

Research Paper

Impact of Screen Time on Personal Adjustment of First-Year Engineering Students

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ABSTRACT

The surge of digital technology has led to a sizeable increase in screen time among college students, especially the students opting for professional courses such as engineering. The adaptation from school to college represents a formative era characterized by academic pressure, social networking, and lifestyle modifications. This phase often coincides with an alarming use of digital devices for academic, social, and recreational purposes. While technology enhances access to information and connectivity, excessive screen exposure has raised concerns regarding its impact on students' personal adjustment and mental health. The present study investigated the effect of screen time on personal adjustment among first-year engineering students. A comparative ex post facto research design was employed with a purposive sample of 60 first-year engineering students from Chhatrapati Sambhaji Nagar district. Participants were classified into two groups based on daily screen usage: more than five hours and less than five hours. The Personal Adjustment Inventory by C. G. Deshpande was administered. Data were analyzed using mean, standard deviation, and independent samples t-test. Results revealed a statistically significant difference between the two groups, indicating poorer adjustment among students with excessive screen time. The findings highlight the need for institutional interventions targeting digital balance and psychological well-being.

Keywords: *Screen Time, Personal Adjustment, Engineering Students, Digital Well-being*

In the current era, screens are a part and parcel of our life, especially for university students. First-year engineering students undergo transition from school life to the university life. Research suggests that such students are vulnerable to emotions, academic pressure and social networking pertinent, particularly for their future. This period of change is frequently convergent with vulnerability to all the digital devices conveniently handled even for trifles. Lisa Thomas in her article suggests that overuse of the digital technology increases stress in students during this phase.

Personal adjustment alludes to, 'One's potential of adjusting constructively to new environments especially to its dictums and mandates'. For first-year engineering students,

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adjustment is not only acquisition of knowledge, but it encompasses holistic development. The pressure to perform in academics, combined with nostalgia, and uncertainty regarding future career opportunities often contributes to stress, anxiety, and emotional dysregulation.

Research carried out universally suggests that there is a link between digital usage and socio-emotional well-being which affects personal adjustment. High and low indulgence both affect socio-emotional well-being negatively whereas moderate usage has beneficial results.

Research papers and systematic reviews persistently suggest direct proportional link between screen time, reel watching and feeling of loneliness and depression and reduced attention span. It is observed that excessive usage of screen leads to social isolation and anxiety and depression.

Although, temporary emotional relief may be sought by the use of screens, overreliance on screens can hinder or delay the formulation of adaptive coping skills essential for long-term psychological resilience. (Nakshine, V.S., Thute, P., Khatib, M. N., & Sarkar, B.2022)

Comprehensively, prolonged screen exposure piles up various ailments like eye strain, musculoskeletal discomfort, sedentary behavior, and sleep disturbances due to nocturnal screen usage which in turn causes fatigue, low immunity, and derangement in the cognitive functioning, further straining the adjustment process.

Overreliance on the screens may thus result in reduced in person social interaction, leading to weakened emotional bonding and fewer formation of meaningful peer relationships. Over-dependence on virtual communication can lead to social withdrawal, procrastination, and ineffective time management, hampering both academic excellence and personal development.

While a hard-core truth, that digital tools are irreplaceable and evitable for modern engineering education, immoderate and unregulated screen usage may pose harm to students' mental health and coping abilities. Comprehending this association, it is important to encourage healthy digital habits in order to nurture a happy and meaningful college era.

REVIEW OF LITERATURE

The increasing prevalence of digital technology has generated extensive research examining the psychological, physical, and academic consequences of screen time. Studies consistently indicate that excessive screen exposure is associated with increased stress, anxiety, and depressive symptoms among adolescents and young adults.

Twenge and Campbell (2018) reported that higher screen usage, especially for non-academic purposes, is linked to reduced psychological well-being and disrupted sleep patterns. Emotional adjustment among college students is particularly vulnerable to excessive social media engagement, which promotes social comparison, fear of missing out (FOMO), and negative self-evaluation (Keles et al., 2020).

From a physical health standpoint, prolonged screen time has been associated with digital eye strain, sedentary lifestyles, and sleep disturbances. Hale and Guan (2015) found that screen exposure before bedtime delays sleep onset and reduces sleep quality, adversely affecting cognitive functioning and academic performance.

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Behavioral consequences of excessive screen use include social withdrawal, reduced real-life interpersonal communication, and poor time management. Przybylski and Weinstein (2017) emphasized that excessive digital engagement may interfere with the development of social support networks essential for college adjustment.

Lua et al. (2023) highlighted that increased screen time negatively affects sleep quality and behavioral functioning among adolescents. Similarly, Chaput (2017) reported a positive association between screen time and obesity, which indirectly impacts self-esteem and psychological well-being.

Academic performance is also influenced by screen habits. Junco (2012) demonstrated that multitasking on digital devices during lectures is associated with poorer academic outcomes. Paulich et al. (2021) observed a weak negative association between screen time and internalizing symptoms, indicating nuanced effects depending on usage patterns.

Despite extensive research, limited studies have specifically focused on first-year engineering students, a population exposed to both high academic demands and substantial screen usage. This gap underscores the relevance of the present investigation.

Need for the Study

First-year engineering students experience considerable academic stress, change in their environment, and their modus vivendi impacting their personal adjustment and in turn their mental health. Over indulgence in screens go hand in hand. However, there is a deficit in the scientific backing, regarding the link of impact of screen time on adjustment and mental well-being among this group. The present study seeks to bridge the gap and provide acumen that may direct institutional policies and student support programs.

Statement of the Problem

To study the effect of screen time on personal adjustment among first-year engineering students.

Objective

To examine the effect of screen time on personal adjustment among first-year engineering students.

Hypothesis

There is a significant effect of screen time on personal adjustment among first-year engineering students.

METHODOLOGY

Table 1 Distribution of Participants Based on Gender and Screen Time

Gender	Screen Time > 5 Hours	Screen Time < 5 Hours	Total
Girls	15	15	30
Boys	15	15	30

Research Design: Comparative ex post facto research design.

Sample: The purposive sample consisted of 60 first-year engineering students from Chhatrapati Sambhaji Nagar district. The sample was divided into two equal groups based on daily screen usage:

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- More than 5 hours (n = 30; 15 boys and 15 girls)
- Less than 5 hours (n = 30; 15 boys and 15 girls)

Variables:

- Independent Variable: Screen time
- Dependent Variable: Personal adjustment

Tool:

Personal Adjustment Inventory by C. G. Deshpande, consisting of 20 items rated on a three-point scale. The inventory has a reliability coefficient of .81 and measures maladjustment and neurotic tendencies.

Procedure:

Participants were informed about the purpose of the study, confidentiality was ensured, and data were collected using a paper-based questionnaire over two weeks.

Statistical Analysis: Mean, standard deviation, and independent samples *t*-test were used.

Table 2 Comparison of Personal Adjustment Scores Based on Screen Time

Screen Time	N	Mean	SD	T	df	p
More than 5 hours	30	28.83	5.71	13.70	58	< .001
Less than 5 hours	30	10.77	4.41			

Note. Higher scores indicate poorer personal adjustment and mental health.

RESULT

A statistically significant difference was observed between students with screen time exceeding five hours and those with less than five hours, $t(58) = 13.70, p < .001$, indicating poorer adjustment and mental health among high screen-time users.

DISCUSSION

The findings reveal that excessive screen time adversely affects personal adjustment ultimately mental health among first-year engineering students. As per earlier studies personal adjustment and mental health goes hand in hand, therefore a well-adjusted person is mentally healthy while maladjusted person is mentally unhealthy, thus students mental health is interpreted with their adjustment. Students with higher screen exposure demonstrated greater difficulty in emotional regulation, academic engagement, and social integration. These findings are consistent with prior research linking excessive screen use with stress, anxiety, sleep disturbances, and reduced coping capacity.

The results support the Displacement Hypothesis, which posits that excessive digital engagement replaces health-promoting activities such as physical exercise, social interaction, and adequate sleep. Social Comparison Theory further explains how exposure to idealized online content may contribute to emotional distress and maladaptive adjustment.

CONCLUSION

The study concludes that excessive screen time significantly impairs personal adjustment and mental health among first-year engineering students. Promoting balanced digital habits through awareness programs, counseling services, and institutional support is essential to enhance students' psychological well-being and academic success.

Suggestions

1. Limit non-academic screen time among first-year students.
2. Conduct digital well-being awareness programs.
3. Encourage offline social and physical activities.
4. Promote interactive classroom engagement.
5. Strengthen counseling services for screen-related adjustment issues.

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Conflict of Interest

The author(s) declared no conflict of interest.

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