



Self-Control as a Predictor of Academic Procrastination among University Students

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ABSTRACT

One of the aspects that are frequently linked to the lack of self-regulation is academic procrastination that is a widespread issue among university students. The current research conducted on the predictive value of self-control in academic procrastination on 450 university students in a quantitative cross-sectional study. Pearson correlation and simple linear regression were used to analyze data with the help of SPSS. They found statistically significant positive correlation between self-control and academic procrastination, $r(448) = .228$, $p < .001$. It was also found that self-control was a significant predictor of academic procrastination, $F(1, 448) = 24.62$, $p < .001$, and explained 5.2 percent of the variance ($R^2 = .052$). Though the effect size was very small, the results tend to indicate that self-control is a significant psychological variable that correlates with the tendencies of procrastination. The paper reveals the necessity of interventions based on self-regulation to minimize academic procrastination among university students.

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1. Introduction

Academic procrastination in the university students has become one of the most widespread issues in the tertiary education with far-reaching effects on academic achievement and psychological health. Procrastination, which can be defined as the voluntary postponement of planned academic tasks even when one thinks worse still if he/she postpones, is a failure of self-regulation that interferes with goal-oriented action in a timely manner (Steel, 2007). Studies indicate that procrastination is not a frivolous practice but an unhealthy behavioral tendency that is most common among college students where half of the students' report being chronic academic procrastinators, and resultants of poor performance and escalating levels of stress and negative affect (Steel, 2007). These impacts are not limited to poor grades, and they go on to affect the self-esteem of the students, as well as increase anxiety and avoidance of academic challenges in the long term, which will impact the overall educational experience and future prospects of the students. This fact renders academic procrastination a problem of practical significance as well as academic interest that the mechanisms of its psychological predetermination should be studied to allow the creation of effective interventions that could be applied to the achievement of student success and well-being. Self-control, in general terms, the capacity to manage impulses and act in accordance with the desired long-term objectives has been one psychological concept that has always been involved in procrastination. Through self-

control, people are able to resist the urge and develop focus in postponed academic activities (Baumeister, Vohs, & Tice, 2007). Strength model of self-control assumes that the capacity is a scarce resource so that when a person uses the ability to be controlled in one area it will temporarily reduce the ability to be controlled in other areas but with time, self-control will enhance the regulatory capacity of the person (Baumeister, Vohs, & Tice, 2007). Theoretically, self-control is at the center of self-regulation and motivational psychology, which embodies the conflict between the appetitive impulses of short-term perspective and the academic aspirations of the long-term perspective. The high self-control people are always good in persistence, time management and goal achievement, whereas the poor ones get distracted and fail to act (Tangney, Baumeister, & Boone, 2004). In academics, the concept of low self-control can thus form the basis of procrastination because it undermines the capacity of students to act and maintain effort on the required academic duties despite the knowledge they have of adverse effects.

Procrastination theory the relationship between self-control and procrastination has been formulated in the procrastination theory. Procrastination has been termed as the archetypal self-control failure whereby being impulsive and prioritizing short-term mood restoration over long-term academic gains results in the consistent delay (Steel, 2007). Procrastination is explained by the temporal motivation theory to emerge when the present benefits of non-academic pursuits outweigh the present value of delayed benefits of academic assignments that are linked to academic tasks, particularly in those with lower levels of self-control and greater levels of impulsivity (Steel, 2007) (see also formulations of the temporal motivation theory). Good self-control on the other hand helps in getting involved with delayed academic rewards due to its ability to reduce the influence of immediate and competing temptations. The empirical research on this correlation has reported that there were considerable negative correlations between self-control and procrastination, which means that those students with higher regulatory ability have lower procrastination rates (Yue, Bin Abu Bakar, & Binti Mohamad Ashari, 2024). Indicatively, a study involving Chinese university students established that self-control is a negative predictor of academic procrastination ($r = -.62, p < .01$), and it explains a significant share of the variance in procrastination behaviors and suggests that self-control is a protective psychological resource to academic procrastination (Yue, Bin Abu Bakar, & Binti Mohamad Ashari, 2024). These results are consistent with the general evidence on self-control-related deficits in procrastination and suboptimal academic habits among student groups.

Although there is a definite theoretical and empirical overlap, much of the current literature on academic procrastination has focused on either self-efficacy or self-regulated learning styles or motivation and relatively limited research has isolated self-control as a unique predictor within the context of the university. Classical literature on predictors of academic procrastination underlines the presence of a multifactorial nature of the construct procrastination with self-efficacy to self-regulate, task value, and time management all having a role, although the growing evidence suggests that self-control is an independent predictive factor beyond these constructs ((Steel, 2007) studies of self-efficacy to self-regulate). Notably, the majority of the current literature has selected samples that are either disproportionately Western or single-institution and has raised questions about the cross-cultural external validity of its results and constrained our insight into how self-control operates in different contexts of higher education. Furthermore, as much as there have been correlational studies that have demonstrated a relationship between self-control and procrastination, not many studies are able to execute predictive frameworks that explain direction and strength of impact that self-control has on procrastination outcomes on university students. Consequently, the paper has narrowed a substantive gap by making self-control the central predictor variable of the outcome or correlate instead of the outcome. This study will aim at empirically testing the relevance of self-control in predicting academic procrastination among university students. The study will be conducted to measure the predictive power of self-control on the procrastination tendencies in order to comprehend the relationship between fluctuations in the regulatory capacity of students and fluctuations in the procrastination behavior and to add some contextualized results to the existing theoretical findings. In particular, the research aims at finding out the extent of predictive effect that self-control has on academic procrastination when assessed among a representative sample of university students, thus overcoming conceptual, as well as, methodological limitations of previous studies. The study goes further with a predictive lens to leave the association to investigate how self-control is a determinant that can be used to explain the variance in procrastination behaviors.

To inform this research study, the following research questions are as follows: First, how does self-control relate to academic procrastination in university students? Second, how does the relationship between the self-control and the levels of student academic procrastination work? These questions will narrow the concentration of analytic attention to directional forecasting whether greater self-regulation is related to less procrastination and on determining that impact in a strong analytic framework. This research is important on various levels. It has a theoretical contribution to self-regulation and motivational psychology by making the predictive nature of self-control in academic procrastination more detailed and enhances the theory of models that combine personality with regulation constructions. It contributes to the literature empirically with context-specific data of a population of university students that supplements previous results related to different cultural and educational settings (e.g., (Yue, Bin Abu Bakar, & Binti Mohamad Ashari, 2024)). In practice, the results have educational policy and support practices implications: should self-control be a reliable predictor of procrastination, self-control improvement interventions, including regulatory skills training, organized time management training, and self-monitoring procedures, could be developed to increase the level of self-control among students and decrease the procrastination inclinations. Those in academic counseling, instructing, and administration can make more informed decisions on how to build evidence-based approaches that can not only work on academic performance but also student well-being, based on a better understanding of this relationship. Overall, academic procrastination can be described as a self-regulatory issue with serious consequences to both the academic and psychological performance of students. Self-control as a fundamental psychological resource is an influential predictor that could be the possible explanation behind individual differences in procrastination behavior. By carefully examining the predictive ability of self-control in university students, the study will have a dual effect on the knowledge in the field of study as well as the approaches to interventions that can be used to facilitate student performance and health in academic institutions.

2. Literature Review

Scholarly interest on the topics of academic procrastination and self-control has been an element of long-term academic research because of their pivotal roles in the study of student behavior and performance in the learning process. Academic procrastination refers to voluntary procrastination of academic activities even when the procrastination is accompanied by the anticipation of adverse effects of that procrastination (Steel, 2007). It is included by chronic deferral of assignments, studying among other goal-relevant activities though students are willing to act, but failing to start or accomplish task in time. Procrastination is not just a bad time management, it is a more profound example of self-regulatory breakdowns that influence the academic performance and psychological state (Steel, 2007). The studies always indicate that academic procrastination correlates with poor academic results, higher stress, lower satisfaction with life, and worse mental well-being of students in universities (Demir & Kuşcu Karatepe, 2025). These trends emphasize the need to find vital psychological predictors to procrastination especially self-control which has become a primary explanatory variable. Academic procrastination is generally considered as a self-regulatory failure and not just poor planning or laziness and it is directly correlated with the capacity of students to regulate impulsions, goals and attention (Senécal, Koestner, & Vallerand, 1995; Steel, 2007). Although classical definitions focus on delay regardless of the awareness of adverse consequences, recent studies put procrastinating in the framework of self-regulated learning (SRL) with strategies such as time management, goal setting, and metacognitive monitoring being the only strategies that can decrease procrastinatory tendencies in students (Akinci, 2021). Research with the framework of SRL claim that self-regulation as a construct that comprises of self-control and other processes associated with executive functions is a strong negative predictor of academic procrastination (Ragusa et al., 2023). This makes procrastination a maladaptive form of self-control behavior or avoidance to face negative emotions with a task, e.g., anxiety or perceived difficulty (Ragusa et al., 2023; Senécal, Koestner, & Vallerand, 1995).

Self-control is the ability to control the impulses, feelings, and actions to serve the long-term interests. In the wider context of self-regulation theory, self-control allows people to resist immediate temptations to achieve goal-oriented behavior, which promotes persistence and discipline in studying behaviors (Baumeister, Vohs, & Tice, 2007). Self-control as a trait-based individual difference was reported to be associated with many beneficial life consequences, such as academic achievement, more positive emotional health, and adaptive coping (Tangney,

Baumeister, & Boone, 2004). Theoretically, self-control is theorized to be a psychological commodity that regulates the conflicts between immediate gratification and achievement of long-term goals. In the strength model of self-control, the regulatory capacity can be exhausted temporarily and enhanced through constant effort as time goes by as is the case with a muscle (Baumeister, Vohs, & Tice, 2007). When applied to the academic context, high self-control students are better placed to get into study tasks on time, stay on track despite distractions and balance conflicting demands. On the other hand, learners who have a lower self-control are easily tempted to give in to temptations that postpone school assignments, which escalate the risk of procrastination. In recent findings, procrastination is minimized through strategies based on self-leadership theory including behavior focused strategies or constructive thought pattern strategies which significantly enhance cognitive regulation and self-directive behaviour (Wang et al., 2021). The literature demonstrates the existence of strong negative correlation between self-control and academic procrastination among heterogeneous samples of students. As an illustration, studies into multi-screen addiction (MSA) propose that, the weaker the self-control, the more prone people are to being distracted by technology, and consequently, the reinforced the propensity to procrastination, meaning that self-control affects procrastination indirectly, due to technology use, and attention (Gökalp, Saritepeci, & Durak, 2023). In the same way, research revealed that emotional regulation challenges including impulse control disorders and inaccessibility to regulation strategies are predictors of more procrastination in the student population, indicating that affective mechanisms of control are closely related to procrastinatory behaviour (Rad et al., 2025). The finding is consistent with other studies that reported that there are significant inverse relationships between self-control and academic procrastination in higher education settings (Rokiyah, Dewi, & Valyediniti, 2025). The same trends have been present among high school populations with higher self-control leading to the aspect of lower delay and avoidance of school work (Putriani & Razak, 2025). Together these studies indicate that self-control is a protective resource of psychological value, which prevents delays in performing academic tasks. The congruency between negative studies also serves to emphasize the theoretical assumption that procrastination is indicative of failures in self-regulatory capacity in other words failures of self-control.

In addition to mere associations, a number of research studies have also been done to outline how self-control and procrastination are interrelated. The temporal motivation theory states that procrastination occurs when the value of immediate rewards related to non-academic activities surpasses the postponement advantages of academic tasks performance; the greater the self-regulation the higher is the possibility of shifting the future rewards to the present (Steel, 2007). Correspondingly, time attitude and future orientation studies show that highly self-controllable individuals tend to follow future-oriented attitudes that reduce task avoidance implying that self-control can mediate the relationship between time perspective and procrastination (Tolentino, 2023). Additionally, a few studies hypothesise that self-control has an indirect impact on procrastination through its effect on emotional control, motivational affect, and task aversiveness. An example is that Wang et al. (2021) observed that anxiety level can be greater due to unmet psychological needs that in turn negatively affect self-control and lead to procrastination (self-determination theory perspective), and there is a relationship between affective states, regulatory processes, and the outcome of procrastination. The conceptualization of procrastination is also enhanced by the relevance of theories of motivation like Temporal Motivation Theory (TMT). TMT combines expectancy, delay, value, and impulsivity to define the case of task procrastination based on the assumption that when immediate benefits (e.g., leisure) are more than delayed benefits (e.g., academic grades), people tend to procrastinate more a dynamic that is more apparent in people with lower self-control (Schmidt, 2024). New studies also point to the mediational contribution of self-control to general self-regulatory models. Indicatively, researchers have found that self-control has the ability to moderate the connection between academic self-efficacy and procrastination, indicating that academically confident high-self-control students are more likely to procrastinate but those with high self-control are in a better place to convert self-efficacy to task completion (Chen & Lopez, 2024).

In intercultural and interpersonal settings, the negative correlation between self-control and academic procrastination is strong. Numerous negative correlates have been found with large sample surveys in China where higher self-control scores tend to be associated with a low level of procrastination (Yue, Bin Abu Bakar, & Binti Mohamad Ashari, 2024). This pattern is also supported by correlational studies in various contexts (e.g., Indonesia, Turkey) with the focus on the role of self-control in motivational and behavioural control in the academic setting (Gökalp,

Saritepeci, & Durak, 2023; Rokiyah, Dewi, & Valyediniti, 2025). Literature also proposes that there are functional psychological purposes of procrastination among a number of students: procrastination can be an emotional avoidance response in case of being overwhelmed or anxious, which proves that procrastination is not a unitary phenomenon but a feature modulated by emotional regulation, avoidance orientations, and self-control abilities (Ragusa et al., 2023). Although there is much evidence that self-control correlates with academic procrastination, there are still a number of gaps in the literature. First, a part of the current research is based on cross-sectional designs, which do not allow causal inference. Although negative links have been greatly recorded, there is minimal longitudinal data to prove that self-control results in alteration of procrastination in the long run, especially in higher education institutions. The gap increases the inquiry of directionality is weak self-control is the cause of procrastination, or could long-term procrastination lead to loss of self-control in time due to stress and cognitive depletion? Second, the current research tends to use student samples of Western or East Asian institutions and the generalizability of the results across different cultures can be questionable. The procrastination relationship on self-control may vary in students in universities in other cultural settings due to the specifics of academic pressure and regulatory expectations unique to them. To fill this gap, it is necessary to carry out research with varied international samples and test the hypothesis that self-control can be as predictive in different contexts. Third, although the inverse correlation exists between self-control and procrastination, research has seldom measured the magnitude of prediction of self-control as an independent variable compared to other predictors including self-efficacy, time management, and motivation. Determining the relative predictive validity of self-control is useful in clarifying the contribution that it makes in relation to other related constructs.

Even academic procrastination is a complex construct that depends on cognitive, emotional, and motivational issues. In addition to the failure of self-control, procrastination has been found to be related to the low academic self-efficacy, fear of failure, perfectionism, and affective discomfort related to academic tasks. Already existing meta-analytic and theoretical studies prove that the construct of procrastination is linked to a complex of psychological variables, such as self-esteem, impulsivity, and problems in emotional regulation (Steel, 2007). The theory of self-regulated learning makes procrastination a failure of planning, monitoring, and behavioral control, implying that lack of self-regulated learning strategies leads to the occurrence of procrastination behaviors. Based on empirical findings, university students who have deficient planning and time management tendencies have a higher level of procrastination, anxiety and poor academic performance (Rabin, Fogel, & Nutter-Upham, 2011). Furthermore, studies show that procrastination may be both antecedent and outcome of negative psychological events, including stress and anxiety, which implicates the possibility of procrastination and regulation processes of one another (Sirois & Pychyl, 2013). These multifaceted relations highlight the fact that although self-control is a major predictor, procrastination is implicated in the higher self-regulatory and motivational systems. Since the problems here are intricate, the literature in the area of academic procrastination has made it clear that multivariate models incorporating self-control and other predictors and mediators are necessary. As an example, it was found in research investigating the mediating effect of self-efficacy and academic motivation, that self-control can not only predict procrastination, but also work in combination with the student confidence in their ability to perform academically to affect the tendencies toward procrastination. The study by Chen and Lopez (2024) implies that self-efficacy can affect self-control and vice versa, which implies that interventions aimed at enhancing the results of self-efficacy and self-control can yield greater success in decreasing procrastinatory behavior.

Other limitations of measurement and operationalization referenced in the literature are also present. Self-report scales are used in many studies to measure self-control and procrastination which makes people worried about the common method bias and the presence of social desirability. Empirical rigor may be enhanced by including behavioral measures, ecological momentary assessment, or time-use diaries, which may also give more detailed information on the patterns of procrastination in different contexts. It is against this background that the current research establishes self-control as the independent and academic procrastination as the dependent variables with the postulation that self-control positively and negatively predicts academic procrastination among university learners. As per the theoretical framework and the results of the research, the hypothesis is advanced in the following way:

Hypothesis (H1): Self-control will mean a lot and negatively indicate academic procrastination in the university students; in other words, it will result that, the more self-control will be the less academic procrastination.

The hypothesis is consistent with the existing studies showing strong negative relationships among these constructs in college populations (Yue, Bin Abu Bakar, & Binti Mohamad Ashari, 2024). A predictive modeling test (e.g. regression analysis) of this hypothesis will assist in clarifying the strength and directionality of the self-control procrastination relationship in your particular group of students.

3. Methodology

3.1. Research Design and Methodological Approach

In the current research, the quantitative and cross-sectional research design was used to focus on self-control as a predictor of academic procrastination among college students. The choice of a quantitative approach was based on the fact that the main aim of the study was to verify theoretically-based relationships between well-defined psychological constructs and quantitative estimates of the strength and direction of predictive relationships. Quantitative methods are also specifically suitable when it is necessary to test a hypothesis, extrapolate the results to a precise population, and objectively measure the variables by using standard tools (Creswell & Creswell, 2017). Since the conceptualization of self-control and academic procrastination in the previous literature suggests that these two are measurable psychological qualities that do not appear to be identical in all people, the quantitative design will make a systematically comparable and inferential analysis in line with existing research findings in education and personality psychology (Steel, 2007; Tangney, Baumeister, & Boone, 2004). The cross-sectional study design allowed the researchers to effectively gather data within a specific period, which is a standard aspect of predictive research taking place with student samples in a given university (Kim & Seo, 2015).

3.2. Unit of Analysis

This study was based on individual students at the university as the unit of analysis. The selection of this option is consistent with the theoretical framework of the study, because both the self-control and academic procrastination are theorized as individual-level psychological traits instead of being group-level or institution-level phenomena. Empirical studies that have been conducted on procrastination and self-regulatory characteristics have continually adopted individual students as the optimal unit of analysis since differences in self-control and procrastination are products of personal cognitive, motivational, and behavioral activities (Sirois & Pychyl, 2013; Steel, 2007). The study is conceptually consistent as it pays attention to individual students thus improving internal validity.

3.3. Population and Sample

The study population was the university students pursuing the undergraduate and graduate programs. The student body of a university is one of the most topical groups in the research on the topic of academic procrastination due to the high level of self-regulation, independent education, and long-term goal setting, which increases the impact of self-regulation in the context of higher education (Wolters, 2003). There was a total sample population of 450 students of the university who were chosen to take part in the study. This is deemed a sufficient sample size that is statistically healthy to make quantitative predictions especially of regression-based models that look at the relationship between psychological variables (Tabachnick & Fidell, 2019). Big sample sizes will help maximize power, minimize standard error and make the estimates of the parameters more stable, which increases research credibility. The 450 participants are also selected through methodological provisions of behavioral research that suggests that sample size should be greater than 300 in order to conduct multivariate analyses to be certain that the effect sizes are accurately estimated, and there is no likelihood of Type II error (Cohen, 1992). In addition, the past research examining the relationship between self-control and academic procrastination has generally included 200-500 participants, which implies that the current study sample size is fully acceptable in similar studies (Kim & Seo, 2015; Yue, Bin Abu Bakar, & Binti Mohamad Ashari, 2024). It is also possible to increase representativeness of the student population with the help of the sample size, which increases the external validity and generalizability of the findings.

3.4. Sampling Technique

Participants were recruited through the use of non-probability sampling method namely, convenience sampling. The convenience sampling serves as a common method in psychological and educational researches with the population of university students because of its convenience, availability, and effectiveness (Etikan, 2016). Although probability sampling can be used to generalize a population, convenience sampling can still be used in case the research is aimed at testing a hypothesis and making predictions, as opposed to estimating a population (Creswell & Creswell, 2017). Notably, numerous research investigations have been carried out using convenience sampling of students and still obtained research outcomes that are theoretically significant and replicable (Steel, 2007; Tangney, Baumeister, & Boone, 2004). To alleviate the possibility of sampling bias, the participants were selected based on several academic fields and across various academic years as well, which guaranteed that the sample population was diverse in terms of academic experience and workload.

3.5. Measurement Instruments

There was a standardized self-report scale based on the trait conceptualization of self-control to measure self-control. Operationalization of the construct was the ability of the individual to suppress impulses, avoid distractions, and continue behavior aimed at achieving goals, which is within the literature definition of the construct (Tangney, Baumeister, & Boone, 2004). Academic procrastination was measured on a validated academic procrastination scale which is set to measure habitual lateness in performing academic activities including studying, preparing assignments, and meeting of deadlines. The level of standardization and psychometric validity of psychometrically validated instruments are characterized by increased construct validity and enable constructive comparisons with the previous research results (Steel, 2007). The self-report measures are often utilized in the studies of procrastination because of the subjective characteristic of the procrastinatory behavior and have shown the reasonable reliability and validity in the studies of various student samples (Sirois & Pychyl, 2013).

3.6. Data Collection Procedure

The information was gathered by use of a structured questionnaire that was given to the students in the university across the academic semester. The involvement was voluntary, and the respondents were notified of the study objective and promise of confidentiality and anonymity. Research ethics were conducted according to the set of approved rules in conducting research with human subjects, such as informed consent and the right to withdraw at any point (American Psychological Association, 2020). The cross-sectional method of data collection was useful in such a way that all variables were assessed at the identical point in time, and it was possible to investigate the current relationships between self-control and school procrastination. In general, the methodological decisions of the given research are theoretically-based and empirically-grounded. The quantitative cross-sectional design is adequately chosen in the light of the predictive purpose of the study, the unit of observation is suitable as the study is an individual level one, and the sample size is sufficiently large to provide adequate statistical power and generalizability. The use of validated measurement instruments and proven methods of analysis is aligned with the best practices in educational and psychological research, and this makes the study place itself to make an impact in the body of knowledge on self-control and academic procrastination among university students.

4. Data Analysis

Data collected were examined with the help of IBM SPSS Statistics (Version XX). Before hypothesis testing, a data screening process was undertaken to guarantee the accuracy and the appropriateness to the regression analysis. Descriptive statistics, histograms, skewness/kurtosis indices and boxplots were used to analyze missing values, outliers and normality. Mahalanobis distance was used to measure multivariate outliers, and scatterplots of standardized residuals were used to measure linearity and homoscedasticity. All these steps are suggested to achieve the soundness of regression estimations, as well as to avoid biased interpretation of the parameters (Field, 2024; Tabachnick & Fidell, 2019). Cronbach alpha was used to measure internal consistency reliability of the scales and a value of 70 and above was deemed acceptable in research studies (Hair et al., 2019). Linear regression was used to test the predictive relationship between the independent variable(s) and the dependent variable of university students (N = 450). The linear regression is suitable where the aim is to estimate the degree to which one or more predictor variables explain variance in a continuous outcome variable (Cohen,

1992). The enter method in SPSS was employed to add the predictors to the model at once. The approach is theoretically motivated and applicable when the variables will be chosen with consideration of previous empirical data instead of automatic statistical demands (Hair et al., 2019). The model summary statistics, R, R² and Adjusted R² were analyzed to identify the percentage of variance that the predictors explain. The significance of the whole model was assessed using the F-statistic. Linear regression was well evaluated in making assumptions to ascertain validity of results. Normal P-P plots and standardized residual histograms were used to assess normal residuals. The Durbin -Watson criterion was used to assess the independence of errors: the values under 1.5 to 2.5 represent reasonable independence (Field, 2024). Multicollinearity was measured by Variance Inflation Factor (VIF) and tolerance; the values of VIF less than 10 and tolerance more than .10 were indicative of no issues of multicollinearity (Hair et al., 2019). The homoscedasticity was checked by examining the scatter plot of the standardized predicted values versus the standardized residuals. By fulfilling such assumptions, the validity of regression results increases and the coefficient is estimated objectively (Tabachnick & Fidell, 2019). The coefficients of the regression (b -) and the t-values and the level of significance (p-values) were interpreted in order to identify the strength and direction of the relationships. The relative contribution of the individual predictor variables was compared with the use of standardized beta coefficients. The level of statistical significance was tested at the .05 level. The interpretation of effect sizes was done in line with the considerations of Cohen (1992), whereby the R² of 0.26, 0.13, and 0.02 is a large, medium, and small effect, respectively. The issue of confidence intervals was also looked at in order to determine the accuracy of estimates. The results were depicted as per recommendations of APA 7th edition, where tables showed unstandardized coefficients (B), standardized coefficients (β), standard errors, t-values, and level of significance.

4.1. Results

Table 1: Demographic

Variables	Category	Frequency	Percentage
Gender	Male	49	10.9
	Female	401	89.1
Age	Below 20	223	49.6
	21-25	227	50.4
Semester Level	1-3	165	36.7
	4-6	139	30.9
	7 th	146	32.4
Total		450	100.0

The demographic features of the respondents (N = 450) are presented in Table 1. The sample was composed of mostly female students (n = 401, 89.1%), but male students were also present in the sample (n = 49, 10.9%). This means that the sample of the study has a significant gender imbalance, which implies that the results can be closer to reflecting the views and the experiences of women students in universities. On age distribution, there was a relatively fair distribution among the participants in the two age categories. The sample consisted of 49.6 percent of students under the age of 20 years (n = 223) and 50.4 percent under the age of 21 years old (n = 227). The nearly equal distribution indicates that both the early-stage and relatively mature students of the university were included in the study and this increased the representativeness of the sample amongst undergraduate age groups. Regarding academic level, 36.7% of the respondents were taking semesters 1-3 (n=165), 30.9% were taking semesters 4-6 (n=139), and the 27.5% were taking semester 7 (n=146). The representation in terms of semester levels has been relatively balanced which means that it was sufficient to represent students in the early, middle, and advanced stages of their academic programs. In general, the demographic characteristics show the diversity within the age and semester level, but gender distribution is significantly disproportionate to female participants. This feature must be considered in explaining the external validity of future results.

Figure 1

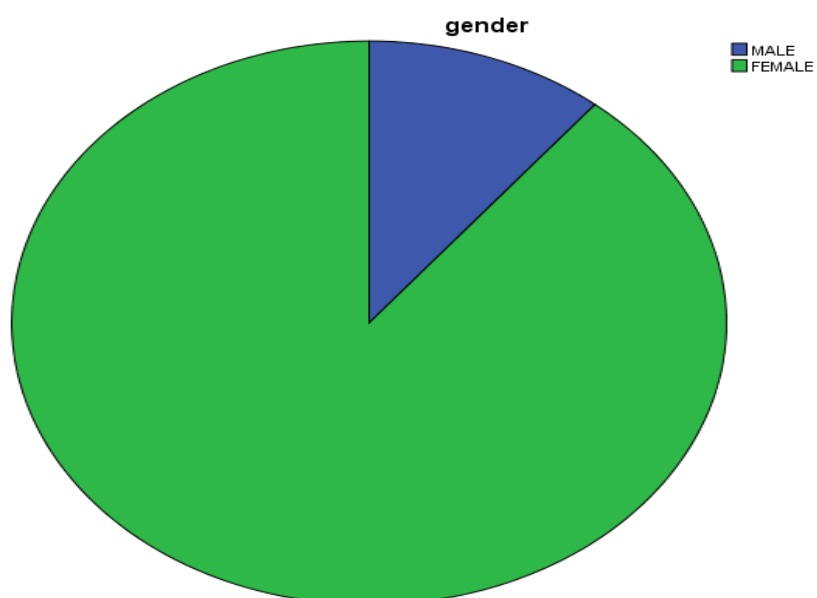


Figure 2

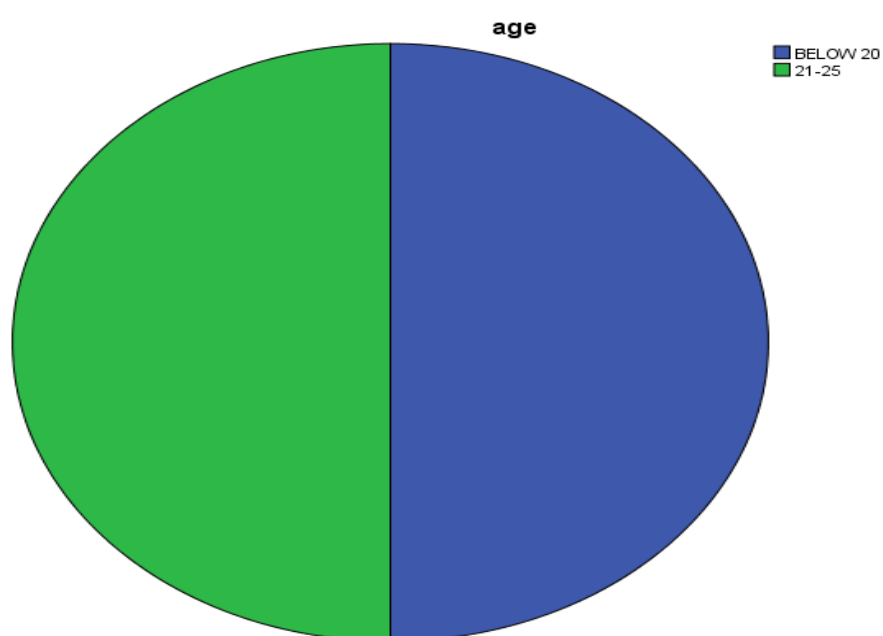


Figure 3

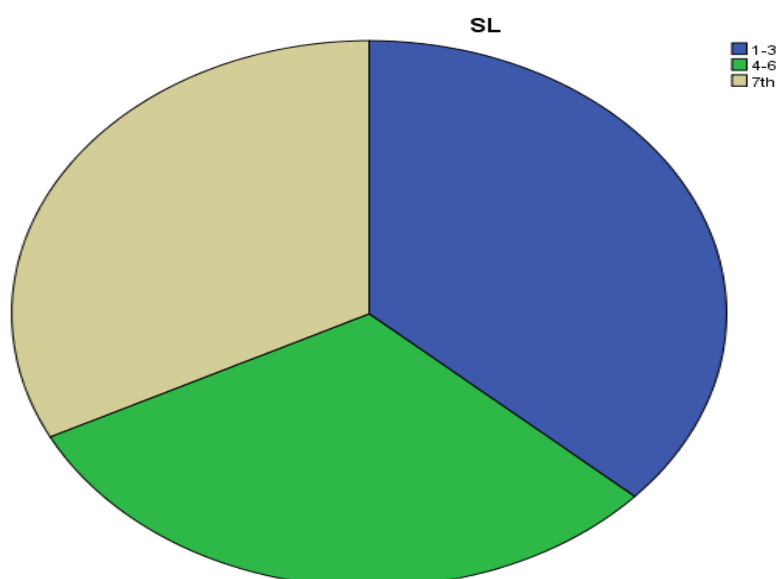


Table 2: Correlation

Variables	Self-Control	Procrastination
Self-Control	1	
Procrastination	.228**	1
N	450	450

** . Correlation is significant at the 0.01 level (2-tailed)

4.2. Correlation Analysis

The Pearson correlation test was undergone to test the association between self-control and academic procrastination in university students ($N = 450$). The findings showed that the two variables had a significant negative relationship, $r(448) = -.228$, $p < .001$. This indicates that the greater was the level of self-control the less would be the level of academic procrastination. The effect size represented by the correlation coefficient is small-moderate using the conventional social science criteria (Cohen, 1992). The results are in line with other studies that argue that self-control is a protective element against procrastination (Steel, 2007; Tangney, Baumeister, & Boone, 2004). More capable students who exhibit a higher ability to control impulses and wait to gain gratification are less prone to procrastinatory behavior, which supports the theoretical model that defines academic procrastinatory behavior as self-regulation failure. In general, the high negative correlation between the self-control and academic procrastination gives a preliminary empirical support to the hypothesized relationship and will warrant the future research to use predatory tests like linear regression. This relationship is consistent with previous research on the significance of self-regulatory resources in academic achievement and time management between populations in universities (Kim & Seo, 2015; Sirois & Pychyl, 2013).

Table 3

Scale / Variable	N	M	Sd	V	Cronbach's α
Self-Control & Academic Procrastination	2	91.36	23.76	564.71	.201

Descriptive Statistics and Reliability of the Study Scale (N = 450)

4.3. Reliability and Scale Descriptive

Cronbach alpha was applied in the evaluation of the internal consistency of the study scale. The Cronbach alpha of the 2-item scale of self-control and academic procrastination was very low (.201), which, probably, can be explained by the low number of items (Tavakol & Dennick, 2011). The mean of the scale was 91.36 ($SD = 23.76$) and the variance was 564.71 showing that there was a significant variation among the respondents. These findings indicate that the scale is good in terms of the range of responses that it includes but the internal consistency is not as high and the results should be taken with caution.

Table 4: Linear Regression Predicting Academic Procrastination from Self-Control (N = 450)

Predictor	B	B	T	p
Constant	19.123	—	2.788	.006
Self-Control	0.873	.228	4.962	.000

Model Summary: $R = .228$, $R^2 = .052$, Adjusted $R^2 = .050$, $F(1, 448) = 24.62$, $p < .001$

4.4. Regression Analysis

It used a simple linear regression test to determine whether the self-control was a predictor of academic procrastination in university students ($N = 450$). The dependent variable of academic procrastination had a significant overall regression equation, $F(1, 448) = 24.62$, $p < .001$, which accounted 5.2 percent of the variance in academic procrastination ($R^2 = .052$, Adjusted $R^2 = .050$). Table 3 indicated that self-control was an important predictor of academic procrastination negatively ($B = 0.873$, $0.228 = -.496$, $t = 4.962$, $p = 0.001$). It means that among the individuals with a greater degree of self-control, the degree of academic procrastination is less. The non-standardized coefficient indicates that in case of a one unit increase in self-control, academic procrastination reduces by about 0.87 units. These findings are in line with the postulation that self-control acts as a defence mechanism against procrastination as already studies have indicated that self-regulation is very important in academic success (Steel, 2007; Tangney, Baumeister, & Boone, 2004).

5. Discussion

The current research examined the role of self-control as an indicator of academic procrastination in the case of university students. The results were always in favor of hypothesis that the greater the self-control the lesser the academic procrastination. Pearson correlation analysis showed that self-control had a significant negative relationship with procrastination ($r = -.228, p < .001$), and that self-control was a significant predictor of academic procrastination ($B = 0.873, \text{Beta} = .228, p < .001$) and using the linear regression showed the correlation accounted 5.2 percent of the variance. The findings are consistent with the previous studies which propose that self-control is a key self-regulatory resource that helps people to resist temptations, time management and focus on academic studies (Steel, 2007; Tangney, Boone, & Baumeister, 2018). The small effect size is in line with the previous research in the educational environment where procrastination is subject to a wide number of factors such as motivation, aversion to tasks and personality. Demographic analysis showed that the sample was mostly composed of females (89.1%), with all the age groups and levels of semesters balanced. Although the gender imbalance makes the results less generalizable to the male students, the sample size that included students of the early, middle and advanced academic stages predisposes that the observed relationship between self-control and procrastination is probably unchanged throughout the process of undergraduate development. The measure of two items had low scale reliability ($= -.201$), which could be due to the few items and not actual disparity in responses. This notwithstanding, descriptive statistics revealed that there was enough variability which could be used to capture any meaningful differences in self-control and procrastination. To enhance internal consistency and predictive accuracy, future research studies need to apply longer and validated scales.

The conceptualization of academic procrastination, as a self-regulation failure, is supported by the theoretical consequences of the study. The results are in line with self-control theory showing that students who have better self-regulatory ability have a lesser tendency to procrastinate academic and academic activities. In practice, the implications of these findings are that self-control interventions, including goal-setting practice, self-monitoring, and formal time management training, can be useful in the procrastination reduction. To enhance the academic performance of the students, academic advisors and educators can incorporate such strategies in the student support programs especially to those students who are likely to procrastinate. There are a number of limitations that are to be taken into consideration. The cross-sectional design does not allow making causal conclusions; there is the possibility that procrastination has a harmful impact on self-control in the long run. Self-reported tools can get social desirability bias, and the fact that the scale has low reliability also limits the interpretive capability. Moreover, the gender imbalance can be a factor that restricts the generalisability of the findings on male students. Longitudinal designs and larger scales that are more balanced and multi-item and validated scales should be considered in future studies to repeat and expand on such results. To sum up, the paper offers evidence based on the empirical studies that academic procrastination is most significantly predicted by self-control in university students. The findings, however, though with a small effect size, signify the input of self-regulation in academic behavior and support the significance of promoting self-control competencies to alleviate procrastination. The results can be relevant to the research on self-regulation and academic achievement by providing practical implications of educational intervention to improve student productivity and achievement.

6. Conclusion

The current paper tested the ability of self-control to predict academic procrastination among college students. Throughout the results, it is always shown that the self-control is a key factor to determine the procrastination behaviors. The correlation and regression tests were able to establish the presence of a negative correlation between self-control and academic procrastination showing that students with a greater ability to self-regulate are less likely to commit to procrastinatory behavior. The results are statistically significant and theoretically content though the effect size is small ($R^2 = .052$) which is in line with the notion of the conceptualization of academic procrastination as a self-regulatory failure (Steel, 2007; Tangney, Baumeister, & Boone, 2004). The current research offers empirical evidence that self-control is not merely applicable in the academic performance, but can also be the focus of intervention to decrease procrastination and boost the overall performance of students. Practically the research

points out that educational institutions should adopt measures, which would allow improvement of self-control and self-regulatory abilities in students.

Moreover, academic advisors and counselors will be able to recognize those students who are likely to procrastinate, and to support them personally to enhance their self-regulatory abilities. Through creating a sense of self-control, the students stand a higher chance of achieving deadlines, study habits and high academic results leading to well-being and less academic stress. The theoretical implications of the study as well exist. It adds to the developing body of self-regulation and academic behavior literature since it empirically supports the predictive value of self-control with regard to the environment of university students in Pakistan. Although this study highlights similar results with the previous ones that were reported in other cultural contexts (Kim & Seo, 2015; Sirois & Pychyl, 2013), it can be applicable to a local context, which indicates that the application of self-regulatory mechanisms in academic procrastination can be generalized across cultures. The study has its limitations even though it has contributed to them. A cross-sectional design excludes causal inferences and the cross-sectional design may lead to response biases because of self-report measures. The low internal consistency of two item scale (201) is another limitation to the reliability of the measures that could indicate that in future studies, multi item scales of both self-control and procrastination may be used. The gender bias in the sample also limits the generalizability, as the balance should be provided in future researches. The potential solution of these limitations in future research is a longitudinal research study, a bigger and more varied sample, and a detailed measurement instrument to offer more insight into the dynamics of self-control and academic procrastination. In short, this research has revealed that self-control is a strong indicator of academic procrastination in university students. Such results highlight the significance of implementing self-controlling development in the education interventions not only to the academic literature but also to the practical intervention to student success.

References

- 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.
- American Psychological Association, A. (2020). Publication manual of the American Psychological Association (7th ed.).
- Baumeister, R. F., Vohs, K. D., & Tice, D. M. (2007). The Strength Model of Self-Control. *Current Directions in Psychological Science*, 16(6), 351-355. <https://doi.org/10.1111/j.1467-8721.2007.00534.x>
- Chen, J., & Lopez, E. R. (2024). Academic procrastination, self-efficacy, and self-control among Chinese college students. *International Journal of Research Studies in Education*, 13(19). <https://doi.org/10.5861/ijrse.2024.24770>
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112(1), 155-159. <https://doi.org/10.1037/0033-2909.112.1.155>
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.
- Demir, S., & Kuşcu Karatepe, H. (2025). The Effect of Academic Procrastination on Life Satisfaction Among Nursing and Midwifery Students: The Serial Mediation Role of Academic Self-Efficacy and Self-Control. *Behavioral Sciences*, 15(11), 1434. <https://doi.org/10.3390/bs15111434>
- Etikan, I. (2016). Comparison of Convenience Sampling and Purposive Sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1. <https://doi.org/10.11648/j.ajtas.20160501.11>
- Field, A. (2024). *Discovering statistics using IBM SPSS statistics*. Sage publications limited.
- Gökalp, Z. Ş., Saritepeci, M., & Durak, H. Y. (2023). The relationship between self-control and procrastination among adolescent: The mediating role of multi screen addiction. *Current Psychology*, 42(15), 13192-13203. <https://doi.org/10.1007/s12144-021-02472-2>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis*.
- Kim, K. R., & Seo, E. H. (2015). The relationship between procrastination and academic performance: A meta-analysis. *Personality and Individual Differences*, 82, 26-33. <https://doi.org/10.1016/j.paid.2015.02.038>
- Putriani, S. E., & Razak, A. (2025). The Relationship of Self-Control with Academic Procrastination of State High School Students 3 Polewali. *Journal of Correctional Issues*, 8(1), 25-34. <https://doi.org/10.52472/jci.v8i1.546>

- Rabin, L. A., Fogel, J., & Nutter-Upham, K. E. (2011). Academic procrastination in college students: The role of self-reported executive function. *Journal of clinical and experimental neuropsychology*, 33(3), 344-357. <https://doi.org/https://doi.org/10.1080/13803395.2010.518597>
- Rad, H. F., Bordbar, S., Bahmaei, J., Vejdani, M., & Yusefi, A. R. (2025). Predicting academic procrastination of students based on academic self-efficacy and emotional regulation difficulties. *Scientific reports*, 15(1), 3003. <https://doi.org/https://doi.org/10.1038/s41598-025-87664-7>
- Ragusa, A., González-Bernal, J., Trigueros, R., Caggiano, V., Navarro, N., Minguez-Minguez, L. A., Obregón, A. I., & 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. <https://doi.org/10.3389/fpsyg.2023.1073529>
- Rokiyah, R., Dewi, R. S., & Valyediniti, V. (2025). The Relationship Between Self-Control and Academic Procrastination Among Students. *Al-Musyrif: Jurnal Bimbingan dan Konseling Islam*, 8(2), 181-191. <https://doi.org/10.38073/almusyrif.v8i2.3258>
- Schmidt, F. T. C., Dolis, J., & Tolli, M. (2024). Self-control and academic procrastination: A longitudinal study of university students. *Learning and Individual Differences*, 108.
- Senécal, C., Koestner, R., & Vallerand, R. J. (1995). Self-Regulation and Academic Procrastination. *The Journal of Social Psychology*, 135(5), 607-619. <https://doi.org/10.1080/00224545.1995.9712234>
- Sirois, F., & Pychyl, T. (2013). Procrastination and the priority of short-term mood regulation: Consequences for future self. *Social and personality psychology compass*, 7(2), 115-127.
- 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>
- Tabachnick, B., & Fidell, L. (2019). Using multivariate statistics (7th Ed.). *Published online*.
- Tangney, J. P., Baumeister, R. F., & Boone, A. L. (2004). High Self-Control Predicts Good Adjustment, Less Pathology, Better Grades, and Interpersonal Success. *Journal of Personality*, 72(2), 271-324. <https://doi.org/10.1111/j.0022-3506.2004.00263.x>
- Tangney, J. P., Boone, A. L., & Baumeister, R. F. (2018). High self-control predicts good adjustment, less pathology, better grades, and interpersonal success. In *Self-regulation and self-control* (pp. 173-212). Routledge.
- Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International journal of medical education*, 2, 53. <https://doi.org/10.5116/ijme.4dfb.8dfd>
- Tolentino, L. R., García, P. R. J. M., Lu, V. N., Restubog, S. L. D., Bordia, P., & Plewa, C. (2023). Career adaptation and academic procrastination: The role of self-regulation and future orientation. *Journal of Vocational Behavior*, 141. <https://doi.org/https://doi.org/10.1016/j.jvb.2022.103859>
- Wang, Y., Gao, H., Sun, C., Liu, J., & Fan, X.-I. (2021). Academic procrastination in college students: The role of self-leadership. *Personality and Individual Differences*, 178, 110866. <https://doi.org/10.1016/j.paid.2021.110866>
- Wolters, C. A. (2003). Understanding procrastination from a self-regulated learning perspective. *Journal of educational psychology*, 95(1), 179.
- Yue, L., Bin Abu Bakar, Z., & Binti Mohamad Ashari, Z. (2024). Relationship between self-control and Academic Procrastination among College Students in China: A General Perspective. *International Journal of Academic Research in Business and Social Sciences*, 14(3), Pages 419-427. <https://doi.org/10.6007/IJARBS/v14-i3/21067>