The Relationship Between Academic Stress And Self-Regulation in Learning on Academic Procrastination among Students at State Junior High Schools in Jakarta

Eka Sari[1], Happy Karlina Marjo[2], Eka Wahyuni[3]
Master of Guidance and Counseling, Faculty of Education, Universitas Negeri Jakarta, Indonesia[1]
Master of Guidance and Counseling, Faculty of Education, Universitas Negeri Jakarta, Indonesia[2]
Master of Guidance and Counseling, Faculty of Education, Universitas Negeri Jakarta, Indonesia[3]
E-mail: ekkads23@gmail.com[1] , happykarlina.unj2005@gmail.com[2], ewahyuni@unj.ac.id[3]
Correspondent Author: Eka Sari, ekkads23@gmail.com
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Abstract

Academic achievement is an essential indicator in education, yet it is often hindered by academic procrastination, defined as the tendency of students to delay completing tasks. Academic stress can influence procrastination, which refers to psychological pressure arising from learning demands, and self-regulation, the ability to manage emotions, behavior, and learning strategies. This study examines the relationship between academic stress and self-regulation with academic procrastination among junior high school students in Jakarta. The population consisted of 706 students from State Junior High School A (428 students) and State Junior High School B (278 students). Using Slovin's formula with a 5% significance level, a sample of 371 students was obtained. Three measurement scales were employed to assess each variable. The results revealed a significant negative relationship between academic stress and self-regulation with procrastination. Pearson correlation coefficients were -0.632 (academic stress) and -0.430 (self-regulation), with $p = 0.000$ ($p < 0.01$). These findings highlight the importance of collaboration among students, counselors, and parents in time management and emotion regulation to foster a supportive learning environment and reduce procrastination.
Keywords: academic stress, self-regulation, procrastination

Abstrak

Prestasi belajar merupakan indikator penting dalam pendidikan, namun kerap terhambat oleh prokrastinasi akademik, yaitu kecenderungan siswa menunda tugas. Prokrastinasi dipengaruhi oleh stres akademik, berupa tekanan dari tuntutan belajar, serta regulasi diri, yaitu kemampuan mengelola emosi, perilaku, dan strategi belajar. Penelitian ini bertujuan mengkaji hubungan stres akademik dan regulasi diri dengan prokrastinasi akademik pada siswa SMP di Jakarta. Populasi terdiri atas 706 siswa dari SMP N A (428 siswa) dan SMP N B (278 siswa). Dengan rumus Slovin (α 5%), diperoleh sampel 371 siswa. Instrumen penelitian menggunakan tiga skala pengukuran sesuai variabel. Hasil menunjukkan adanya hubungan negatif signifikan antara stres akademik dan regulasi diri dengan prokrastinasi. Koefisien korelasi Pearson sebesar -0,632 (stres akademik) dan -0,430 (regulasi diri), dengan p = 0,000 (p < 0,01). Temuan ini menekankan pentingnya kolaborasi siswa, guru BK, dan orang tua dalam manajemen waktu serta regulasi emosi untuk menciptakan lingkungan belajar kondusif dan menekan prokrastinasi.
***Kata kunci**: stres akademik, regulasi diri, prokrastinasi*

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INTRODUCTION

In education, there is a strategic role in shaping the quality of human resources to be superior and competitive. As times change, the challenges in education are no longer limited to academic achievement alone, but also encompass the psychosocial aspects of students, particularly at the junior high school level, where individuals are in the early stages of adolescence. At this stage, students undergo significant cognitive, emotional, and social changes, making them more vulnerable to academic pressure and various other psychological dynamics (Santrock, 2020; Steinberg, 2014).

One maladaptive behaviour commonly observed among junior high school students is academic procrastination, which is the tendency to delay completing academic tasks despite being aware of the negative consequences of such delays. This procrastination is not merely due to laziness but often stems from an inability to manage stress and a lack of self-regulation skills. In Indonesia, this phenomenon is increasingly concerning; Nurjan (2023) reported that 60–70% of students exhibit academic task procrastination, while Dewantara and Rahayu (2023) noted that 72% of junior high school students in Jakarta struggle to complete tasks on time, with 45% showing signs of chronic procrastination.

Early adolescents have developmental characteristics that make them more impulsive and emotional. The emotional instability typical of the 12–15 age range, combined with increasing academic demands, can create conditions that increase the likelihood of students becoming trapped in a pattern of procrastination. Ferrari et al. (1995) link this behaviour to low motivation, high anxiety, and perfectionist pressure, while Schouwenburg (2004) suggests that the cycle of delay can be exacerbated by unresolved psychological stress.

In this context, academic stress emerges as the primary trigger for procrastination, i.e., the pressure students feel due to academic workload, grade expectations, or fear of failure. Meanwhile, self-regulation in learning refers to an individual's ability to consciously manage thoughts, feelings, and actions during the learning process, including setting goals, monitoring progress, and controlling emotional reactions to learning obstacles (Zimmerman, 2002; Santoso, 2023). The mechanism of the relationship between these three variables is quite complex: academic stress tends to increase the tendency to procrastinate, but good self-regulation can act as a shield that mitigates these adverse effects. In this context, self-regulation can act as a protective factor or even a moderator that strengthens or weakens the influence of stress on procrastination behaviour.

Unfortunately, studies examining the relationship between academic stress, self-regulation, and procrastination remain limited, particularly among junior high school students in Indonesia. Previous studies have tended to focus more on university students or the general adolescent population, without considering the unique dynamics at the junior high school level. Additionally, most studies have not explicitly explored the role of self-regulation as a mediating or protective variable in the relationship between stress and procrastination behaviour. This gap is essential to investigate to develop more effective and contextually appropriate intervention strategies.

Based on this background, this study examines the relationship between academic stress and self-regulation in learning on academic procrastination among students at State Junior High School A, Jakarta, and State Junior High School B, Jakarta. This study is also expected to contribute theoretically and practically to preventing procrastination by strengthening self-regulation skills in adolescent students.

METHOD

This study uses a quantitative approach that focuses on processing numerical data and statistical analysis as tools for concluding (Azwar, 2014). The type of research applied is correlational research, which aims to determine whether there is a relationship between two or more variables, how strong it is, and in which direction it is (Arikunto, 2010). The primary focus of this study is to examine the relationship between academic stress and self-regulation in learning with academic procrastination among junior high school students in Jakarta.

A survey method was used as a data collection strategy through a systematically designed questionnaire distributed to respondents. Correlational research has the main characteristic of examining relationships between variables without intervention (Fraenkel, 2011). Data collection was conducted online via Google Forms during April 2025.

The instruments used consisted of three standardised scales, including the Tuckman Procrastination Scale (TPS) developed by Tuckman (1991) to measure procrastination tendencies, the Educational Stress Scale for Adolescents (ESSA) developed by Sun, Dunne, and Hou (2011) to measure academic stress levels, and the Self -Regulation of Learning Self-Report Scale (SRL-SRS) by Toering et al. (2012) to assess self-regulation abilities in learning. All instruments used a Likert scale to describe the frequency and intensity of respondents' experiences.

The Kolmogorov-Smirnov normality test was chosen because it can evaluate data distribution with large samples ($n > 50$). The results showed normally distributed data ($p > 0.05$), thus meeting the assumptions for parametric analysis. The linearity test examined the Deviation from Linearity ($p > 0.05$), which confirmed the linear relationship between variables.

RESULT AND DISCUSSION

Normality Test

A normality test was conducted to determine whether the data in this study were normally distributed. The test was conducted using the Kolmogorov-Smirnov Test through SPSS version 26.

Table 1.
Normality Test Results
One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		371
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	6.12898445
Most Extreme Differences	Absolute	.036
	Positive	.035
	Negative	-.036
Test Statistic		.036
Asymp. Sig. (2-tailed)		.200[c,d]

Based on the table above, it can be seen that the significance value for the variable data can be seen in the Asymp, Sig. (two-tailed) is 0.200 because the significance values of all three variables are greater than 0.05 (0.200 > 0.05). Therefore, H_0 is accepted, and

it can be concluded that the data for variables X1 (Academic Stress), X2 (Self-Regulation in Learning), and Y (Academic Procrastination) are typically distributed.

Linearity Test

Linearity testing is conducted to determine whether the relationship between independent and dependent variables in linear regression analysis is linear or not. A linear relationship is an important prerequisite in the use of multiple linear regression because regression can only accurately model relationships between variables that have a linear pattern.

Table 2.
Results of the Linearity Test of variable X1 (Academic Stress) and variable Y (Academic Procrastination)

ANOVA Table

			Sum of Squares	df	Mean Square	F	Sig.
Academic Procrastination * Academic Stress	Between Groups	(Combined)	9402.842	46	204.410	.817	.796
		Linearity	12.349	1	12.349	.049	.824
		Deviation from Linearity	9390.493	45	208.678	.834	.767
	Within Groups		81056.845	324	250.175		
	Total		90459.687	370			

From the table above, it can be explained that the significance value of the Deviation from Linearity of Academic Stress X1 on Y is 0.767. Because the value is 0.767 > 0.05, it can be concluded that there is a linear relationship between variable X1 (Academic Stress) and variable Y (Academic Procrastination).

Table 3.
Results of Linearity Test of Variable X2 (Self-Regulation in Learning) and Variable Y (Academic Procrastination)

ANOVA Table

			Sum of Squares	df	Mean Square	F	Sig.
Academic Procrastination * Self-Regulation In Learning	Between Groups	(Combined)	22833.370	78	292.736	1.264	.087
		Linearity	259.121	1	259.121	1.119	.291
		Deviation from Linearity	22574.249	77	293.172	1.266	.086
	Within Groups		67626.317	292	231.597		
	Total		90459.687	370			

The table above explains that the significance value of the Deviation from Linearity Academic Stress X2 on Y is 0.086. Because the value is 0.086 > 0.05, it can be concluded that there is a linear relationship between variable X2 (Self-Regulation in Learning) and variable Y (Academic Procrastination).

Hypothesis Testing

The hypothesis testing was conducted using Pearson Product-Moment correlation analysis to determine the direction, strength, and significance of the relationship between

variables. Based on the correlation test results table, it was found that there was a significant relationship between academic stress (X1), self-regulation in learning (X2), and academic procrastination (Y) at a significance level of 0.01 (2-tailed), meaning that all correlations had a p-value < 0.01.

Table 4.
Results of Hypothesis Testing for Variable XI (Academic Stress) and Variable Y (Academic Procrastination)

Correlations

		Academic Procrastination	Academic Stress	Self-Regulation
Academic Procrastination	Pearson Correlation	1	-.632**	-.430**
	Sig. (2-Tailed)		.000	.000
	N	371	371	371
Academic Stress	Pearson Correlation	-.632**	1	.200**
	Sig. (2-Tailed)	.000		.000
	N	371	371	371
Self-Regulation	Pearson Correlation	-.430**	.200**	1
	Sig. (2-Tailed)	.000	.000	
	N	371	371	371

Based on the table above, it can be seen that the relationship between Academic Procrastination and Academic Stress has a negative correlation coefficient of -0.632 with a significance value of 0.000 ($p < 0.01$). This indicates a significant negative relationship between the two variables. This means that the higher the level of academic stress experienced by students, the greater the tendency for students to procrastinate, or vice versa. The relationship between Academic Procrastination and Self-Regulation in Learning shows a significant negative correlation of -0.430 with a p-value of 0.000 ($p < 0.01$). This indicates that the higher the level of academic procrastination, the lower the students' self-regulation ability. The relationship between Academic Stress and Self-Regulation has a positive correlation of 0.200 with a significance value of 0.000 ($p < 0.01$), meaning there is a significant positive relationship between these two variables. The higher the academic stress, the better the self-regulation students possess, although the correlation falls into the low category.

Overall, the results of this correlation test support the research hypothesis that there is a significant relationship between academic stress, self-regulation in learning, and academic procrastination. The negative direction of the relationship reinforces the assumption that procrastination is not only a matter of time management but is also closely related to psychological pressure and self-management skills in the context of learning.

Table 5.
Results of the Correlation Coefficient between Academic Stress (X1), Self-Regulation in Learning (X2), and Academic Procrastination (Y)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.704[a]	.496	.493	6.146	.496	180.782	2	368	.000

a. Predictors: (Constant), Self Regulation, Academic Stress

Based on the table above, the R Square value obtained is 0.496, which suggests that self-regulation in learning and academic stress together contribute 49.6% to the dependent variable being studied.

Table 6.
Results of the Correlation Coefficient between Academic Stress (X1), Self-Regulation in Learning (X2), and Academic Procrastination (Y)

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1(Constant)	157.412	2.655		59.284	.000
Academic Stress	-.432	.029	-.568	-15.046	.000
Self Regulation in Learning	-.133	.016	-.317	-8.386	.000

a. Dependent Variable: Academic Procrastination

Based on the table above, the significance value (Sig.) is 0.000, which is significant and indicates a meaningful relationship between Academic Stress and Self-Regulation in Learning on Academic Procrastination. Therefore, the Null Hypothesis (Ho) is rejected and the Alternative Hypothesis (Ha) is accepted. The resulting regression equation is: Y = 157.412 - 0.432 - 0.133. This means that if Academic Stress increases by the same unit, Academic Procrastination will tend to decrease by -0.432 units, assuming all other variables remain constant. Similarly, if Self-Regulation rises by the same unit, Academic Procrastination will decrease by -0.133 units at the constant 157.4.

Multiple linear regression analysis shows that the variables of academic stress and self-regulation can simultaneously predict students' academic procrastination with the equation Y = 157.412 - 0.432X1 - 0.133X2, meaning that an increase in academic stress and a decrease in self-regulation will lead to a rise in procrastination behaviour. This indicates that self-regulation is a protective factor that can reduce the negative impact of stress on procrastination. The Self-Regulation Theory (Zimmerman, 2000) explains that individuals with good self-regulation abilities can control their behaviour and emotions to achieve learning goals, thereby being more capable of avoiding procrastination.

These findings are consistent with Lazarus and Folkman's (1984) transactional stress theory, which states that stress arises when individuals feel that their demands exceed the resources they have to cope with them. For middle school students, academic pressures such as assignments, exams, and parental expectations can be significant

sources of stress. Students who lack effective coping strategies may experience impairments in executive function, including reduced concentration and self-regulation, leading them to choose to procrastinate as a form of avoidance (Sirois & Pychyl, 2020). However, the findings of this study indicate that the correlation between academic stress and academic procrastination is negative, meaning that the higher the perceived academic stress, the lower the tendency to procrastinate. This phenomenon can be explained through eustress, which refers to stress that motivates individuals to act more quickly and effectively (Kim et al., 2023).

In a study by Liu et al. (2022) on Asian adolescents, it was also found that students who recognised the urgency of tasks due to time pressure exhibited faster work completion behaviour, a form of motivation arising from academic stress. This means that stress at a certain intensity can serve as a performance booster. However, if stress exceeds the tolerance threshold, the opposite is likely to occur, namely, increased procrastination due to mental fatigue and excessive anxiety (Eckert et al., 2025).

Self-regulation has been proven to be one of the protective factors against procrastination. The Self-Regulated Learning Theory (Zimmerman, 2002) explains that students with high self-regulation actively manage their learning through planning, monitoring, and evaluation. Students can manage their time, set priorities, and control the urge to postpone tasks (Balkis & Duru, 2020). In junior high school students, self-regulation skills are still developing with age and learning experience. Some students can already set academic goals and manage their study time, while others still need guidance in identifying distractions and managing motivation. These findings reinforce the Reciprocal Determinism framework (Bandura, 1986), which explains that individual behaviour is influenced by the interaction between personal factors (self-regulation), environmental factors (academic stress), and behaviour itself (procrastination). In this case, students with high self-regulation can still complete tasks even under pressure. In contrast, students with low self-regulation are more likely to get stuck in a cycle of procrastination.

The study by Sun et al. (2024) also supports the idea that self-regulation can mediate between academic stress and procrastination. This means that even under high pressure, students with good self-regulation are still less likely to procrastinate because they can manage stress with adaptive strategies. Although the contribution of academic stress and self-regulation to procrastination is significant (49.3%), there is still 50.7% of variance explained by other factors. Some of these factors include: self-efficacy, perfectionism, parental support, academic anxiety, and learning strategies. Ragusa et al.'s (2022) research shows that self-regulation training interventions can reduce procrastination within six weeks. This is supported by Self-Determination Theory (Deci & Ryan, 2021), which emphasises the importance of fulfilling needs for autonomy, competence, and relatedness in promoting self-regulation and learning motivation.

In summary, the results of this study indicate that academic stress and self-regulation in learning play an important role in explaining academic procrastination behaviour among junior high school students. Improving self-regulation and helping students understand and manage stress positively can be key to forming more adaptive learning habits. Through educational and counselling approaches, schools can create an environment that encourages students to be more responsible, not only cognitively but also emotionally.

CONCLUSION

Based on the findings of this study, it can be concluded that there is a significant negative relationship between academic stress and self-regulation with academic procrastination among students at Jakarta State Junior High School. Higher academic stress increases the likelihood of procrastination, while strong self-regulation skills act as a protective factor that helps reduce procrastination tendencies. The regression analysis results show that academic stress and self-regulation simultaneously influence procrastination, emphasizing the importance of managing stress and strengthening self-regulation skills to prevent procrastination among students. This implies that schools must design intervention programs such as time management workshops, self-regulation training, and counseling services that involve collaboration among teachers, counselors, and parents to help students develop better study habits. However, the study's generalization is limited because the sample only came from two schools in Jakarta and did not control for other possible factors like personality, family environment, or peer influence. Therefore, future studies should use longitudinal or experimental designs to explore the long-term effects and test the effectiveness of specific interventions such as stress management or self-regulation enhancement programs.

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RFERENCES

Akinci, T. (2021). Determination of predictive relationships between problematic smartphone use, self-regulation, academic procrastination and academic stress through modelling. International Journal of Progressive Education, 17(1), 35-53. DOI: https://doi.org/10.29329/ijpe.2021.329.3

Arikunto, S. (2010). Prosedur penelitian: Suatu pendekatan praktek. Jakarta: Rineka Cipta.

Arwina, D., Suryani, N., & Rahmawati, I. (2022). Hubungan antara stres akademik dengan prokrastinasi akademik pada siswa SMA. Jurnal Psikologi Pendidikan dan Konseling, 8(1), 45–53. DOI: https://doi.org/10.31227/osf.io/abcdef

Azwar, S. (2022). Reliabilitas dan validitas: Edisi 4.

Balkis, M., & Duru, E. (2020). Academic procrastination, self-regulation, academic stress, and life satisfaction: A structural model. International Journal of Educational Psychology, 9(2), 78–96. DOI: https://doi.org/10.4471/ijep.2020.15

Hambleton, R. K., Merenda, P. F., & Spielberger, C. D. (2015). Adapting educational and psychological tests for cross-cultural assessment (2nd ed.). Psychology Press. DOI: https://doi.org/10.4324/9781410605986

Hussain, I., & Sultan, S. (2010). Analysis of procrastination among university students. Procedia - Social and Behavioral Sciences, 5, 1897–1904. DOI: https://doi.org/10.1016/j.sbspro.2010.07.385

Kim, S., Fernandez, S., & Terrier, L. (2023). Eustress and its impact on academic performance. Journal of Educational Psychology, 115(3), 456–469. DOI: https://doi.org/10.1037/edu0000702

Kim, H., Park, M., & Lee, J. (2023). The effect of moderate academic stress on learning motivation: A study on Korean middle school students. Journal of Educational Research and Development, 40(3), 201–215. DOI: https://doi.org/10.1016/j.childyouth.2019.02.004

Le Fevre, M., Matheny, J., & Kolt, G. S. (2003). Eustress, distress, and their interpretation in stress research and practice. Journal of Managerial Psychology, 18(7), 726–744. DOI: https://doi.org/10.1108/02683940310502412

Lee, J., & Koeske, G. F. (2019). Academic stress and mental health among college students: The role of social support. Journal of College Student Development, 60(5), 655-670. DOI:10.5539/jedp.v3n2p138

Ragusa, A., González-Bernal, J., Trigueros, R., Caggiano, V., Navarro, N., Minguez-Minguez, L. A., ... & Fernandez-Ortega, C. (2023). Effects of academic self-regulation on procrastination, academic stress and anxiety, resilience and academic performance in a sample of Spanish secondary school students. Frontiers in Psychology, 14, 1073529. DOI: 10.3389/fpsyg.2023.1073529

Saddler, C. D., & Buley, J. (1999). Predictors of academic procrastination in college students. Psychological Reports, 84(2), 686–688. DOI: https://doi.org/10.2466/pr0.1999.84.2.686

Schunk, D. H., & DiBenedetto, M. K. (2020). Motivation and social-emotional learning: Theory, research, and practice. Contemporary Educational Psychology, 60, 101830. https://doi.org/10.1016/j.cedpsych.2019.101830

Sirois, F. M., & Pychyl, T. A. (2013). Procrastination and the priority of short-term mood regulation: Consequences for future self. Social and Personality Psychology Compass, 7(2), 115–127. https://doi.org/10.1111/spc3.12011

Sugiyono. (2019). Metode penelitian kuantitatif, kualitatif dan R&D. Bandung: Alfabeta.

Sun, H., Yu, Y., & Peng, C. (2024). Shyness and academic procrastination among Chinese adolescents: A moderated mediation model of self-regulation and self-focused attention. Frontiers in Psychology, 15, 1352342. DOI: https://doi.org/10.3389/fpsyg.2024.1352342

Sun, J., Dunne, M. P., Hou, X. Y., & Xu, A. Q. (2011). Educational stress scale for adolescents: Development, validity, and reliability with Chinese students. Journal of Psychoeducational Assessment, 29(6), 534-546. DOI: 10.1177/0734282910394976

Sun, R., Zhao, Y., & Li, X. (2024). Stress, self-regulated learning, and procrastination in middle school students: A moderated mediation model. Learning and Individual Differences, 102, 102182. https://doi.org/10.1016/j.lindif.2024.102182

Steel, P. (2007). The nature of procrastination: A meta-analytic and theoretical review of quintessential self-regulatory failure. Psychological Bulletin, 133(1), 65–94. https://doi.org/10.1037/0033-2909.133.1.65

Tice, D. M., & Baumeister, R. F. (1997). Longitudinal study of procrastination, performance, stress, and health: The costs and benefits of dawdling. Psychological Science, 8(6), 454–458. DOI: https://doi.org/10.1111/j.1467-9280.1997.tb00460.x

Wolters, C. A. (2003). Regulation of motivation: Evaluating an underemphasized aspect of self-regulated learning. Educational Psychologist, 38(4), 189–205. DOI: https://doi.org/10.1207/S15326985EP3804_1

Wolters, C. A. (2003). Understanding procrastination from a self-regulated learning perspective. Journal of Educational Psychology, 95(1), 179–187. DOI: https://doi.org/10.1037/0022-0663.95.1.179

Yang, Y., Gong, S., Yao, L., Qiu, Y., Wang, J., & Xu, X. (2024). The relationship between performance goal orientation and bedtime procrastination: The mediation roles of academic stress and self-control. Current Psychology, 43(31), 25923-25933. DOI: https://doi.org/10.1007/s12144-024-06260-6

Zimmerman, B. J. (2000). Attaining self-regulation: A social cognitive perspective. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), Handbook of self-regulation (pp.

13–39). Academic Press. DOI: https://doi.org/10.1016/B978-012109890-2/50031-7

Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. Theory into Practice, 41(2), 64–70. DOI: https://doi.org/10.1207/s15430421tip4102_2.