International Journal for Research in Educational Studies
(ISSN: 2208-2115)
Volume 12, Issue 03, October 2026
DOI: 10.65327/es.v12i3.2544

ACADEMIC PROCRASTINATION, FEAR OF FAILURE, AND THEIR ASSOCIATIONS WITH UNIVERSITY STUDENTS ACADEMIC PERFORMANCE

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Received: 10/02/2026 **Revised:** 05/08/2026 **Acceptance:** 21/09/2026 **Published:** 24/10/2026

ABSTRACT

Procrastination and fear of failure are two important psychological and behavioral issues that can affect university students performance. The target of this study was to examine single and dual effects of academic procrastination and fear of failure on academic achievement among higher education students in Indonesia. A cross-sectional, quantitative correlational research design was used, based on secondary psychometric data of 2,111 student observations and 29 variables were used. A multidimensional psychometric scale was used to measure academic procrastination, aversion to failing and academic achievement. Descriptive statistics, Cronbach's alpha reliability analysis, Pearson and Spearman's correlations and multiple linear regression were applied. The results indicated statistically significant, but small negative correlations between academic procrastination and academic achievement ($r = -0.116$, $p < 0.001$) and aversion to failing and academic performance ($r = -0.120$, $p < 0.001$). There was a moderate positive relationship between aversion to failing and academic procrastination ($r = 0.450$, $p < 0.001$). The multiple regression analysis revealed that both variables were negatively associated with each other, but they had a limited joint explanatory power ($R^2 = 0.019$). The results point to the significance of psychological and behavioral dimensions for academic achievement and the need for other explanatory factors to be considered. The study suggests the need for academic, emotional and self-management counseling support to enhance the support system and educational development for students at the university level.

Keywords – Academic Procrastination; Fear of Failure; Academic Performance; University Students; Educational Psychology

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1. Introduction

Academic achievement is regarded as one of the basic measures for educational achievement and student development in higher education. But psychological and behavioral problems are common among University students and can affect their learning effectiveness, academic engagement and achievement. Among these difficulties include academic procrastination and failure-related anxiety that have been given much attention due to their relationship with students' motivation, emotional regulation, and academic success. The needless postponement of academic assignments is known as academic procrastination with an awareness of potential consequences, while aversion to failing is an apprehension of failure and what is perceived as its effects. Studies have shown that there is a correlation between procrastination and low academic achievement, though the extent to which this correlation holds in different studies varies (Akpur, 2020; Kooren et al., 2024). Besides, self-regulated learning has a great impact on academic success because it enhances the students' ability to control learning activities and educational responsibilities (Jansen et al., 2019).

Procrastination is a common concern in academia, defined as putting off assignments, study for exams and other tasks. Motivational, emotional, environmental and self-regulatory factors are involved in its development. There is longitudinal evidence that procrastination is reciprocally related to study satisfaction and intentions to leave higher education (Scheunemann et al., 2022). Problematic SMMU can also affect the tendency to procrastinate in academic settings, potentially impacting attention, motivation, and engagement in tasks (Touloupis & Campbell, 2024). On the other hand, cooperative academic tasks may promote the completion of tasks and minimize unwarranted delays. Structured social support in writing groups and collaborative learning environments can prove to be effective as evidenced by the research done in these settings (Koppenborg & Klingsieck, 2022; Patria & Laili, 2021). Moreover, SRL and procrastination have been linked to academic stress, psychological well-being, and educational attainment (García-Ros et al., 2023).

The aversion to failing is considered one of the significant psychological factors that affect students' academic motivation, academic confidence and behavior in relation to achievement. Students who have a strong fear of failing may be reluctant to take on challenging assignments, procrastinate, or be overly concerned with assessment. Irrational academic beliefs are believed to play a role in the relationship between fear of failure and procrastination (Balkis et al., 2024). Similarly, links between aversion to failing and academic satisfaction are explained by emotional regulation problems and procrastination (Duru et al., 2024). The aversion to failing is a relevant predictor of academic procrastination as evidenced in the data of university students in Indonesia (Karim & Alim, 2021). These relationships might also be affected by achievement expectancy and year of study (Tan & Prihadi, 2022). Furthermore, aversion to failing is investigated as an explanatory mechanism for age differences and procrastination tendencies (Danne et al., 2024).

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Even though studies have examined academic procrastination and similar psychological traits, more research is required to fully comprehend their relationship to university students' academic achievement at the same time. Available systematic reviews tend to focus on interventions to reduce procrastination, and not on jointly exploring these psychological variables as correlates of academic achievement (Salguero-Pazos & Reyes-de-Cozar, 2023; Turner & Hodis, 2023). Added to this, the variations in educational contexts and in the characteristics of the students warrant separate investigations. The analysis of the relationship in the Indonesian University students might provide valid evidence to build more specific academic counseling, psychological support, and learning management.

This study's primary goal is to objectively and psychometrically investigate the connections between university students' academic procrastination, Fear of not succeeding and academic accomplishment. In particular, the study aims to investigate the connections between academic procrastination and academic achievement, academic performance and Fear of not succeeding and academic procrastination and Fear of not succeeding. The study also seeks to determine the bivariate statistical association between students' academic progress and academic procrastination and aversion to failing. These goals aim to give a complete picture of the relationship between psychological and behavioral variables and academic outcomes. The results used to inform educational psychology research and to create evidence-based student support methods that can enhance academic achievement and reduce student procrastination and Fear of not succeeding.

2. Materials and Methods

2.1. Research Design and Approach

This study examined the association between academic procrastination, Fear of not succeeding and university students' academic achievement using a quantitative, cross-sectional, correlational research design. Multiple linear regression, reliability testing, correlation analysis, and descriptive statistics were used to analyze the secondary psychometric data. We just looked at statistical correlations.

2.2. Dataset Description and Study Population

The study took data of psychometric from the Indonesian Higher Education students, which consisted of 2111 observations and 29 variables. Demographic characteristics, educational information and psychological measurements were included in the dataset. The dependent variables were age (AGE), gender (GDR), degree level (DEGR), faculty (FAC), grade point average category (GPA), disorganization (DS1 – DS5), Fear of failing (FF1 – FF5), academic procrastination (APC1 – APC5), and academic achievement (AP1 – AP4). The responses were obtained from 1 student for each observation (Aldhi et al., 2025).

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2.3. Study Variables and Measurement Instruments

Academic procrastination was assessed using five indicators (APC1–APC5) and Fear of failing was assessed using five indicators (FF1–FF5). There were four indicators of academic achievement (AP1- AP4) and an additional indicator of academic achievement, GPA. The corresponding psychometric items used to create composite scores were averaged together, with a check for the direction of scoring. Potential control variables were demographic characteristics. Academic procrastination and anxiety of failing were considered as explanatory variables and academic achievement as the outcome variable.

2.4. Data Preprocessing and Reliability Assessment

Data processing included the study of missing values, variable consistency, distribution of numerical values, and possible outliers. There were no missing values for any of the variables. The observation identifier was not included in the statistical modeling. The Internal Consistency was assessed by Cronbach's alpha and values of 0.70 and above were accepted. Academic procrastination, aversion to failing and academic achievement had preliminary reliability coefficients of 0.798, 0.822 and 0.721 respectively. In accordance with the item coding and reverse-scoring rules, psychometric composite scores were computed for subsequent statistical analysis.

2.5. Statistical Analysis

The study's variables were summed up using descriptive statistics including frequencies, percentages, means, and standard deviations. When distributional assumptions were not satisfied, Spearman correlation was utilized, and Pearson correlation was utilized to assess linear relationships between continuous composite scores. The simultaneous links between academic procrastination, aversion to failure, and academic achievement were examined using multiple linear regression. The models were assessed using regression coefficients, R2, and 95% confidence intervals. Before drawing conclusions, the proper regression assumptions were verified and the threshold of statistical significance was set at $p < 0.05$.

3. Results

3.1. Demographic Characteristics of University Students

The data included 2111 full student observations with demographic and educational information gathered in numerical categories. Gender was almost split evenly with 1,050 students (49.7%) coded as 0 and 1,061 students (50.3%) coded as 1. There were more people in degree category 1 (41.2%) than in category 0 (27.9%). There were 35.2% observations in age category 1. Table 1 shows the distribution of the main demographic characteristics. The original categorisation labels were not available and so numerical category labels were kept without assigning unverifiable

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demographic meanings.

Table 1. Demographic Characteristics of University Students (N = 2,111)

Variable	Category	Frequency	Percentage (%)
Gender	Code 0	1,050	49.74
	Code 1	1,061	50.26
Degree	Code 0	590	27.95
	Code 1	870	41.21
	Code 2	440	20.84
	Code 3	211	10.00
Age	Code 0	282	13.36
	Code 1	743	35.20
	Code 2	344	16.30
	Code 3	213	10.09
	Code 4	292	13.83
	Code 5	237	11.23

Note: Percentages are calculated within each demographic variable and may differ slightly from 100% because of rounding.

3.2. Descriptive Statistics of Major Study Variables

Descriptive analysis showed that the mean composite scores of academic procrastination (M = 4.612, SD = 0.526) and aversion to failing (M = 4.569, SD = 0.496) are relatively high. The mean score of academic achievement indicated a relatively lower level (M = 3.849, SD = 0.616). The median values were 4.80, 4.80, and 4.00, respectively. The mean values and variance of the three constructs of the study are represented in Figure 1. The results show that the registered procrastination and fear-of-failure measures were skewed towards the higher end of the scales, but the meaning should be substantially interpreted based on the wording of the original items.

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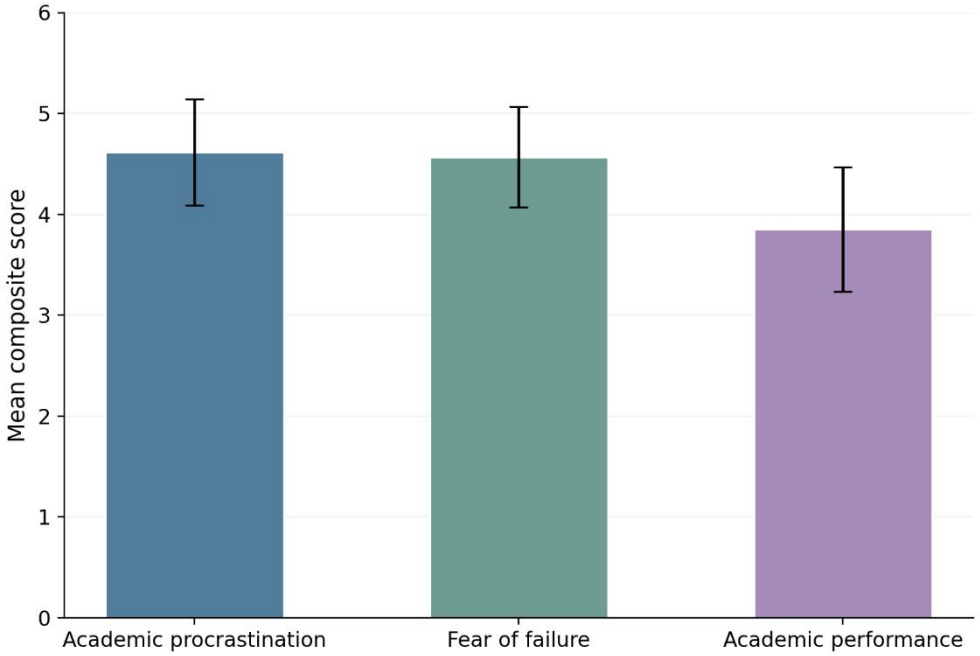

Figure 1. Mean Scores and Standard Deviations of the Major Study Variables

3.3. Reliability Analysis of Measurement Scales

The internal consistency analysis showed good reliability for all three psychometric constructs. The Cronbach's alpha coefficient has the highest value in aversion to failing (α = 0.822) followed by academic procrastination (α = 0.798) and academic achievement (α = 0.721). All the coefficients were higher than the convention (0.70) as shown in Table 2, indicating good internal consistency of the composite measures. Estimates were made based on the values of items recorded without reverse-scoring adjustments.

Table 2. Internal Consistency Reliability of the Measurement Scales

Construct	Number of items	Cronbach's α	Reliability
Academic procrastination	5	0.798	Acceptable
Fear of failure	5	0.822	Good
Academic performance	4	0.721	Acceptable

3.4. Relationship Between Academic Procrastination and Academic achievement

A statistically significant negative correlation was found via the Pearson correlation analysis, but

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with a low correlation coefficient between academic procrastination and academic achievement ($r = -0.116$, $p < 0.001$). Spearman correlation was also used to assess the weak negative correlation ($\rho = -0.052$, $p = 0.016$). The distribution of the composite scores and the fitted linear trend are shown in Figure 2. The findings indicate that there was a slight, but restricted, relation between recorded academic procrastination scores and academic achievement scores.

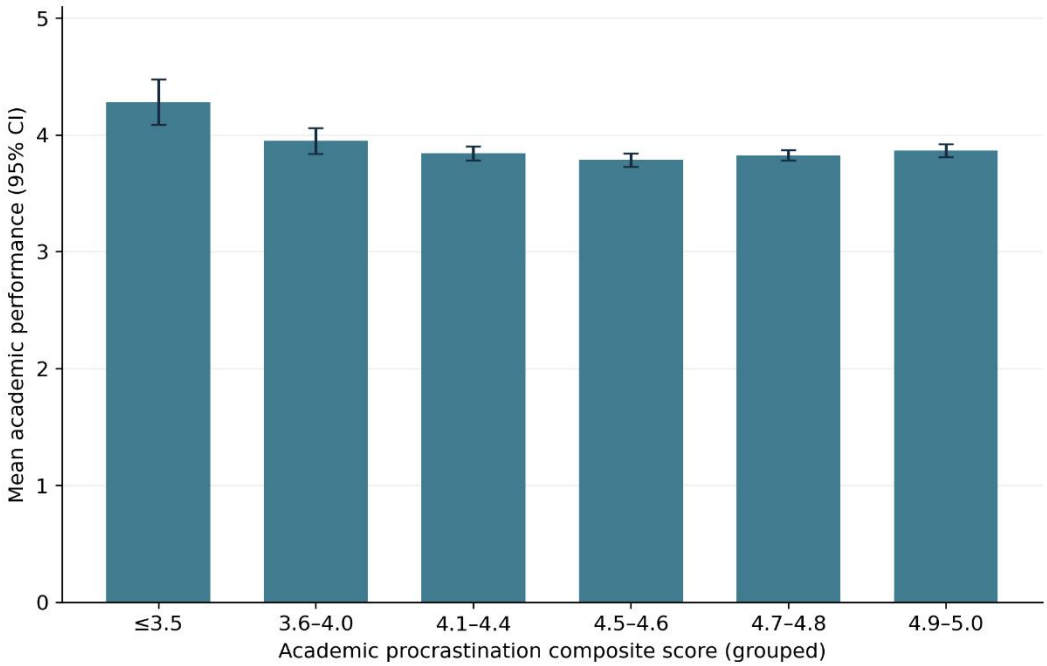

Figure 2. Relationship Between Academic Procrastination and Academic Performance

3.5. Relationship Between Fear of Failure and Academic Performance

Academic achievement and anxiety of failing were negatively correlated and the difference was statistically significant ($r = -0.120$, $p < 0.001$). The Spearman coefficient was also negative ($\rho = -0.097$, $p < 0.001$). The association, as can be seen in Table 3, was weak in magnitude, meaning that only a small proportion of the observed variation in academic achievement was related to anxiety of failing. Results from these findings indicated that students who had higher scores on anxiety of failing were slightly less likely to score higher on academic achievement.

Table 3. Correlation Between Fear of Failure and Academic achievement

Statistical indicator	Value
Sample size	2,111
Pearson correlation (r)	−0.120
Pearson p-value	< 0.001
Spearman correlation (ρ)	−0.097
Spearman p-value	< 0.001

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Coefficient of determination (r^2)	0.014
Association strength	Weak negative

3.6. Relationship Between Academic Procrastination and Fear of Failure

Academic procrastination was associated with Fear of not succeeding with a statistically significant positive correlation ($r = 0.450$, $p < 0.001$). A smaller but statistically significant coefficient ($\rho = 0.133$, $p < 0.001$) was obtained by Spearman correlation. The relationship between the two constructs is shown in Figure 3, which shows that there was a general increase in academic procrastination scores as the fear-of-failure scores increased. The difference between Pearson and Spearman estimates also suggests that the observed association is method-dependent, which may be due to "clumping" of scores and the presence of tied scores.

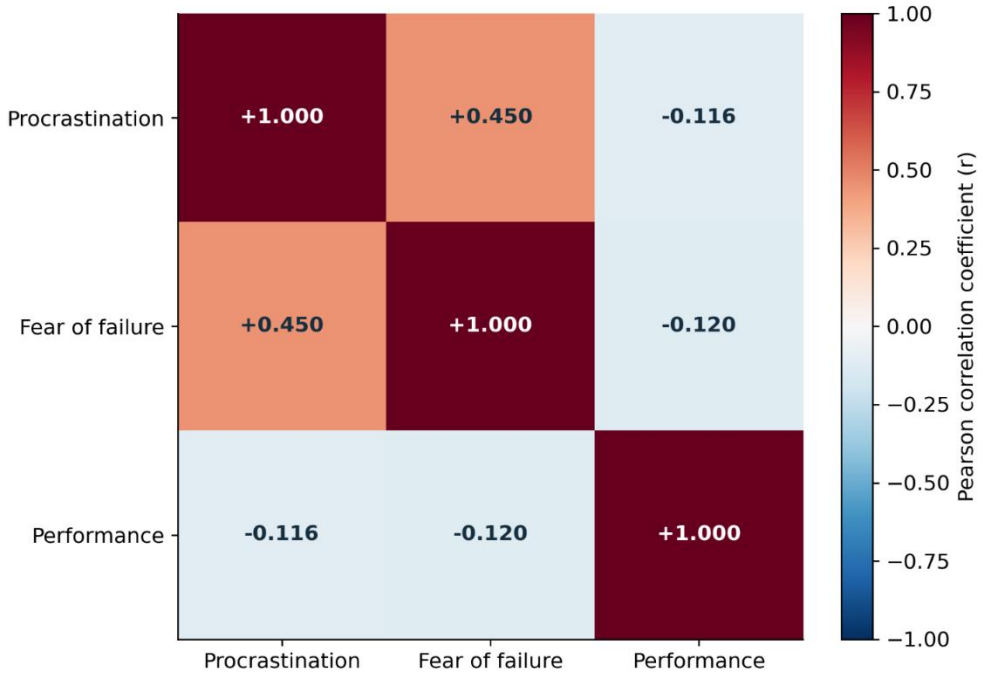

Figure 3. Relationship Between Academic Procrastination and Fear of Failure

3.7. Combined Associations of Academic Procrastination and Fear of Failure With Academic Achievement

The multiple linear regression analysis was conducted to test the joint effects of academic procrastination and Fear of not succeeding on academic achievement. Both the predictors exhibited negative regression coefficients that were statistically significant. Academic achievement was also related to academic procrastination (B = -0.091, 0.077, p = 0.001), but the

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level of fear of failure was a little stronger (B = -0.106, 0.085, $p < 0.001$). Table 4 sums up the regression coefficients and confidence intervals. The results show that, the two psychological constructs were each significantly related to academic achievement, when modeled together.

Table 4. Multiple Linear Regression Analysis of Academic achievement

Predictor	B	SE	β	t	p-value	95% CI for B
Constant	4.750	0.141	—	33.672	<0.001	[4.474, 5.027]
Academic procrastination	−0.091	0.028	−0.077	−3.204	0.001	[−0.146, −0.035]
Fear of failure	−0.106	0.030	−0.085	−3.520	<0.001	[−0.165, −0.047]

Note: B = unstandardized coefficient; SE = standard error; β = standardized coefficient; CI = confidence interval. Dependent variable: academic achievement composite score.

3.8. Regression Model Performance and Statistical Significance

The multiple regression model was statistically significant, $F(2, 2108) = 20.57$, $p < 0.001$, with an R^2 of 0.019 and adjusted R^2 of 0.018. Therefore the combination of academic procrastination and Fear of not succeeding had an overall account of 1.9% of the variance in academic achievement. Both predictors were statistically significant; however, the low explanatory power means that the variation is explained by other academic, psychological, and contextual variables. Figure 4 shows the correlation between the fitted values and regression residuals. The residual distribution depicts significant variability, which supports the weak predictability of the model.

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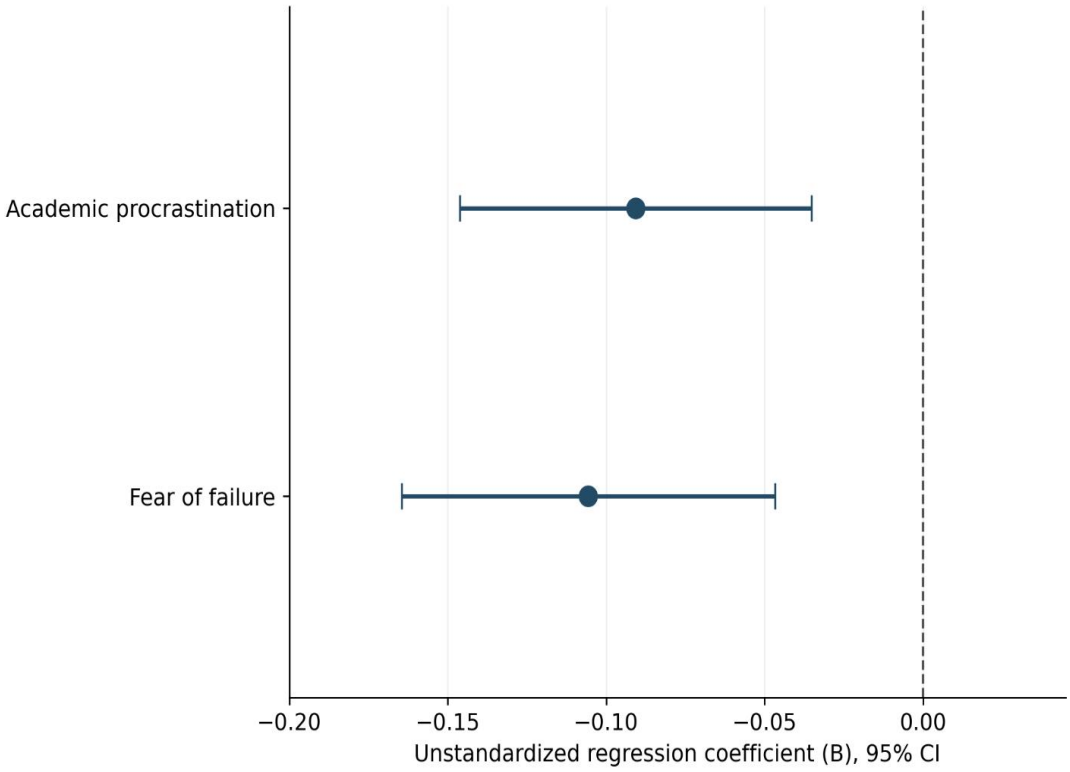

Figure 4. Regression Residuals Versus Fitted Academic Achievement Scores

4. Discussion

The current paper examined the correlations between academic procrastination, fear of failure, and academic achievement among 2,111 university students in Indonesia. Results showed weak yet statistically significant negative correlations between academic procrastination and academic achievement (r = -0.116) and fear of failure and academic achievement (r = -0.120). On the other hand, there was a moderate positive Pearson correlation between procrastination and fear of failure (r = 0.450). Such results imply that academic outcomes are related to psychological and behavioral traits, but their explanatory value is limited. Past studies also focus on the multidimensionality of academic procrastination and its links with psychological functioning and student well-being (Pereira & Ramos, 2021; Rasool et al., 2024).

Academic procrastination and academic success were negatively correlated, which implies that students who claimed to postpone more tasks were likely to have slightly lower scores on academic achievement. Nevertheless, the low correlation indicates that procrastination cannot be fully used to explain the variation in academic achievement. Procrastination can be indicative of emotional control, academic drive, and efficient task management issues. Longitudinal studies have linked procrastination to psychological distress and perceived stress, and the significance of

emotional functioning in academic behavior (Jochmann et al., 2024). Equally, time perspectives and the satisfaction of basic psychological needs have been cited as factors related to procrastination among university students (Codina et al., 2024). These results contribute to the idea of procrastination as a multi-dimensional behavioral pattern instead of poor time management.

Fear of not succeeding showed a statistically significant, but weakly negative correlation with academic achievement, indicating that the fear of failure can be accompanied by poorer academic achievement. The increased fear of poor performance can lead to avoidance behaviors, lack of confidence or struggles with academic demands in students. The studies that compare severe procrastination to regular delays in tasks emphasize the relevance of psychological peculiarities in understanding maladaptive academic behaviors (Rist et al., 2023). Moreover, self-control and anxiety have also been reported to mediate between basic psychological needs and procrastination tendencies (Ye et al., 2025). However, the current evidence creates associations and no longer proves that the Fear of not succeeding lowers academic achievement.

Multiple regression analysis showed that academic achievement was independently related to academic procrastination ($\beta = -0.077$) and Fear of not succeeding ($\beta = -0.085$). Nevertheless, their joint explanatory value was not that large ($R2 = 0.019$), which explained around 1.9 percent of performance variations. This implies that other educational, motivational, and contextual factors play a significant role in academic achievement. Academic self-efficacy has also been found to be a significant psychological factor that links problematic behavioral patterns to procrastination (Chavez-Yacolca et al., 2025). Likewise, academic procrastination and academic success have been linked to self-regulated learning strategies (Tao et al., 2025). The relationships, therefore, should be viewed in a wider context of academic self-regulation.

The conclusions are generally in line with research highlighting the implications of emotional regulation, motivation, and learning behaviors in academic procrastination. The relationships identified by Sarwar et al. included academic motivation of teachers, procrastination of students, emotional regulation, and studying habits (Sarwar et al., 2025). The technological factors should also be discussed because push notifications can define student engagement and self-regulation (Mumcu & Çebi, 2025). Moreover, classroom anxiety has been linked to procrastination, indicating that academic avoidance can be accompanied by the emotionally taxing learning experiences (Jiang, 2024). However, the small associations found in this study suggest that they cannot be generalized to be strong predictors of academic achievement.

The results demonstrate the possible worth of combining psychological support with the development of academic skills. Universities can explore interventions that focus on emotional control, self-control, realistic goal setting, and organised academic planning. Studies that investigate feelings associated with examinations prove that positive and negative emotions are relevant to procrastination patterns (Gadosey et al., 2024). In this regard, student support

programs ought to deal with the postponement of behavior and apprehension about achievement together with the identification of individual differences in psychological needs.

In addition, the low R2 of regression indicates that there is a significant variation in academic achievement that is not explained. Future studies must include longitudinal designs, documented measurement validation, other academic predictors, and wider institutional sample to elucidate the stability and external validity of such associations.

5. Conclusion

The current investigation focused on the relationships between academic procrastination and aversion to failing and academic achievement of 2,111 Indonesian university students based on quantitative psychometric data. The results showed statistically significant yet small negative correlations between academic procrastination and academic achievement (r = -0.116) and between aversion to failing and academic achievement (r = -0.120). Moderate positive relationships were found between academic procrastination and aversion to failing (r = 0.450), which means that students with higher aversion to failing were also more likely to have higher scores of procrastination. The multiple regression analysis also determined that both psychological constructs were significantly correlated with academic achievement in independent conditions, but their combined explanatory power was minimal (R2 = 0.019). These results imply that a more comprehensive set of psychological, behavioral, educational, and contextual traits, rather than procrastination and aversion to failing alone, contributes to academic achievement. The research has added value to the field of educational psychology through the empirical evidence on the interrelations of these constructs in the Indonesian higher education setting. Academic counseling, emotional regulation techniques, self-management training, and specific psychological support can be helpful to include in the student development programs in universities. The limitations of the cross-sectional design and measurements, however, limit causal interpretation. Future studies ought to use longitudinal methods, validated measures, and other explanatory variables to enhance comprehension of academic achievement and guide effective teaching and learning interventions.

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