OCD). Mobile phone addiction can totally isolate its victims, ruin them economically and even turn them into criminals. Overuse of cell phones, especially smart phones, with mental health problems among adolescents. Problems revolving around attention, behaviour and self-regulation are more common among adolescents with high mobile phone usage.

The objectives of review of this study that addressing the issue of mobile phone addiction is to promote responsible and balanced smart phone use in order to enhance its benefits while reducing associated risks. This includes supporting overall well-being by encouraging real-world social engagement, regular physical activity, and healthy sleep habits. Additionally, the aim is to strengthen face-to-face communication skills that may be negatively affected by excessive smart phone use. Another key objective is to draw greater attention to mobile phone addiction, an area that has received comparatively less research focus than other forms of addictive behaviour. By achieving these objectives, efforts to address mobile phone addiction can help foster a healthier and more balanced relationship with technology, ultimately leading to improved quality of life and positive adolescent's health outcomes.

REVIEW OF LITERATURE

Vandana Goswami and, Dr. Divya Rani Singh (2016) stated that mobile phones are essential for daily functioning, with certain users even expressing a willingness to forgo food for an entire day rather than be without their phones. Excessive mobile phone use is also observed among adolescent girls, where such overuse reflects addictive behaviour.

Dr. Parmeshwar Abhiman Puri, et.al. (2017) examined the Study of Mobile Phone Addiction and Mental Health among Adolescent Girls Studying in Various Streams. It indicates a positive and significant correlation between mobile phone addiction & mental health. It predicts that higher the level of mobile phone addiction lower will be the mental health. It can be concluded that addiction of mobile phones affects the mental health of adolescent girls.

Chaudhury P. and Tripathy Kr. H. (2018) conducted a study involving 222 university students, in which data were analyzed using machine learning-based classification models. The findings highlighted a significant relationship between smart phone addiction and academic performance. Pearson's correlation analysis revealed that excessive smart phone usage negatively affected students' academic achievement. The study also examined additional factors such as internet accessibility and participation in outdoor sports activities, with experimental results confirming that these variables were likewise negatively associated with academic performance.

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Bhanderi et al. (2021) examined smart phone use and addiction among adolescents aged 16 to 19 years. This cross-sectional study included 496 students and employed the Smartphone Addiction Scale along with a self-administered questionnaire to collect data. The results indicated that smart phone usage and addiction were significantly influenced by factors such as age, parental income, place of residence, and educational background. Adolescents residing in urban areas demonstrated a notably higher prevalence of smart phone addiction. Furthermore, the study found that increased duration and daily hours of smart phone use were associated with a greater risk of addiction. A higher prevalence of smart phone addiction was also observed among metropolitan college students from well-educated families.

Mukhdoomi, et.al. (2020) explored the quantitative study among 500 LQRA university north campuses and found that positive and significant relation of smart phone, self efficacy, and behavioral intension with student's academic performance.

Rezwant, et.al. (2023) examined the 295 university students in Dhaka age range from 18 – 25 years and found that 12.9% university students using smart phone for texting, 5.8% for email, 36.3% for surfing internet, 4.4% for gaming and 40.7% for using face book.

Dr. Bharat, K. Patel et.al. (2024) found that there is no significant difference of smart phone addiction among boys and girls and locale.

Ashish Kumar and Subhash Kr. Gupta, et.al. (2024) showed the longitudinal study to track the long-term impact of smart phone usage on academic performance and overall well-being.

Zhang, et.al. (2024) revealed the cross-sectional study university college students in China and found that there was positive association between mobile phone addiction (MPA) and Non suicidal self-injury (NSSI).

Wang, R. et.al. (2022) revealed the study conducted in China examined the possible association between Mobile Phone Addiction (MPA) and non-suicidal self-injury (NSSI). NSSI, which refers to intentional self-harm without suicidal intent is common among adolescents and young adults and frequently occurs alongside suicidal behaviours.

Effect of smart phone addiction on mental health:

The associated risks and negative consequences of mobile phone addiction affect multiple domains, including physical and mental health, social relationships, as well as academic and professional functioning. Mobile phones have become increasingly essential, particularly for students, due to fast-paced social environments, busy daily routines, and complex interpersonal demands. However, excessive smart phone use can adversely impact sleep quality, physical health, mental well-being, cognitive functioning, and eye health. Exposure to blue light from screens may disrupt circadian rhythms, resulting in sleep disturbances and reduced alertness. In addition, prolonged smart phone use can lead to musculoskeletal problems such as neck pain, repetitive strain injuries, and visual impairments. Consequently, mobile phone addiction is associated with significant negative outcomes in both physical health and social behaviour.

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Physical health problem:

Extended smart phone use may promote an inactive lifestyle by limiting physical activity, thereby increasing the long-term risk of non-communicable diseases such as cardiovascular disorders and obesity. Lower levels of physical activity can also contribute to musculoskeletal issues and a reduction in muscle mass. Moreover, prolonged exposure to smart phone screens may result in eye strain, dryness, and visual problems, including digital eye fatigue and myopia. The blue light emitted from screens can further interfere with sleep cycles and negatively affect overall eye health.

Psychological effects:

Excessive smart phone use has been associated with a range of psychological effects, including depression, stress, anxiety, and addictive behaviours. Research has demonstrated a significant relationship between heavy smart phone use and depressive symptoms, with early problematic use identified as a predictor of later depression. High levels of depressive mood are often linked to excessive mobile phone engagement. Problematic smart phone use has also been connected to anxiety disorders, with fear of missing out (FOMO) acting as a mediating factor in the association between anxiety and excessive smart phone use. Furthermore, excessive smart phone use has been linked to symptoms of obsessive–compulsive disorder (OCD) and attention-deficit / hyperactivity disorder (ADHD). Prolonged exposure to smart phones and social media may additionally affect self-esteem, social relationships, and overall mental well-being.

Cognitive destruction:

Excessive smart phone use shares common underlying mechanisms with other forms of addictive behaviour, including diminished cognitive control and altered functioning of the prefrontal cortex. These changes can negatively influence decision-making and emotional regulation. Evidence indicates that problematic smart phone use may impair cognitive abilities such as memory, attention, and problem-solving skills, with constant digital stimulation and multitasking contributing to a gradual decline in cognitive performance. Furthermore, a study conducted in Saudi Arabia reported that university students with smart phone addiction were more likely to have lower grade point averages.

Concentration problems:

Excessive mobile phone use can reduce focus and concentration during lectures and study periods. Frequent notifications, social media distractions, and the urge to repeatedly check smart phones can interrupt students' attention, leading to decreased learning efficiency and poorer comprehension of academic material.

Sleep interruption:

Excessive smart phone use, particularly before sleep, can interfere with normal sleep patterns, resulting in poor sleep quality, insomnia, and increased daytime sleepiness, which may adversely affect overall health and well-being.

Poor time management:

Mobile phone addiction (MPA) can hinder students' time management skills, resulting in difficulties with task prioritization, meeting deadlines, and allocating adequate time for study. Excessive time spent on smart phones may lead students to neglect academic responsibilities, thereby negatively affecting their academic performance.

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Poor diet issue:

Smartphone addiction has been linked to irregular eating behaviors, including skipping meals, changes in eating pace, and altered portion sizes as a result of excessive phone use. Students with smart phone addiction tend to snack more frequently and often choose unhealthy food options. Research indicates that excessive smart phone users consume higher amounts of fizzy drinks, sugary beverages, junk food, noodles, and snacks, while showing lower intake of nutritious foods such as fruits, vegetables, and milk. These unhealthy dietary patterns associated with smart phone addiction may increase the risk of nutritional deficiencies, adverse health outcomes, and psychological problems among students.

Social and behavioural changes:

Smartphone addiction can result in behavioural changes such as irritability, impulsivity, and difficulties in emotional regulation. It may also lead to social withdrawal and reduced face-to-face interaction. Excessive smart phone use has been associated with weakened communication skills, as individuals may favour text-based communication over direct verbal interaction, which can negatively affect interpersonal relationships. Furthermore, heavy engagement with smart phones and social networking platforms has been linked to increased feelings of loneliness and social isolation, as online interactions may substitute for meaningful real-life social connections, leading to a sense of disconnection.

Sign and symptoms of smart phone addiction:

There is a fine distinction between healthy smart phone use and compulsive use. Excessive reliance on a mobile device can result in smart phone addiction. According to a scholarly article published by the National Library of Medicine, approximately 6.3% of the general population is addicted to their smart phones; with the highest prevalence observed among individuals under 30 about 16% of adolescents are affected. Although frequent smart phone use is common, it is important to differentiate between regular usage and addiction.

Indicators of smart phone addiction:

- Misrepresenting the amount of time spent on a smart phone.
- Family or friends expressing concern about usage habits.
- Difficulty fulfilling responsibilities at work, school, or home due to phone use.
- Spending increasing amounts of time on the device.
- Repeatedly checking others profiles driven by anxiety.
- Experiencing accidents or injuries linked to phone use.
- Working longer hours to complete tasks postponed by phone use.
- Reduced or absent social interactions.
- Experiencing fear of missing out (FOMO).
- Withdrawing from family or loved ones.
- Feeling a lack of connection or engagement.
- Becoming irritated or angry when phone use is interrupted.
- Waking at night to check the phone.
- Instinctively reaching for the phone when alone or bored.
- Experiencing “phantom vibrations” (perceiving notifications that do not occur).
- Struggling to limit phone usage despite intentions.
- Feeling strong cravings to access a smart phone or other digital device.

Intervention techniques:

Several strategies can be adopted to reduce excessive smart phone use and promote a healthier balance in technology engagement. Reducing overall screen time is essential in

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addressing this issue. Research suggests avoiding the use of smart phones for entertainment, such as watching shows, particularly at night, to prevent habitual use. Setting time limits for social media use, disabling app notifications for specific periods, and avoiding scrolling before bedtime can also be effective. Engaging in alternative activities such as reading, drawing, painting, meditation, or other cognitively enriching tasks before sleep may further help reduce screen exposure and encourage healthier technology habits.

- **Parenting observation:** Parents serve as positive role models for children in their technology habits. It is important that to use them responsibly and monitor daily usage.
- **Screening time limits:** setting usage limits is essential to reduce excessive mobile phone use, particularly during extended conversations or entertainment activities. Establishing daily time restrictions can help individuals better manage their screen time and prevent overuse.
- **Limit notification:** Limiting or disabling non-essential notifications can further reduce distractions. Customizing the home screen by rearranging app icons or removing tempting applications can make them less immediately accessible.
- **Grayscale mode:** Using grayscale mode may also reduce visual appeal and discourage prolonged screen engagement.
- **Utilizing app for monitoring:** In addition, monitoring applications can be used to track screen time and provide insights into usage patterns, enabling users to develop greater awareness of their smart phone habits and make appropriate adjustments.
- **Creating tech-free zones:** Creating tech-free zones or designated periods, such as during meals or before sleep, can further promote disengagement from smart phones and encourage healthier activities.
- **Engaging in physical activities:** Encouraging participation in physical activities and hobbies that do not involve smart phone use can help reduce screen time and support a more active and healthy lifestyle.
- **Promoting face to face interactions:** Emphasizing direct, face-to-face social interactions without the use of smart phones can help strengthen interpersonal relationships and reduce reliance on digital forms of communication.
- **Mindfulness techniques:** Mindfulness techniques for adolescents involve intentionally focusing on the present moment without judgment to manage stress, anxiety, and emotions.

Indian Psychiatric Society Guidelines for Children Aged 5 to 18 Years:

- Foster digital literacy to help children use technology responsibly and in healthy ways.
- Establish realistic and reasonable rules regarding device use, ensuring they are mutually agreed upon.
- Encourage the use of gadgets in shared spaces rather than in isolation.
- Promote at least one hour of daily physical activity and designate specific media-free times.
- Monitor children's media usage and the apps they access, testing apps before use.
- Communicate these guidelines consistently to all caregivers to ensure uniform enforcement of the rules.

CONCLUSION

This review study emphasizes the need for long-term research to better understand how smart phone addiction affects adolescents over time, particularly in relation to their academic performance and overall physical and mental well-being. It highlights the importance of evaluating interventions designed to reduce smart phone addiction and identifying students who are most at risk and may benefit from targeted behavioural changes. Adults should serve as positive role models for children in their technology habits. It is important that to use them responsibly and monitor daily usage. The statement also stresses that understanding these impacts is essential for developing effective strategies to manage smart phone use. Children and adolescents are particularly vulnerable to developing this addiction. Parents should supervise the duration, usage patterns, and types of content their children access. Moderate internet use can be beneficial, but excessive use may negatively affect mental well-being. Apart from this psychological counselling, mindfulness techniques, engaging in physical activities and screening timings are useful to control smart phone addiction conclusively the need for a balanced approach to technology use to promote healthy habits and balanced daily life routine reduce the negative consequences of smart phone addiction and related adolescents health concerns.

REFERENCES

- Bhanderi, Dinesh, J. & Pandya, Yogita, P. & Sharma, Deepak. (2021) Smart phone use and its addiction among Adolescents in the age group of 16-19 years. *Indian Journal of community Medicine*.46. 88. 10. 4103.
- Chaudhary, Pamela. (2018) A study on impact of smart phone addiction on academic performance. *International Journal of Engineering & Technology*. 7. 50. 10. 14419.
- Gupta, A.K.S.K., Singh, P.S.B., Krishak, A.K.S. (2024) smart phone addiction: impact on health and well-being. *Int J Community Med Public Health*; 11:2100-6.
- Mukhdoomi, A., Farooqi, A. (2020) The impact of smart phone addiction on academic performance of higher education student's mental health: MPRA, 2020; 104485.
- Patel, S.A. & Puri, P.A. (2017) A Study of Mobile Phone Addiction and Mental Health among Adolescent Girls Studying in Various Streams. *International journals of Indian psychology*, Vol.5(1); DIP:18.01.099.
- Rezwan, AK.M., Yasmin, N. (2023) Study on smart phone addiction among university students: a cross – sectional survey-based study. *World J Adv Res Rev*; 18 (03): 1063-70.
- Umarji, M.H. & Patel, B.K. (2024) A study of smart phone addiction among College students. *International Journal of Indian psychology*, 12 (3), 3163 – 3169.
- Vandana Goswami & Dr. Divya Rani Singh. (2016). Impact of mobile phone addiction on adolescent's life: A literature review. *International Journal of Home Science*; 2 (1): 69 – 74.
- Wang, R., Yang, R., Ran, H. et.al. (2022) Mobile phone addiction and non-suicidal self-injury among adolescents in china. *Peer*; 10: 4057.
- Zhang, Y. Yang, Q., Wang, H. (2024) Effect of online game policy on smart phone game play time, addiction, and emotion in rural adolescent of china. *VL23, BMC Psychiatry*. 23: 814.

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Conflict of Interest

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