



The Effect of Academic Stress and Emotion Regulation on Nomophobia among Undergraduate Students in an Indonesian University

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Article History

Manuscript submitted:
15 April 2026
Manuscript revised:
21 Mei 2026
Accepted for publication:
19 Juni 2026

Keywords

Academic Stress, Emotion Regulation, Nomophobia, Students.

Abstract

This study examined the effects of academic stress and emotion regulation on nomophobia among undergraduate students at an Indonesian university. A quantitative correlational design was employed involving 200 active undergraduate students selected through purposive sampling. Data were collected using the Academic Stress Inventory (ASI), Emotion Regulation Questionnaire (ERQ), and Nomophobia Questionnaire (NMP-Q), and analyzed using multiple linear regression. The findings revealed that neither academic stress nor emotion regulation significantly predicted nomophobia, either individually or simultaneously. The regression model also demonstrated limited explanatory power, indicating that these variables accounted for only a small proportion of variation in nomophobia. These results suggest that nomophobia among university students may be more strongly influenced by other psychological and behavioral factors, such as smartphone usage intensity, fear of missing out (FoMO), social media dependency, and self-control. The study contributes to the nomophobia literature by providing evidence that academic stress and emotion regulation may not constitute primary determinants of nomophobia in higher education settings. This finding highlights the need for future research to explore broader digital behavioral and psychosocial factors in explaining smartphone-related dependence among university students.

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Introduction

The rapid advancement of information technology in the digital era has brought significant changes to various aspects of human life. This progress has not only influenced how people communicate, but also how they think, work, learn, and engage in social interactions. Among the many technological devices that have evolved, smartphones have become one of the most dominant tools in supporting daily activities. Their presence has made communication faster and more efficient, while also providing broad access to information and entertainment within a single handheld device. According to a report by the Indonesian Internet Service Providers Association (APJII, 2025), the number of internet users in Indonesia has reached 229.4 million people, with a penetration rate of 80.66% of the total population of 284.44 million. Regionally, urban communities exhibit an internet penetration rate of 85.53%, contributing 58.24% to total national users, while rural communities show a penetration rate of 76.96%, contributing 41.76%. These data indicate that the majority of Indonesian society is now digitally connected, particularly in urban areas, which serve as centers of economic, educational, and social activities.

This condition reflects the characteristics of urban communities that are highly dependent on digital technology in their daily lives. Most internet access is conducted through smartphones, making them no longer merely communication tools but essential instruments supporting learning activities, work, and social interaction. This phenomenon illustrates the increasingly digitalized lifestyle of modern urban society. However, the high intensity of smartphone use also gives rise to various psychological consequences. Initially intended to support learning and social communication, smartphone use can develop into psychological dependence in the form of nomophobia, defined as the anxiety experienced when individuals are unable to access or use their mobile phones (King et al., 2013). This term refers to feelings of anxiety, fear, or discomfort when individuals cannot access or use their smartphones (King et al., 2014). This condition has become increasingly common, particularly among adolescents and university students. Students are considered highly vulnerable to nomophobia, as their academic and social activities are deeply integrated with smartphone use, including accessing course materials, communicating with lecturers and peers, as well as fulfilling entertainment needs and maintaining social media presence.

The prevalence of nomophobia an excessive fear of being unable to use one's phone has emerged as a serious psychological issue among university students in Indonesia, especially in urban areas. Empirical studies in several major cities demonstrate this trend. For instance, in Makassar, the majority of 470 students studied exhibited high levels of nomophobia (Marannu & Arifa, 2024). Similarly, in Padang, data from 75 students revealed that 25 individuals were already categorized as experiencing severe nomophobia (Rahayuningrum & Sary, 2019). This high level of dependence is also reflected qualitatively. A phenomenological study conducted among students in the same city found that average smartphone usage ranged from 10 to 13 hours per day, indicating strong addictive behavior (Karlina & Gautama, 2021). Furthermore, among medical students in Jakarta, 55.8% of respondents were found to experience moderate to high levels of nomophobia, often associated with sleep disturbances (Mulyana & Widyastuti, 2017).

Nomophobia is associated with several significant negative consequences on students, particularly by disrupting the balance between academic, psychological, and physical demands. One of the primary consequences is academic failure and academic procrastination, where excessive smartphone dependence leads students to delay tasks, lose focus, and experience a decline in academic performance (Fitriani & Pratama, 2023; Nugroho et al., 2020). In addition to the psychological effects of nomophobia, students frequently experience academic stress, defined as the pressure arising from

academic demands perceived as exceeding their coping abilities (Lin & Chen, 2009). Academic stress encompasses various sources, including teacher-related stress, result-oriented pressure, test anxiety, and difficulties in time management (Lin & Chen, 2009).

Based on the Transactional Model of Stress and Coping (Lazarus & Folkman, 1985), stress occurs when individuals perceive environmental demands such as academic workload or examinations as threats that surpass their personal resources. Continuous academic stress often triggers excessive smartphone use as a maladaptive coping mechanism. When students feel overwhelmed by assignments or fear of failure, negative emotions such as anxiety and frustration emerge. Smartphones then function as digital transitional objects that provide distraction and rapid emotional validation through social media or online entertainment (digital escape). This process temporarily alleviates negative emotions and reinforces the habit of turning to smartphones whenever academic stress arises. This phenomenon creates a negative feedback loop in which high academic stress increases nomophobia. In turn, dependence on smartphones exacerbates academic procrastination, reduces academic performance, and significantly elevates stress levels over time (Suresh, Alam, & Senthil, 2019; Rahmawati & Nurhidayah, 2021). Nomophobia also worsens mental health disturbances, as symptoms such as excessive anxiety, panic, and irritability when separated from the device can intensify conditions like depression. Some studies even indicate a relationship between severe nomophobia and an increased risk of suicidal behavior (Yun et al., 2023).

From a physical and lifestyle perspective, uncontrolled smartphone use especially at night can lead to sleep disturbances (insomnia and reduced sleep quality), as well as physical issues such as neck pain, eye strain, and headaches. Additionally, nomophobia disrupts social and cognitive functioning, as individuals tend to prefer virtual interactions over face-to-face communication, and constant distraction from smartphones reduces concentration and memory capacity (Tran, 2016). When such usage continues without adequate self-control, individuals may develop addiction and lose balance in daily life, including in learning concentration and emotional regulation. Beyond self-control, emotional regulation plays a crucial role in understanding nomophobia tendencies among students. Emotional regulation refers to an individual's ability to recognize, understand, evaluate, and manage emotions both positive and negative in order to function adaptively in everyday life (Gross, 2015).

Individuals with low emotional regulation abilities tend to struggle in managing feelings such as anxiety, sadness, or boredom, leading them to seek instant coping mechanisms. One of the most common forms of escape is excessive smartphone use, as it provides immediate access to entertainment, communication, and social validation through social media (Elhai et al., 2017). When access to smartphones is disrupted for example, due to battery depletion or network issues these individuals may experience heightened anxiety, emotional tension, or even panic, which are characteristic symptoms of nomophobia. Conversely, individuals with strong emotional regulation abilities are better able to balance smartphone use with their emotional and social needs. They are less dependent on digital devices for managing stress or boredom and can redirect their attention to more productive activities such as exercising, engaging in face-to-face interactions, or self-reflection. With these abilities, they can resist the urge to constantly check notifications, delay responses to messages, and maintain focus on academic and social activities more effectively. This demonstrates that emotional regulation functions as a protective factor that can reduce the risk of nomophobia, particularly among students who are vulnerable to academic and social pressures.

Several studies in Indonesia indicate that nomophobia is increasingly prevalent in higher education environments. Fitriani and Pratama (2023) found that the majority of university students experience moderate to severe levels of nomophobia, driven by high dependence on smartphones for

both academic and social purposes. Students tend to use smartphones not only for information seeking but also as a means of managing emotions when feeling stressed or bored. This condition highlights a strong relationship between psychological factors, such as emotional regulation, and the level of nomophobia experienced by students. Research by Hidayati and Sari (2024) further shows that students with low emotional regulation are more vulnerable to nomophobia. Such individuals tend to use smartphones as a distraction from negative emotions such as anxiety, loneliness, or academic stress. As a result, when they are unable to access their smartphones, they experience excessive anxiety, a hallmark of nomophobia. In contrast, students with strong emotional regulation can manage their emotions through more adaptive strategies, such as direct social interaction or engaging in positive activities without relying on smartphones.

Additionally, this study offers a novelty that distinguishes it from previous research. While prior studies have examined nomophobia and related psychological factors such as emotional regulation, self-control, and smartphone usage intensity, most have focused on students from a single discipline or faculty, such as education, health, or medicine. This limitation reduces the ability of previous findings to comprehensively represent nomophobia across different academic fields (Rizka, 2022; Mulyana & Widyastuti, 2017). Furthermore, although some studies have explored emotional regulation or self-regulation in relation to nomophobia, many have not incorporated academic stress as a key factor that may strengthen or influence this relationship (Safaria, 2024; Patimah, 2024).

Based on these research gaps, the present study contributes novelty by including students from all faculties, thereby providing more representative cross-disciplinary findings, and by specifically focusing on students who are known to experience high levels of academic pressure. Moreover, this study simultaneously examines the influence of emotional regulation and academic stress on nomophobia, offering a more comprehensive understanding of the relationship between emotional management, academic demands, and smartphone dependence tendencies among university students a population that remains underexplored in existing research.

Methods

This study employed a quantitative associative research design aimed at analyzing the relationship and influence of academic stress and emotion regulation on nomophobia among students at University X. The population consisted of 5,021 active undergraduate students, who are considered highly dependent on smartphones for academic and social activities and are at a developmental stage (18–25 years) characterized by increased academic demands and emotional challenges, which may increase their vulnerability to stress and nomophobia. The sample comprised active undergraduate (S1) students only, excluding postgraduate (S2) students to avoid bias due to differences in academic demands, age, and behavioral patterns. Inclusion criteria required respondents to be active students, own and use a smartphone for daily activities, and be willing to complete the questionnaire, while exclusion criteria included students on academic leave. The sample size was determined based on methodological recommendations suggesting at least 200 respondents for stable multivariate analysis, although this study used a more practical sample size approach adjusted to research constraints. A purposive sampling technique was applied, combining predefined criteria with random selection among eligible participants. Data were collected online using Google Forms and filtered to ensure completeness and validity. Research instruments included the Academic Stress Inventory (ASI), Emotion Regulation Questionnaire (ERQ), and Nomophobia Questionnaire (NMP-Q), all of which are widely used and have demonstrated good validity and reliability across different populations.

Prior to data collection, participants were informed about the objectives of the study and provided informed consent electronically. Participation was voluntary, anonymous, and confidential, and respondents were free to withdraw from the study at any stage without consequence. Permission to conduct the study was obtained from the relevant academic authorities at the university. The Academic Stress Inventory (ASI) developed by Lin and Chen (2009), the Emotion Regulation Questionnaire (ERQ) developed by Gross and John (2003), and the Nomophobia Questionnaire (NMP-Q) developed by Yıldırım and Correia (2015) were employed as research instruments. The instruments were translated and adapted into Indonesian through a forward-backward translation process and reviewed by experts to ensure content validity and linguistic appropriateness. All questionnaire items were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Negatively worded items were reverse-coded before analysis. Higher scores reflected higher levels of the respective constructs measured by each instrument. Data analysis was performed using IBM SPSS Statistics version 26. The analysis included descriptive statistics, validity and reliability testing, classical assumption testing, multiple linear regression analysis, partial (t-test) and simultaneous (F-test) hypothesis testing, as well as coefficient of determination analysis.

Results and Discussions

Validity Test

The results of the validity test indicate that for the academic stress variable (W), 22 items were considered valid, whereas 5 items did not meet the validity criteria. The invalid items are W1, W7, W8, W18, and W26. For the emotion regulation variable (X), 7 items are valid and 1 item is invalid, namely X7. In the nomophobia variable (Y), 14 items are valid and 4 items are invalid, namely Y11, Y15, Y16, and Y17. Based on these results, valid items were retained for further analysis, while invalid items were excluded from the instrument.

A summary of the validity test results is presented as follows:

Table 1. Validity Test Results

Variable	Total Items	Valid Items	Invalid Items
Academic Stress (W)	27	22	5
Emotion Regulation (X)	8	7	1
Nomophobia (Y)	18	14	4

Based on the table above, it can be concluded that most items across all three variables meet the validity criteria. The academic stress variable has the highest proportion of valid items, indicating that its instrument is generally representative for research use. For emotion regulation, almost all items are valid, with only one item requiring elimination. Similarly, the majority of items in the nomophobia variable are valid, meaning the instrument remains appropriate after removing invalid items. Overall, the research instrument meets the requirements for proceeding to the next stage of data analysis.

Reliability Test

Table 2. Reliability Test Results

Variable	Total Items	Cronbach's Alpha
Academic Stress (W)	22	0,890
Emotion Regulation (X)	7	0,701

Variable	Total Items	Cronbach's Alpha
Nomophobia (Y)	14	0,782

Overall, the reliability test results show that all research instruments have Cronbach's Alpha values above 0.70. Therefore, the instruments measuring academic stress, emotion regulation, and nomophobia are considered reliable and suitable for further data collection and analysis.

Statistic Value

Table 3. Descriptive Statistics

Statistics		Academic Stress	Emotion Regulation	Nomophobia
N	Valid	200	200	200
	Missing	0	0	0
Mean		82.59	53.81	57.26
Std. Error of Mean		.680	.429	.642
Median		84.00	54.00	57.00
Mode		88	50	52 ^a
Std. Deviation		9.619	6.064	9.073
Variance		92.525	36.768	82.322
Range		69	40	44
Minimum		36	30	36
Maximum		105	70	80
Sum		16518	10762	11451
a. Multiple modes exist. The smallest value is shown				

Based on the descriptive statistical analysis of 200 respondents, the academic stress variable has a mean score of 82.59 with a standard deviation of 9.619. The minimum value is 36, while the maximum value is 105. These findings indicate that students' academic stress levels range from moderate to high, with considerable variability in responses.

For the emotion regulation variable, the mean score is 53.81 with a standard deviation of 6.064. The minimum value is 30 and the maximum is 70, suggesting that respondents generally possess relatively good emotional regulation abilities with a fairly stable distribution. Meanwhile, the nomophobia variable has a mean score of 57.26 with a standard deviation of 9.073. The minimum value is 36 and the maximum is 80, indicating that respondents' level of nomophobia falls within the moderate category.

Assumption Tests

Multicollinearity Test

Table 4. Multicollinearity Test

Table 4: Multicollinearity Test							
Coefficients ^a							
Model	Unstandardized Coefficients		Standardized Coefficients		Sig.	Collinearity Statistics	
	B	Std. Error	Beta	t		Tolerance	VIF

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1	(Constant)	64.586	6.312		10.232	<.001	
	Academic Stress	.059	.083	.063	.716	.475	.650
	Emotion Regulation	-.227	.131	-.152	-1.732	.085	.650

a. Dependent Variable: Nomophobia

The multicollinearity test is used to determine whether there is a strong correlation among independent variables in the regression model. High correlation between independent variables can lead to instability in regression coefficients, which affects the accuracy of interpreting relationships between variables. In this study, multicollinearity was analyzed by examining the Variance Inflation Factor (VIF) and Tolerance values. A regression model is considered free from multicollinearity if the Tolerance value is greater than 0.10 and the VIF value is less than 10.

The results show that the academic stress variable has a Tolerance value of approximately 0.650 and a VIF value of 1.538. Similarly, the emotion regulation variable has a Tolerance value of 0.650 and a VIF value of 1.538. Since both variables have Tolerance values greater than 0.10 and VIF values less than 10, it can be concluded that there is no indication of multicollinearity among the independent variables in this regression model. This indicates that academic stress and emotion regulation contribute differently in explaining the nomophobia variable and do not excessively influence each other within the model. Therefore, the regression model used in this study satisfies the multicollinearity assumption and is appropriate for multiple linear regression analysis.

Normality Test

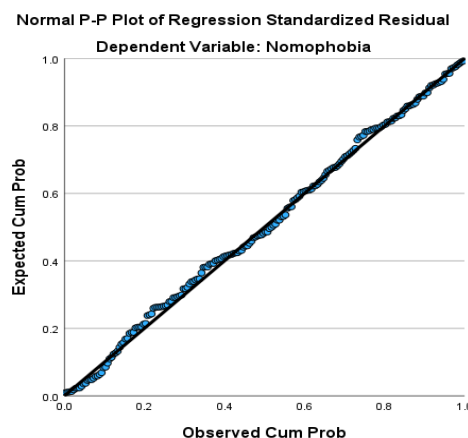


Figure 2. Descriptive Normality Test

The normality test is used to determine whether the residuals in the regression model are normally distributed or not. Based on the results of the normality test using the Normal P-P Plot of Regression Standardized Residuals, it can be seen that the data points follow a diagonal line from the bottom left to the top right. This pattern indicates that the residuals tend to be located around the normal line and do not show extreme deviations.

Table 5. Descriptive Normality Test

One-sample kolmogorov-smirnov test
Unstandardized residual

N	200	
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	9.00157220
Most Extreme Differences	Absolute	.039
	Positive	.028
	Negative	-.039
Test Statistic	.039	
Asymp. Sig. (2-tailed) ^c	.200 ^d	
Monte Carlo Sig. (2-tailed) ^e	Sig.	.673
	99% Confidence Interval	Lower Bound .661
		Upper Bound .685

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. This is a lower bound of the true significance.

e. Lilliefors' method based on 10000 Monte Carlo samples with starting seed 1502173562.

The normality test is conducted to determine whether the residual data in the regression model are normally distributed or not. In the regression model, residuals are the difference between actual values and predicted values. Testing residual normality is important because one of the main assumptions in multiple linear regression analysis is that residuals must be normally distributed so that parameter estimation produces accurate and unbiased results. In this study, the One-Sample Kolmogorov-Smirnov test on unstandardized residuals was used to assess normality. The decision criterion is that if the significance level is greater than 0.05, the residuals are considered normal. If it is less than 0.05, the residuals are considered not normally distributed.

Based on the results, the Asymp. Sig. (2-tailed) value is approximately 0.200, while the Monte Carlo Sig. value is approximately 0.673. Because both values are greater than 0.05, it can be concluded that the residuals in this study are normally distributed. This shows that the regression model has met the normality assumption. The normality assumption indicates that the distribution of residuals follows a pattern close to a normal curve, so the regression model can be used for further hypothesis analysis. Thus, multiple linear regression analysis can be continued to the next stage.

Heteroscedasticity Test

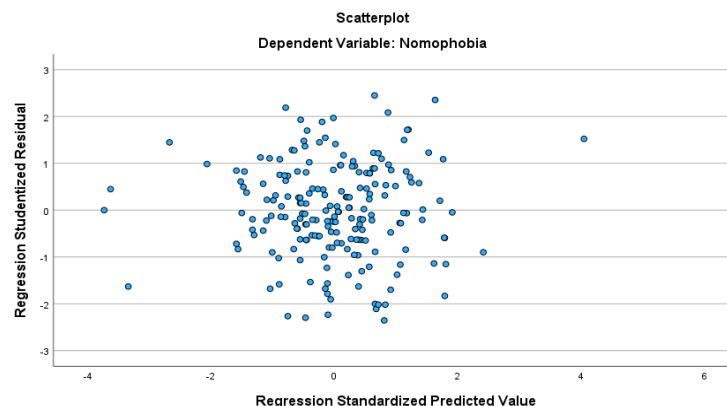


Figure 2. Heteroscedasticity Scatterplot

The heteroscedasticity test is used to determine whether the variance of residuals is constant or not in the regression model. Based on the results of the scatterplot between Regression Standardized Predicted Value and Regression Studentized Residual, the data points are randomly distributed both above and below the zero line and do not show a specific pattern such as narrowing, widening, or wave-like patterns.

This indicates that there is no heteroscedasticity in the regression model. Thus, the residual variance can be considered homogeneous or constant, meaning that the homoscedasticity assumption has been met.

Table 6. Descriptive Heteroscedasticity Test

Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	Sig.
		B	Std. Error	Beta	
1	(Constant)	64.586	6.312		10.232
	Academic Stress	.059	.083	.063	.475
	Emotion Regulation	-.227	.131	-.152	.085

a. Dependent Variable: Nomophobia

The heteroscedasticity test is conducted to determine whether there are differences in residual variance across observations in the regression model. A regression model is considered good if no heteroscedasticity is found so that the residual variance remains constant (homogeneous).

In this study, the heteroscedasticity test was carried out using the Glejser method by examining the significance values of each independent variable on the absolute residual. The model is considered free from heteroscedasticity if the significance value of each variable is above 0.05. The results show that the academic stress variable has a significance value of 0.475, while the emotion regulation variable has a significance value of 0.085. Both values are above 0.05. Therefore, the regression model in this study does not show any indication of heteroscedasticity. This condition indicates that the residual variance is relatively constant, so the regression model can be considered to meet the homoscedasticity assumption and has stable prediction ability.

F Test

Table 7. F Test

ANOVA ^a					
Model		Sum of Squares	df	Mean Square	F
1	Regression	257.363	2	128.681	1.572
	Residual	16124.632	197	81.851	
	Total	16381.995	199		

a. Dependent Variable: Nomophobia

b. Predictors: (Constant), Emotion Regulation , Academic Stress

The F test is conducted to determine whether academic stress and emotion regulation simultaneously affect nomophobia among students at University X. The decision rule is that if the significance value is less than 0.05, the independent variables simultaneously have a significant effect on

the dependent variable. Conversely, if the significance value is greater than 0.05, the variables are considered not to have a significant effect.

Based on the regression results, the F value is 1.572 with a significance level of 0.210. Since this value is above 0.05, it can be interpreted that academic stress and emotion regulation do not simultaneously have a significant effect on nomophobia among students at University X.

This finding shows that the regression model used has not been able to optimally explain the relationship between the two independent variables and nomophobia. Therefore, the third hypothesis (H3), which states that academic stress and emotion regulation affect nomophobia, is rejected. However, this result does not indicate that the variables have no relationship at all with nomophobia, but rather that the effect is not strong enough statistically in this sample.

T Test

Table 8. T-test

Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	Sig.
		B	Std. Error	Beta	
1	(Constant)	64.586	6.312		10.232
	Academic Stress	.059	.083	.063	.475
	Emotion Regulation	-.227	.131	-.152	.085

a. Dependent Variable: Nomophobia

The t test is conducted to examine the partial effect of each independent variable on the dependent variable. The decision rule is that if the significance value is less than 0.05, the variable has a significant effect. If it is greater than 0.05, the variable does not have a significant effect. Based on the results, the academic stress variable has a significance value of 0.475 (> 0.05). This indicates that academic stress does not have a significant effect on nomophobia among students at University X. Therefore, the first hypothesis (H1) is rejected.

Furthermore, the emotion regulation variable has a significance value of 0.085 (> 0.05). This result also indicates that emotion regulation does not have a significant effect on nomophobia among students at University X. Therefore, the second hypothesis (H2) is also rejected. Although both variables do not show a statistically significant effect, the direction of the relationship is still consistent with the research theory. Academic stress shows a positive relationship with nomophobia, while emotion regulation shows a negative relationship. This indicates that an increase in academic stress tends to be followed by an increase in nomophobia, while better emotion regulation tends to reduce nomophobia, although the effect is not statistically significant.

Multiple Linear Regression Analysis

Multiple linear regression analysis was used to examine the effect of independent variables, namely academic stress and emotion regulation, on the dependent variable, nomophobia among students at University X. This analysis aims to determine the direction of the relationship, the level of influence, and the ability of the independent variables to predict changes in the dependent variable. Based on the results, the regression equation is as follows:

$$Y = 64.586 + 0.059X_1 - 0.227X_2$$

Description:

Y = Nomophobia

X₁ = Academic Stress

X₂ = Emotion Regulation

Based on the regression equation, the following can be explained:

1. The constant value of 64.586 indicates that when academic stress and emotion regulation are considered constant or zero, the level of nomophobia is estimated at 64.586.
2. The regression coefficient for academic stress of 0.059 indicates that every one-unit increase in academic stress will be followed by an increase in nomophobia of 0.059 units, assuming emotion regulation is constant. The positive coefficient indicates a positive relationship between academic stress and nomophobia, meaning higher academic stress leads to higher nomophobia.
3. The regression coefficient for emotion regulation of -0.227 indicates that every one-unit increase in emotion regulation will be followed by a decrease in nomophobia of 0.227 units, assuming academic stress is constant. The negative coefficient indicates a negative relationship between emotion regulation and nomophobia. Thus, better emotion regulation leads to lower nomophobia.

Coefficient of Determination Test

Table 9. Coefficient of Determination

Model summary				
Model	R	R square	Adjusted r square	Std. Error of the Estimate
1	.125 ^a	.016	.006	9.047
a. Predictors: (Constant), Emotion Regulation , Academic Stress				

The coefficient of determination is used to determine how far the independent variables are able to explain the dependent variable in the regression model. Based on the analysis, the R value is 0.125, the R square value is 0.016, and the Adjusted R square value is 0.006. The R square value indicates that academic stress and emotion regulation only contribute 1.6% to nomophobia. Thus, the remaining 98.4% is influenced by other factors outside the variables in this study.

The Adjusted R square value of 0.006 also shows that the ability of the regression model to explain nomophobia is still very low. This indicates that nomophobia among students is likely influenced more by other psychological and behavioral factors than academic stress and emotion regulation. Some other factors that are suspected to have a stronger influence on nomophobia include smartphone usage intensity, fear of missing out (FoMO), self-control, social media addiction, the need for digital social connectivity, loneliness, and compulsive smartphone use behavior.

Overall, the results of this study show that academic stress and emotion regulation are not the main factors influencing nomophobia among students at University X. The finding that academic stress did not significantly predict nomophobia contrasts with several previous studies that reported a positive association between academic stress and problematic smartphone use. For example, Suresh et al. (2019) found that students experiencing higher academic pressure tended to exhibit stronger nomophobic tendencies as smartphones were frequently used as coping tools to alleviate stress and anxiety. Similarly, Rahmawati and Nurlhidayah (2021) reported that academic stress was associated with increased reliance on digital media among university students.

However, the present findings suggest that academic stress alone may not be sufficient to explain nomophobia. In contemporary higher education settings, smartphone use has become a routine component of academic activities, including accessing learning materials, participating in online

discussions, and communicating with lecturers. Consequently, smartphone dependence may be driven more by habitual digital engagement than by stress-related coping mechanisms. This may explain why academic stress showed only a weak and statistically insignificant relationship with nomophobia in the current sample. From the perspective of the Transactional Model of Stress and Coping (Lazarus & Folkman, 1985), individuals respond differently to stress depending on their available coping resources. Students experiencing academic stress may adopt various coping strategies, such as seeking social support, time management, or problem-solving behaviors, rather than relying exclusively on smartphones. Therefore, academic stress may indirectly influence nomophobia through other mediating variables not examined in this study.

The results indicate that emotion regulation did not significantly influence nomophobia, although the direction of the relationship was negative. This finding partially supports theoretical expectations suggesting that individuals with better emotional regulation skills tend to be less dependent on smartphones for emotional comfort and validation. Previous studies have generally reported that poor emotion regulation increases vulnerability to problematic smartphone use and nomophobia (Elhai et al., 2017; Hidayati & Sari, 2024). Individuals who struggle to manage negative emotions often seek immediate psychological relief through digital interactions, social media engagement, or continuous smartphone checking behaviors. Nevertheless, the absence of a significant effect in the present study suggests that emotional regulation may not operate as a direct determinant of nomophobia.

One possible explanation is that smartphone dependence among university students has become normalized regardless of emotional competence. Students with adequate emotional regulation may still demonstrate high smartphone attachment because smartphones function not only as emotional coping tools but also as essential instruments for academic, social, and professional activities. Consequently, emotional regulation alone may be insufficient to explain variations in nomophobia levels among students. The low explanatory power of the regression model ($R^2 = 0.016$) indicates that academic stress and emotion regulation account for only a small proportion of nomophobia variance. This finding highlights the multidimensional nature of nomophobia and suggests that other psychological and behavioral variables may play a more substantial role.

Recent studies have identified several predictors that consistently demonstrate stronger associations with nomophobia, including fear of missing out (FoMO), social media addiction, self-control deficits, loneliness, compulsive smartphone use, and digital dependency behaviors. These factors are directly linked to smartphone engagement patterns and may therefore exert a greater influence on nomophobia than broader psychological constructs such as academic stress or emotion regulation. Theoretically, these findings contribute to the growing body of literature suggesting that nomophobia should not be viewed solely as an outcome of emotional distress or academic pressure. Instead, it appears to be more closely related to digital behavioral patterns and technology-mediated social needs. Therefore, future research should consider integrating psychological, social, and technological determinants into a more comprehensive explanatory model of nomophobia. In addition, the coefficient of determination shows an R-square value of 0.016, meaning that academic stress and emotion regulation together explain only 1.6% of the variance in nomophobia, while the remaining 98.4% is influenced by other factors outside the scope of this study.

Conclusion

This study examined the effects of academic stress and emotion regulation on nomophobia among undergraduate students at an Indonesian university. The findings indicate that neither academic stress nor emotion regulation significantly predicts nomophobia, either individually or simultaneously.

Although academic stress showed a positive relationship and emotion regulation showed a negative relationship with nomophobia, these associations were not statistically significant.

These findings suggest that academic stress and emotion regulation are not the primary determinants of nomophobia in this sample. Instead, nomophobia may be more strongly influenced by other psychological and digital behavioral factors, such as smartphone usage intensity, fear of missing out (FoMO), social media dependency, self-control, loneliness, and habitual digital engagement.

The study contributes to the growing literature on nomophobia by demonstrating that factors commonly assumed to influence smartphone-related anxiety may not always play a significant role across different student populations. Future research is encouraged to investigate broader psychological, social, and technology-related variables and to employ more comprehensive models to better explain nomophobia among university students.

Acknowledgments

We would like to express our deepest gratitude to all parties who contributed to this research. We would like to thank our colleagues who provided advice, support, and inspiration throughout the research process. We would also like to thank all participants and respondents who took the time to participate in this research. We would also like to thank the institutions that provided support and facilities for conducting this research. All contributions and assistance were invaluable to the smooth running and success of this research. Thank you for all your hard work and collaboration.

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