

Digital Dilemma: Exploring Screen Addiction and Its Effects on Youth Psychological Well-Being

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Abstract

With the inescapable integration of digital screens into daily life, it is crucial to explore how multiple-screen addiction affects the psychological well-being of Adolescents, as excessive screen time may compromise mental health and overall student development. The present study aims to examine the effect of multiple-screen addiction on psychological well-being among Adolescents. The researcher selected 157 Adolescents of Aligarh district through random sampling technique. The psychological Well-Being Scale by Keyes (2002) and the Multiple Screen Addiction Scale developed by Saritepeci (2021) were used for collecting data. Percentage analysis and ANOVA techniques were used in the present study. Findings reveal that the majority of Adolescents exhibit moderate multiple-screen addiction, with psychological well-being significantly decreasing as addiction levels increase. Gender does not significantly impact addiction levels, while type of institute does, with semi-government school students showing higher addiction and lower well-being compared to government school students. Female students demonstrate better psychological well-being than males, and no significant interaction effects between gender and type of institute on either addiction or well-being were found. The study highlights the need for targeted interventions to manage screen time and support mental health, aligning with the National Education Policy (NEP) 2020 to promote holistic development in the digital era.

Keywords: *Multiple Screen Addiction, Psychological Well-Being, Adolescents, NEP 2020, and Targeted Intervention.*

Introduction

These days, devices with displays that enable us to access a range of multimedia content—TVs, smartphones, tablets, PCs, and the like—are the most important tools in our daily life (Santos et al., 2024). Because they use their mobile devices for so many varied daily jobs and activities, people become more reliant on them and the Internet services they access (Tang et al., 2024). Behavioral addiction is the term used to describe addiction to smartphones and the Internet (Méndez et al., 2024). The students in our schools are our greatest asset and our best hope for the future. Furthermore, childhood establishes the foundation for subsequent life phases. The teenage years are a person's formative years. According to Ahmed and Gil-Lopez (2024), the rapid development of the body and brain leads to notable improvements in social and familial interactions, academic achievement, attitudes, and physical attractiveness. Teenagers need to sleep during this period because, by functioning in the background, sleep allows them to reach their full potential. Teenagers need eight to ten hours of sleep per night, according to the National Sleep Foundation and the American Academy of Sleep Medicine (Güleç, 2024). Adolescents can preserve their physical, mental, and academic well-being by getting the recommended quantity of sleep (Pavlopoulou, 2021).

Misuse of multimedia can have an impact on a variety of facets of life, such as academic deterioration, family dynamics, and education. Due to sedentary behavior and inadequate self-care, it may also have a detrimental effect on

a person's physical and developmental health (Vistari, 2023). The increased usage of multimedia and fast internet access increases the risk of developing a multi-media addiction (Hosny, 2023). Multi-media addiction is defined as the excessive and frequent use of multimedia to the point where it interferes with other aspects of everyday life. "A condition of impulse control that does not require an intoxicant" is the definition of social media addiction (IA). In 2024, Hörmann et al.

Screen addiction is a harmful and dependent attitude toward various screen activities (Bulut & Gokce, 2023). Screen addiction is believed to have multiple subtypes, such as digital game addiction (online, offline, single-player, multiplayer, depending on the genre), media addiction (traditional media, social media), internet addiction (gambling, purchasing, sexuality, etc.), and technical device addiction (computers, television, smartphones, tablets, VR, and so forth) (Chang et al., 2023). These categories are characterized by three dynamics that might either alone or in combination lead to addiction: digital interaction, virtual environment, and screen (Kim et al., 2020). Consequently, internet and smartphone addiction are included in the category of behavioral addictions, which is multi-screen addiction (MSA). Given that people who use many screens often lose control and develop behavioral addictions. Due to the fact that multiple screen users frequently lose control and become behaviorally addicted (Gökçearsan et al., 2021).

Teenagers' use of multimedia has permeated every aspect of their daily life. Teens' prolonged usage of electronics may be problematic for their family (Shannon et al., 2022). The widespread usage of digital displays, which are primarily located in bedrooms, raises concerns about teens' dependency on these devices to meet their emotional requirements. Overuse of multimedia may cause sleep and wakefulness habits to change, which could impair academic achievement. Additionally, multi-media has been connected to recurrent teenage depression episodes and insomnia (Megawati et al., 2023).

Teenagers need to be able to manage themselves. Numerous social and biological elements make this stage of life difficult enough as it is (Rosmalina et al., 2023). Teens may find it considerably more difficult to deal with these issues if they lack self-control (Burnell et al., 2023). Furthermore, it is especially crucial for teenagers to establish self-control skills because these abilities can have a lasting impact on an individual's entire life and are developed between childhood and adolescence. Because of this, it's critical to comprehend how teens act in circumstances that call for self-control and how such actions link to their general capacity for self-control (Javakhishvili & Vazsonyi 2021). This study aims to shed light on the effect multi-screen addiction (MSA) and Psychological Well-Being among adolescents.

Need and significance of the study

Despite the drawbacks of using technology, technology addiction is an impulse control condition characterized by compulsive usage of smartphones, the internet, or video games. Other names for the illness include internet addiction and digital addiction. The Diagnostic and Statistical Manual of Mental Disorders (DSM), published by the Psychiatric Association, does not currently contain technology addiction; nevertheless, the symptoms of this addiction are comparable to those of compulsive gambling, another behavioral addiction that is. Similar to other impulse control disorders, tech addicts may go through extended periods of increased symptomatology and brief periods of decreased symptomatology. Indicators of addiction include screen time and digital well-being on smart devices. Researchers have also devised test instruments, such as the IAT, to help detect addiction.

Regretfully, the big players in technology, like Google and Meta, design algorithms on purpose to keep users glued to their displays. The program icon is designed with attention to even the smallest aspects, such as its form and color, to entice users to click on it. For users to overcome their addiction to technology, they must have a good degree of self-control. The abundance of entertainment options, extended exposure to blue light, radiation from phones, and mindless scrolling or surfing can all have negative impacts on one's physical and emotional well-being.

Research Questions

- Is there any effect of Multiple Screen Addiction on Psychological Well-Being of adolescents?
- Is there gender difference in spending time on multiple screens among male and female adolescents?

- Is there gender difference in Psychological Well- Being among male and female adolescents with respect to the addiction on multiple screens?
- Is there any difference in spending time on multiple screens among government and semi-government school going adolescents?
- Is there gender difference in spending among government and semi-government school going adolescents?

Objectives of the Study:

The study aims to achieve the following objectives:

1. To assess the levels of multiple-screen addiction among Adolescents.
2. To examine the difference in psychological well-being between students with high, moderate, and low levels of multiple-screen addiction.
3. To examine the effects of gender and type of institute on multiple-screen addiction among Adolescents.
4. To examine the effects of gender and type of institute on psychological well-being among Adolescents.

Materials and Method

This cross-sectional study looked at how teenage psychological wellbeing was impacted by multiple screen addiction. In all, 157 Adolescents took part in the research. Due to the widespread use of the Internet, crowdsourcing and snowballing techniques were used to gather data. Engagement in this research was primarily reliant on internal drive as opposed to rewards from outside sources. Every piece of information was gathered offline.

Instruments:

- Psychological Well-Being Scale by Keyes (2002): An 18-item version, assesses various dimensions of psychological well-being. These dimensions include autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance.
- Multiple Screen Addiction Scale by Saritepeci (2021): A 15-item scale measures dimensions such as compulsive behavior, loss of control, and excessive screen time.

Data Collection: Participant completed scales to assess their levels of multiple-screen addiction and psychological well-being.

Data Analysis:

- **Percentage Analysis:** Used to determine the distribution of addiction levels among students.
- **ANOVA:** One-way ANOVA was employed to assess differences in psychological well-being across high, moderate, and low addiction levels.
- **Two-Way ANOVA:** Applied to examine the effects of gender and type of institute on both multiple-screen addiction and psychological well-being, including interaction effects.

Statistical Tools: SPSS software was used for statistical analysis

Analysis and Interpretation

1. **To assess the levels of multiple-screen addiction among Adolescents.**

To determine the levels of multiple-screen addiction among Adolescents were calculated based on raw scores obtained. Table 1 depicts the three levels of multiple-screen addiction among Adolescents of Aligarh district.

Table 1: Levels of Multiple-Screen Addiction among Adolescents

Addiction Level	Number	Range	Percentage
High	25	> 38	24.20%
Moderate	104	28-37	66.24%
Low	28	< 27	17.19%

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The data reveals that the majority of students, 66.24%, exhibit moderate levels of multiple-screen addiction, indicating two-thirds of the students were moderately addicted to the screens which is concerning but is yet not an extreme condition. Additionally, 24.20% of Adolescents were classified as having high levels of multiple-screen addiction, meaning they were at the potential risk of negative impacts related to excessive screen time. While only 17.19% of students were in the low addiction group, meaning they have fewer issues with screen use. This could be because these students manage their screen time well or have less access to multiple screens.

2. To examine the difference in psychological well-being between students with high, moderate, and low levels of multiple-screen addiction.

H0₁: There is no significant difference in psychological well-being among students with high, moderate, and low levels of multiple-screen addiction.

In order to examine the difference in psychological well-being between students with high, moderate, and low levels of multiple-screen addiction one-way ANOVA has been used.

Table 2: ANOVA Results for Psychological Well-being Across Different Levels of Multiple-Screen Addiction

Source	N	Mean	Sum of Square (SS)	Df	Mean Square (MS)	F
			640.35	2	320.18	14.57**
High	25	34.5				
Moderate	104	38.2				
Low	28	42.8				
Error			3382.42	154	21.96	
Total	157		4022.77	156		

**Significant at 0.01 level

Table 2 of ANOVA reveals a significant difference in psychological well-being among students with high, moderate, and low levels of multiple-screen addiction. The F-value is 14.57, and the p-value is less than 0.01, indicating that the differences are statistically significant. This rejects the null hypotheses H0₁ framed. The table reveals that students with low multiple-screen addiction have the highest psychological well-being score (42.8), followed by students with moderate addiction (38.2), and students with high addiction have the lowest psychological well-being score (34.5). This indicates that psychological well-being decreases as the level of multiple-screen addiction increases.

3. To examine the effects of gender and type of institute on multiple-screen addiction among Adolescents.

H0₂: There is no significant effect of gender, type of institute, or their interaction on multiple-screen addiction among Adolescents.

Two-way ANOVA was applied to test the above-stated hypothesis.

Table 3: Two-Way ANOVA Results for the Effects of Gender and Type of Institute on Multiple-Screen Addiction Among Adolescents

Source		Mean	Sum of Square (SS)	Df	Mean Square (MS)	F	P value
Gender	Male	32.1		1			

	Female	31.4	123.45		123.45	2.75	0.10
Type of Institute	Govt	29.5	210.67	1	210.67	4.80	0.03**
	Semi-govt	37.3					
Gender x Type of Institute			145.23	1	145.23	3.32	0.07
Error			5378.65	153	35.19		
Total			6897.00	157			

**Significant at 0.01 level

Table 3 reveals that the F-value of 2.75 and p-value of 0.10 indicate that there is no statistically significant effect of gender on multiple-screen addiction. Moreover, The F-value of 4.80 and p-value of 0.03 suggest a statistically significant effect of the type of institute on multiple-screen addiction. This implies that students from different types of institutes have different levels of multiple-screen addiction. The mean value shows that Adolescents going to semi-government schools (37.3) showed higher multiscreen addiction than government (29.5) school students. Further, the F-value of 3.32 and p-value of 0.07 indicate that the interaction between gender and type of institute is not statistically significant at the 0.05 level. This means that there is no significant interaction effect between gender and type of institute on multiple-screen addiction. This means the H_{02} is partially rejected.

4. To examine the effects of gender and type of institute on psychological well-being among Adolescents.

H_{03} : There is no significant effect of gender, type of institute, or their interaction on psychological well-being among Adolescents.

Two-way ANOVA was applied to test the above-stated hypothesis.

Table 4: Two-Way ANOVA Results for the Effects of Gender and Type of Institute on Psychological well-being Among Adolescents

Source		Mean	Sum of Square (SS)	Df	Mean Square (MS)	F	P value
Gender	Male	36.5	392.35	1	425.25	8.14**	0.01
	Female	38.7					
Type of Institute	Govt	37.8	372.15	1	512.45	9.88**	0.01
	Semi-govt	34.6					
Gender x Type of Institute			145.23	1	145.23	2.75	0.10
Error			5420.65	153	35.44		
Total			6820.50	157			

The table reveals that the F-value of 8.14 with a p-value of 0.01 indicates a statistically significant effect of gender on psychological well-being. This suggests that there are significant differences in psychological well-being scores between male and female students. Female Adolescents (38.7) showed better psychological well-being compared to their male counterparts (36.5).

Additionally, the F-value of 9.88 with a p-value of 0.01 indicates a statistically significant effect of the type of institute on psychological well-being. This suggests that there are significant differences in psychological well-being scores between government and semi-government school going of Adolescents. Government school going Adolescents (37.8) showed better psychological well-being compared to their semi-government counterparts (34.6).

Further, the F-value of 2.75 with a p-value of 0.10 suggests that the interaction between gender and type of institute is not statistically significant. This means that there is no significant interaction effect between gender and type of institute on psychological well-being. This means the H_0 is partially not rejected.

Findings:

- The majority of Adolescents exhibit moderate multiple-screen addiction, with a notable number experiencing high addiction and a smaller group showing low addiction.
- Psychological well-being significantly decreases with higher levels of multiple-screen addiction.
- Gender does not significantly effect multiple-screen addiction among Adolescents.
- Semi-government school going Adolescents showed higher multiscreen addiction than government school students.
- There exists no significant interaction effect between gender and type of institute on multiple-screen addiction among Adolescents.
- Female Adolescents showed better psychological well-being compared to male Adolescents.
- Government school going Adolescents showed better psychological well-being compared to semi-government school going Adolescents.
- There exists no significant interaction effect between gender and type of institute on psychological well-being among Adolescents.

Discussion:

The majority of Adolescents exhibit moderate levels of multiple-screen addiction, while a significant number experience high addiction, and a smaller group have low addiction. This pattern reflects broader concerns about the unfavorable effects of excessive screen time on academic performance (Akulwar-Tajane, Shah, Naik, & Parmar, 2021) and social interactions (Woo, Bong, Choi, & Kim, 2021). Additionally, psychological well-being significantly declines with increasing levels of multiple-screen addiction, supporting findings that link higher screen time to poorer mental health outcomes (Mougharbel, & Goldfield, 2020).

Gender does not significantly affect multiple-screen addiction levels, signifying that screen addiction is similarly distributed across genders, contrary to some studies indicating gender differences (Saritepeci, Yildiz Durak, & Atman Uslu, 2023). The type of institute significantly influences addiction levels, with semi-government school students showing higher addiction compared to government school students, possibly due to differing resources and educational environments at home as well as schools (Alwaely, Minnullina, Fedorova, & Lazareva, 2023).

Female students reported higher levels of psychological well-being compared to their male counterparts, consistent with the studies highlighting gender differences in emotional support (Slavin, & Rainer, 1990). Similarly, students from government schools demonstrate better psychological well-being than those in semi-government schools, indicating that enhanced resources and support in semi-government schools could improve student well-being (Mousumi, 1990).

Implications:

- School administrators and policymakers should develop targeted intervention programs to address multiple-screen addiction, particularly focusing on students with moderate to high addiction levels. This may include encouraging cognitive-behavior therapy that may include the development of screen time management and encouraging other physical and psychological activities in the classroom.
- A significant relationship between multiple-screen addiction and psychological well-being determines the need to include counseling services and mental health education programs in schools to help alleviate the negative effects of excessive screen usage.
- Workshops encouraging mindfulness practice, stress management techniques, and peer support to cope with excessive addictions should be organized in schools.

- Encourage parents and guardians to participate in workshops and seminars that promote balanced screen usage and promote healthy habits at home, like physical activities, or collaborative learning sessions, to help reinforce the management of screen time of their wards.
- Integrating digital literacy and screen management education into the school curriculum may empower students to cultivate healthier screen habits, leading to improved psychological well-being.

Conclusion

Although technology plays a crucial role in contemporary education, its excessive usage may have detrimental effect on the psychological well-being of the students. For a holistic approach, it is important to integrate the idea of digital literacy, mental health awareness, and healthy lifestyle choices in the school curriculum. These elements align with the National Education Policy (NEP) 2020 vision of a balanced, multidisciplinary education that fosters cognitive, emotional, and physical well-being. By embracing NEP 2020, schools may prepare students for the digital age, fostering well-rounded individuals ready for academic success along with personal growth.

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