RELATIONSHIP BETWEEN DIGITAL ANXIETY, DIGITAL STRESS AND DIGITAL WELL-BEING AMONG LATE ADOLESCENTS

Saptarishi Bora

Ph.D Research scholar, Department of Psychology, Annamalai University
Corresponding Author's Mail Id: borarishi66@gmail.com

Dr.R.Neelakandan

Assistant Professor, Department of Psychology, Annamalai University
Mail Id: neejaialm@yahoo.co.in

INTRODUCTION

The rapid evolution of digital technologies has fundamentally transformed how individuals communicate, learn, and interact with the world. Among the most impacted are adolescents, particularly those in the late adolescence stage (ages 17–21), who are not only digital natives but are also navigating crucial developmental transitions in identity, autonomy, and emotional regulation. While digital technologies offer immense opportunities for learning, social connection, and entertainment, they also present a new set of psychological challenges, prominently including digital anxiety, digital stress, and threats to digital well-being.

Digital anxiety refers to the feelings of unease, nervousness, or fear related to the use of digital technologies, often driven by information overload, fear of missing out (FOMO), cyberbullying, or privacy concerns. Similarly, digital stress encompasses the psychological strain or tension resulting from excessive digital engagement, multitasking across devices, and constant connectivity. These experiences are increasingly recognized as significant contributors to mental health issues such as anxiety, sleep disturbances, and reduced academic performance among late adolescents.

Conversely, digital well-being is a concept that captures the balance between the benefits and drawbacks of digital technology use, emphasizing mindful and purposeful interaction with digital tools to enhance, rather than harm, mental and emotional health. Maintaining digital well-being has become essential for adolescents, who often struggle to manage screen time, set boundaries, and prioritize offline relationships and activities.

Despite growing interest in digital mental health, limited research has holistically examined the interplay between digital anxiety, digital stress, and digital well-being in late adolescence. This stage of life is particularly critical as young individuals are developing lifelong habits, coping strategies, and digital literacy skills. Therefore, investigating these relationships can provide valuable insights into how digital environments influence adolescent psychological functioning and can inform educational, parental, and clinical strategies to promote healthier digital habits.

This study aims to explore the relationship between digital anxiety, digital stress, and digital well-being among late adolescents, contributing to the growing body of literature on digital mental health and offering implications for interventions that support adaptive digital engagement during a formative developmental period.

REVIEW OF LITERATURE

The digital revolution has reshaped the developmental experiences of adolescents, with both positive and negative implications for mental health. Researchers have increasingly focused on understanding how digital anxiety, digital stress, and digital well-being intersect during late adolescence, a period marked by critical identity formation, academic pressure, and increased autonomy.

Digital Anxiety

Digital anxiety, often triggered by fear of missing out (FOMO), cyberbullying, and overexposure to online information, has been identified as a growing concern among adolescents (Przybylski et al., 2013). Studies suggest that prolonged digital engagement, especially through social media, heightens the sense of social comparison and performance anxiety (Twenge & Campbell, 2018). This is particularly evident in late adolescents, who are more likely to internalize online interactions and derive self-worth from digital validation (Nesi & Prinstein, 2015). Research by Elhai et al. (2017) has shown a strong association between problematic smartphone use and symptoms of anxiety and depression, indicating that maladaptive digital habits may contribute to emotional distress.

Digital Stress

Digital stress is a multidimensional construct characterized by tension arising from constant notifications, multitasking across platforms, and an inability to disconnect (Hall et al., 2021). Adolescents often report feeling overwhelmed by academic demands communicated through digital platforms, peer pressure on social media, and expectations of instant responses (Reinecke et al., 2017). According to Thomée (2018), the overuse of digital devices is significantly linked to stress-related symptoms, including sleep disruption and cognitive fatigue. A longitudinal study by George and Odgers (2015) further emphasized that digital stress contributes to heightened emotional volatility in adolescents, potentially impairing their ability to focus and cope with offline challenges.

Digital Well-being

Digital well-being refers to the capacity to engage with digital technology in a way that supports mental, emotional, and social health (Livingstone & Helsper, 2007). It is influenced by digital literacy, self-regulation, and conscious usage patterns. Orben et al. (2019) argue that balanced screen time, coupled with digital mindfulness, enhances adolescents' resilience and promotes emotional stability. Research indicates that promoting digital well-being through interventions such as digital detox, screen-time awareness, and emotional self-regulation can mitigate the adverse effects of digital anxiety and stress (Keles et al., 2020). Furthermore, Rideout and Robb (2018) found that adolescents who practiced healthy digital habits reported better sleep, more positive moods, and improved academic performance.

Although each construct has been studied individually, emerging research highlights their interconnectedness. For instance, digital anxiety and digital stress are often reciprocally related, with higher stress levels exacerbating anxiety symptoms and vice versa (Frison & Eggermont, 2015). Both factors, in turn, negatively impact digital well-being, creating a cycle of maladaptive digital engagement. Late adolescents are particularly vulnerable due to their increased academic workload, social expectations, and identity development challenges (Uhls et al., 2017). There is a growing need to investigate these dynamics holistically to inform interventions that support digital mental health.

RESEARCH GAP

Despite growing research on digital technology use, there is limited understanding of how digital anxiety and digital stress specifically impact digital well-being among late adolescents. Most studies do not treat these constructs separately, and few focus on this age group, especially within the Indian context. Additionally, predictive relationships among these variables remain underexplored. This study addresses these gaps by examining the distinct effects of digital anxiety and stress on digital well-being in late adolescents.

METHODOLOGY

Research Design

This study employed a **quantitative, cross-sectional correlational research design** to examine the relationship between digital anxiety, digital stress, and digital well-being among late adolescents. This design was chosen to identify and analyze the strength and direction of associations among the key variables within a defined population at a single point in time.

Objectives of the Study

1. To assess the level of digital anxiety, digital stress and digital well-being among late adolescents.
2. To examine the relationship between digital anxiety and digital well-being among late adolescents.
3. To examine the relationship between digital stress and digital well-being among late adolescents.
4. To determine the predictive influence of digital anxiety and digital stress on digital well-being.

Hypotheses of the Study

H_1: There will be a significant negative relationship between digital anxiety and digital well-being among late adolescents.

H_2: There will be a significant negative relationship between digital stress and digital well-being among late adolescents.

H_3: Digital anxiety and digital stress significantly predict digital well-being among late adolescents.

Participants

The participants consisted of **late adolescents aged 17 to 21 years,** recruited from colleges and universities in and around cuddalore district. A **random sampling** technique was employed to select participants who were readily accessible and willing to participate in the study. A total of **120 participants** were included. Inclusion criteria required participants to (1) be within the age range of 17–21 years, (2) be currently enrolled in an academic institution, and (3) provide informed consent. Participants with a diagnosed psychological disorder or those currently undergoing psychological treatment were excluded to minimize potential confounding variables.

Measures

The present study employed three standardized tools to assess key variables. Digital Well-Being was measured using the Digital Wellbeing Scale (DWS) by Lee, Cho, and Kim (2021), which assesses healthy digital engagement across multiple dimensions and has shown strong reliability (Cronbach's $\alpha > 0.80$). Digital Anxiety was assessed using the Digital Anxiety

Scale (DAS) developed by Vally and D'Souza (2019), which measures anxiety symptoms related to social media and mobile phone use, including FOMO and compulsive checking, with high reliability (Cronbach's α > 0.85). Digital Stress was measured using the Digital Stress Scale (DSS), adapted from Weinstein (2017), which captures stress from online social interactions, multitasking, and digital communication demands, demonstrating good internal consistency (Cronbach's α > 0.80). All scales use a 5-point Likert format, with higher scores indicating greater intensity of the respective construct. Procedure

Data Analysis

Data were analyzed using **IBM SPSS (Version 21).** Descriptive statistics (mean, standard deviation) were computed for demographic and study variables. **Pearson correlation coefficients** were calculated to examine the relationships between digital anxiety, digital stress, and digital well-being. Further**, multiple regression analysis** was conducted to assess the predictive power of digital anxiety and digital stress on digital well-being. A significance level of **p < .05** was used for all statistical tests.

RESULTS AND INTERPRETATION

Table 1

Frequency distribution of the participants based on demographic variables

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	55	45.8%
	Female	65	54.2%
Age Group	17–18 years	38	31.7%
	19–20 years	52	43.3%
	21 years	30	25.0%
Educational Stream	Science	48	40.0%
	Arts & Humanities	42	35.0%
	Commerce	30	25.0%

The demographic profile of the participants (N = 120) reveals a fairly balanced gender distribution, with 55 males (45.8%) and 65 females (54.2%). The age distribution shows that the largest proportion of participants were aged 19–20 years (43.3%), followed by those aged 17–18 years (31.7%), and the remaining 25.0% were 21 years old.. In terms of educational stream, the majority of participants were from the Science stream (40.0%), while 35.0% belonged to the Arts and Humanities stream, and 25.0% were from the Commerce stream. This suggests that the sample includes a diverse mix of students from different academic backgrounds, providing a broad perspective for examining the variables under study.

Table 2

Pearson Correlation of Digital Anxiety, Digital Stress and Digital Well-being among late Adolescents

Variables	Digital Anxiety	Digital Stress	Digital Well-being
Digital Anxiety	1		

Variables	Digital Anxiety	Digital Stress	Digital Well-being
Digital Stress	.46**	1	
Digital Well-being	–.54**	–.48**	1

** Correlation at 0.01 levels (sig 2-tailed)

The Pearson correlation analysis revealed several significant relationships among the variables. There was a moderate positive correlation between digital anxiety and digital stress (r = 0.46, p < 0.01), indicating that as digital anxiety increases; digital stress also tends to rise. Additionally, digital well-being was found to be negatively correlated with both digital anxiety (r = –0.54, p < 0.01) and digital stress (r = –0.48, p < 0.01). These negative correlations suggest that higher levels of digital anxiety and stress are associated with lower levels of digital well-being among late adolescents.

Table 3

Multiple Regression Analysis Predicting Digital Well-being (N = 120)

Predictor Variables	B	SE B	β (Beta)	t	p
Digital Anxiety	–0.62	0.13	–.43	–4.77	< .001
Digital Stress	–0.38	0.11	–.36	–3.45	.001

R² = .42, Adjusted R² = .40, F(2, 117) = 42.12, p < .001

The results of the multiple regression analysis indicated that digital anxiety and digital stress significantly predicted digital well-being among late adolescents. The model was statistically significant, F(2, 117) = 42.12, p < .001, and accounted for 42% of the variance in digital well-being (R² = .42; Adjusted R² = .40), suggesting a strong explanatory power. Digital anxiety emerged as a stronger negative predictor (β = –.43, p < .001), meaning that higher levels of anxiety related to digital engagement are associated with lower digital well-being. Digital stress also negatively predicted digital well-being (β = –.36, p = .001), indicating that increased stress from digital interactions contributes to reduced well-being. These findings highlight the detrimental impact of digital anxiety and stress on adolescents' ability to maintain healthy digital habits and emotional balance.

CONCLUSION

The present study aimed to explore the relationship between digital anxiety, digital stress and digital well-being among late adolescents. The findings revealed significant negative correlations between both digital anxiety and digital stress with digital well-being, suggesting that increased psychological distress associated with digital technology usage is linked to decreased well-being. Additionally, multiple regression analysis demonstrated that both digital anxiety and digital stress are significant negative predictors of digital well-being, with digital anxiety having a slightly stronger impact. These results emphasize the growing psychological burden digital environments may place on adolescents and underline the need for awareness, education, and coping strategies to promote healthier digital habits. Given the high prevalence of digital engagement in this age group, the study provides valuable insights for educators, mental health professionals, and policymakers aiming to improve adolescent mental health and foster balanced digital usage. Future research can further explore intervention strategies and expand to diverse populations and cultural contexts.

Recommendation for future study

Future research should consider using larger and more diverse samples to enhance the generalizability of findings across different cultural and socioeconomic backgrounds. Longitudinal studies are recommended to examine the long-term impact of digital anxiety and stress on digital well-being. Exploring mediating and moderating variables such as self-esteem, coping strategies, digital literacy, and gender could provide deeper insights into these relationships. Qualitative methods like interviews or focus groups may uncover personal experiences behind the quantitative trends. Additionally, intervention-based studies focusing on digital literacy, emotional regulation, and responsible technology use could be valuable in promoting digital well-being. Cross-cultural comparisons and the role of parental or institutional guidance also warrant further investigation to develop effective, context-specific strategies for adolescent digital mental health.

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