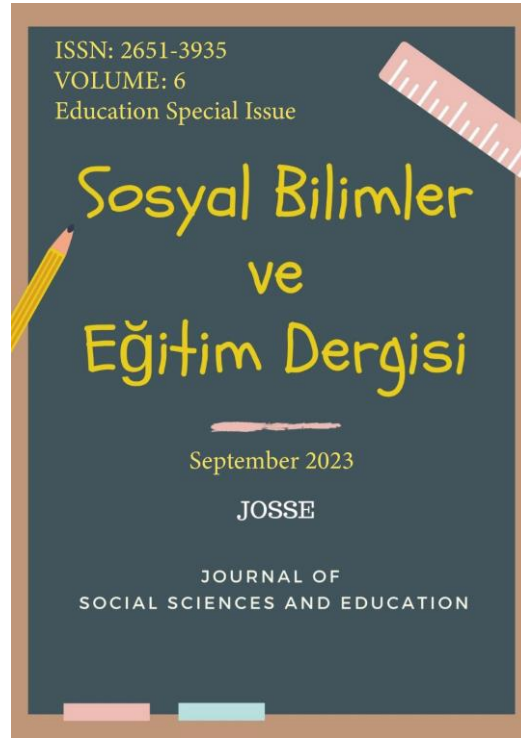


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The Relationship Between Academic Procrastination, General Procrastination and Patience: A Study on University Students*

*Article derived from the report.

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ABSTRACT

Research Article

This research aims to reveal the nature of the relationship among university students' general procrastination, academic procrastination, and patience behaviors. In the study, the Academic Procrastination Scale (APS) and General Procrastination Scale (GPS) developed by Çakıcı (2003), the University Students' Patience Tendency Scale (USPTS) developed by Çeliköz and Gül (2018), and the "Personal Information Form" developed by the researcher were used. The data obtained were analyzed using SPSS 27.0 software. First, a normality analysis was applied, followed by the t-Test and One-Way Analysis of Variance (ANOVA). A correlational design was used in the research to determine the relationship among university students' general procrastination, academic procrastination, and patience behaviors; for the purpose of determining the effect of the patience variable on general and academic procrastination, a multiple regression analysis was used. A moderate ($r=0.616$), significant, and strong relationship was found between university students' general procrastination behaviors and academic procrastination behaviors. A negative relationship was identified between patience behaviors and both general and academic procrastination behaviors. The multiple linear regression analysis showed that academic procrastination behavior ($\beta= -.227$) had a more pronounced effect in predicting patience behavior than general procrastination behavior ($\beta= -.155$). The research found significant differences in general procrastination, academic procrastination, and patience behaviors based on the participants' gender, the university they attend, family income level, and their field of study; while similarities were identified based on age and class level.

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Introduction

All individuals exhibit tendencies to procrastinate at certain times. While some are inherently prone to constant procrastination, others show this propensity only under specific circumstances. Although procrastination is often perceived as a personality trait, a myriad of external and internal factors can contribute to this behavior (Klingsieck, 2013; Steel & Klingsieck, 2016; Van Eerde, 2003). Procrastination is defined as the deliberate delay of a task or action by an individual (Solomon & Rothblum, 1984; Steel, 2007). This can particularly result from an individual's inability to efficiently manage their activities and performance (Tuckman & Sexton, 1989). Overall, procrastination behaviors detrimentally affect an individual's work productivity and performance (Balkis & Duru, 2009). The term captures an individual's tendency to delay responsibilities, decision-making processes, or tasks they ought to fulfill (Haycock, McCarthy, & Skay, 1998). Individuals engaged in procrastination often fail to materialize the thought of performing a task, leading to the task's completion remaining theoretical. Consequently, there exists a misalignment between planned and executed behaviors (Yaraş, 2021). Characteristics of procrastination include delaying tasks perceived as significant, holding tasks off until the last moment when they ought to be completed on time, not investing enough effort into tasks, and feeling overwhelmed by these situations (Milgram, 1991). Procrastination can occasionally offer short-term benefits to individuals. The pressure from simple and mundane tasks can trigger a desire in individuals to swiftly complete the task (Van Eerde, 2003). A study by Tice and Baumeister (1997) highlighted the short-term stress-relieving effects of procrastination. However, individuals who procrastinate often make excuses for their delays, leading them to believe they control the task. Yet, these short-term benefits tend to transform into long-term detrimental effects (Akbay, 2010).

Throughout various life stages, individuals frequently delay certain responsibilities that are expected of them. Whether this procrastination behavior occurs within or outside of the educational process, it exhibits similar characteristics (Ekşi & Dilmaç, 2010). Academic procrastination is an act where students postpone their academic duties for various reasons (Akdemir, 2013). This act has two phases: the continuous postponement of tasks and the absence of anxiety as a result of this delay (Solomon & Rothblum, 1984). Essentially, this behavior stems from a lack of motivation; individuals with low motivation tend to shift their focus from primary tasks to other activities. Particularly, students often choose to utilize their

free time rather than enhance their academic performances (Franziska, Manfred, & Stefan, 2007). The university phase represents a pivotal period in which individuals prepare for their roles in the professional and societal domains. At this stage, there are numerous duties and responsibilities that fall upon students. However, many students either delay or do not completely fulfill these tasks for a variety of reasons (Güngör & Koçak, 2020). It is evident that more than 70% of university students consistently exhibit procrastination tendencies (Klingsieck, Grund, Schmid, & Fries, 2013). Academic procrastination, frequently encountered among students, can adversely influence their academic outcomes (Onwuegbuzie, 2004). This phenomenon is characterized by a student consciously delaying a task, even while aware of the potential negative repercussions (Steel, 2007). Such behavior manifests as students postponing their learning activities, which can yield detrimental effects, especially for those frequently facing deadlines (Dietz, Hofer & Fries, 2007; Tuckman, 2002). Numerous studies have identified academic procrastination as a factor that negatively impacts a student's academic success (Akpur, 2020; Daryani et al., 2021; Hayat et al., 2020; Nayak, 2019; Öztürk Başpınar, 2020; Sula Ataş & Kumcağız, 2020; Yaraş, 2021). Zacks and Hen (2018) have outlined various causes for procrastination, including negative thoughts, fear of not reaching goals, low self-esteem, and a lack of awareness. Additionally, habitual procrastination in school can lead to adverse outcomes such as stress, anxiety, poor grades, and alienation from peers. In this context, procrastination tendencies manifest in diverse forms, including deferring study sessions, leaving tasks until the last moment, neglecting critical project deadlines, and postponing administrative responsibilities related to academic life, such as failing to return library books on time or registering late for exams (Rothblum, Solomon, & Murakami, 1986; Scher & Ferrari, 2000). Academic procrastination negatively affects the learning process and its quality, resulting in delays in education. Consequently, students do not complete tasks timely and fail to meet expected performance levels in exams, thereby hindering their academic progress (Yang et al., 2019; Balkıs, 2013; Nayak, 2019; Steel, 2007).

Throughout their lives, individuals may encounter various adversities. In such instances, patience has been found to play a crucial role in alleviating negative emotional responses and overcoming potential conflicts or challenges (Kıral, 2019). The concept of patience encompasses a cognitive aspect that shapes individuals' reactions to events and people. In a psychological context, patience is categorized into two distinct sub-categories: as an internal emotion and as an outward response to adverse events (Doğan & Gülmez, 2014).

Patience denotes the act of waiting without exhibiting anxiety or anger in the face of difficulties and challenges. It is synonymous with values such as tolerance, forbearance, and anger control, often possessing an emotional dimension (Gül & Çeliköz, 2018). Patience is associated with an individual's ability to cope with life's challenges and display resilience. This trait contributes to a person's personal growth, equipping them with the strength to overcome obstacles (Peker, 2013). The challenges and barriers encountered throughout life affect an individual's life based on their perspective. The ability to overcome these challenges enhances an individual's resilience level and aids in the development of coping strategies (Tokur, 2017). Curry, Price, and Price (2008) suggest in their research that patient individuals demonstrate a more positive approach to the challenges they face compared to others. These individuals generally possess a positive perspective, with relatively reduced levels of negative thinking and anxiety. Patience is not only essential for dealing with adversities but is also crucial in achieving desired positive outcomes. It stands as a foundational factor influencing success and happiness in an individual's life (Doğan, 2017). Patience is instrumental in managing feelings of anxiety and navigating uncertain situations. In times of stress, it fosters a balance between adverse emotional responses and feelings of contentment, ensuring one remains centered and focused. Additionally, research has indicated its pivotal role in augmenting life contentment and overall well-being (Diener, Sapyta, & Suh, 1998).

Examining the relationship between university students' general and academic procrastination, as well as their patience behaviors, within the context of demographic variables, represents a significant research topic in the field of educational sciences. Such behavioral characteristics hold substantial influence over students' academic performance, motivation, and overall well-being. In particular, the potential impact of demographic variables on these behaviors aids in a deeper understanding of how individuals respond to educational processes and learning strategies. Therefore, a thorough analysis of these relationships is of critical importance to the literature, promising to contribute to the design of more effective pedagogical approaches and interventions.

Objective

The aim of this research is to examine the relationship between university students' general procrastination, academic procrastination, and patience behaviors concerning various demographic variables. With this objective in mind, the study seeks answers to the following questions:

- What is the level of relationship between university students' general procrastination, academic procrastination, and patience behaviors?
- To what extent does the patience behavior of university students affect their general procrastination and academic procrastination behaviors?
- Are there significant differences in the general procrastination, academic procrastination, and patience behaviors of university students based on demographic characteristics?

Method

This research aims to examine the relationship between university students' general procrastination, academic procrastination, and patience behaviors under various variables and to identify the current situation. Consequently, it is structured using the relational screening model from the quantitative research methods. The screening model describes precisely how we perceive a situation and includes processes about how desired behaviors will be developed in individuals. In general screening, either a whole or a subset of a large group is examined to reach a general conclusion. The relational screening model seeks to determine if there is a connection between two or more variables. In this model, how variables co-vary is investigated (Karasar, 2023). A relational (correlational) design has been used to determine the relationship between university students' general procrastination, academic procrastination, and patience behaviors. Correlation studies aim to clarify specific human behaviors by examining the simultaneous variability of multiple variables and to predict potential outcomes (Cohen, Manion & Morrison, 2000; Fraenkel & Wallen, 2009). In the research, multiple regression analysis has been employed to determine the effect of the patience variable on general procrastination and academic procrastination. Regression analysis is a comprehensive statistical method used in measuring relationships between multiple variables. This analysis examines the relationship between a dependent variable and one or more independent variables. If there is only one dependent variable in the analysis and its relationship with two or more independent variables is being examined, this situation is termed as multiple regression analysis (Büyüköztürk, 2018).

Population & Sample

The sample of this research consists of students studying in state and foundation universities in Turkey during the spring term of the 2022-2023 academic year. The sample is determined by the maximum diversity method, consisting of 345 university students. Maximum diversity sampling is used to ensure a wide range of individuals related to a problem is represented, thus capturing all possible situations even in a small sample (Yıldırım & Şimşek, 2018).

Data Collection Tools

A personal information form developed by the researcher has been used in the study to determine the demographic characteristics of the university students (gender, age, type and foundation year of the university attended, grade level, family income level). In the research, the Academic Procrastination Scale (APS) and General Procrastination Scale (GPS) developed by Çakıcı (2003) and the University Students Patience Tendency Scale (USPTS) developed by Çeliköz and Gül (2018) have been used. The General Procrastination Scale consists of 18 items from the "Procrastination" and "Effective Time Management" factors; the Academic Development Scale consists of 19 items from the "Procrastination" and "Regular Study Habit" factors; while the University Students Patience Tendency Scale comprises 21 items from the "Patience Against Intolerance", "Patience Against Hastiness", and "Patience Against Anger" factors.

Analysis of Data

In this study, during the 2022-2023 academic year spring semester, due to an earthquake in Turkey that affected 11 provinces and resulted in significant destruction, universities transitioned to remote teaching. Consequently, data were collected online adhering to the principle of voluntary participation. Participants were informed about the research through an online form and their consent was secured. During pilot applications, it was determined that the average time to complete the form was between 15-20 minutes. For data analysis, the SPSS 27 statistical software was utilized. To determine which statistical method would be used for analyzing the data, the normality of the data obtained from the data collection tools used in the research was examined. A correlational (correlation) design was employed to determine the relationship between university students' general procrastination, academic procrastination, and patience behaviors. Furthermore, multiple regression analysis

was used to determine the effect of the patience variable on general procrastination and academic procrastination. To determine the significance of differences based on data from the personal information form, independent sample t-tests, ANOVA, and Post-Hoc (LSD) tests were utilized.

Compliance with Ethical Standard

In this study, all rules were complied with within the scope of the "Higher Education Institutions Scientific Research and Publication Ethics Directive". In addition, for this study, Kırşehir Ahi Evran University Social Sciences Research and Publication Ethics Committee numbered 2023/08/08 ethics committee approval was obtained.

Findings

In this section, the results obtained from the analysis of the research data are shared.

Normality Distribution

Before proceeding to the data analysis stage of the research, analyses concerning the normality distribution of the General Procrastination Scale, Academic Procrastination Scale, and Patience Scale were conducted. The related analysis results are detailed in Table 1 below.

Table 1

Normality Distribution of the General Procrastination, Academic Procrastination, and Patience Scales

	N	\bar{X}	Median	Skewness	Kurtosis	P
General Procrastination Scale	345	2,83	2,77	,204	-,518	.00
Academic Procrastination Scale	345	2,87	2,78	,376	-,660	.00
Patience Scale	345	3,33	3,28	-,029	-,231	.03

Table 1 presents the kurtosis and skewness values for the General Procrastination Scale, Academic Procrastination Scale, and Patience Scale for university students. As Büyüköztürk (2007) pointed out, when the mode, median, and arithmetic mean have similar values, it indicates that the data follows a normal distribution. The median value for the General Procrastination Scale was found to be 2.83, with an arithmetic mean of $\bar{X} = 2.77$. For

the Academic Procrastination Scale, the median was 2.87, with $\bar{X} = 2.78$; for the Patience Scale, the median was 3.33, and $\bar{X} = 3.28$. It is noteworthy in these scales that the median and arithmetic mean values are closely aligned, suggesting that the assumption of normality is met. Büyüköztürk (2007) emphasized that for data to be considered normally distributed, the values for kurtosis and skewness should be between +1 and -1. Guided by this information, the data set was subjected to analysis, and statistical methods appropriate for normal distribution were employed in the research.

Table 2*Demographic Information of the Participants*

	Variable	Frequency (f)	Percentage (%)
Gender	Female	180	52.2
	Male	165	47.8
	Total	345	100.0
Grade Level	1st year	84	24.3
	2nd year	123	35.7
	3rd year	69	20.0
	4th year	69	20.0
	Total	345	100.0
Age	20 and below	55	15.9
	21 years old	128	37.1
	22 years old	61	17.7
	23 years old	53	15.4
	24 and above	48	13.9
	Total	345	100.0
University Attending	Public university	289	83.8
	Private university	56	16.2
	Total	345	100.0
University Establishment Year	Established 2006 and after	183	53.0
	Established before 2006	162	47.0
	Total	345	100.0
Family Income Level	1 minimum wage and below	141	40.9
	2 minimum wages	167	48.4
	3 minimum wages and above	37	10.7
	Total	345	100.0
Field of Study	Health sciences	59	17.1
	Social sciences	107	31.0
	Natural sciences	55	15.9
	Educational sciences	124	35.9
	Total	345	100.0

Table 2 provides demographic information about the participants. Accordingly, 180 of the participants (52.2%) are female and 165 (47.8%) are male. 84 participants (24.3%) are in their 1st year, 123 (35.7%) in their 2nd year, and 69 (20.0%) each in their 3rd and 4th years. In terms of age distribution, 55 participants (15.9%) are 20 or younger, 128 (34.1%) are 21

years old, 61 (17.7%) are 22 years old, 53 (15.4%) are 23 years old, and 48 (13.9%) are 24 or older. 289 participants (83.3%) are studying at public universities, while 56 (16.2%) are at private universities. When participants were analyzed based on the establishment year of the university they attend, 183 (53.0%) study at universities established in 2006 or after, while 162 (47.0%) are at universities established before 2006. As for family income distribution: 141 participants (40.9%) have family incomes of 1 minimum wage or below, 167 (48.4%) have family incomes equivalent to 2 minimum wages, and 37 (10.7%) have family incomes of 3 minimum wages or more. In terms of their fields of study, 59 participants (17.1%) are in health sciences, 107 (31.0%) in social sciences, 55 (15.9%) in natural sciences, and 124 (35.9%) in educational sciences. Upon reviewing the table, it's evident that various characteristics of the participants and their distributions based on these characteristics are clearly presented.

Pearson Correlation Analysis Findings on the Relationship Among University Students' General Procrastination, Academic Procrastination, and Patience Behaviors

To determine the relationship between university students' general procrastination behavior, academic procrastination behavior, and patience behaviors, a Pearson Correlation Analysis was employed. The findings obtained are presented in Table 3.

Table 3

Pearson Correlation Analysis on the Relationship Among University Students' General Procrastination, Academic Procrastination, and Patience Behaviors

		General Procrastination Behavior	Academic Procrastination Behavior	Patience Behavior
General Procrastination Behavior	Pearson r	1.000	.616	-.305
	p-value		.000	.000
	n		345	345
Academic Procrastination Behavior	Pearson r		1.000	-.333
	p-value			.000
	n			345
Patience Behavior	Pearson r			1.000

* Correlation is significant at $p < .05$ level.

A moderate ($r=0.616$) and significant ($p<0.05$) relationship was determined between the university students' general procrastination behaviors and academic procrastination behaviors. That is, participants' general procrastination behaviors and academic procrastination behaviors are positively correlated and increase significantly together. The variables explain 38% of the variance with each other. Hence, 38% of the academic procrastination behavior could potentially stem from the general procrastination behavior.

There is a moderate ($r=-0.305$; $r=-.333$) and significant ($p<0.05$) relationship between the university students' general procrastination behaviors and academic procrastination behaviors with their patience behaviors. Based on this finding, the patience behaviors of university students impact both general procrastination and academic procrastination behaviors in a moderate and significantly inverse manner. The variance explained between these variables is 9% and 11% respectively. That is, 9% of the General Procrastination Behavior and 11% of the Academic Procrastination Behavior may be attributable to patience behavior. There's a negative relationship between university students' patience behaviors and both general procrastination and academic procrastination behaviors.

Multiple Linear Regression Analysis Findings on the Relationship Between University Students' General Procrastination, Academic Procrastination, and Patience Behaviors

A multiple linear regression analysis was conducted to determine how patience behaviors, which are believed to influence the general procrastination and academic procrastination behaviors of university students, act as predictors. The findings are presented in Table 4.

Table 4

Multiple Linear Regression Analysis on the Relationship Among University Students' General Procrastination, Academic Procrastination, and Patience Behaviors

Variable	B	Standard Error	β	t-value	p	Bivariate r	Partial r
Intercept	5.117	.273		18.774	.000		
Academic Procrastination Behavior	-.341	.099		-3.428	.001	-.326	-.182
General Procrastination Behavior	-.284	.121		-2.345	.020	-.300	-.126
				.155			
R = .347		R ² = .115		F _(2,342) = 23.403		p = 0.00	

From the multiple linear regression analysis performed to determine how patience behaviors predict the influence on university students' general and academic procrastination

behaviors, a significant relationship ($R = .347$, $R^2 = .115$) has been identified between academic procrastination and general procrastination behaviors ($F_{(2,342)} = 23.403$, $p = 0.00$). The mentioned variables account for 11% of the variance in patience behaviors. Based on standardized regression coefficients, the relative importance order of predictor variables on patience behaviors is academic procrastination behavior ($\beta = -.227$) followed by general procrastination behavior ($\beta = -.155$). Considering the significance tests of the regression coefficients, both variables ($p < 0.01$) and ($p < 0.05$) are significant predictors of patience behaviors. Observing the relationship between the predictor variables and patience behaviors, correlations appear at the level of academic procrastination behavior ($r = -.326$) and general procrastination behavior ($r = -.300$).

Findings on the Differentiation of University Students' General Procrastination, Academic Procrastination, and Patience Behaviors Based on Gender

To determine whether the general procrastination, academic procrastination, and patience behaviors of university students vary according to gender, scores obtained from general procrastination, academic procrastination, and patience scales were analyzed using an independent samples t-test. The results related to this analysis are presented in Table 5.

Table 5

T-Test Results For The Differentiation of General Procrastination, Academic Procrastination, And Patience Behaviors Based On Gender

Scale	Gender	n	\bar{X}	ss	t	sd	p
General Procrastination	Male	180	2.78	.20	-4.71	343	.00*
	Female	165	2.89	.21			
Academic Procrastination	Erkek	180	2.84	.25	-2.85	343	.00*
	Kadın	165	2.92	.25			
Patience	Erkek	180	3.43	.38	5.16	343	.00*
	Kadın	165	3.22	.37			

* $p < 0.05$

It has been determined that there is a significant difference in the general procrastination, academic procrastination, and patience behaviors of the participant university students based on gender ($p < 0.05$). According to the results, female students exhibited higher general procrastination ($\bar{X} = 2.89$) and academic procrastination ($\bar{X} = 2.92$) behaviors compared to male students' general procrastination ($\bar{X} = 2.78$) and academic procrastination

(\bar{X} = 2.84) behaviors. Conversely, male students (\bar{X} = 3.43) demonstrated more patience compared to female students (\bar{X} = 3.22).

Findings on the Differentiation of University Students' General Procrastination, Academic Procrastination, and Patience Behaviors Based on Academic Year

To determine if the general procrastination, academic procrastination, and patience behaviors of university students vary according to academic year, scores obtained from the general procrastination, academic procrastination, and patience scales were analyzed using a one-way ANOVA. The results of this analysis are presented in Table 6.

Table 6

ANOVA Test Results For The Differentiation of General Procrastination, Academic Procrastination, And Patience Behaviors Based On Academic Year

Scale	Year	n	\bar{X}	SD	F	p	Source of Difference
General Procrastination	1st year	84	2.78	.24	2.52	.05	
	2nd year	123	2.85	.20			
	3rd year	69	2.82	.17			
	4th year	69	2.87	.22			
	Total	345	2.83	.21			
Academic Procrastination	1st year	84	2.85	.29	.337	.79	
	2nd year	123	2.88	.23			
	3rd year	69	2.87	.24			
	4th year	69	2.89	.28			
	Total	345	2.87	.26			
Patience	1st year	84	3.35	.41	1.02	.38	
	2nd year	123	3.28	.37			
	3rd year	69	3.37	.38			
	4th year	69	3.34	.40			
	Total	345	3.33	.39			

* $p < 0.05$

Upon examining Table 6, it has been determined that the views of student participants on general procrastination, academic procrastination, and patience behaviors do not show a significant difference based on academic year ($p > .05$). Similarly, the examination of the scales also reveals no significant difference based on academic year. These results indicate that the behaviors of general procrastination, academic procrastination, and patience among participating students are distributed homogeneously, regardless of their academic year.

Findings on the Differentiation of University Students' General Procrastination, Academic Procrastination, and Patience Behaviors Based on Age

To determine if the general procrastination, academic procrastination, and patience behaviors of university students vary according to age, scores obtained from the general procrastination, academic procrastination, and patience scales were analyzed using a one-way ANOVA. The results of this analysis are presented in Table 7.

Table 7

ANOVA Test Results For The Differentiation of General Procrastination, Academic Procrastination, And Patience Behaviors Based on Age

Scale	Age Group	n	\bar{X}	SD	F	p	Source of Difference
General Procrastination	20 and below	55	2.79	.24	1.042	.38	
	21 years old	128	2.83	.20			
	22 years old	61	2.82	.17			
	23 years old	53	2.86	.22			
	24 and above	48	2.86				
	Total	345	2.83	.21			
Academic Procrastination	20 and below	55	2.90	.29	.300	.87	
	21 years old	128	2.86	.23			
	22 years old	61	2.88	.24			
	23 years old	53	2.89	.28			
	24 and above	48	2.86				
	Total	345	2.87	.26			
Patience	20 and below	55	3.24	.41	.880	.47	
	21 years old	128	3.34	.37			
	22 years old	61	3.32	.38			
	23 years old	53	3.33	.40			
	24 and above	48	3.38				
	Total	345	3.33	.39			

* $p < 0.05$

Upon examining Table 7, it has been determined that the perspectives of student participants regarding general procrastination, academic procrastination, and patience behaviors do not show a significant difference based on age ($p > .05$). Similarly, the examination of the scales also reveals no significant variance due to age. These results indicate that the behaviors of general procrastination, academic procrastination, and patience among participating students are distributed homogeneously and are not influenced by age.

Findings on the Differentiation of University Students' General Procrastination, Academic Procrastination, and Patience Behaviors According to the University They Attend

In order to determine if the general procrastination, academic procrastination, and patience behaviors of university students vary based on the university they attend, scores

obtained from the general procrastination, academic procrastination, and patience scales were analyzed using an independent samples t-test. The results of this analysis are presented in Table 8.

Table 8

T-test Results for the Differentiation of General Procrastination, Academic Procrastination, and Patience Behaviors Based on the Attended University

Scale	Attended University	<i>n</i>	\bar{X}	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
General Procrastination	State	289	2.84	.21	-4.71	343	.03*
	Foundation	56	2.78	.19			
Academic Procrastination	State	289	2.89	.26	-2.85	343	.00*
	Foundation	56	2.77	.21			
Patience	State	289	3.32	.39	5.16	343	.92
	Foundation	56	3.33	.36			

* $p < 0.05$

It has been determined that the participating university students' general procrastination and academic procrastination behaviors show significant differences based on the university they attend ($p < 0.05$), whereas their patience behavior does not show a difference ($p > 0.05$). According to these findings, students attending state universities exhibited greater general procrastination ($\bar{X} = 2.84$) and academic procrastination ($\bar{X} = 2.89$) behaviors than students attending foundation universities, who demonstrated general procrastination ($\bar{X} = 2.78$) and academic procrastination ($\bar{X} = 2.77$) behaviors. Along with these results, it can be observed that the patience behaviors of the participating students are distributed homogeneously regardless of the university they attend.

Findings on the Differentiation of University Students' General Procrastination, Academic Procrastination, and Patience Behaviors Based on the Year of Establishment of the University They Attend

In order to ascertain whether the general procrastination, academic procrastination, and patience behaviors of university students vary depending on the year of establishment of the university they attend, scores derived from the general procrastination, academic procrastination, and patience scales were analyzed using an independent samples t-test. The outcomes of this analysis are presented in Table 9.

Table 9

T-test Results Regarding the Differentiation of General Procrastination, Academic Procrastination, and Patience Behaviors Based on the Year of Establishment of the Attended University

Scale	Year of University Establishment	n	\bar{X}	SD	t	df	p
General Procrastination	2006 and later	183	2.82	.22	-.63	343	.52
	Before 2006	162	2.84	.20			
Academic Procrastination	2006 and later	183	2.86	.26	-.82	343	.41
	Before 2006	162	2.89	.25			
Patience	2006 and later	183	3.32	.37	-.40	343	.68
	Before 2006	162	3.33	.40			

* $p < 0.05$

It has been determined that the participating university students' general procrastination, academic procrastination, and patience behaviors do not show significant differentiation based on the year of establishment of the university they attend ($p > 0.05$). These results indicate that the behaviors related to general procrastination, academic procrastination, and patience among the participants are distributed homogeneously irrespective of the year of establishment of the university they attend.

Findings on the Differentiation of University Students' General Procrastination, Academic Procrastination, and Patience Behaviors Based on Family Income Level

In order to determine whether university students' general procrastination, academic procrastination, and patience behaviors vary according to their family's income level, scores obtained from the general procrastination, academic procrastination, and patience scales were analyzed using an independent groups ANOVA. The results of this analysis are presented in Table 10.

Table 10

ANOVA Test Results Regarding the Differentiation of General Procrastination, Academic Procrastination, and Patience Behaviors Based on Family Income Level

Scale	Family Income Level	n	\bar{X}	SD	F	p	Source of Difference
General Procrastination	1 minimum wage and below	141	2.87	.20	6.77	.00*	1 minimum wage and below > 2 minimum wages
	2 minimum wages	167	2.82	.21			

	3 minimum wages and above	37	2.73	.22			wages and above
	Total	345	2.83	.21			1 minimum wage and below > 3 minimum wages and above
	1 minimum wage and below	141	2.89	.25			
Academic Procrastination	2 minimum wages	167	2.87	.26	.629	.53	
	3 minimum wages and above	37	2.84	.29			
	Total	345	2.87	.26			
	1 minimum wage and below	141	3.33	.35			
Patience	2 minimum wages	167	3.34	.40	.823	.44	
	3 minimum wages and above	37	3.25	.46			
	Total	345	3.33	.39			

* $p < 0.05$

Upon examining Table 10, it is determined that, according to the participating students' views, there is a significant difference in the general procrastination behavior based on family income level ($p < .05$). However, there was no significant difference observed regarding academic procrastination and patience behaviors based on income level ($p > .05$). LSD tests conducted to determine between which groups the general procrastination behavior varied revealed that students whose families earn 1 minimum wage and below ($\bar{X} = 2.87$) displayed more general procrastination behavior compared to those earning 2 minimum wages ($\bar{X} = 2.82$) and 3 minimum wages and above ($\bar{X} = 2.73$). Moreover, students with families earning 2 minimum wages ($\bar{X} = 2.82$) displayed more general procrastination behavior than those with incomes of 3 minimum wages and above ($\bar{X} = 2.73$). Contrarily, it was determined that participating students' academic procrastination and patience behaviors were homogeneously exhibited, irrespective of their family's income level.

Findings on the Differentiation of University Students' General Procrastination, Academic Procrastination, and Patience Behaviors Based on Their Field of Study

To determine whether university students' general procrastination, academic procrastination, and patience behaviors vary according to their field of study, scores obtained from the general procrastination, academic procrastination, and patience scales were analyzed using an independent groups ANOVA. The results of this analysis are presented in Table 11.

Table 11

ANOVA Test Results Concerning the Differentiation of General Procrastination, Academic Procrastination, and Patience Behaviors by Field of Study

Scale	Field of Study	n	\bar{X}	SD	F	p	Source of Difference
General Procrastination	Health Sciences	59	2.81	.21	1.665	.17	
	Social Sciences	107	2.85	.21			
	Natural Sciences	55	2.78	.23			
	Educational Sciences	124	2.85	.20			
	Total	345	2.83	.21			
Academic Procrastination	Health Sciences	59	2.88	.27	.305	.82	
	Social Sciences	107	2.88	.25			
	Natural Sciences	55	2.89	.26			
	Educational Sciences	124	2.86	.26			
	Total	345	2.87	.26			
Patience	Health Sciences	59	3.39	.34	3.206	.02*	Health Sciences > Natural Sciences Educational Sciences > Natural Sciences
	Social Sciences	107	3.30	.36			
	Natural Sciences	55	3.20	.43			
	Educational Sciences	124	3.37	.40			
	Total	345	3.33	.39			

* $p < 0.05$

Upon examining Table 11, it was determined that, according to the views of the participating students, there's a significant difference in patience behaviors based on their field of study ($p < .05$). However, no significant difference was observed in general procrastination and academic procrastination behaviors based on their field of study ($p > .05$). LSD tests conducted to ascertain the groups between which the patience behavior varied showed that students studying in the Health Sciences ($\bar{X} = 3.39$) exhibited more patience than those in Natural Sciences ($\bar{X} = 3.20$). Additionally, students in the Educational Sciences ($\bar{X} = 3.37$) displayed more patience compared to those in Natural Sciences ($\bar{X} = 3.20$). Conversely, it was observed that students' general procrastination and academic procrastination behaviors were consistently exhibited, regardless of their field of study.

Discussion and Results

The findings of this study indicate a significant and robust correlation between university students' general procrastination behaviors and academic procrastination behaviors. A determined correlation coefficient ($r = 0.616$) suggests a moderate and positive relationship

between these two variables. This signifies that a student's tendency to procrastinate in general life strongly aligns with their tendency to procrastinate in an academic context. The 38% shared variance between the two variables suggests that general procrastination behavior is a significant predictor of academic procrastination behavior. Moreover, there is a negative relationship between patience behaviors and both general and academic procrastination behaviors. This negative correlation implies that an increase in patient behaviors could reduce both general and academic procrastination tendencies. Patience could potentially reduce procrastination behaviors by enhancing students' resilience against present challenges and bolstering their persistence in reaching rewards. Multiple linear regression analysis indicates that academic procrastination behavior ($\beta = -.227$) has a more pronounced effect on patience than general procrastination behavior ($\beta = -.155$). This suggests that procrastination in an academic context might influence individuals' levels of patience more powerfully.

When research data is evaluated based on gender, it was found that female students exhibited more general and academic procrastination behaviors compared to male students. Additionally, male students were found to display more patient behaviors than females. These results highlight the significant influence of gender on procrastination and patience behaviors. Procrastination in academic settings is commonly observed across different educational levels and between genders (Klassen, Krawchuk, & Rajani, 2008; Klassen, 2010; Ozer & Ferrari, 2011). While Eliüşük (2014) and Karabıyık Çeri, Çavuşoğlu, and Gürol (2015) found no effect of gender on patience, Bettinger and Slonim (2007) determined that female students were more patient than males. It is observed that the foundation year of the university does not have a determinative effect on students' general procrastination, academic procrastination, and patience behaviors. This suggests that universities established at different times are homogeneous in terms of educational quality, institutional culture, and student profile with respect to these behaviors.

Neither grade level nor age had a significant impact on procrastination or patience behaviors. This suggests that university students display these behaviors similarly, regardless of their year of study or age. This could imply that individual procrastination behaviors and patience levels might be more tied to factors such as university environment, academic pressures, or social circles, rather than individual differences. Kim & Seo (2015) determined that younger university students tended to procrastinate more than their older counterparts. These findings might reflect the maturity levels of younger students and their inability to fully take responsibility for their learning processes. Such results might indicate that students are

on their path to becoming fully independent adults, but still need some support in self-managing their learning (Ferrari, 2001).

There were significant differences in procrastination behaviors among students based on the type of university they attended. Students from public universities exhibited more general and academic procrastination behaviors than those from foundation universities. This could point to potential differences in teaching methods, academic pressures, or social environments between public and foundation universities. Significant differences were also found in patience behaviors of students based on their field of study. Students studying in the fields of health sciences and educational sciences were more patient than those in the natural sciences. This suggests that specific academic disciplines might play a determining role in student behaviors, a result consistent with Kaya's (2020) findings. Ercan Gül and Çeliköz (2018) identified variations in patience behaviors among students depending on their field of study.

Income level created a significant difference in students' general procrastination behaviors. Children from families with lower income levels exhibited more general procrastination behaviors compared to those from higher income families, highlighting the potential impacts of economic challenges on student behaviors.

Recommendations

In conclusion, this study reveals a significant relationship between university students' general and academic procrastination tendencies, and that these tendencies have a distinct impact on their levels of patience. The obtained findings suggest variability in these behaviors based on demographic factors and that patience training could have a positive effect on students' procrastination behaviors. However, it is emphasized that there's a need for more comprehensive future studies to understand these findings in depth and to determine the actual impact of patience training.

Compliance with Ethical Standard

In this study, all rules were complied with within the scope of the "Higher Education Institutions Scientific Research and Publication Ethics Directive". In addition, for this study, Kırşehir Ahi Evran University Social Sciences Research and Publication Ethics Committee numbered 2023/08/08 ethics committee approval was obtained

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