

RESEARCH ARTICLE

The effect of digital detox on psychological well-being in college students



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Belva Afsyari¹,  Rahmah Hastuti²

¹ Department of Psychology, Universitas Tarumanagara, Special Capital Region of Jakarta, Indonesia

² Department of Psychology, Universitas Tarumanagara, Special Capital Region of Jakarta, Indonesia

Corresponding Author:

Belva Afsyari (email: belva.705220446@stu.untar.ac.id)

ABSTRACT

The pervasive integration of digital technology into daily life has raised significant concerns regarding its impact on mental health, particularly among university students. Digital detox, defined as the intentional reduction or cessation of digital device use, has been proposed as a strategy to mitigate negative effects and promote psychological well-being (PWB). However, empirical evidence within the Indonesian context remains limited. This quantitative, cross-sectional study aimed to examine the effect of digital detox practices on the psychological well-being of university students in Jakarta, Indonesia. A purposive sample of 310 students (71.9% female; M age = 20-21 years) who reported prior digital detox experience completed online measures, including the Digital Detox Scale and a short-form adaptation of Ryff's Psychological Well-Being Scale. Due to non-normal residuals, a bootstrapped simple linear regression analysis was conducted. Results indicated that digital detox practice was a significant positive predictor of psychological well-being ($\beta = .355$, $p < .001$), accounting for 12.6% of the variance ($R^2 = .126$). Supplementary non-parametric analyses revealed no gender differences but found that students who had taken academic leave reported significantly higher levels of both digital detox and PWB. The type of primary digital platform used was associated with PWB but not with detox practices, while the duration of daily digital use showed no significant relationship with either variable. The findings suggest that deliberate digital disconnection is a meaningful, though not exhaustive, contributor to student well-being. Practical implications include integrating digital wellness education and structured detox strategies into university mental health and academic support programs. Study limitations, including the cross-sectional design and localized sample, are discussed, alongside recommendations for future longitudinal and experimental research.

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INTRODUCTION

The proliferation of digital technology has fundamentally reshaped daily life, with college students representing a demographic particularly immersed in digital environments. As of January 2025, global social media users numbered 5.24 billion, constituting approximately 64% of the world's population and growing at an annual rate of 5.4% (Statista, 2025). In Indonesia, internet penetration reached 79.50% in 2024, with over 221 million users (Statistics Indonesia [BPS], 2024). College students, as a highly connected segment, frequently use the internet for social networking, entertainment, and academic purposes, often spending more than 8 hours per day online (BPS, 2024). While offering connectivity and access to information, this high level of engagement carries significant risks, including information overload, psychological distress, cyberbullying, exposure to misinformation, and behaviors indicative of digital addiction (Prasetyo et al., 2025). This scenario underscores a critical gap between rapid technological advancement and individuals' capacity to manage its associated mental and emotional impacts.

In response to these challenges, the concept of "digital detox" has emerged as a deliberate strategy. It is defined as a period during which individuals consciously reduce or refrain from using digital devices and applications to mitigate adverse effects and foster a healthier, more balanced relationship with technology (Marx et al., 2025). Research indicates that college students are prone to social media dependency, often driven by perceived freedom and low social responsibility, which can foster individualistic pursuits of happiness at the expense of broader well-being (Prasetyo et al., 2022). Excessive digital use may lead to diminished concentration, sleep disturbances, and deterioration in the quality of interpersonal relationships, thereby negatively affecting core dimensions of psychological well-being, such as autonomy, positive relations with others, and personal growth.

Preliminary investigations into digital detox interventions suggest promising outcomes. Anandpara et al. (2024) reported that participants experienced relief and enhanced psychological well-being following a detox period, along with improved awareness of online behaviors and more effective self-regulation strategies. A meta-analysis by Halimah (2025) further supports that digital detox can reduce stress and anxiety, while also potentially improving emotional regulation and self-reflection. Educational initiatives focused on digital detox have also proven effective in raising awareness about healthy technology management (Susanto et al., 2015).

Despite these positive indications, the existing body of research presents inconsistencies and acknowledges several limitations. While some studies report increases in happiness and life satisfaction post-detox (Safitri et al., 2025; Setia et al., 2025), others found minimal or non-significant effects (Tuasikal, 2024). This inconsistency suggests that the impact of digital detox may not be uniform across all facets of psychological well-being and may be moderated by factors such as intervention type, duration, and individual differences (Halimah, 2025; Prasetyo et al., 2025). Furthermore, there is a recognized need for more rigorous, context-specific research. Specifically, studies within the Indonesian context that employ standardized instruments, comprehensive quantitative designs, and investigate local moderating factors are scarce.

To address these gaps, this study aims to empirically examine the effect of digital detox practices on the psychological well-being of college students in Jakarta. By focusing on a defined population with firsthand experience in digital detox, the research seeks to contribute more precise evidence to the discourse on technology use and mental health.

METHOD

This study employed a quantitative, non-experimental, cross-sectional design. The primary aim was to systematically describe and analyze the relationship between self-reported digital detox practices and psychological well-being among university students in Jakarta who had engaged in such practices. A descriptive correlational approach was selected, as the objective was to examine the association between variables without implementing or manipulating an intervention (Creswell & Creswell, 2018). Data were collected via an online questionnaire distributed through digital platforms, including WhatsApp, Instagram, and Line. This method enabled efficient access to the target population and allowed participants to respond in their convenience and from any location.

Participants were university students enrolled at institutions in Jakarta, aged 18-24 years. The key inclusion criterion was self-reported prior experience with digital detox, operationalized as a period of conscious reduction or temporary cessation of digital device and/or social media use for well-being purposes. A purposive sampling technique was used to recruit participants who met these specific criteria, thereby ensuring the sample was relevant to the research question (Etikan et al., 2016).

The sample size was determined a priori using G*Power software (Faul et al., 2007). For a simple linear regression analysis with an anticipated small-to-medium effect size ($f^2 = 0.10$), an alpha level of .05, and a power of .95, the required sample size was 310 participants. The final sample consisted of 310 students. Demographic characteristics are presented in Table 1. The sample was predominantly female (71.9%, $n = 223$). The majority of participants were aged 20-21 years (combined 60.6%). In terms of academic progression, 7th-semester students constituted the largest group (30.3%).

Table 1. Participant distribution by gender ($n = 310$)

Gender	n (%)
Male	87 (28.10)
Female	223 (71.90)

Data were collected using two primary scales, administered in Indonesian. In the Digital Detox Practice, the frequency and extent of digital detox engagement were measured using a 12-item scale developed by Imran, Siddiqui, and Javed (2023). Items (e.g., "I deliberately take breaks from my smartphone") are rated on a 5-point Likert scale (1 = Never to 5 = Always), with higher scores indicating more frequent detox practices. The scale demonstrated high internal consistency in the present sample (*Cronbach's* $\alpha = .812$). Corrected item-total correlations ranged from .27 to .63, confirming the validity of all items for this sample.

Psychological Well-Being (PWB) was assessed using a 14-item short-form adaptation (Dewi & Sari, 2022) of Ryff's Psychological Well-Being Scale (Ryff, 1989). This instrument measures six core dimensions: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance. Respondents rate items on a 6-point Likert scale (1 = Strongly Disagree to 6 = Strongly Agree). In this study, the scale showed acceptable internal consistency (*Cronbach's* $\alpha = .706$). Although some items exhibited modest item-total correlations (.15 to .23), the overall alpha did not improve substantially upon their deletion; thus, all items were retained for analysis to preserve the theoretical breadth of the construct.

Data were analyzed using IBM SPSS Statistics (Version 27). The analysis proceeded in several stages: 1) Descriptive Statistics: Frequencies, percentages, means, and standard deviations were calculated to summarize participant demographics and the distributions of the primary variables; 2) Psychometric Testing: Reliability (Cronbach's alpha) and item-level validity (corrected item-total correlation) were assessed for both measurement scales; 3) Assumption Testing for Regression: The assumption of normality for the residuals was tested using the Kolmogorov-Smirnov and Shapiro-Wilk

tests. Both tests indicated a significant deviation from normality ($p < .001$). Consequently, the assumption for standard ordinary least squares (OLS) regression was violated. To address this and obtain robust estimates, a bootstrapping procedure with 1,000 resamples was employed for the primary regression analysis, as it does not rely on the normality assumption and provides bias-corrected confidence intervals (Hayes, 2018); 4) Primary Hypothesis Testing: A simple linear regression analysis using the bootstrap method was conducted to test the hypothesis that digital detox practice significantly predicts psychological well-being; and 5) Supplementary Analysis: To explore group differences based on demographic and behavioral factors, non-parametric tests were utilized due to the non-normal distribution of the data. The Mann-Whitney U test was used for two-group comparisons (e.g., gender). The Kruskal-Wallis H test was used to compare more than two groups (e.g., academic semester, primary digital platform used).

RESULT

Descriptive statistics for the primary study variables are presented in Table 2. The mean score for Digital Detox practices ($M = 3.83$, $SD = 0.61$) indicated a moderate-to-high level of reported engagement among participants. Scores for Psychological Well-Being (PWB) averaged 2.90 ($SD = 0.33$) on a 1-6 scale, suggesting a moderate overall level. The ranges for both variables (Digital Detox: 1.58–4.92; PWB: 2.28–4.00) demonstrated considerable variability within the sample. Skewness and kurtosis values for both distributions fell within the acceptable range of -2 to +2 (see Table 2), indicating no severe departures from normality for descriptive purposes (George & Mallery, 2019).

Table 2. Descriptive Statistics for Primary Variables (n = 310)

Variable	M	SD	Min	Max	Skewness	Kurtosis
Digital Detox	3.83	0.61	1.58	4.92	-0.451	-0.128
Psychological Well-Being	2.90	0.33	2.28	4.00	0.216	-0.405

Note. M = Mean; SD = Standard Deviation.

To test the primary hypothesis, a simple linear regression analysis was conducted using a bootstrapping procedure with 1,000 samples to account for the non-normality of residuals. The model was statistically significant, $F(1, 308) = 44.43$, $p < .001$. Results indicated that Digital Detox practice was a significant positive predictor of Psychological Well-Being (see Table 3). The unstandardized coefficient ($B = 0.637$, 95% BCa CI [0.456, 0.830]) indicates that for each one-unit increase in Digital Detox score, Psychological Well-Being score increased by 0.637 units. The standardized coefficient ($\beta = .355$) suggests a moderate effect size. The model explained approximately 12.6% of the variance in Psychological Well-Being ($R^2 = .126$).

Table 3. Simple Linear Regression Analysis Predicting Psychological Well-Being from Digital Detox (Bootstrapped)

Predictor	B	SE	β	t	p	95% BCa CI for B	
						LL	UL
Constant	0.548	0.248		2.207	.028	0.057	1.035
Digital Detox	0.637	0.095	.355	6.666	<.001	0.456	0.830

Note. SE = Standard Error; BCa CI = Bias-Corrected and Accelerated Confidence Interval; LL = Lower Limit; UL = Upper Limit.

Non-parametric tests were conducted to explore differences in the primary variables across demographic and behavioral factors. No significant gender differences were found in Digital Detox scores ($U = 9503.50$, $p = .749$) or Psychological Well-Being scores ($U = 8804.00$, $p = .230$). However, significant differences were observed based on academic leave status. Students who had taken a leave of absence reported significantly higher levels of both Digital Detox ($U = 7520.50$, $p < .001$) and Psychological Well-Being ($U = 7068.00$, $p < .001$) compared to students who had never taken leave.

The type of primary digital platform used (categorized for analysis) did not significantly affect Digital Detox scores, $\chi^2(2) = 1.07$, $p = .585$. However, a significant effect was found for Psychological Well-Being, $\chi^2(2) = 8.54$, $p = .014$. Post-hoc pairwise comparisons with a Bonferroni adjustment revealed a significant difference ($p = .015$) between platform category 2 (Mdn = 2.94) and platform category 3 (Mdn = 2.71), indicating that well-being levels varied by primary platform.

Neither the average daily duration of digital use ($\chi^2(3) = 6.41$, $p = .091$ for Digital Detox; $\chi^2(3) = 3.68$, $p = .304$ for PWB) nor academic semester ($\chi^2(2) = 5.82$, $p = .055$ for Digital Detox; $\chi^2(2) = 1.21$, $p = .546$ for PWB) yielded statistically significant differences in the primary variables after correction for multiple comparisons.

DISCUSSION

The present study provides empirical support for a significant positive relationship between self-reported digital detox practices and psychological well-being (PWB) among university students in Jakarta. The regression model confirmed digital detox as a meaningful predictor, accounting for 12.6% of the variance in PWB. While this represents a moderate effect, it underscores that deliberate periods of reduced digital engagement can be a valuable, though not exhaustive, component of enhancing student well-being. These findings align with theoretical expectations that disconnection can alleviate digital stressors, thereby improving sleep quality, fostering richer face-to-face social interactions, and restoring a sense of autonomy over technology use (Setia et al., 2025). This corroborates Halimah's (2025) meta-analytic conclusions, which identified digital detox as an effective strategy for reducing stress and anxiety while promoting facets of well-being, such as emotional regulation and self-reflection.

A notable supplementary finding was that students who had taken an academic leave of absence reported significantly higher levels of both digital detox practice and PWB. This suggests a potential link between acute academic stress, the development of adaptive coping strategies, and subsequent recovery. It is plausible that the experience of significant pressure leading to a leave period may catalyze greater self-awareness and the intentional adoption of restorative behaviors, including more mindful digital habits. This positions digital detox not merely as a general wellness practice but as a potentially targeted recovery strategy for students grappling with high-stress academic periods. Consequently, university counseling and wellness centers should consider integrating psychoeducation on digital self-regulation into support programs for students returning from or considering academic leave.

The absence of significant gender differences in both digital detox and PWB is consistent with prior research suggesting that well-being in academic contexts is more strongly influenced by intrapersonal and environmental factors than by biological sex (Morales-Rodríguez et al., 2020). Furthermore, the finding that the type of primary digital platform was associated with differences in PWB, but not with detox practices themselves, offers a nuanced insight. It implies that platform characteristics (e.g., design, content type, social dynamics) may differentially impact user well-being, supporting the notion that the quality and nature of digital engagement are critical mediators (Ramadhan et al., 2024). Conversely, the non-significant relationship between simple duration of use and the study's primary variables reinforces the growing consensus that screen time alone is a poor predictor of outcomes; motivation, context, and the subjective experience of use are more determinants of well-being (Marciano et al., 2024).

These findings have direct implications for university policy and student support services: 1) Curriculum Integration: Develop and implement evidence-based digital wellness modules within

orientation or first-year experience programs. These should move beyond warnings about excessive use to teach practical self-regulation skills, mindful engagement, and strategies for intentional disconnection; 2) Targeted Support: Incorporate digital detox principles into stress management workshops and counseling services, particularly for students identified as being at risk for or recovering from academic burnout; and 3) Structural Support: Universities should evaluate policies surrounding academic leave to ensure they are psychologically supportive and consider piloting structured “digital wellness breaks” or designated low-tech zones on campus.

Several limitations of this study must be acknowledged. First, the cross-sectional design precludes definitive causal inferences. While the data suggest a positive association, it is possible that individuals with higher baseline PWB are more inclined to engage in digital detox. Future research should employ longitudinal or experimental designs (e.g., randomized controlled trials of detox interventions) to establish causality and examine the temporal dynamics of this relationship. Second, the use of a purposive sample from Jakarta limits the generalizability of the findings. Replication studies across diverse geographic, cultural, and institutional settings are necessary to determine whether the observed relationships are universal or context-specific. Third, while significant, the model explains a modest portion of the variance in PWB. This highlights the multifactorial nature of well-being and suggests that digital detox is one piece of a larger puzzle. Future models should incorporate additional theoretically relevant variables, such as specific digital addiction symptoms, emotion regulation strategies, perceived social support, academic self-efficacy, and objective measures of sleep quality, to build a more comprehensive explanatory framework.

CONCLUSION

In conclusion, this study contributes to the growing literature on digital well-being by demonstrating a significant positive association between digital detox practices and psychological well-being in a sample of Indonesian university students. The findings underscore the importance of promoting intentional and mindful technology use as a component of holistic student mental health initiatives. Addressing the digital dimension of student life, particularly within high-pressure academic environments, is an essential step toward fostering healthier, more resilient learning communities.

DECLARATION

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Author contribution statement

Belva Afsyari conducted the research design, data collection, distributed the scales, analyzed the research results, and wrote the manuscript. Rahmah Hastuti served as a supervisor who assisted with and approved the research design development, oversaw the data collection process, and reviewed the results and manuscript.

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The data described in this article can be accessed by contacting the first author.

Declaration of interest statement

The authors declare no conflict of interest.

Additional information

No additional information is available for this paper.

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