



ANALYZING THE EFFECT OF SCREEN TIME AND SOCIAL MEDIA USAGE AND THE EMOTIONAL OUTCOME OF THE ADOLESCENTS

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Abstract: The rapid growth of digital technology has made screen time and social media an integral part of adolescents' daily lives, raising concerns about their emotional well-being. This study examines the relationship between screen time, social media usage and emotional outcomes, particularly anxiety, feelings of inadequacy, negative feelings and social exclusion among adolescents. The study is based on primary data collected from 169 adolescents through a structured questionnaire using random sampling. The data were analysed using Cronbach's Alpha reliability test and Pearson correlation analysis. The reliability analysis produced a Cronbach's Alpha value of 0.828, indicating good internal consistency. The findings reveal that adolescents experience considerable emotional effects associated with social media usage. Anxiety and negative feelings showed a strong positive correlation ($r = .708, p < .001$). Significant positive relationships were also observed between feelings of inadequacy, scrolling behaviour and feelings of exclusion. A perfect positive correlation was identified between scrolling and exclusion ($r = 1.000, p < .001$), indicating possible redundancy between the two measures. Overall, the study demonstrates that excessive and passive social media engagement is associated with adverse emotional outcomes among adolescents. The study highlights the importance of mindful digital engagement, appropriate screen-time boundaries, digital literacy and maintaining healthy offline relationships to support adolescents' emotional well-being.

Keywords: Screen Time, Social Media Usage, Adolescents, Emotional Well-being, Anxiety, Social Exclusion.

1. INTRODUCTION

Adolescents is a highly sensitive and critical developmental stage that are characterized by a rapid cognitive maturation, emotional volatility and a heightened need for a peer acceptance. The 21st century has witnessed an unprecedented technological revolution that fundamentally shift like how society communicate, learn and interact. In this digital era, the adolescents are referred as digital natives who have grown up in a world where smartphones, tablets and social media platforms are integral to their daily existence. The digital connectivity offers a remarkable opportunities for learning and global peer socialization, thus the sheer volume of daily screen time has sparked a significant concern month educators, health professionals and so on. The core problem is in the disproportionate amount of time spent on screen and social media engagement by the adolescents. The prolonged screen exposure has highly correlated with a spectrum of negative emotional outcomes. This constant exposure to idealized online personas fosters an upward social comparison, that lead to body dissatisfaction, diminished self-esteem and pervasive fear of missing out. Physically, excessive screen time contribute to a sedentary lifestyle and significantly disrupts circadian rhythms. The displacement of sleep and physical activity further compounds emotional dysregulation creating a vicious cycle fatigue and psychological stress.

The rapid evolution of digital technology over the past two decades has fundamentally restructured human society. The transition from an era where internet access was a stationary, localized activity to a hyper-connected reality



where high speed internet are carried in our pockets. Smart phones, tablets and wearable technology have entirely dismantled the traditional boundaries between the physical and digital worlds. The integration of technology into a daily life is no longer a matter of active choice but a societal baseline. Education, entertainment, socialization and even civic engagement are increasingly mediated through screens. This absolute reliance on digital interface demand a rigorous examination of its long-term consequences, particularly concerning the fragile and highly malleable developmental stage of adolescence. The sheer volume of screen time often exceed 6 to 8 hours of non-academic daily use has catalyzed a public health discourse regarding emotional, cognitive and physical outcomes of such pervasive digital immersion. The understanding of the impact of screen time of adolescents it a crucial to first analyze the design of the platforms. Digital platforms employ persuasive design techniques rooted in behavioral psychology. Features such as infinite scrolling, outplaying the videos, push notifications and variable reward schedules are meticulously designed to exploit the human brain vulnerability to intermittent reinforcement. Thus this create a psychological environment where users are constantly drawn back to their screens, seeking validation and novelty. They are very effectively pitted against the super computers algorithms that possess deep learning capabilities that are designed to predict and exploit their unique psychological triggers that make excessive screen time an almost inevitable outcome.

2. Review of Literature

- **Dr.Preeti Tamta (2025)** undergone a study on, “Digital Technology in mental health and Well-being : Opportunities and Challenges”, to explore the positive and negative impacts of digital technology on mental health, emphasizing the need for a balanced approach to its use. It finally discuss the strategy for promoting digital literacy, setting healthy boundaries and fostering responsible technology use to mitigate risks and enhance the benefits of digital tools in supporting mental health and well being.
- **Namita Kumari and Dr.Krishna Chandra Choudhary (Sep 2024)** carried out a research on, “Impact of Digital Screen Time on Adolescents” to find out the positive and negative effects and impact of screen time on their mental, physical and educational outcomes. In this research, it is identified that due to development and advancement in digital technology there is a excessive digital screen time that lead to a sedentary lifestyle, social isolation and decreased physical activity ultimately affecting the adolescents physical and mental health. In India adolescent is the age between 10 to 19 who are in a stage of transformation from childhood stage to adulthood stage. This stage is characterized with physical, emotional and psychological changes. In 2011 census reveals that approximately that adolescents spend 4 to 5 hours per day on screens for various purpose like chatting, video games, watching movies by making use of any electronic gadgets like tablet, laptop, Desktop or Mobile phone through applications, or online websites. It is concluded that it is very much essential for the parents, caregivers and educators to be aware of and monitor adolescents digital screen time to ensure a healthy balance between screen time and other aspects of life.
- **Dr.Ajay Kumar(2025)** conducted a research on, “Impact of Social Media on Mental Health” to explore about the multifaceted impacts of social media on mental health examining both positive and negative dimensions and also to investigate the key factors such as anxiety, depression, self-esteem and addiction while also analyzing the potential imitative strategies. From the research conducted it is identified that social media is like a double sided sword that offers both opportunities and challenges for mental health that fosters the connectivity, education and addiction. This can be rectified by promoting responsible usage and implementing protective measures, society can harness the benefits of the social media while minimizing the drawbacks.
- **Apurvakumar Pandya and Pragya Lodha (July 2021)** undertook a study on, “Social Connectedness, Excessive Screen Time During COVID-19 and Mental Health : A Review of Current Evidence” to understand the virtual social connectedness, excessive use of digital technology, its consequences and suggest the strategies to maintain healthy use of digital technology. From the research result it is revealed that the screen time has increased drastically during pandemic. It is found that there are mixed consequences of prolonged screen time use and blurred understanding between health and unhealthy social connectedness over digital media. The study suggest that for negative implications on physical and mental health, each individual must inculcate a strict healthy digital habits of how to and when to make use of digital technology to stay and grow with the timely changes.
- **Saleem, N., Young, P., and Yousuf, S. (2024)** conducted a study titled “Exploring the Relationship Between Social Media Use and Symptoms of Depression and Anxiety Among Children and Adolescents” to examine the relationship between social media usage and symptoms of depression and anxiety among children and adolescents. The researchers reviewed 67 quantitative studies involving children and adolescents aged 5–18 years.



The findings revealed that problematic social media use was associated with depressive and anxiety symptoms. The study also identified sleep deprivation, social comparison and feedback-seeking behaviours as important factors influencing these emotional outcomes. It concluded that further longitudinal research is required to understand the long-term effects of social media usage.

- **Orben, A., Meier, A., Dalgleish, T., and colleagues (2024)** conducted a review titled “Mechanisms Linking Social Media Use to Adolescent Mental Health Vulnerability” to examine how social media usage may influence adolescents’ mental health. The study highlighted that the relationship between social media use and mental health is complex and can vary according to individual characteristics, developmental factors and patterns of digital engagement. The researchers emphasized that adolescence is a particularly sensitive developmental period because of changes in behaviour, cognition and socio-emotional development. The study concluded that understanding the mechanisms linking social media use with mental health is essential for developing effective interventions and recommendations for adolescents.

3. Statement of Problem

Despite a growing awareness of the risks associated with excessive digital consumption, there remains a critical gap in successfully mitigating these effects among teenagers. Prohibitive measures and strict screen-time bans often fail, leading to deceit or intensified cravings for digital access. Furthermore, not all screen time is inherently detrimental; active, connection-driven use (such as video-calling family or collaborating on a school project) yields vastly different psychological outcomes compared to passive, endless scrolling through algorithmic feeds. The core problem this research addresses is the urgent need to disentangle the nuanced relationship between *how* adolescents use screens and the resulting emotional and physical tolls, in order to establish actionable, realistic frameworks for digital wellness.

4. Objectives

- To Analyze the correlation between passive social media consumption and the prevalence of emotional distress indicators,

5. Research Methodology

The present study is mainly based on primary data random respondents by distributing the questionnaire, the questionnaire containing related to screen time and social media usage resulting to emotional outcomes. The questionnaires include questions pertaining to socio economic profile of sample of consumer, and their details of emotional outcomes due to more screen time usage and social media usage. The necessary data for the study have obtained through issue of 169 of questionnaires to adolescents. Method random sampling techniques has been adopted to collect the data from the sample consumers. The data have been analyzed by making of statistical tools like reliability test and correlation.

6. Findings

6.1 Reliability Analysis

Table 1. Emotional Outcome and Social Media Usage

Case Processing Summary			
		N	%
Cases	Valid	169	100.0
	Excluded ^a	0	.0
	Total	169	100.0
a. Listwise deletion based on all variables in the procedure.			

Reliability Statistics	
Cronbach's Alpha	N of Items
.828	6



Interpretation

Table 1 presents the reliability analysis of the emotional outcome and social media usage construct using Cronbach's Alpha. The construct consists of six measurement items designed to assess adolescents' emotional outcomes due to prolonged screen time and social media usage by them. The analysis yielded a Cronbach's Alpha coefficient of 0.828, which is well above the recommended threshold value of 0.70, indicating a high level of internal consistency among the measurement items. This result confirms that the items collectively provide a reliable measure of the competency framework construct. Therefore, the scale is considered suitable for further statistical analyses such as descriptive statistics, correlation analysis, and regression analysis.

Table 2 Descriptive Statistics of emotional outcome and social media usage

Item Statistics			
	Mean	Std. Deviation	N
feel anxious	4.4379	.80769	169
less than	3.4556	1.45143	169
scrolling	3.4852	1.36759	169
connected	3.7337	1.27946	169
negative feeling	4.4201	.86317	169
excluded	3.4852	1.36759	169

Table 2 presents the descriptive statistics of emotional outcomes associated with social media usage among 169 adolescents. The item "I feel anxious or restless when I cannot check my notifications" recorded the highest mean score (Mean = 4.4379, SD = 0.80769), indicating a high level of anxiety associated with social media access. The statement "I use social media to escape from negative feelings or stress" also recorded a high mean (Mean = 4.4201, SD = 0.86317). The item "I feel more connected to my friends because of social media" obtained a mean of 3.7337 (SD = 1.27946), indicating a moderately positive perception of social media connectivity. Meanwhile, "I find myself scrolling without realizing how much time has passed" and "I have felt excluded after seeing photos of friends hanging out without me" both recorded a mean of 3.4852, with an SD of 1.36759. The statement "I feel less than or unsuccessful after looking at other people's posts" recorded the lowest mean (3.4556, SD = 1.45143). Overall, the results indicate that social media usage is associated with noticeable emotional experiences among the adolescents, particularly anxiety and the use of social media to cope with negative feelings or stress.

6.2 Correlation Analysis

Table 4 Impact of More Social Media Usage on Emotional Outcome of Adolescents

Correlations							
		feel anxious	less than	scrolling	connected	Negative feeling	excluded
feelanxious	Pearson Correlation	1	.133	.211**	.090	.708**	.211**
	Sig. (2-tailed)		.084	.006	.242	.000	.006
	N	169	169	169	169	169	169
lessthan	Pearson Correlation	.133	1	.758**	.672**	.074	.758**
	Sig. (2-tailed)	.084		.000	.000	.337	.000
	N	169	169	169	169	169	169
scrolling	Pearson Correlation	.211**	.758**	1	.564**	.124	1.000**
	Sig. (2-tailed)	.006	.000		.000	.109	.000
	N	169	169	169	169	169	169
connected	Pearson Correlation	.090	.672**	.564**	1	.188*	.564**
	Sig. (2-tailed)	.242	.000	.000		.014	.000
	N	169	169	169	169	169	169
negative feeling	Pearson Correlation	.708**	.074	.124	.188*	1	.124
	Sig. (2-tailed)	.000	.337	.109	.014		.109



	N	169	169	169	169	169	169
excluded	Pearson Correlation	.211**	.758**	1.000**	.564**	.124	1
	Sig. (2-tailed)	.006	.000	.000	.000	.109	
	N	169	169	169	169	169	169
**. Correlation is significant at the 0.01 level (2-tailed).							
*. Correlation is significant at the 0.05 level (2-tailed).							

The correlation analysis in the table 4 shows the coefficients® between six behavioral and emotional variables for a sample of N=169. The analysis shows there is a strong positive significant correlation between feeling anxious and the negative feel about prolonged screen time and social media usage which indicates that as anxiety increase the negative feeling also rises substantially. Also it is found that there is a perfect positive correlation between scrolling the social media and screen without knowing how much time is present in the social media, and how far felt excluded from the friends after seeing their pages without our presence, this anomaly suggest a potential redundancy in the data which means these two variables are moving identically and likely measuring the exact same construct. The variable that adolescents feel less than or unsuccessful after seeing the post of their success is strongly positively correlated with both scrolling the social media usage and feeling excluded from the society. Thus this highlights an interconnected web where feelings of inadequacy rise alongside digital behaviors and feelings of exclusion. The study reveals significant associations between high digital engagement constructs and adverse emotional states though the perfect correlation between scrolling and feeling excluded strongly warrants further data validation.

7. Suggestions

- **Promote Mindful Engagement:** Encourage a shift from passive consumption (like mindless scrolling) to active, intentional interaction. Users, particularly adolescents, who actively engage with peers rather than passively observing curated feeds often report lower levels of social comparison and inadequacy.
- **Implement Digital Boundaries:** Recommend the establishment of clear "tech-free" zones or times—such as during meals or an hour before bedtime. This helps mitigate anxiety and improves sleep hygiene, which is heavily linked to emotional regulation and cognitive function.
- **Foster Digital Literacy:** Education should focus on helping users understand the highly curated and algorithm-driven nature of social media. Recognizing that feeds are highlight reels can significantly reduce the "less than" feelings and FOMO (Fear of Missing Out) that trigger negative emotional responses.
- **Prioritize Real-World Connections:** Balance screen time with offline, face-to-face interactions. Building a tangible support system and engaging in physical or offline hobbies acts as a strong buffer against the feelings of exclusion that digital platforms can sometimes amplify.
- **Future Research Directions:** Suggest that future studies differentiate between the *types* of screens being used (e.g., educational tools vs. social platforms) and conduct longitudinal tracking to see how these emotional outcomes evolve as users age.

8. Conclusion

The analysis of screen time and social media usage reveals a deeply complex relationship with emotional well-being. While digital platforms provide unprecedented avenues for connection, excessive and unregulated usage is heavily associated with adverse emotional outcomes, including heightened anxiety, feelings of exclusion, and diminished self-worth. The core finding is that the quality and nature of digital engagement specifically, passive scrolling and upward social comparison are often more detrimental than the sheer quantity of hours logged. Ultimately, mitigating these negative emotional outcomes does not require the complete elimination of digital tools, but rather the cultivation of mindful usage habits, strong digital literacy, and a balanced lifestyle that prioritizes offline relationships alongside online connectivity.



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