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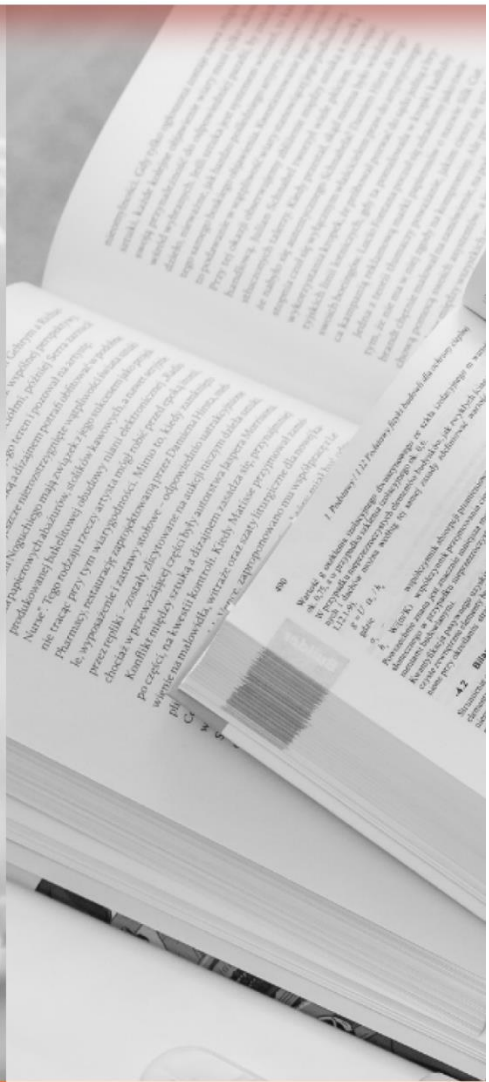

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The Relationship Between Procrastination and Academic Stress Among University Students

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Abstract

The study examines how Procrastination is associated with increased academic stress among university students, specifically perceiving how procrastination impacted their mental health. The study uses a quantitative research strategy and a non-experimental correlation approach, where data is collected from 409 university students, applying a sampling technique. Two reliable and validated questionnaires are utilized to extract data from the study using Google Forms. The findings suggest a moderate yet significant relationship between procrastination and academic stress, where procrastination only explains 11.4% of the variance in academic stress. It implies that procrastination is a critical predictor of stress among university students. Hence, students who procrastinate are more likely to experience heightened academic stress and may experience pressure to perform and time constraint, which aligns with previous research suggesting that procrastination leads to adverse academic outcomes, as indicated by its positive regression coefficient. The study contributes to the body of knowledge and fresh data about procrastination and academic stress among university students by presenting the possible effects of procrastination that may lead to coping strategies and applicable academic policies.

Keywords

Procrastination; Academic Stress; Mental Health

Introduction

Academic stress and procrastination are common problems for university students and can have harmful effects on their general well-being as well as their academic achievement. As Mental health crisis increases exponentially year by year, it is ideal to promote positive mental health that may lessen procrastination. Obenza et al. (2024a) it is in time to view the relation of procrastination and academic stress to see its challenges. Research has consistently shown that procrastination and stress levels have a significant positive association (Kuftyak, 2022). Further research highlights the complex interplay between procrastination, stress, and other psychological factors. The purpose of this study is to identify the behavioral and psychological elements that influence the health of students through exploration into the relationship between procrastination and stress. Procrastination has larger consequences for both mental and physical health and goes further with educational achievements.

Research shows that personality trait plays a significant role in managing academic stress and the happiness of the students, as Obenza et al. (2024c) describe happiness for students as a complex emotion influenced by academic pressure, which impacts their well-being and performance. This study is essential to help us understand how procrastination relates to academic stress in university students, specifically its impact on their mental health. Consequently, students' perceiving their academic self-efficacy is an important ability to handle school challenges, according to Obenza et al. (2024b), self-efficacy helps connect academic determination and happiness. This means that students who are more confident in their abilities not only persist in their schoolwork but also experience greater happiness and overall well-being and better in handling stress. This shows that helping students feel more confident can reduce the bad effects of stress and procrastination in academics, which can lead to better mental health.

The focus on the connection between procrastination and stress among college students is consistent with these findings, which imply that procrastination has wide-ranging effects on both mental and physical health. (Johansson et. al., 2023). Furthermore, stress has a detrimental effect on self-control, which raises procrastination among college students, according to a study looking at the mediating effects of stress and self-control. (To et al., 2021). These problems have been made worse by the COVID-19 pandemic; medical students have found a somewhat positive association between academic procrastination and stress, anxiety, and depression. (Cahyaratri et al., 2022). According to (Jamieson et. Al. (2021) colleges must put stress-reduction and procrastination-busting techniques into place in order to improve the academic performance and mental health of their students.

Research by Sirois et al. (2016) introduced the Procrastination-Health Model, which argues that procrastination heightens stress and has lasting impacts on mental health, including anxiety and depression. This is supported by studies such as Khalid et al. (2019), who found a clear link between procrastination and perceived academic stress among university students. Stead et al. (2010) also pointed out that procrastination not only harms academic performance but also increases stress, making it a key focus for interventions aimed at reducing stress among students. Moreover, academic stress is a major global issue, affecting student resilience, anxiety levels, and overall academic performance. Studies have consistently shown a positive link between procrastination and academic stress, further worsening students' mental health (Ragusa et al., 2023). While it is generally accepted that procrastination raises stress levels, the exact mechanisms through

which this occurs are not entirely clear. Jochmann et al. (2024) examined the link between procrastination and stress over time and found that although procrastination was tied to symptoms of depression and anxiety, the role of stress as a mediator in this relationship remains uncertain. Further, Students' academic performance is severely impacted by increased academic stress and procrastination, emphasizing the necessity of instructional efforts to lessen these issues (Goher et. al., 2022).

This study aims to determine the level of procrastination stress and their relationship between procrastination and academic stress in students. Understanding this relationship will help develop more effective techniques to reduce both procrastination and academic stress, ultimately enhancing the educational achievement and well-being of a student. The relevance of this study lies in understanding how procrastination contributes to academic stress among university students, particularly its impact on their mental health. These findings may offer valuable insights to the mental health field for reducing and managing stress within universities. In turn, educational policies could provide more flexible deadlines and balanced workloads, creating a student-friendly academic environment that supports their primary goals. Public health initiatives may also benefit by developing strategies to promote stress management, motivation, and effective coping mechanisms, ultimately enhancing student success. In the academic and research sectors, the findings could expand knowledge of procrastination and its influence on academic stress.

Materials and Methods

The current study employed a quantitative research methodology, precisely the non- experimental correlational approach, to investigate the relationship between variables. As Creswell & Creswell (2023) described, the quantitative research strategy involves the methodical collection, analysis, and interpretation of data and information, typically obtained through experimental investigations or surveys. The study gathered a total number of 409 university students from different universities in Davao City. The sampling technique applied in this study was random sampling, where researchers first divide a population into smaller subgroups, or strata, based on shared characteristics of the members and then randomly select among these groups to form the final sample (Simkus, 2023).

A correlational design is suitable for this study, as it aims to determine the potential association between procrastination and academic stress without manipulating any variables. This research adhered to strict ethical guidelines. The researchers obtained permission to conduct the study and to ensure autonomy, informed consent was given to the participants. This consent guarantees that individuals understand the study's objective, procedure, risks, benefits, confidentiality measures, and their right to withdraw at any point. The adapted Survey questionnaires were distributed to the participants in which they will complete the Academic Procrastination Scale (McCloskey, 2011) to measure academic procrastination and the Academic Stress Scale (Bedewy & Gabriel, 2015) to measure perceptions of academic stress and its sources. These two surveys will be administered online through google forms.

The study will use two key instruments: the Academic Procrastination Scale (McCloskey, 2011), a 5-point Likert scale consisting of 25 items, where responses range from 1 = disagree to 5 = agree; and the Academic Stress Scale (Bedewy & Gabriel, 2015), a 5-point Likert scale consisting of 18 items, where participants respond by choosing answers from 1 = strongly disagree to 5 = strongly agree. The Academic Stress Scale is designed to measure perceptions of academic stress among the general student population. The researchers will obtain permission to conduct the study, and informed consent will be obtained from the participants to ensure they understand the study's

purpose. Cronbach's Alpha, average variance extracted and Heterotrait-Monotrait ratio test were also used with SmartPLS 4.0 software to ensure construct validity and reliability. Furthermore, regression analysis was applied to determine the predictive power of the five personality traits on the financial management behavior of university students.

Results

Table 1. Levels of students' Academic Stress and Procrastination

						Shapiro-Wilk	
	N	Mean	Median	Mode	SD	W	p
Academic Stress (2)	409	3.38	3.42	3.00	0.528	0.980	<.001
Pressures to Perform	409	3.34	3.40	4.00	0.847	0.984	<.001
Perceptions of Workload	409	3.50	3.50	4.00	0.851	0.976	<.001
Academic Self-Perceptions	409	3.61	3.75	3.50	0.851	0.967	<.001
Time Restraints	409	3.07	3.00	2.80	0.697	0.983	<.001
Procrastination	409	2.90	2.88	3.28	0.683	0.997	0.788

Table 1 presents the descriptive statistics for the key variables in the study: academic stress and procrastination, including the dimensions of academic stress such as performance expectations, perceptions of workload, academic self-image and time limitations. A total of 409 students were surveyed, except for procrastination, which had 407 valid responses. The mean value for academic stress is 3.38 (SD = 0.528), with a median of 3.42, indicating that most students experience moderate levels of academic stress. This is consistent with the hypothesis of the study that procrastination has an impact to academic stress. This is consistent with the findings of Pascoe et al. (2020); Talib and Zia-ur-Rehman (2012); and Xue Li et al. (2023), which stated that academic-related stress is a common issue among students, impacting their learning capacity and academic performance. The mode of 3.00 suggests that a significant portion of the sample reported stress levels slightly below the mean. The Shapiro-Wilk test for normality (W = 0.980, p < .001) suggests a significant deviation from normality, indicating the need for caution when assuming a normal distribution in subsequent analyses.

The subscale "pressures to perform" have a mean score of 3.34 (SD = 0.847) and a mode of 4.00 which suggests that many students perceive significant pressure to perform academically. According to research, academic stress can reduce motivations and increased risk of school dropout, highlighting the pressure students face to achieve high academic standards (Pascoe et al., 2020; Deng et al., 2022; Harahap, 2022). The Shapiro-Wilk normality test (W = 0.984, p < .001) also indicates a significant deviation from normality for this subscale. The subscale "perceptions of workload" with a mean score of 3.50 (SD = 0.851), this subscale shows that students often feel burdened by their academic workload. Studies have identified course load and academic demands as major sources of stress affecting students' academic performance (Talib et al., 2012; Xue Li et al., 2023; Reddy et al., 2017). The mode of 4.00 indicates that many students experience high levels of workload, and the normality test confirms non- normality (W = 0.976, p < .001). "Academic self-perceptions" subscale has the highest mean value of 3.61 (SD = 0.851), implying that students generally have a positive perception of their academic abilities. This aligns with findings that self-efficacy and self-demand are significant factors in the development of academic stress, suggesting

that students who believe in their abilities may experience higher stress due to self-imposed expectations (Olivera et al., 2023; Harahap et al., 2017).

The non-normality in the distribution ($W = 0.967$, $p < .001$) suggests that academic self-perceptions vary significantly across the sample. The mean for "time restraints" subscale is lower ($M = 3.07$, $SD = 0.697$), with a mode of 2.80, suggesting that students feel somewhat constrained by time, though this aspect of stress is not as pronounced as others. Time management issues and the pressure to balance academic and non-academic activities are common stressors among students. The Shapiro-Wilk test ($W = 0.983$, $p < .001$) again indicates non-normality. The mean procrastination score is 2.90 ($SD = 0.683$), with a median of 2.88, suggesting that students exhibit moderate levels of procrastination, that supports the hypothesis of the study. Procrastination is often linked to academic stress, as students may delay tasks due to the overwhelming pressure of academic demands (Barbayannis et al., 2022). Unlike the other variables, procrastination does not significantly deviate from normality ($W = 0.997$, $p = 0.788$), indicating that normality assumptions can be reasonably applied in analyses involving this variable.

Table 2. Assumption Checks and Collinearity Statistics

VIF		Tolerance
Procrastination	1.00	1.00

Table 2 presents the variance inflation factor (VIF) for procrastination, which is 1.00, indicating no multicollinearity issues in the model, with the (VIF) for procrastination being well below the recommended threshold, Dey et al. (2023) suggest that there is less correlation between the predictors, which makes it possible to interpret the regression results with more accuracy. Additionally, the Shapiro-Wilk test for the residuals ($W = 0.985$, $p < .001$) suggests non-normality in the residuals, which may warrant caution when interpreting the results, though the effect size remains significant. While this indicates some non-normality, it doesn't necessarily contradict the results given the robustness of linear regression to such deviations (Ghasemi & Zahediasl, 2012). This significant effect suggests that the relationship between the variables remains meaningful despite the violation of normality assumptions.

Table 3. Coefficients of the relationship between academic stress and procrastination

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Academic Stress -> Academic Procrastination	0.503	0.512	0.040	12.488	0.000

Table 3 presents the original sample path coefficient for the immediate impact of procrastination on academic stress which is 0.503 ($t = 12.488$, $p < .001$), which corroborates the results of the linear regression. This further strengthens the assertion that procrastination significantly impacts academic stress, with the T-statistic confirming the robustness of this effect. The path coefficient of 0.503 ($t = 12.488$, $p < .001$) suggests a strong positive relationship between procrastination and academic stress. This finding is consistent with several research studies that have linked procrastination to increase stress levels among students. For instance, Sirois (2014) found that procrastination exacerbates stress due to its impact on task completion and time management, particularly in academic environments where deadlines are rigid. Additionally, (Rozental et al., 2022) academic

procrastination is associated with increased stress and anxiety, further impacting student's well-being. The scientific proof from this study supports the direct relationship between academic stress and procrastination; the validity of this relationship is proven by T-statistics. Similar findings in the study of Cahyaratri et al (2022) perceived Academic Procrastination is positively correlated with stress level r= .468 and depression level of r=0.401 that has a significant impact on procrastination with stress and other factors.

Table 4. Model Fit Measures

					Overall Model Test		
Model	R	R^2	Adjusted R^2	F	$_1df$	df2	p

The linear regression analysis explores the relationship between procrastination (predictor) and academic stress (outcome).

Table 5. Omnibus ANOVA Test

	Sum of Squares	df	Mean Square	F	p
Procrastination	12.9	1	12.930	52.1	<.001
Residuals	100.6	405	0.248		

Note. Type 3 sum of squares

Table 5 presents the Omnibus ANOVA Test which the F-statistic (F = 52.1, p < .001) further confirms the overall significance of the regression model providing strong evidence that procrastination significantly contributes to the variance in academic stress. The total sum of squares (12.9) and residual sum of squares (100.6) provide insight into the variation explained by procrastination and the unexplained residual variation. In the study of Sirois (2023) procrastination increases stress by avoiding tasks, particularly in stressful environments, thus increasing academic stress experienced by students. Furthermore, procrastination was found to be a direct predictor of academic stress and anxiety by Ragusa et al. (2023), supporting the notion that procrastinators are more likely to experience higher levels of stress because of poor time management. Additionally, Blanca et al. (2023) verified the resilience of ANOVA testing in the presence of non-normal data, which is pertinent to our discoveries in which non-normal residuals were seen, yet procrastination persisted as a noteworthy predictor of academic stress. Lastly, Sirois et al. (2023) confirmed the strong correlation between procrastination and stress shown in our model by highlighting how chronic procrastination eventually results in prolonged stress.

Table 6. Model Coefficients - Academic Stress

Predictor	Estimate	SE	t	p
Intercept	2.620	0.1079	24.28	<.001
Procrastination	0.261	0.0362	7.22	<.001

Conclusion

The results suggest a moderate yet significant relationship between procrastination and academic stress. While procrastination only explains 11.4% of the variance in academic stress, its significant impact implies that it is a critical predictor of stress among the 409 university students in Davao City. The positive regression coefficient indicates that students who procrastinate are more likely to experience heightened academic stress, aligning with previous research suggesting that procrastination leads to negative academic outcomes (e.g., increased stress, decreased performance). In conclusion, this study contributes to the growing body of literature on academic stress

by providing empirical evidence for the role of procrastination as a significant predictor. The findings have practical implications for developing interventions aimed at reducing procrastination and its associated stress in university students, potentially improving their academic experiences and well-being. Given the moderate explanatory power of the model, it is also essential to consider additional factors that may contribute to academic stress, such as personal, environmental, and academic support variables. Future studies could extend this analysis by including mediators or moderators, such as coping mechanisms or academic self-efficacy, and, number workloads to provide a more comprehensive understanding of the factors influencing academic stress.

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