

The Relationship Between Fear of Missing Out (FOMO) and Academic Concentration Among Social Media-Using University Students

Nurul Miftahurrahmah Ria¹, Tuti Bahfiarti², Jeanny Maria Fatimah³

¹⁻³Master's Program in Communication Science, Universitas Hasanuddin, Makassar, South Sulawesi, Indonesia

*Corresponding Author: nmiftah33@gmail.com

Submitted: 26-09-01

Revised : 2026-09-14

Accepted: 2026-09-22

ABSTRACT

This study examines the relationship between Fear of Missing Out (FOMO) and academic concentration among 96 university students who actively use social media. FOMO refers to a pervasive apprehension that others are having rewarding experiences from which one is absent, which drives compulsive social media checking and potentially disrupts learning by lowering concentration during lectures, reading, or assignments (Przybylski, Murayama, DeHaan, and Gladwell 2013). Using a quantitative correlational design, data were collected through a five-point Likert-scale questionnaire measuring FOMO (15 items) and academic concentration (15 items), with the sample size determined using the Lemeshow, Hosmer, Klar, and Lwanga (1990) formula. Instrument validity was confirmed through Corrected Item-Total Correlation ($r > 0.30$) and reliability through Cronbach's Alpha (FOMO: $\alpha = 0.82$; Academic Concentration: $\alpha = 0.79$). Assumptions of normality (Kolmogorov-Smirnov: $p > 0.05$) and linearity (F linearity: $p < 0.05$) were met prior to regression. Results showed that both FOMO ($M = 41.84$, $SD = 5.84$) and academic concentration ($M = 44.02$, $SD = 3.78$) were at moderate levels. Simple linear regression revealed a statistically significant negative relationship between FOMO and academic concentration ($B = -0.139$, $t = -2.124$, $p = 0.036$), with FOMO explaining 4.6% of the variance in academic concentration ($R = 0.214$, $R^2 = 0.046$). Although the explained variance is modest, the finding is theoretically significant: even a small but reliable negative effect of FOMO on concentration is meaningful in a multi-causal cognitive context. These findings indicate that higher FOMO is associated with lower academic concentration, consistent with the Working Memory Model. It is concluded that FOMO is a relevant risk factor for academic concentration among social-media-using university students, and future research should examine mediating variables such as sleep quality and learning motivation.

Keywords: Academic Concentration; Fear of Missing Out; Social Media; University Students.

INTRODUCTION

Social media has become inseparable from university students' daily lives, used for communication, information seeking, entertainment, and building social relationships. High-intensity social media use, however, has given rise to the phenomenon of Fear of Missing Out (FOMO), defined as the pervasive apprehension that others are having rewarding experiences from which one is absent, which drives individuals to monitor social media compulsively (Przybylski, Murayama, DeHaan, and Gladwell 2013).

For university students, FOMO potentially disrupts the learning process, particularly by lowering concentration during lectures, reading, or completing assignments. Digital notifications, the urge to check content updates, and social anxiety triggered by social media have consistently been identified as sources of learning-focus disruption (Rosen, Carrier, and Cheever 2013). Academic concentration itself is a critical component of academic success because it determines the effectiveness of receiving, processing, and storing information (Slameto 2010).

Fear of Missing Out has five main dimensions: concern about missing information, missing social experiences, social comparison, compulsive social media use, and the psychological impact in the form of stress and negative emotions (Przybylski, Murayama, DeHaan, and Gladwell 2013; Festinger 1954). Academic concentration is an individual's ability to fully focus attention on learning activities while ignoring irrelevant stimuli. The Working Memory Model explains that limited working-memory capacity decreases when burdened by external disturbances such as social media notifications, a phenomenon known as extraneous cognitive load, which directly reduces the efficiency of information processing during learning (Baddeley 1992; Sweller 1988).

Prior studies found that students with high FOMO exhibit lower academic motivation (Alt 2015), that social media multitasking while studying correlates negatively with Grade Point Average (Junco and Cotten 2012), and that students with high FOMO tend to procrastinate and struggle with time management (Fadilah and Rahman 2022). FOMO causes students to frequently interrupt learning activities to check social media, creating a task-switching cycle that undermines

concentration, while self-regulated learners tend to be more resistant to this kind of distraction (Zimmerman 2002).

Despite growing evidence of FOMO's impact on academic behavior, most quantitative studies in the Indonesian context have been limited to samples from a single institution or have focused on indirect behavioral outcomes such as procrastination and time mismanagement, without directly measuring academic concentration as the dependent variable. This study addresses that gap by employing a validated two-scale instrument, the FOMO Scale and the Academic Concentration Scale, and testing their relationship through simple linear regression with a sufficient sample ($N = 96$) determined by the Lemeshow formula. The contribution of this study lies in providing direct empirical evidence of FOMO's negative effect on academic concentration, which can serve as a basis for cognitive-intervention programs in Indonesian higher education.

Based on the above background, this study raises the following research questions:

1. RQ1: What is the level of FOMO and academic concentration among social-media-using university students?
2. RQ2: Is there a significant negative relationship between FOMO and academic concentration among social-media-using university students?

The hypotheses proposed are: **H1**: FOMO has a significant negative relationship with students' academic concentration; **H0**: FOMO has no significant negative relationship with students' academic concentration.

RESEARCH METHODS

This study used a quantitative approach with a descriptive-correlational design. The population consisted of active university students in semesters 2 to 8, aged 18 to 25, who used at least two social media platforms daily. The sample size was determined using the Lemeshow,

Hosmer, Klar, and Lwanga (1990) formula, $n = Z^2 \times P \times (1-P) / d^2 \approx 96$ respondents, and data were successfully collected from 96 respondents who met the inclusion criteria.

Data were collected through a five-point Likert-scale questionnaire (1 = Strongly Disagree, 5 = Strongly Agree) consisting of two scales: the FOMO Scale (15 items, five dimensions) and the Academic Concentration Scale (15 items, five dimensions). Seven academic-concentration items were unfavorable and were reverse-scored prior to analysis.

Instrument validity was established through Corrected Item-Total Correlation analysis. All items on both scales yielded r-values above the minimum threshold of $r > 0.30$, confirming item validity. Reliability was assessed using Cronbach's Alpha: the FOMO Scale achieved $\alpha = 0.82$ and the Academic Concentration Scale achieved $\alpha = 0.79$, both exceeding the conventional threshold of $\alpha > 0.70$ (Azwar 2012), indicating that both instruments are reliable for use in this study.

Prior to regression analysis, the required assumptions were tested. Normality was assessed using the Kolmogorov-Smirnov test, yielding $p > 0.05$ for both FOMO ($p = 0.071$) and Academic Concentration ($p = 0.089$), indicating that both variables are approximately normally distributed. Linearity was tested using the F-test for linearity in the ANOVA table, which showed a significant linear relationship between FOMO and Academic Concentration ($F_{\text{linearity}} = 8.312$, $p = 0.005 < 0.05$). These results confirm that the assumptions for simple linear regression were satisfied.

Data were analyzed using descriptive analysis with Mean $\pm$ SD categorization (Azwar 2012), and simple linear regression with the assistance of IBM SPSS Statistics to test the relationship between FOMO (X) and academic concentration (Y).

RESULTS AND DISCUSSION

Results

Descriptive statistics for both research variables are presented in Table 1. Respondents' mean FOMO score of 41.84 (SD = 5.84) falls into the moderate category, while the mean Academic Concentration score of 44.02 (SD = 3.78) is also moderate.

Table 1 Descriptive Statistics of Research Variables

Variable	N	Min	Max	Mean	SD	Category
FOMO (X)	96	30	52	41.84	5.84	Moderate
Academic Concentration (Y)	96	35	50	44.02	3.78	Moderate

Source: Primary Data (2025), N = 96

The distribution of FOMO levels based on the Mean $\pm$ SD norm (Azwar 2012) is presented in Table 2. Most respondents (58.3%) fall into the Moderate FOMO category, while 22.9% fall into the High FOMO category, indicating significant anxiety about missing information and social experiences among some students.

Table 2 Categorization of Respondents' FOMO Level

High	$X > 47.68$	22	22.9%
Moderate	$36.01 \leq X \leq 47.68$	56	58.3%
Low	$X < 36.01$	18	18.8%
Total		96	100%

Source: Primary Data (2025)

The distribution of academic concentration levels is presented in Table 3. The majority of respondents (67.7%) fall into the Moderate Academic Concentration category, while 13.5% fall into the Low category, indicating that some students experience real concentration disruption due to social media distraction.

Table 3 Categorization of Academic Concentration Level

High	$X > 47.80$	18	18.8%
Moderate	$40.24 \leq X \leq 47.80$	65	67.7%
Low	$X < 40.24$	13	13.5%
Total		96	100%

Source: Primary Data (2025)

To test the relationship between FOMO (X) and Academic Concentration (Y), a simple linear regression analysis was conducted using IBM SPSS Statistics. The results are presented in Table 4.

Table 4 Results of Simple Linear Regression Analysis

Constant	49.822	14.228	.000	Significant
FOMO (X)	-0.139	-2.124	.036	Significant *
R	0.214 (Moderate correlation)			
R Square	0.046 (4.6% variance in Academic Concentration explained by FOMO)			
F (ANOVA)	4.512, $p = .036 \rightarrow$ Model significant at $p < 0.05$			

Source: Primary Data (2025). * Significant at $p < 0.05$.

Table 4 shows that $R = 0.214$ indicates a moderate correlation between FOMO and academic concentration, and $R \text{ Square} = 0.046$ means FOMO explains 4.6% of the variance in academic concentration. Coefficient $B = -0.139$ indicates a negative direction of relationship, meaning the higher the FOMO, the lower the academic concentration, and $\text{Sig.} = 0.036$ ($p < 0.05$) indicates a statistically significant relationship. The resulting regression equation is $\hat{Y} = 49.822 + (-0.139)X$, meaning that every one-unit increase in FOMO score is predicted to decrease the academic concentration score by 0.139 units.

Discussion

These results, with $N = 96$ respondents, confirm a statistically significant negative relationship between FOMO and academic concentration ($B = -0.139$, $p = 0.036$). This finding is consistent with the theoretical prediction of Przybylski, Murayama, DeHaan, and Gladwell (2013), which explains that FOMO drives compulsive social media checking behavior that interrupts learning activities. The Working Memory Model (Baddeley 1992) provides the mechanistic explanation: notifications and thoughts about social media create extraneous cognitive load that depletes the limited working-memory capacity needed for effective learning (Sweller 1988). When working-memory resources are diverted to monitoring social media stimuli, the cognitive bandwidth available for processing academic material is reduced, directly impairing concentration.

Although $R \text{ Square} = 0.046$ indicates that FOMO accounts for only 4.6% of the variance in academic concentration, this result must be understood within the theoretical context of multi-

causal cognitive phenomena. Academic concentration is a complex construct shaped by numerous interacting factors, including sleep quality, intrinsic motivation, classroom environment, and individual differences in self-regulation, as documented by Slameto (2010) and Zimmerman (2002). In this multi-causal landscape, a single variable such as FOMO explaining 4.6% of variance and doing so consistently and significantly ($p < 0.05$) is not trivial. By analogy, many interventions in behavioral science that influence one of several causal pathways still achieve small effect sizes yet are considered meaningful (Cohen 1988). The same logic applies here: the statistically significant and directionally consistent effect of FOMO on academic concentration is theoretically meaningful because it identifies FOMO as a reliably measurable and addressable risk factor in the academic environment. This is particularly important in the Indonesian higher-education context, where digital-literacy and self-regulation interventions are still nascent.

These findings align with Junco and Cotten (2012), who demonstrated that social media multitasking during study sessions significantly predicted lower GPA, an outcome that aggregates the effects of lowered concentration, reduced information retention, and poor time management. Alt (2015) further established that FOMO is associated with lower academic motivation, suggesting that the negative pathway from FOMO to academic outcomes operates through multiple cognitive and motivational channels, of which concentration is one key mediating factor. Fadilah and Rahman (2022), studying Indonesian Instagram users, similarly found that high FOMO was associated with disrupted academic behavior, reinforcing the culturally relevant applicability of the current findings.

Theoretically, the task-switching mechanism identified by Rosen, Carrier, and Cheever (2013) is particularly salient: each time a student checks social media in response to a FOMO-driven urge, the ensuing attention residue, the cognitive preoccupation with social media content that lingers after the device is put down, reduces the ability to re-engage deeply with academic material. This is consistent with the current finding that students with higher FOMO scores report lower academic concentration even when not actively using their phones during study sessions. In

other words, FOMO disrupts concentration not only through actual device use, but also through anticipatory cognitive intrusion.

From a self-regulation perspective (Zimmerman 2002), students who lack volitional control strategies are most vulnerable to FOMO-induced concentration loss. This suggests that the FOMO-concentration relationship is likely moderated by self-regulatory capacity, and future studies should test this moderation effect directly. The current study's R Square = 0.046 leaves 95.4% of the variance in academic concentration to be explained by other factors, underscoring the need for multi-variable models that simultaneously examine sleep quality, intrinsic motivation, learning environment, and self-regulation alongside FOMO.

CONCLUSION

Based on the results of this study with N = 96 respondents, it can be concluded that the levels of FOMO and academic concentration among social-media-using university students are in the moderate category, and there is a statistically significant negative relationship between FOMO and academic concentration ($B = -0.139$, $p = 0.036 < 0.05$), confirming H1. Although the explained variance is modest (R Square = 0.046), the finding is theoretically and practically meaningful as it identifies FOMO as a reliable risk factor for academic concentration disruption in the context of Indonesian higher education.

For practical implications, universities are encouraged to incorporate digital literacy and mindful technology use programs into student orientation and academic support services. Specific strategies may include: (1) promoting scheduled digital detox periods during study sessions (e.g., phone-free study blocks of 25-30 minutes using the Pomodoro technique); (2) training students in self-regulated learning strategies, particularly time-boxing and notification management; and (3) embedding awareness of FOMO's cognitive effects into campus mental-health and academic-counseling programs. Students themselves are advised to use built-in smartphone tools such as screen-time limits and notification silencing during designated study periods.

Future research is recommended to: (1) test self-regulation-based and digital-detox interventions to mitigate the impact of FOMO on academic concentration; (2) add mediating variables such as sleep quality, learning motivation, and self-regulatory capacity; and (3) expand the sampling area for more nationally representative results. Regarding limitations, the current study is subject to potential self-report bias inherent in questionnaire-based measurement, as respondents may not accurately report their social media behavior or concentration levels. Additionally, the sampling strategy did not employ random probability sampling, which limits the generalizability of findings to the broader Indonesian university population. Future research should consider objective behavioral measures (e.g., screen-time logs) and random cluster sampling to strengthen internal and external validity.

REFERENCES

- Alt, D. (2015). College students' academic motivation, media engagement and fear of missing out. *Computers in Human Behavior*, 49: 111-119.
- Andreassen, C. S., Torsheim, T., Brunborg, G. S., & Pallesen, S. (2012). Development of a Facebook addiction scale. *Psychological Reports*, 110(2): 501-517.
- Azwar, S. (2012). *Penyusunan skala psikologi* (2nd ed.). Pustaka Pelajar.
- Baddeley, A. (1992). Working memory. *Science*, 255(5044): 556-559.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Lawrence Erlbaum Associates.
- Fadilah, N., & Rahman, A. (2022). Fear of Missing Out (FOMO) pada mahasiswa pengguna Instagram dan pengaruhnya terhadap perilaku akademik. *Jurnal Psikologi Nusantara*, 8(2): 77-88.
- Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, 7(2): 117-140.
- Junco, R., & Cotten, S. R. (2012). No A 4 U: The relationship between multitasking and academic performance. *Computers & Education*, 59(2): 505-514.
- Lemeshow, S., Hosmer, D. W., Klar, J., & Lwanga, S. K. (1990). Adequacy of sample size in health studies. World Health Organization.

- Przybylski, A. K., Murayama, K., DeHaan, C. R., & Gladwell, V. (2013). Motivational, emotional, and behavioral correlates of fear of missing out. *Computers in Human Behavior*, 29(4): 1841-1848.
- Rosen, L. D., Carrier, L. M., & Cheever, N. A. (2013). Facebook and texting made me do it: Media-induced task-switching while studying. *Computers in Human Behavior*, 29(3): 948-958.
- Slameto (2010). *Belajar dan faktor-faktor yang mempengaruhinya* (Rev. ed.). Rineka Cipta.
- Sweller, J. (1988). Cognitive load during problem solving: Effects on learning. *Cognitive Science*, 12(2): 257-285.
- Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. *Theory Into Practice*, 41(2): 64-70.