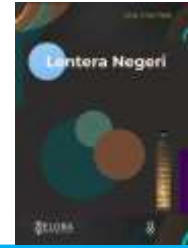




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Academic procrastination as a self-regulatory failure: the combined influence of academic stress and fear of failure

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ABSTRACT

Academic procrastination remains a prevalent issue among university students and has been associated with adverse academic outcomes, including reduced academic performance, poor self-regulation, and increased psychological distress. Although procrastination is often attributed to ineffective time management, growing evidence suggests that underlying psychological factors may play a more substantial role in shaping students' delaying behaviors. This study investigated the extent to which academic stress and fear of failure predict academic procrastination among undergraduate students. A quantitative cross-sectional design was employed, and data were collected through self-report questionnaires administered to undergraduate students. The data were analyzed using multiple linear regression to examine the predictive contributions of academic stress and fear of failure to academic procrastination. The findings revealed that academic stress significantly and positively predicted academic procrastination, indicating that students experiencing higher levels of academic stress were more likely to delay academic tasks. Fear of failure was also found to be a significant positive predictor of academic procrastination. Furthermore, the regression model demonstrated that academic stress and fear of failure jointly contributed to explaining variations in procrastination behavior. These findings suggest that academic procrastination is influenced not only by behavioral factors but also by psychological vulnerabilities related to stress and failure concerns. Therefore, interventions aimed at reducing academic procrastination should incorporate strategies for stress management and addressing maladaptive fear of failure to enhance students' academic functioning and self-regulatory capacities.



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Introduction

Academic procrastination is widely recognized as one of the most prevalent academic challenges among university students. A meta-analysis conducted by Steel (2007) estimated that approximately 80–95% of college students engage in procrastination behavior, while nearly 50% report procrastinating consistently and problematically. More recent evidence suggests that academic procrastination remains highly prevalent in higher education settings and is associated with lower academic achievement, increased stress, reduced well-being, and poorer self-regulatory capacities (Svardal et al., 2020). Academic procrastination refers to the voluntary delay of intended academic tasks despite anticipating that such delays will result in negative consequences. In academic settings, procrastination manifests through postponing assignment completion,

delaying examination preparation, and avoiding academic responsibilities, often resulting in diminished academic performance and psychological distress. Contemporary research increasingly views procrastination not merely as a time-management problem but as a self-regulation failure influenced by emotional and cognitive processes. Steel (2007) argued that procrastination occurs when individuals prioritize short-term mood repair over long-term academic goals, whereas Svartdal et al. (2020) emphasized the role of stress, emotional instability, and maladaptive coping strategies in maintaining procrastinatory behaviors. These perspectives suggest that psychological vulnerabilities may play a critical role in explaining why students delay academic tasks despite being aware of the negative consequences. Therefore, this study aims to examine the extent to which academic stress and fear of failure predict academic procrastination among undergraduate students using standardized and psychometrically validated measurement scales.

One of the major factors contributing to academic procrastination is academic stress. Academic stress refers to the psychological pressure experienced by students due to academic demands, excessive workload, examinations, competition, and expectations for achievement. University students, particularly undergraduates, frequently encounter multiple academic stressors throughout their studies, including tight deadlines, heavy coursework, performance expectations, and concerns about academic failure. When students perceive that these academic demands exceed their coping resources, stress develops and may trigger avoidance behaviors such as procrastination. According to Pascoe et al. (2020), prolonged academic stress negatively affects students' cognitive functioning, emotional well-being, and learning motivation. Similarly, Bedewy and Gabriel (2015) reported that high levels of academic stress significantly increase students' tendencies to delay academic responsibilities. More recent studies have reinforced these findings by demonstrating that academic stress impairs self-regulation, increases emotional exhaustion, and reduces students' ability to effectively manage academic tasks, thereby increasing procrastination tendencies (Hailikari et al., 2021; Sirois & Owens, 2021; Grunschel et al., 2023). Furthermore, a recent systematic review by Saputra et al. (2025) concluded that academic stress consistently emerges as one of the strongest psychological predictors of academic procrastination because it depletes students' emotional resources and weakens adaptive coping strategies. Consequently, students experiencing persistent stress are more likely to seek temporary emotional relief by postponing academic tasks rather than confronting them directly, resulting in increased procrastination and poorer academic performance.

In addition to academic stress, fear of failure is another psychological factor that contributes significantly to academic procrastination. Fear of failure refers to an individual's excessive concern about making mistakes, receiving negative evaluations, or failing to meet expectations. Students with high fear of failure tend to avoid academic tasks because they are worried about producing unsatisfactory outcomes or disappointing others. This fear creates anxiety and self-doubt, which subsequently encourage procrastination as a form of avoidance coping. Conroy et al. (2007) explained that fear of failure is closely associated with avoidance motivation, whereby individuals postpone challenging tasks to protect themselves from the possibility of failure. Similarly, Haghbin et al. (2012) found that students with higher levels of fear of failure were more likely to engage in academic procrastination because of increased anxiety and reduced confidence in their academic abilities. More recent evidence also supports this relationship. Rahimi and Hall (2021) demonstrated that fear of failure significantly predicts procrastination through increased achievement anxiety and diminished competence beliefs. Rozentel et al. (2022) further argued that fear of failure contributes to procrastination by impairing emotional regulation and increasing avoidance-oriented coping strategies. Likewise, Svartdal et al. (2023) identified fear of negative evaluation and self-regulation failure as important psychological mechanisms underlying procrastination among university students. In addition, Abdi Zarrin et al. (2023) reported that students with high fear of failure generally exhibit lower academic self-efficacy and stronger tendencies to delay academic tasks. Collectively, these findings suggest that students often procrastinate not because they lack the necessary ability, but because they perceive failure as a threat to their self-worth and personal competence. Consequently, procrastination functions as a psychological defense mechanism that temporarily reduces emotional distress while simultaneously increasing the risk of poorer academic performance.

Several previous studies have demonstrated a relationship between academic stress, fear of failure, and academic procrastination. Research conducted by Sirois and Pychyl (2016) found that stress and emotional regulation difficulties significantly predict procrastination behavior among university students. Likewise, Flett et al. (2016) emphasized that fear of failure contributes to procrastination through increased perfectionism and self-critical thinking. Another study by Closson and Boutilier (2017) reported that students who experience high academic pressure and fear of academic incompetence are more likely to delay completing academic tasks. These findings indicate that academic procrastination is influenced not only by external academic demands but also by internal psychological factors such as anxiety, stress, and fear of

negative evaluation. However, despite numerous studies discussing procrastination, limited research specifically examines the predictive role of academic stress and fear of failure simultaneously among undergraduate students, particularly in developing country contexts. Therefore, further investigation is needed to better understand how these psychological factors contribute to procrastination behavior in undergraduate students.

This study is important because academic procrastination has been consistently linked to a range of negative educational and psychological outcomes. Previous research has shown that students who frequently procrastinate tend to achieve lower academic performance, experience higher levels of stress and anxiety, report reduced academic satisfaction, and demonstrate poorer self-regulation skills (Steel, 2007; Kim & Seo, 2015; Svartdal et al., 2020). Furthermore, chronic procrastination has been associated with increased emotional distress, diminished well-being, and greater vulnerability to academic burnout (Sirois & Pychyl, 2013). These findings suggest that procrastination extends beyond simple delays in task completion and represents a significant challenge to students' academic success and psychological adjustment.

The implications of procrastination may also extend beyond higher education. Longitudinal evidence indicates that procrastination tendencies developed during university years often persist into adulthood and professional contexts, where they can negatively affect work performance, productivity, goal attainment, and career development (Steel & Ferrari, 2013; Svartdal et al., 2020). Individuals with chronic procrastination tendencies are more likely to struggle with meeting deadlines, maintaining task persistence, and effectively managing workplace responsibilities. Consequently, understanding the psychological factors associated with procrastination is essential for developing strategies that promote adaptive self-regulation and long-term professional effectiveness.

Given the substantial academic and psychological consequences of procrastination, greater attention should be directed toward identifying the psychological vulnerabilities that contribute to this behavior. Such knowledge may assist universities and educators in designing evidence-based interventions, including counseling services, stress-management training, and self-regulation development programs. By addressing the underlying psychological factors associated with procrastination, higher education institutions can foster healthier coping strategies, enhance students' academic functioning, and support their overall psychological well-being. This study is also expected to contribute to the educational psychology literature by providing further evidence regarding the psychological determinants of academic procrastination and offering practical implications for student support services in higher education.

Method

This study employed a quantitative correlational design to examine the relationships among academic stress, fear of failure, and academic procrastination among undergraduate students. A correlational approach was selected because the study aimed to investigate the extent to which academic stress and fear of failure contribute to variations in academic procrastination. The target population consisted of undergraduate students enrolled in higher education institutions. Participants were selected using purposive sampling based on the following criteria: (1) active undergraduate students and (2) students currently engaged in academic activities during the data collection period.

The sample size was determined using the recommendation proposed by Hair et al. (2019), which suggests that multivariate studies should include a minimum of 5–10 respondents per indicator. Given that the present study employed 14 indicators across all variables, the minimum sample requirement was calculated as 14×10 , resulting in 140 participants. Therefore, a total of 140 undergraduate students participated in the study. Data were collected through a self-administered online questionnaire distributed via Google Forms. Responses were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

The research instrument consisted of three constructs adapted from previously validated studies. Academic stress (X1) was measured using an instrument adapted from Afif et al. (2022), comprising five indicators: pressure, frustration, conflict, self-imposition, and self-change. Fear of failure (X2) was measured using an instrument adapted from Henschel (2021), consisting of five indicators: fear of experiencing shame and embarrassment, fear of devaluing one's self-estimate, fear of having an uncertain future, fear of important others losing interest, and fear of upsetting important others. Academic procrastination (Y) was measured using an instrument adapted from Cynthia and Natalya (2019), consisting of four indicators: outcome satisfaction, preference for pressure, intentional decision to procrastinate, and ability to meet deadlines. To

ensure measurement quality, the validity and reliability of all instruments were evaluated prior to hypothesis testing. Construct validity was assessed using item validity testing, while internal consistency reliability was examined using Cronbach's alpha coefficients. The results of these analyses are reported in the measurement assessment section. Furthermore, multiple linear regression analysis was employed to examine the predictive contributions of academic stress and fear of failure to academic procrastination after all measurement assumptions had been satisfied. To ensure the validity and reliability of the instruments, validity testing was conducted using Pearson Product Moment correlation, while reliability testing employed Cronbach's Alpha coefficient. Instruments were considered reliable if the Cronbach's Alpha value exceeded 0.70. The measurement questionnaire scale described on Table 1.

Table 1. The Measurement Scale

Variables	Indicators	Statement
Academic stress (X1)	1. Pressure	1. I feel pressured by academic demands from lectures and assignments.
	2. Frustration	2. I feel frustrated when I cannot complete academic tasks properly.
	3. Conflict	3. I experience conflict between academic activities and personal activities.
	4. Self-imposition	4. I set very high academic standards for myself.
	5. Self-change (Afif et al, 2022)	5. I feel that academic stress has changed my daily habits.
Fear of Failure (X2)	1. Fear of experiencing shame and embarassement	1. I am afraid of feeling embarrassed when I fail academically.
	2. Fear of devaluing one's self estimate	2. I feel like a failure when I cannot achieve good academic results.
	3. Fear of having an uncertain future	3. I worry that academic failure will affect my future career.
	4. Fear of important others losing interest	4. I worry that people important to me will lose confidence in me if I fail.
	5. Fear upsetting important others (Henschel, 2021)	5. I am afraid of disappointing my parents when my academic performance is poor.
Academic procrastination (Y)	1. Outcome satisfaction	1. I feel satisfied even when completing assignments at the last minute.
	2. Preference for pressure	2. I prefer working on assignments when the deadline is near.
	3. International decision to procrastinate	3. I intentionally postpone starting academic assignments.
	4. Ability to meet deadlines	4. I often struggle to complete assignments before the deadline.
	5. (Cynthia & Natalya, 2019)	

Prior to conducting the main analysis, classical assumption tests were also carried out, including normality, multicollinearity, and heteroscedasticity tests, to ensure that the regression model met statistical assumptions. The collected data were analyzed using multiple linear regression analysis to determine the predictive influence of academic stress and fear of failure on academic procrastination among undergraduate students. The analysis was conducted using Statistical Package for the Social Sciences (SPSS). Descriptive statistics were first used to describe respondents' demographic characteristics and variable distributions. Subsequently, inferential statistical analysis was employed to test the research hypotheses through t-tests for partial effects, F-tests for simultaneous effects, and the coefficient of determination (R^2) to measure the explanatory power of the independent variables on the dependent variable. This study assumed that respondents answered the questionnaire honestly and that the selected sample adequately represented undergraduate students experiencing academic activities. However, this study also had several limitations, including the use of self-report questionnaires which may produce response bias and the limitation of data collection conducted only through online questionnaires. Furthermore, because the study used a cross-sectional design, the findings only reflected conditions at one point in time and could not fully explain causal

relationships longitudinally. Nevertheless, the methodology was designed systematically to enable future researchers to replicate or further develop the study in broader educational contexts.

Results and Discussions

This research had been conducted by shared the questionnaire to 140 students at Muhammaiayah University of Yogyakarta, the charahcteristis of respondent described on Table 2.

Table 2. Characteristic of Respondents

Characteristics	Frequency	Percentage (%)
Gender		
Male	48	34,3%
Female	92	65,7%
Total	140	100%
Age		
19-20 years	58	41,4%
21-22 years	64	45,7%
>23 years	18	12,9%
Total	140	100%

Sources: Data Analysis (2026)

Based on Table 1, the majority of respondents were female students, totaling 92 respondents (65.7%), while male students accounted for 48 respondents (34.3%). In terms of age distribution, most respondents were between 21–22 years old, with 64 respondents (45.7%), followed by those aged 19–20 years with 58 respondents (41.4%). Meanwhile, respondents aged above 23 years represented the smallest proportion, totaling 18 respondents (12.9%). This distribution indicates that the respondents were predominantly undergraduate students within the typical productive academic age range. This profile is relevant to the present study because students in early adulthood often encounter substantial academic demands, including examinations, assignments, and performance expectations, which may contribute to higher levels of academic stress and fear of failure. Consequently, the demographic composition of the sample provides an appropriate context for examining the predictive role of academic stress and fear of failure toward academic procrastination among undergraduate students. Based on the result of characteristic respondent, the researcher analyzed the validity and reliability test for each instrument described on Table 3:

Table 3. The Result of Validity and Reliability test

Indicators	r-score	AVE	Description	Cronbach alpha	Composite Reliability	Criteria	Description
X1.1	0.842	0,637	Valid	0.853	0,897	>0,6	Reliabel
X1.2	0.737		Valid				Reliabel
X1.3	0.799		Valid				Reliabel
X1.4	0.803		Valid				Reliabel
X1.5	0.789		Valid				Reliabel
X2.1	0.805	0,661	Valid	0.873	0,907	Reliabel	
X2.2	0.827		Valid			Reliabel	
X2.3	0.789		Valid			Reliabel	
X2.4	0.804		Valid			Reliabel	
X2.5	0.849		Valid			Reliabel	
Y1	0.843	0,683	Valid	0.845	0,896	Reliabel	
Y2	0.820		Valid			Reliabel	
Y3	0.815		Valid			Reliabel	
Y4	0.829		Valid			Reliabel	

Sources: Data Analysis (2026)

Table 3 presents the results of the validity and reliability assessment for all research constructs. The validity test showed that all indicators achieved r-scores ranging from 0.737 to 0.849, exceeding the recommended threshold of 0.30, indicating that all items were valid measures of their respective constructs. In terms of convergent validity, the Average Variance Extracted (AVE) values for Academic Stress (X1), Fear of Failure (X2), and Academic Procrastination (Y) were 0.637, 0.661, and 0.683, respectively,

surpassing the minimum criterion of 0.50 and demonstrating that each construct adequately explained more than 50% of the variance of its indicators. Furthermore, the reliability analysis revealed Cronbach's Alpha values of 0.853 for Academic Stress, 0.873 for Fear of Failure, and 0.845 for Academic Procrastination, all exceeding the acceptable threshold of 0.60. Similarly, Composite Reliability values ranged from 0.896 to 0.907, which were above the recommended cut-off value of 0.70. These findings indicate that all measurement instruments possess satisfactory validity, convergent validity, and internal consistency reliability, confirming their suitability for measuring academic stress, fear of failure, and academic procrastination among undergraduate students and supporting their use in subsequent regression analysis. The result of Descriptive statistic showed on Table 4:

Table 4. The Result of Statistic descriptive Analysis

	Statistics			
	X1	X2	Y	
N	Valid	140	140	140
	Missing	0	0	0
Mean		59.69	59.86	59.68
Median		60	56	55
Mode		36	76	55
Std. Deviation		19.882	19.78	19.984
Minimum		20	20	20
Maximum		100	100	100

Sources : Data Analysis (2026)

Table 4 presents the results of the descriptive statistical analysis for variables X1, X2, and Y based on 140 valid respondents with no missing data. The mean scores of the variables are relatively similar, with X1 obtaining 59.69, X2 obtaining 59.86, and Y obtaining 59.68, indicating that the average responses of respondents are at a moderate level. The median values are 60 for X1, 56 for X2, and 55 for Y, while the mode values are 36, 76, and 55 respectively, showing differences in the most frequently occurring responses among variables. In addition, the standard deviation values of X1 (19.882), X2 (19.780), and Y (19.984) indicate a relatively similar level of data distribution and variability among respondents' answers. The minimum score for all variables is 20 and the maximum score is 100, demonstrating that the responses cover the full range of measurement. Therefore, the data distribution of all variables can be considered sufficiently varied and representative for further analysis. The result of Assumption classic described on the Below:

Table 5. The Result of Normality Test

One-Sample Kolmogorov-Smirnov Test		
	Unstandardized Residual	
N		140
Normal Parameters ^{a,b}	Mean	0
	Std. Deviation	15.2579464
Most Extreme Differences	Absolute	0.059
	Positive	0.059
	Negative	-0.044
Test Statistic		0.059
Asymp. Sig. (2-tailed)	.200 ^{c,d}	

^a Test distribution is Normal.
^b Calculated from data.
^c Lilliefors Significance Correction.
^d This is a lower bound of the true significance.

Sources: Data Analysis (2026)

Table 5 presents the result of the normality test using the One-Sample Kolmogorov–Smirnov Test on the unstandardized residual data. The analysis involved 140 samples with a mean value of 0 and a standard deviation of 15.2579464. The result showed that the most extreme difference in the residual distribution was 0.059, with a positive difference of 0.059 and a negative difference of -0.044. The Kolmogorov–Smirnov test statistic was 0.059, while the Asymp. Sig. (2-tailed) value was 0.200, which is higher than the significance level of 0.05. Therefore, it can be concluded that the residual data are normally distributed. This indicates that the regression model fulfills the assumption of normality and is appropriate for further statistical analysis.

Based on Table of Coefficients, the multiple linear regression model can be formulated as follows:
 $Y=13.277+0.419X_1+0.357X_2$

Where:

Y = Academic Procrastination

X₁ = Academic Stress

X₂ = Fear of Failure

The regression equation indicates that the constant value is 13.277, meaning that if Academic Stress and Fear of Failure are assumed to be constant or equal to zero, the Academic Procrastination score would be 13.277. The coefficient of Academic Stress (X₁X₁) is 0.419, which means that every one-unit increase in Academic Stress will increase Academic Procrastination by 0.419 units, assuming other variables remain constant. Meanwhile, the coefficient of Fear of Failure (X₂X₂) is 0.357, indicating that every one-unit increase in Fear of Failure will increase Academic Procrastination by 0.357 units. The significance values for both variables are 0.000, which are lower than 0.05, showing that Academic Stress and Fear of Failure have a significant positive effect on Academic Procrastination. The result of Hypothesis testing for parsial analysis showed on Table 7.

Table 7. The Result of Hypothesis testing for Parsial Analysis

Model	Coefficients ^a	Standardized Coefficients	t	Sig.		
					Unstandardized Coefficients	
	B	Std. Error	Beta			
1	(Constant)	13.277	4.872		2.72 5 7	0.00 7
	Stress Academic	0.419	0.072	0.417	5.85 4	0,00 0
	Fear of Failure	0.357	0.072	0.354	4.97	0,00 0

^a Dependent Variable: Procrastination Academic (Y)

Sources: Data Analysis (2026)

Table 7 presents the results of the partial hypothesis testing analysis using the coefficient test (t-test). The findings show that Academic Stress has a positive and significant effect on Academic Procrastination, with a regression coefficient value of 0.419, a t-value of 5.854, and a significance value of 0.000, which is lower than 0.05. This indicates that higher levels of Academic Stress tend to increase students' Academic Procrastination. In addition, Fear of Failure also has a positive and significant effect on Academic Procrastination, as indicated by the regression coefficient value of 0.357, a t-value of 4.970, and a significance value of 0.000, which is also below 0.05. Therefore, both independent variables, namely Academic Stress and Fear of Failure, partially influence Academic Procrastination among students. The result of simultan analysis described on Table 8 :

Table 8. The Result of Hypothesis Testing or Simultan Analysis

Model	ANOVA ^a				F	Sig.
	Sum of Squares	df	Mean Square			
1	Regression	23150.651	2	11575.325	49.006	.000b
	Residual	32359.885	137	236.204		
	Total	55510.536	139			

^a Dependent Variable: Y

^b Predictors: (Constant), X₂, X₁

Sources: Data Analysis (2026)

Table 8 presents the results of the simultaneous hypothesis testing using the ANOVA test. The findings show that the regression model has an F-value of 49.006 with a significance value of 0.000, which is lower than the significance level of 0.05. This indicates that Academic Stress (X₁) and Fear of Failure (X₂) simultaneously have a significant effect on Academic Procrastination (Y). The regression sum of squares was 23150.651, while the residual sum of squares was 32359.885, resulting in a total sum of squares of 55510.536.

These results demonstrate that the proposed regression model is statistically significant and suitable for explaining the influence of Academic Stress and Fear of Failure on students' Academic Procrastination. The result of Coefficient Determination described on Table 9.

Table 9. The Result of Coefficient Determination

Model	R	R Square	Model Summary ^b	
			Adjusted R Square	Std. Error of the Estimate
1	.646a	0.417		15.369

a Predictors: (Constant), X2, X1

b Dependent Variable: Y

Sources : Data Analysis (2026)

Table 9 presents the results of the coefficient of determination analysis. The findings show that the correlation coefficient (R) is 0.646, indicating a strong relationship between Academic Stress (X1) and Fear of Failure (X2) with Academic Procrastination (Y). The R Square value is 0.417, which means that 41.7% of the variation in Academic Procrastination can be explained by Academic Stress and Fear of Failure simultaneously, while the remaining 58.3% is influenced by other variables outside the regression model. In addition, the Adjusted R Square value of 0.409 indicates that after adjustment, the model explains 40.9% of the variance in Academic Procrastination. The standard error of the estimate is 15.369, showing the average deviation of the observed values from the regression line. These results indicate that the regression model has a moderate explanatory power in predicting Academic Procrastination. The model of result hypothesis as follows:

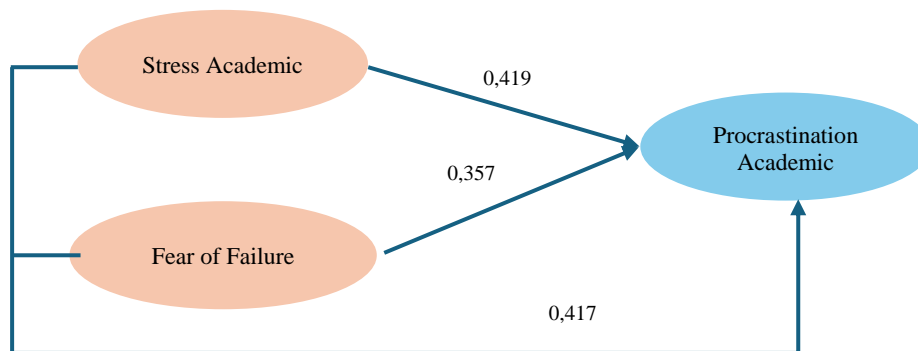


Figure 1. Models of Hypotesis

Discussions

The Effect of Academic Stress on Academic Procrastination

The findings demonstrate that academic stress has a positive and significant effect on academic procrastination among undergraduate students ($\beta = 0.419$, $p < .001$), indicating that students experiencing greater academic pressure are more likely to postpone academic responsibilities. This finding suggests that procrastination is not merely a problem of poor time management but rather an emotional coping mechanism used to reduce psychological discomfort caused by excessive academic demands. According to the Transactional Theory of Stress and Coping stress occurs when individuals perceive that environmental demands exceed their available coping resources. When students appraise examinations, multiple deadlines, and heavy academic workloads as uncontrollable, they become more likely to adopt avoidance-oriented coping strategies, including procrastination. Recent evidence consistently supports this explanation by showing that academic stress increases procrastination through emotional exhaustion, anxiety, cognitive overload, and maladaptive coping behaviors rather than through workload alone (Asio & Hitipeuw, 2021; Hailikari et al., 2021; Scheunemann et al., 2022; Garcia Frias & González Jaimes, 2022; Saputra et al., 2025). From the perspective of self-regulation theory, the positive relationship identified in this study can be explained by the depletion of psychological resources necessary for effective learning. High academic stress consumes students' executive functioning, reducing their capacity to plan, prioritize, monitor progress, and maintain attention toward academic goals. Consequently, students prioritize short-term emotional relief over long-term academic achievement by delaying difficult tasks. This finding is consistent with recent systematic reviews demonstrating that emotional regulation, self-control, and self-regulated learning are among the strongest predictors of academic procrastination, whereas stress amplifies self-regulatory failure by impairing motivation and decision-making processes (Pereira & Ramos, 2021; Sahin, 2024; Saputra et al., 2025).

Furthermore, intervention studies indicate that reducing procrastination requires strengthening emotional regulation and self-regulation rather than relying exclusively on time-management training because emotional distress often precedes procrastination behavior (Hailikari et al., 2021; Scheunemann et al., 2022; Saputra et al., 2025).

The present study also extends previous research by confirming that the relationship between academic stress and procrastination remains robust within the Indonesian higher education context. Although previous international studies consistently reported similar findings across different educational systems, evidence from Indonesian universities remains relatively limited. The current findings therefore contribute additional empirical support demonstrating that stress functions as a universal psychological risk factor for procrastination regardless of cultural context. Nevertheless, the present results also suggest that academic stress alone cannot fully explain procrastination because students respond differently to similar academic demands. Recent reviews emphasize that variables such as resilience, emotional intelligence, academic self-efficacy, perfectionism, social support, and self-regulated learning may buffer or strengthen the impact of stress on procrastination (Asio & Hitipeuw, 2021; Garcia Frias & González Jaimes, 2022; Umam & Soeharto, 2021; Saputra et al., 2025; AJESS, 2025). Therefore, future studies should investigate these moderating and mediating mechanisms to provide a more comprehensive explanation of students' procrastination behavior and to support the development of evidence-based psychological interventions in higher education.

The Effect of Fear of Failure on Academic Procrastination

The findings of this study indicate that fear of failure has a positive and significant effect on academic procrastination ($\beta = 0.357$, $p < .001$), suggesting that students with greater concerns about making mistakes, receiving negative evaluations, or performing below expectations are more likely to postpone academic tasks. This finding supports the view that procrastination is fundamentally an emotion-focused coping strategy rather than merely a problem of poor time management. Students who perceive academic tasks as potential threats to their competence tend to delay task engagement to temporarily reduce feelings of anxiety, shame, and anticipated disappointment. Such avoidance behavior provides short-term emotional relief but ultimately reinforces procrastination by increasing workload, reducing preparation time, and intensifying subsequent academic stress. Recent empirical studies consistently demonstrate that fear of failure predicts procrastination because it increases performance anxiety, perfectionistic concerns, and avoidance motivation, particularly in highly demanding academic environments (Rahimi & Hall, 2021; Henschel, 2021; Abdi Zarrin et al., 2023; Gagnon et al., 2023).

From a theoretical perspective, these findings can be explained through Self-Worth Theory, which argues that individuals often associate their personal value with achievement outcomes. When academic success becomes closely linked to self-esteem, failure is interpreted not merely as poor performance but as evidence of inadequate personal ability. Consequently, students employ self-protective strategies to preserve their self-worth, one of which is procrastination. By delaying academic tasks, students create an external explanation for possible failure, allowing poor performance to be attributed to insufficient effort or limited preparation rather than low ability. Recent studies further suggest that fear of failure influences procrastination indirectly through emotional dysregulation, reduced academic self-efficacy, maladaptive perfectionism, and heightened test anxiety. Students who experience persistent fear of negative evaluation tend to demonstrate lower confidence in completing academic tasks, making avoidance behaviors increasingly attractive despite recognizing their negative academic consequences (Grunschel et al., 2022; Steel et al., 2023; Svartdal et al., 2023; Rozental et al., 2022).

The present findings extend previous literature by confirming that fear of failure remains an important psychological antecedent of academic procrastination within the Indonesian higher education context. Although previous studies consistently identified a positive relationship between fear of failure and procrastination, many focused primarily on direct associations without examining the broader psychological mechanisms underlying this relationship. The current findings reinforce recent evidence suggesting that fear of failure operates through interconnected cognitive and emotional processes involving self-evaluative beliefs, perfectionism, emotional regulation, and motivational control rather than functioning as an isolated predictor. This implies that interventions designed solely to improve students' study skills or time-management abilities may be insufficient if fear of failure remains unaddressed. Instead, universities should develop preventive programs that strengthen students' academic self-efficacy, adaptive perfectionism, resilience, and emotional regulation to reduce avoidance behaviors. Future research should therefore investigate whether variables such as psychological resilience, growth mindset, self-compassion, and emotional intelligence mediate or moderate the relationship between fear of failure and academic

procrastination, thereby providing a more comprehensive understanding of students' academic behavior (Abdi Zarrin et al., 2023; Gagnon et al., 2023; Svartdal et al., 2023; Steel et al., 2023).

The Simultaneous Effect of Academic Stress and Fear of Failure on Academic Procrastination

The present study demonstrates that academic stress and fear of failure simultaneously exert a positive and significant influence on academic procrastination among undergraduate students. This finding indicates that procrastination cannot be adequately explained by a single psychological factor but rather emerges from the interaction of external academic demands and internal cognitive-emotional processes. Academic stress reflects students' perceptions that academic requirements exceed their available coping resources, whereas fear of failure represents persistent concerns regarding mistakes, poor performance, and negative evaluation. When these two conditions coexist, students experience heightened psychological pressure that weakens their willingness to initiate or complete academic tasks. Instead of approaching academic challenges proactively, students tend to adopt avoidance behaviors as a temporary strategy for regulating negative emotions. Recent empirical evidence suggests that academic procrastination is a multidimensional phenomenon resulting from the interaction between environmental stressors and individual psychological vulnerabilities, including anxiety, perfectionism, and fear of negative evaluation (Rahimi & Hall, 2021; Hailikari et al., 2021; Abdi Zarrin et al., 2023; Svartdal et al., 2023).

From a theoretical perspective, the simultaneous influence identified in this study can be explained through the integration of the Transactional Theory of Stress and Coping (Lazarus & Folkman, 1984) and Self-Worth Theory (Covington, 1992). The Transactional Theory proposes that students who perceive academic demands as exceeding their coping capacity are likely to experience psychological stress and adopt avoidance-oriented coping strategies. Meanwhile, Self-Worth Theory explains that students who strongly associate personal value with academic achievement become increasingly vulnerable to fear of failure because unsuccessful performance threatens their self-esteem. The interaction between these two mechanisms intensifies self-regulation failure. Academic stress depletes the cognitive resources required for planning, decision-making, and sustained attention, while fear of failure amplifies emotional distress and avoidance motivation. Consequently, procrastination becomes an adaptive short-term strategy for reducing emotional discomfort despite producing negative long-term academic consequences. Recent systematic reviews further demonstrate that emotional regulation, academic self-efficacy, and resilience partially explain why students experiencing similar academic demands exhibit different levels of procrastination, highlighting the importance of examining multiple psychological predictors simultaneously rather than independently (Rozenal et al., 2022; Grunschel et al., 2022; Steel et al., 2023; Saputra et al., 2025).

The present findings contribute to the existing literature by providing empirical evidence that academic stress and fear of failure jointly explain students' procrastination behavior within the Indonesian higher education context. While previous studies have predominantly examined these variables separately, the current findings indicate that their combined influence provides a more comprehensive explanation of procrastination than either variable alone. This suggests that interventions aimed solely at reducing academic workload or improving study skills may have limited effectiveness if students continue to experience maladaptive beliefs regarding failure and performance evaluation. Therefore, universities should adopt integrated intervention strategies that simultaneously address academic stress management, emotional regulation, resilience development, academic self-efficacy, and adaptive coping skills. Such comprehensive psychological support is expected to reduce avoidance behavior more effectively than interventions focusing on a single determinant of procrastination. Future research should further investigate potential mediating and moderating variables, such as psychological well-being, self-compassion, growth mindset, and social support, to develop a more comprehensive explanatory model of academic procrastination among university students.

Conclusions

In conclusion, this study confirms that academic stress and fear of failure are significant predictors of academic procrastination among undergraduate students at Muhammadiyah University of Yogyakarta. The regression analysis revealed that academic stress ($\beta = 0.419$, $p < 0.001$) and fear of failure ($\beta = 0.357$, $p < 0.001$) both positively influenced academic procrastination, indicating that students experiencing higher levels of academic pressure and greater concerns about failure are more likely to delay academic tasks. Simultaneously, the model explained 41.7% of the variance in academic procrastination ($R^2 = 0.417$), suggesting that these psychological factors constitute substantial determinants of procrastination behavior, although other variables outside the model also contribute to students' procrastination tendencies. The

constructs were measured using validated instruments adapted from previous studies, including the Academic Stress Scale adapted from Afif et al. (2022), the Fear of Failure Scale adapted from Henschel (2021), and the Academic Procrastination Scale adapted from Cynthia and Natalya (2019). The measurement model demonstrated satisfactory psychometric properties, with indicator validity coefficients ranging from 0.737 to 0.849, Average Variance Extracted (AVE) values between 0.637 and 0.683, Cronbach's Alpha values ranging from 0.845 to 0.873, and Composite Reliability values between 0.896 and 0.907. These results indicate adequate convergent validity and internal consistency reliability, supporting the alignment between the theoretical constructs and their operational measurement in this study. Compared with previous studies that have generally examined academic stress and fear of failure independently, this research provides a more integrated explanation of academic procrastination by demonstrating the simultaneous contribution of both psychological factors within a single predictive model. The findings support self-regulation theory and achievement motivation perspectives, which suggest that negative achievement-related emotions and perceived academic demands can impair students' capacity to initiate, regulate, and complete academic tasks effectively. Therefore, higher education institutions should consider implementing comprehensive interventions that focus not only on academic skills development but also on stress management, emotional regulation, and fear-of-failure reduction programs. Such initiatives may help students develop healthier coping strategies, reduce procrastination tendencies, and ultimately improve academic performance and psychological well-being.

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