



MITIGATING TECHNOSTRESS THROUGH SELF-REGULATION – AN EMPIRICAL EVALUATION OF DIGITAL DETOX PRACTICES ON UNIVERSITY STUDENT WELL-BEING AND ACADEMIC OUTCOME

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1. ABSTRACT

Excessive digital technology use among university students has become a growing concern due to its negative impact on psychological wellbeing, academic performance and interpersonal relationships. digital detox has emerged as an effective self-regulation strategy that helps students reduce excessive digital engagement and restore cognitive and emotional resources. Grounded in the job demands resource model this study examines the impact of digital detox practices on screen time, psychological wellbeing, academic performance and interpersonal relationships among university students in Bengaluru. A quantitative, descriptive cross sectional research design was adopted and primary data were collected from 252 university students using a structured questionnaire through convenient sampling. The instrument demonstrated good reliability with an overall Cronbach's Alpha of 0.887. Data were analysed using Pearson's correlation, independent sample t test and multiple regression analysis in IBM SPSS statistics. The findings revealed a significant negative relationship between digital detox practices and screen time ($r = -0.654$) and significant positive relationship with psychological wellbeing ($r = 0.781$), Academic performance ($r = 0.693$) and interpersonal relationships ($r = 0.736$). Regression analysis further confirmed that digital detox practices significantly predicted psychological wellbeing ($R^2 = 0.638$), academic performance ($R^2 = 0.507$) and interpersonal relationships ($R^2 = 0.519$). The study highlights the importance of digital Wellness programs and self-regulation interventions in reducing techno stress and promoting healthier technology use among university students. Furthermore it contributes to the limited empirical evidence on the digital detox within the Indian education context.

KEYWORDS : Digital detox, Technostress, Psychological wellbeing, Academic Performance, Interpersonal Relationships, Screen time, University students.

2. INTRODUCTION

The digital revolution has greatly affected the lives of university students as smartphones, computers and online academic platform have become integral to their academics, social and personal lives. Although technology has increased access to information and enabled online learning excessive use has also led to concerns such as stress, anxiety, sleep disturbance, reduced attention span and declining academic productivity. University students being among the most active users of digital technology are more vulnerable to digital over dependence and its adverse effects on their wellbeing and academic performance. The Job Demands Resource (JD-R) model Provides a useful theoretical framework for understanding these effects. According to the model continuous digital activity, information overload, constant notifications in social media pressure function acts as demands that consume students cognitive and emotional resources. When these demands exceed the available personal resources students are most likely to experience stress, fatigue, reduced psychological wellbeing in poor academic outcomes. The model further suggests that personal resources and self-regulation strategies can help individuals cope with these demands and restore their wellbeing. Digital detox has emerged as a self-regulation strategy that involves reducing or temporarily abstaining from the use of digital devices to achieve a healthier balance between the online and offline activities. Practices such as limited social media use, scheduling device free hours and engaging in offline activities have become increasingly common among students seeking to improve their mental wellbeing. In a technology driven city such as Bengaluru where students rely heavily on digital technologies studying the impact of digital detox on psychological wellbeing, academic performance, screen time and interpersonal relationship is both timely and relevant.

2.1 Research Objectives

- To understand the correlation between the practices of digital detox and the well-being of students in the Indian scenario.
- To determine the effects of digital detox practices on the academic performance of the students.
- To identify the effects of digital detox practices on the interpersonal relationships of the students.
- To compare the results of students who practice digital detox and those who do not practice digital detox.

2.2 Research Gaps

- There is limited empirical research on digital detox practices and student's well-being in the Indian higher education context

- Limited research has integrated the Job Demands - Resources (JD-R) Model to explain the relationship between digital detox practices and students well-being.
- Limited studies explore the impact of digital detox practices on students interpersonal relationships despite their importance for overall well-being.
- There are few comparative studies examining differences in well-being and interpersonal relationships between students who practice digital detox and those who do not.

2.3 Hypothesis

H1-There is a significant negative relationship between digital detox practices and daily screen time among university students.

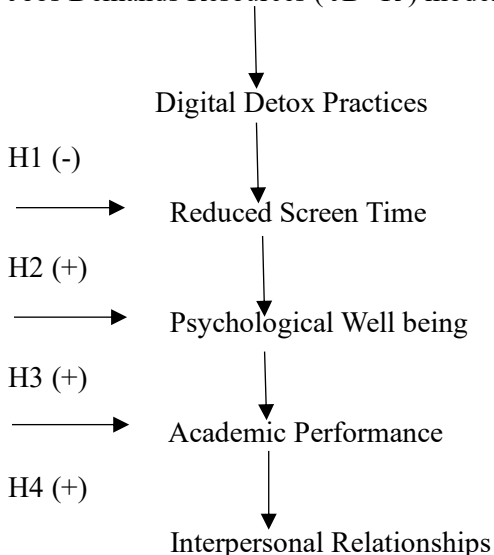
H2-Digital detox practices are positively associated with the psychological wellbeing of university students.

H3-Digital detox practices exert a significant positive influence on students' academic performance.

H4-Students who actively practice digital detox express significantly higher levels of psychological wellbeing and lower screen time compared to those who do not practice digital detox.

2.4 Conceptual frame work

Jobs Demands Resources (JD- R) model



3. LITERATURE REVIEW

3.1 Technostress

Techno stress is a major consequence of excessive digital technology use among university students. continuous connectivity, information overload and frequent digital interruptions contribute to stress, cognitive fatigue and reduced wellbeing.(Upadhyaya & Vrinda, 2021). Similarly (Norquziyeya et al 2025) Reported that excessive smartphone use increases stress and reduces mindfulness. While previous studies have established the negative effects of techno stress limited research has examined how students can effectively manage these challenges through digital detox practices.

3.2 Digital Addiction

Digital addiction particularly smartphone and social media addiction has become increasingly common among students. Studies show that problematic technology use is associated with emotional distress, poor coping strategies and reduced daily functioning (Tariq et al, 2025; Singh et al, 2023). Information overload further contributed to digital fatigue, encouraging students to adopt temporary digital disconnection as a coping strategy (Dilinka & Huang, 2024). However research on the effectiveness of digital detox in reducing digital addiction remains limited.

3.3 Self-Regulation Theory

Self-regulation theory explains how individuals consciously regulate their behaviour to achieve desired outcomes. Digital detox represents a self-regulatory strategy in which individuals intentionally reduce technology use to restore emotional balance and improve concentration. Research suggests that digital detox enhances self-control, reduce stress and promote psychological wellbeing (Afsyari & Hastuti,2026; Yaramis & Ünal , 2024). Within the JD-R framework digital detox functions as a personal resource that helps students recover from technological demands.

3.4 Academic Performance

Excessive digital engagement often affects academic performance by reducing attention and increasing distractions rather than directly lowering grades. (Ammunje et al, 2022) found that Divided attention negatively influences learning, while (Upadhyaya &



Vrinda, 2021) Linked techno stress with lower academic productivity. Conversely digital detox practices have been shown to improve concentration, cognitive functioning and engagement in academic tasks (Afsyari & Hastuti, 2026; Marx et al, 2025)

3.5 Psychological Well-Being

Research consistently demonstrates that excessive digital use is associated with anxiety, emotional exhaustion and reduce psychological wellbeing. (Morales-Rodríguez et al, 2020) Highlighted the role of emotional intelligence and anxiety in determining students wellbeing while (Singh et al, 2023) Found that smartphone dependence negatively affects mental health. Although these relationships are well established, studies integrating digital detox with psychological wellbeing remain relatively scarce.

3.6 Digital Detox Interventions

Digital detox interventions including temporary abstinence from smartphones and social media have emerged as effective strategies for reducing stress and improving concentration. Studies report that students who practice digital detox experience better emotional regulation, lower stress levels and improve wellbeing (Košir et al, 2025; Afsyari & Hastuti, 2026). Nevertheless empirical evidence examining these interventions among Indian university students remains limited.

3.7 Summary of Literature Review

Existing research demonstrates that excessive digital engagement contributes to techno stress, digital addiction and poor academic and psychological outcomes. Although digital detox has shown promise as a self-regulatory strategy most studies examine these relationships independently rather than within a comprehensive theoretical framework. Furthermore limited evidence exists from the Indian higher education context therefore the present study employees that Job Demands-Resources model JD-R To examine how digital detox practices influence psychological wellbeing, academic performance, screen time and interpersonal relationships among university students in Bengaluru.

4. RESEARCH METHODOLOGY

4.1 Research Design

This study adopted a quantitative research approach using a descriptive cross sectional survey design. The research aim to examine the relationship between screen time, digital detox practices, psychological well-being, academic performance an interpersonal relationship among university students. The cross sectional design enabled data to be collected from respondents at a single point in time.

4.2 Population of the Study

The target population comprised university students in Bengaluru, Karnataka who regularly use digital devices for academic, social, and personal purposes.

4.3 Sample Size

The study included 252 respondents. this sample size was considered adequate to ensure reliable statistical analysis and meaningful interpretation of the research findings.

4.4 Sampling Technique

A convenient sampling technique was used to select the respondents. The questionnaire was distributed through Google forms and participation was voluntary. This method was appropriate as it enabled easy access to university students within the available time and resources.

4.5 Measurement Instrument

Primary data were collected using a structured questionnaire administered through Google Forms. The questionnaire consisted of 25 items divided into five constructs:

Screen Time – 5 items

Digital Detox Practices – 5 items

Psychological well-being – 5 items

Academic Performance – 5 items

Interpersonal Relationships – 5 items

Responses were measured using a 5 point Likert Scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree)



4.6 Reliability Analysis

Construct	No. of Items	Cronbach's Alpha	Interpretation
Screen Time	5	0.824	Good
Digital Detox Practices	5	0.858	Good
Psychological Well-being	5	0.899	Very Good
Academic Performance	5	0.876	Good
Interpersonal Relationships	5	0.814	Good
Overall Questionnaire	25	0.887	Good Internal Consistency

All constructs Recorded reliability coefficient above the recommended value of 0.70, indicating good internal consistency.

4.7 Data Analysis Techniques

The collected data were analysed using IBM SPSS statistics. The following statistical techniques were employed

- Descriptive statistics to summarise respondents characteristics in study variables.
- Cronbach's Alpha to assess the reliability of the questionnaire
- Pearson correlation analysis to examine the relationship among the study variables.
- Independent sample t test to determine significant difference between respondent groups.

5. DATA ANALYSIS AND INTERPRETATIONS

5.1 Correlation Analysis

Relationship	r value	p value	Interpretation
Digital Detox – Screen Time	-0.654	<0.001	Strong negative correlation
Digital Detox – Well-being	0.781	<0.001	Strong positive correlation
Digital Detox – Academic Performance	0.693	<0.001	Strong positive correlation
Digital Detox – Interpersonal Relationship	0.736	<0.001	Strong positive correlation

- A strong negative correlation was found between digital detox practices and screen time ($r = -0.654$) indicating that students who practice digital detox spend less time on digital devices.
- A strong positive correlation was observed between digital detox practices and wellbeing ($r = 0.781$) suggesting that increased digital detox practices will associated with better wellbeing.
- Digital detox practices also showed a strong positive correlation with academic performance ($r = 0.693$) indicating that students practicing digital detox were likely to perform better academically.
- A strong positive correlation was found between digital detox practices and interpersonal relationships ($r = 0.736$) suggesting that greater digital detox practices are associated with healthier social relationships.

5.2 Independent Samples T-Test

Variable	t value	p value	Mean Difference	Result
Psychological Well-Being	9.21	<0.001	1.64	Significant
Academic Performance	6.54	<0.001	1.11	Significant
Screen Time	-7.18	<0.001	-1.24	Significant

- Psychological wellbeing $t = 9.21$ indicate a very strong difference between the groups.
- Academic performance $t = 6.54$ indicates a significant positive difference.
- Screen time -7.18 indicates a significant reduction in screen time between the groups.

5.3 Multiple Regression Analysis

Dependent Variable	B	t	P value	R ²
Psychological Well being	0.953	10.822	<0.001	0.638
Academic Performance	0.658	8.099	<0.001	0.507
Interpersonal Relationships	0.798	8.647	<0.001	0.519

The multiple regression analysis showed that digital detox practices significantly and positively predict psychological well-being, academic performance and interpersonal relationships among university students ($p < 0.001$). The model explained 63.8% of the variance in psychological well-being, 50.7% in academic performance and 51.9% in interpersonal relationships. These findings indicate that increased engagement in digital detox practices is associated with better psychological well-being, improved academic performance and stronger interpersonal relationships.

6. DISCUSSIONS

The findings of the Pearson correlation analysis indicate that digital detox practices are associated with lower screen time and improved psychological wellbeing, academic performance and interpersonal relationships among the university students. These



finding supported all the proposed hypothesis and suggests that consciously reducing digital device use contributes positively to students overall wellbeing an academic outcome. The results are consistent with the studies of Tariq et al.(2025) , Li et al. (2024) , Afsyari and Hastuti (2026) and Marx et al. (2025) who reported that digital detox reduces stress, enhance emotional wellbeing, improves concentration and promotes healthier technology use. The independent sample t test further confirmed that students who practice digital detox deferred significantly from those who did not , demonstrating better psychological wellbeing , stronger academic performance and lower screen time. These findings strengthen the correlation results by showing that digital detox has meaningful benefits for university students. These findings for supported by the job demands resource (JD – R) model which explains that constant digital connectivity, information overload and excessive screen time act as an academic demand that deplete students cognitive and emotional resources. Therefore university should promote digital Wellness initiatives and encourage balance technology used to support students' academic success and overall wellbeing being.

7. LIMITATIONS

- The study was carried out with the help of participants from the city of Bangalore hence making its generalization difficult when talking about students living in other regions or countries.
- The age group of the respondents was confined to ages 18 to 26 and therefore it is possible that the results of this survey cannot be generalized to students of other ages.
- The survey was conducted among non-working university students only while other students who worked part-time were not considered.
- The data was collected at a single point in time and may not capture long-term effects of digital detox practices.
- The research relied on self-reported data collected through a questionnaire which may include response bias or inaccuracies in answers.

8. CONCLUSION

This research examined the effects of digital detox on the psychological wellbeing of the participants as well as academic performance. Based on the results it is evident that the use of digital detox greatly impacts the psychological wellbeing of students as well as their academic performance. Participants who engage in digital detox achieve better psychological wellbeing perform better in academics, are good with socialization and spend minimum time on screens. The result showed that there were statistical significance differences in the performance between students who engaged in digital detox and others who did not practice digital detox. From the findings we can say that limiting the use of electronic devices could help them balance their academics, psychological wellbeing, and social lives.

Based on the study there is need for students to limit the use of digital devices to improve academic performance as well as psychological wellbeing.

9. RECOMMENDATIONS FOR FUTURE RESEARCH

- Future researches may use more subjects in their experiments in order to improve the generalization of the results that could be obtained during the study.
- Longitudinal design of future studies could help to understand the impacts of practicing digital detoxing behaviours on the level of psychological well-being and academic performance of subjects.
- Other aspects that could affect the results of the research might include the level of stress experienced, quality of sleep, and addiction to social media usage.
- Comparing studies that will be focused on assessing the impacts of practicing digital detoxing behaviour on life of different kinds of people could be carried out.
- Data obtained through the use of qualitative research could help to understand participants experience in the process of practicing digital detoxing.

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