



An Analysis of Graduate Theses on Students' Academic Procrastination Published in Türkiye Between 2003 and 2021

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ABSTRACT

The purpose of this study is to analyze the graduate theses on students' academic procrastination published in Türkiye to identify emerging research trends and provide suggestions for future studies. For this purpose, a case study design as a type of qualitative research was employed. A list of the theses was obtained as a result of a search in the National Thesis Center using the keywords "academic procrastination" in both Turkish and English languages. From the list, all the open-access theses with the samples of student were included in the study. In line with the determined criteria, a total of 101 graduate theses (87 master's and 14 doctoral) published between 2003 and 2021 were analyzed through document analysis based on the descriptive content analysis method. The distribution of the theses was examined based on variables including the program type, year of publication, the university, institute, and department where the study was conducted, language, gender of the researcher, research design, sampling method, sample size, region of the data collection, level of education, the data collection tool used to measure academic procrastination, the research topics studied along with academic procrastination, and examined independent variables. The study revealed that the theses were mostly written in the master's program (86.14%), in 2019 (15.84%), at Gazi University (5.94%), in the Institute of Educational Sciences (56.44%), in the Department of Educational Sciences (53.47%), in the Turkish language (92.08%), by female researchers (59.41%), based on survey design (94.06%), using random sampling (59.41%), with a sample size of 400-499 (22.77%), with data collected from Central Anatolia (28.71%) from undergraduate students (53.46%) using the Academic Procrastination Scale (56.43%) together with the research topic academic performance (45.54%) and the independent variable gender (76.24%).

Keywords: Academic procrastination, document analysis, graduate theses.

Türkiye'de Öğrencilerin Akademik Ertelemeleri Üzerine 2003-2021 Yılları Arasında Yapılan Lisansüstü Tezlerin Analizi

ÖZ

Bu çalışmanın amacı öğrencilerin akademik ertelemeleri üzerine Türkiye'de yayımlanmış lisansüstü tezleri analiz ederek ortaya çıkan araştırma eğilimlerini belirlemek ve gelecek çalışmalar için öneriler sunmaktır. Bu amaç doğrultusunda nitel araştırmanın bir türü olan durum çalışması deseni kullanılmıştır. Ulusal Tez Merkezi'nde "akademik erteleme" ve İngilizcesi olan "academic procrastination" anahtar kelimeleri kullanılarak yapılan tarama sonucunda bulunan lisansüstü tezlerinin bir listesi çıkarılmıştır. Bu tezler arasından çalışma grubunu öğrencilerin oluşturduğu ve erişim izni bulunan tüm lisansüstü tezler araştırmaya dahil edilmiştir. Belirlenen ölçütler doğrultusunda 2003-2021 yılları arasında yayımlanan toplam 101 lisansüstü tez (87 yüksek lisans, 14 doktora), betimsel içerik analizi yöntemine dayalı doküman analizi yapılarak incelenmiştir. Çalışmada incelenen tezler program türü, basıldığı yıl, araştırmanın yapıldığı üniversite, enstitü ve anabilim dalı, yazıldığı dil, araştırmacının cinsiyeti, araştırma deseni, örneklem belirleme yöntemi, örneklem büyüklüğü, veri toplanan bölge, öğrenim kademesi, akademik ertelemeyi ölçmek için kullanılan veri toplama aracı, akademik erteleme ile birlikte çalışılan diğer araştırma konuları ve ele alınan bağımsız değişkenlere göre dağılımı incelenmiştir. Çalışma sonucunda incelenen tezlerin ağırlıklı olarak yüksek lisans programında (%86.14), 2019 yılında (%15.84), Gazi Üniversitesinde (%5.94), Eğitim Bilimleri Enstitüsünde (%56.44), Eğitim Bilimleri Anabilim Dalında (%53.47), Türkçe dilinde (%92.08), kadın araştırmacılar tarafından (%59.41), tarama desenine dayalı (%94.06), seçkisiz örnekleme kullanılarak (% 59,41), 400-499 arasında örneklem büyüklüğü ile (%22.77), İç Anadolu Bölgesinde (28.71%), lisans öğrencileri ile (%53,46), Akademik Erteleme Ölçeği (%56.43) kullanılarak, çoğunlukla akademik performans (%45.54) araştırma konusu ve cinsiyet (%76.24) bağımsız değişkeni ile birlikte yapıldığı tespit edilmiştir.

Anahtar kelimeler: Akademik erteleme, doküman analizi, lisansüstü tezler.

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1 | INTRODUCTION

Individuals undertake many tasks and responsibilities throughout their lives. However, some prefer to postpone these tasks and responsibilities to a later time by making different excuses, rather than fulfilling them on time. Why individuals postpone which tasks in which situations is explained with the concept of procrastination. Procrastination, which originates from the Latin word “procrastinare”, refers to the act of postponing a task until later without any reason (Teyfur et al., 2017). In English, procrastination is a combination of two words “pro”, which implies forward motion, and “crastinus”, which means belonging to tomorrow (Bayrak, 2018). In Turkish, procrastination is expressed with concepts such as “işleri son ana bırakma” (leaving things to the last moment), “son dakikacılık” (last-minuteness), “erteleme” (postponing) and “gecikme” (delaying) (Balkıs, 2007; Bayrak, 2018; Şirin & Duman, 2018). The Turkish Language Institution (TDK, 2022) describes the verb “ertelemek” (to postpone) as “sonraya bırakmak, tehir etmek, tecil etmek, talik etmek” (to put off until later, to defer). There is no agreed definition for procrastination in the literature (Aydoğan & Özbay, 2012; Balkıs, 2007; Şirin & Duman, 2018). Within the scope of this study, the concept of procrastination, based on different definitions in the literature, is described not doing tasks that are assigned or that need to be done, and postponing/delaying goals intentionally without a reasonable excuse by taking responsibility for the behavior and knowing that the delay will result in harm, and thus feeling uncomfortable with the situation (Aydoğan & Özbay, 2012; Balkıs & Duru, 2010; Balkıs et al., 2006; Çam, 2013; Çelikkaleli & Akbay, 2013; Erdoğan, 2019; Korkmaz, 2018; Naktiyok & Kızıl, 2018; Odacı & Çelik, 2012; Satıcı, 2020; Solomon & Rothblum, 1984; Steel, 2007; Şeker & Saygı, 2013; Yakut & Kuru, 2020; Yücel & Şen, 2019). On the other hand, Engin and Genç (2020) describe procrastination as spending time with other activities instead of performing the task that needs to be done. In addition, according to Naktiyok and Kızıl (2018), the concept can also be described as a personality trait, a behavioral tendency, or an irrational delay. There is also a consensus in the literature that procrastination is described as a form of self-regulatory failure (Steel, 2007; Wolters, 2003). Self-regulated learners are motivationally, behaviorally, and metacognitively active in their learning process to reach their goals (Zimmerman, 1986). Accordingly, the characteristics of self-regulated learners (employing adaptive motivational strategies, possessing and employing a repertoire of cognitive strategies accurately, and monitoring and controlling their learning) contrast with those of procrastinating students (Steel, 2007; Wolters, 2003).

In the literature, procrastination behavior is examined in two parts “personality trait or chronic procrastination” and “situational procrastination” (Balkıs et al., 2006). While chronic procrastination is categorized into three groups “neurotic procrastination”, “compulsive procrastination (obsessive and dysfunctional)” and “decisional procrastination”; situational procrastination is divided into two “general procrastination” and “academic procrastination”. According to Balkıs (2007), the first three are related to avoiding a decision, whereas the last two are related to avoiding a task. Çam (2013) refers to personal or chronic procrastination as delaying the tasks that individuals perform to manage in every moment of life, which causes the individual to feel inadequate and helpless, and that is required to achieve a goal. Şirin and Duman (2018) define situational procrastination as the act of postponement at certain times, in certain situations and conditions.

In the field of education, the most frequently encountered concept is “academic procrastination”. Ay et al. (2019) define academic procrastination as not doing academic tasks such as doing homework and studying for an exam, in other words, school activities, continuously or intermittently because of anxiety and stress, delaying or postponing these until the last moment or finally giving them up. Çelik and Odacı (2015) explain the characteristics of students who experience academic procrastination as follows: forgetting the due dates of assignments, leaving homework to the last minute, postponing study for exams, delaying study, putting off administrative tasks (such as not delivering books to the library, not registering for an exam, etc.). Academic procrastination yields undesirable results such as poor academic achievement, fear of failure, lack of a plan, making excuses, boredom, and depression (Balkıs et al., 2006; Solomon & Rothblum, 1984). Academic procrastination should not be perceived as a negative situation all the time but should be considered as a strategy used to take a break and make a better start in extraordinary situations such as the current pandemic. Similarly, Özer and Altun (2011) state that people with academic procrastination use this as a strategy to protect their self-esteem by leaving a priority task to a later time and performing another task of lower priority.

Engin and Genç (2020) explain academic procrastination in three dimensions behavioral, affective (emotional), and cognitive. The behavioral dimension refers to wasting the time allocated for a task to be done or a decision to be taken. The cognitive dimension covers the inconsistency between one's goals and behaviors. Finally, the affective dimension refers to the feelings such as guilt, sadness, hatred, and disappointment felt when assignments and duties are not performed. For example, knowing that there is a certain deadline for a performance assignment that is due within one and a half months but not being able to use this time well and wasting it on other stuff even though the deadline is approaching explains the behavioral aspect; knowing what needs to be done for the performance assignment but not being able to make progress towards achieving goals explains the cognitive dimension; and as a result of these, the feelings such as rage and anger for oneself, and fear and guilt towards teacher because of not doing anything even though there is little time left for the assignment explains the affective dimension.

It is observed in the literature that the causes of academic procrastination are frequently studied. The reasons for academic procrastination includes: difficulty in concentrating on a task, low sense of responsibility, low locus of control, low motivation, low self-confidence, anxiety, poor time management, indifference towards the task, hopelessness, low capacity, poor academic performance, little effort for success, perceiving the task as difficult, self-esteem, general mood, fear of failure, cognitive misattributions, difficulty in decision-making, dependency and support, qualities of the given task, low resistance for frustration, learned helplessness, laziness, avoiding class (duties), being unpretentious, external locus of control, peer influence, social media addiction, perfectionism, risk aversion, poor self-regulation, lack of motivation, irrational beliefs, depression, test anxiety, personality traits (introverted, extroverted), shyness, low self-efficacy, fear of negative criticism and study habits (Balkıs, 2007; Balkıs & Duru, 2010; Özer & Altun, 2011; Aydoğan & Özbay, 2012; Berber Çelik & Odacı, 2012; Çam, 2013; Çelikkaleli & Akbay, 2013; Ataş & Kumcağız, 2017; Korkmaz, 2018; Solomon & Rothblum, 1984; Steel, 2007; Wolters, 2003).

It is identified that individuals with academic procrastination may show behavior patterns such as absenteeism and dropping out of school, avoiding responsibilities (work and tasks), delegating work to others, failing the required success, being alienated from school, lessons, and teachers, weariness, and experiencing problems in private life (Ay et al., 2019), sense of guilt, hopelessness, feeling nervous, avoiding opportunities, retarding academic studies (Şeker & Saygı, 2013), feeling inadequate, self-humiliation, embarrassment, dishonesty, panic and anxiety (Erdoğan, 2019).

Ocak and Karataş (2019) specify that academic procrastination is more common in high school and university students. Çelik and Odacı (2015) also state that 70% of university students experience procrastination in academic life. In addition, Uzun Özer (2005) identified that 54% of the students exhibited procrastination in a similar study conducted in Türkiye.

Moreover, studies examining the effects of variables, including gender, culture, age, level of education, and type of school, on academic procrastination are also quite common. In particular, the variable of gender is frequently studied. For example, in his study conducted with teacher candidates, Balkıs (2007) found out that male teacher candidates were more prone to academic procrastination. In the studies conducted with university students, Şirin and Duman (2018) identified that males experienced general and academic procrastination more compared to females, whereas the study by Şeker and Saygı (2013) revealed that the behavior was encountered more in female students. Likewise, in studies conducted with high school students, Aydoğan and Özbay (2012) discovered that males were more engaged in academic procrastination, while Ay et al. (2019) identified that females were more likely to exhibit the behavior. On the other hand, there are also studies indicating that academic procrastination does not differ depending on variables such as gender, department, and course load, and the study by Cumaoglu et al. (2012) conducted with a group of 115 teachers can be given as a relevant example. It is observed that current studies present different results regarding gender. According to Yakut and Kuru (2020), since each study is unique, it is of great importance to conduct new studies on academic procrastination with different student groups, departments, variables, and demographic characteristics, and to compare their results. Furthermore, the topic needs to be examined longitudinally and experimentally.

Significance of the Study

Academic procrastination is a widely encountered topic in educational research since it involves basic academic tasks that students need to perform in their education life from kindergarten to university, such as studying for an exam, writing a term paper/an assignment, dealing with administrative procedures related to school, and ensuring participation. It is acknowledged that individuals experience high levels of stress and a decrease in motivation as a result of not performing academic tasks on time, and accordingly, their performance is negatively affected. The behavior of procrastination in academic subjects is the most significant obstacle for individuals in achieving their goals. Particularly during the pandemic, which broke out in 2020 and affected the whole world, a new era began, and educational activities were compulsorily carried out in online environments. As a result, there was a decrease in motivation and thus an increase in academic procrastination. Studies on distance education have become more important during the pandemic period, so it is believed that the importance of academic procrastination as a research area will also increase. Saltürk and Güngör (2020) also state that the needs, motivations, and performances of students are affected in distance education and that the relevant factors regarding this effect should be investigated. In addition, Rakes and Dunn (2010) note that it is difficult for graduate students to maintain their motivation in online environments, and it increases their academic procrastination behavior and that the subject needs to be studied.

Accordingly, studies on procrastination and its types, which are among the variables that affect academic performance, are frequently investigated in the field of education. If the reasons for academic procrastination are known, it will pave the way for studies to be conducted for the behavior to decrease, and necessary measures will be taken to prevent student failures. Since each individual is unique, there are different reasons behind their procrastination and many related variables, and therefore, academic procrastination appears as a research subject that continues to be relevant and even increasingly important (Erdođdu, 2019). Consequently, the purpose of this study is to examine the doctoral and master's theses on "academic procrastination", which were published in Türkiye between the years 2003-2021 and accessed in the National Thesis Center, to evaluate them in terms of various variables. It is expected that this study will provide researchers, who will study academic procrastination, with collective data on previous research and be a guide for future studies. In addition, it is believed that this study will shed light on the studies carried out before the pandemic period. The importance of academic procrastination will increase even more in new learning environments such as distance education, hybrid learning, and blended learning, which were introduced into our lives with the pandemic. For this reason, this study will be recommendatory for future studies as it reveals the current situation in master's and doctoral theses, guides those who will study "academic procrastination" with students, gives an idea for their studies, and points out the deficiencies in the field and what needs to be done.

Research Questions

Over time, several meta-analyses on procrastination have been accomplished in which findings coming from different studies were combined and reviewed to provide information about the relationship between procrastination and a wide range of variables (Kim & Seo, 2015; Steel, 2007; van Eerde & Klingsieck, 2018; Zhou et al., 2022). In his study Steel (2007) reviewed 216 publications (book chapters, conference proceedings, journal articles, etc.) between 1982 and 2005 to explore the causes and correlates of procrastination. He addressed that studies on procrastination covered various situations and variables and summarized the results in four categories: task characteristics (possible environmental causes), individual differences (relevant personality traits), outcomes (proximal effects), and participant demographics (possible physical and cohort moderators). In another meta-analysis, Kim and Seo (2015) explored the articles published between 1984 and 2014 to identify the relationship between procrastination and academic performance. They found that procrastination was negatively correlated with academic performance, and it was affected by the choice of procrastination measure, nature of performance indicator, use of self-report data or external observations, and demographic profile of participants. They also emphasized that inconsistent results on this relationship observed in earlier studies might occur due to the divergence in these factors. In another meta-analysis, van Eerde and Klingsieck (2018) explored the effects of 24 intervention studies published between 1979–2017 to overcome procrastination. They found out that procrastination decreased after getting intervention and its effect remained constant. In a recent meta-analysis, Zhou et al. (2022) examined 59 studies published between 2003 and February 2021 to identify the association

between two forms of academic procrastination (passive procrastination or negative form versus active procrastination or positive form) and three types of metacognition (i.e., metacognitive awareness, beliefs, and regulation). They found that metacognitive belief and regulation were significantly and negatively related to passive procrastination; nevertheless, regardless of its types, metacognition was not significantly associated with active procrastination. This suggested that metacognition played an important role in reducing passive procrastination but did not affect the tendency of active procrastination. Despite increased attention to academic procrastination, researchers did not encounter any systematic review of studies on either general or academic procrastination capturing Turkish literature. Accordingly, the graduate theses conducted on students' academic procrastination so far were examined to give an idea to the graduate students and researchers for their future studies.

In this study, which aims to analyze the graduate theses on academic procrastination published in Türkiye, regarding various variables, answers are sought to the following research questions.

How is the distribution of graduate theses on academic procrastination by;

1. the program type
2. year of publication
3. the university where the study was conducted
4. the institute of the study where the study was conducted
5. the department of the study where the study was conducted
6. language
7. gender of the researcher
8. research design
9. sampling method
10. sample size
11. region of the data collection
12. level of education and
13. the data collection tool
14. the research topics studied along with academic procrastination
15. examined independent variables?

2 | METHOD

Within the scope of this study, the graduate theses on students' academic procrastination in the National Thesis Center were examined using the case study design, one of the qualitative research methods. Case study design as a practice of inquiry focuses on an in-depth understanding of a single participant, a single document repository, or a specific event (Patton, 2002). In an attempt to define the research trends that occurred in the literature on academic procrastination the sources of Turkish graduate theses were examined as a case in detail. The case was explored using a document analysis approach that looks for meaning in the pre-existing documents (Patton, 2002). This study is qualitative in the manner that the data is not given but constructed by the researchers in line with their experiences with the phenomena studied.

The Documents

The documents –the graduate theses in this case– to be analyzed were selected cautiously. A detailed search in the National Thesis Center using the keywords “procrastination, general procrastination, academic

procrastination” both in Turkish and English was conducted. The first time a graduate thesis on the topic was published in 2003 in the National Thesis Center. Totally 135 open-access theses (both masters’ and doctoral studies) were obtained. The theses to be analyzed within the scope of the study were determined Using the following criteria:

1. The studies open to access were included.
2. Both masters’ and doctoral studies were involved.
3. The studies focusing on academic procrastination were selected; while the studies investigating general procrastination behavior were eliminated.
4. The studies with the sample of students were included. On the other hand, studies in the fields of “psychiatry, business, psychology” or with a sample involving patients, bank-white-collar-telecommunication employees, academicians, administrators (managers-deputy managers), and teachers were eliminated.
5. The studies were carried out in Türkiye.
6. All the theses published between 2003 and 2021 were taken into the scope of the present research.

Consequently, a total of 101 theses (87 master’s and 14 doctoral) which were published between the years 2003-2021, conducted in the field of education with students in Türkiye, and offered as open-access in the National Thesis Center, were included in the study.

Data Analysis

In the analysis of the documents, the descriptive content analysis method was performed. Descriptive content analysis is an approach in which the trends and results of both qualitative and quantitative studies conducted in a specific subject area are described and organized (Çalık & Sözbilir, 2014). With content analysis, it is aimed to identify the data and reveal the facts that may be hidden therein. Therefore, the data brought together with certain concepts and themes are organized and interpreted in a way that can be understood by the reader (Yıldırım & Şimşek, 2018). The main purpose of content analysis is to gather the obtained data under certain topics and to bring them to a level that is understandable for the reader (Yıldırım & Şimşek, 2018, p.242).

Since this study focused on identifying research patterns and providing suggestions for future studies, the themes were determined by the researchers considering the basics of educational research such as sampling, measurement, and associated variables. Additionally, the general features of the theses were analyzed such as the year of publication and the information about the institution where the thesis was conducted etc. Accordingly, the 101 theses included in the study were coded using Microsoft Excel software, under the themes of the program type, year of publication, the university, institute, and department where the study was conducted, language, gender of the researcher, research design, sampling method, sample size, region of the data collection, level of education, the data collection tool used to measure academic procrastination, other research topics investigated with academic procrastination, and considered independent variables. While reporting the findings, the frequencies and percentages of the theses were calculated and presented in tables. The use of numbers in a qualitative study is helpful to facilitate pattern recognition or to extract meaning during the document’s analytic moves (Maxwell, 2010; Sandelowski et al., 2009).

3 | FINDINGS

The findings obtained from the document analysis regarding the graduate theses are presented in tables including frequencies and percentages of their distribution based on the program type, year of publication, the university, institute, and department where the study was conducted, language, gender of the researcher, research design, sampling method, sample size, region of the data collection, level of education and the data collection tool used to measure academic procrastination. Within the scope of the first research question, the distribution of the graduate theses according to the program type is reported. While answering other research questions, the distribution of the theses is reported both in total and within masters and doctoral theses in terms of the relevant variables.

Distribution of Graduate Theses by the Program Type

The distribution of 101 graduate theses, which are included in the study in line with the determined criteria, in master's and doctoral programs is presented in Table 1.

Table 1. Distribution of Graduate Theses by the Program Type

Program Type	Frequency (<i>f</i>)	Percentage (%)
Master's thesis	87	86.14
Doctoral thesis	14	13.86
Total	101	100.00

When Table 1 is examined, it is observed that the published theses were comprised of 87 master's theses (86.14%) and 14 doctoral theses (13.86%). Accordingly, the vast majority of the graduate theses on academic procrastination had been written at the master's level.

Distribution of Graduate Theses by Year of Publication

Within the scope of this study, graduate theses published between 2003 and 2021 were analyzed. The distribution of the theses by year of publication is presented in Table 2.

Table 2. Distribution of Graduate Theses by Year of Publication

Year of Publication	Frequency (<i>f</i>)	Frequency (<i>f</i>)	Frequency (<i>f</i>)	Percentage (%)
	Master's	Doctorate	Total	Total
2021	13	2	15	14.85
2020	12	2	14	13.86
2019	16	-	16	15.84
2018	11	1	12	11.88
2017	5	2	7	6.93
2016	10	2	12	11.88
2015	4	1	5	4.95
2014	5	1	6	5.94
2013	4	-	4	3.96
2012	1	-	1	.99
2011	2	-	2	1.98
2010	-	2	2	1.98
2009	1	-	1	.99
2007	1	-	1	.99
2006	-	1	1	.99
2005	1	-	1	.99
2003	1	-	1	.99
Total	87	14	101	100.00

According to Table 2, only one or two studies were published every year until 2013, and there was even no thesis published in 2004 and 2008. It was observed that, after 2013, the interest in academic procrastination had increased over time, and after 2016, this increase had become more significant. Considering the distribution of the theses by year, the highest number of studies were published in 2019 ($f=16$, 22.22%), and it was followed by 2020 ($f=14$, 13.86%) and 2021 ($f=15$, 14.85%). In addition, when the distribution of the theses by year based on the program type was examined, it was observed that there was an increase in master's theses over time, whereas doctoral theses were limited in number, but they had become more popular after 2014.

Distribution of Graduate Theses by the University Where the Study was Conducted

The distribution of the theses regarding the universities where they were studied is presented in Table 3.

Table 3. Distribution of Graduate Theses by the University Where the Study was Conducted

University	Frequency (<i>f</i>) Master's	Frequency (<i>f</i>) Doctorate	Frequency (<i>f</i>) Total	Percentage (%) Total
Gazi University	3	3	6	5.94
Necmettin Erbakan University	5	-	5	4.95
Marmara University	5	-	5	4.95
Middle East Technical University	4	1	5	4.95
Anadolu University	3	2	5	4.95
Üsküdar University	4	-	4	3.96
Gaziantep University	4	-	4	3.96
Ankara University	3	1	4	3.96
Karadeniz Technical University	3	1	4	3.96
Dokuz Eylül University	2	2	4	3.96
Tokat Gaziosmanpaşa University	3	-	3	2.97
Mersin University	3	-	3	2.97
Sakarya University	1	2	3	2.97
Sivas Cumhuriyet University	3	-	3	2.97
İstanbul University	3	-	3	2.97
Muğla Sıtkı Koçman University	2	-	2	1.98
Ufuk University	2	-	2	1.98
Yıldız Technical University	2	-	2	1.98
Afyon Kocatepe University	2	-	2	1.98
Beykent University	2	-	2	1.98
Çağ University	2	-	2	1.98
Balıkesir University	2	-	2	1.98
Kilis 7 Aralık University	2	-	2	1.98
İnönü University	-	2	2	1.98
Amasya University	1	-	1	.99
Atatürk University	1	-	1	.99
Bursa Uludağ University	1	-	1	.99
Çukurova University	1	-	1	.99
Fatih University	1	-	1	.99
Fatih Sultan Mehmet Vakıf University	1	-	1	.99
Fırat University	1	-	1	.99
Hacettepe University	1	-	1	.99
Haliç University	1	-	1	.99
İstanbul Aydın University	1	-	1	.99
Nevşehir Hacı Bektaş Veli University	1	-	1	.99
Başkent University	1	-	1	.99
Ondokuz Mayıs University	1	-	1	.99

Sakarya University of Applied Sciences	1	-	1	.99
İstanbul Arel University	1	-	1	.99
İstanbul Şehir University	1	-	1	.99
İstanbul Kent University	1	-	1	.99
İstanbul Sabahattin Zaim University	1	-	1	.99
Eskişehir Osmangazi University	1	-	1	.99
Toros University	1	-	1	.99
Yeditepe University	1	-	1	.99
Yüzüncü Yıl University	1	-	1	.99
Total	87	14	101	100

In Table 3, it was observed that graduate studies on academic procrastination had been carried out at universities in every region of the country. When the universities with the highest frequency were examined, Gazi University with a frequency of six (5.94%) ranked first, and it was followed by Necmettin Erbakan University, Middle East Technical University, Marmara University, and Anadolu University with a frequency of five (4.95%). Considering the distribution of the theses by the program type, master's theses were studied at all universities in the list, whereas doctoral theses were limited to a few universities in metropolitan cities.

Distribution of Graduate Theses by the Institute Where the Study was Conducted

The distribution of the graduate theses based on the institute where the thesis study was conducted is presented in Table 4.

Tablo 4. Distribution of Graduate Theses by the Institute Where the Study was Conducted

Institute	Frequency (<i>f</i>)		Frequency (<i>f</i>) Total	Percentage (%) Total
	Master's	Doctorate		
Institute of Graduate Studies in Educational Sciences	45	12	57	56.44
Institute of Graduate Studies in Social Sciences	33	1	34	33.66
Institute of Graduate Studies	6	-	6	5.94
Institute of Graduate Studies in Health Sciences	2	1	3	2.97
Institute of Graduate Studies in Natural and Applied Sciences	1	-	1	.99
Total	87	14	101	100.00

Table 4 indicated that 56.44% ($f=57$) of the studies had been carried out in the Institute of Graduate Studies in Educational Sciences, and it is followed by the Institute of Graduate Studies in Social Sciences ($f=34$, 33.66%). This situation might arise from the fact that a graduate program in the field of education used to be offered under the roof of different institutes due to different organizations of institutional structures in universities. For instance, the Department of Educational Sciences is organized under the Institute of Graduate Studies in Educational Sciences in some universities, whereas it is under the Institute of Graduate Studies in Social Sciences in universities where there is no Institute of Graduate Studies in Social Sciences. Besides, after 2018, graduate institutes were merged, and all the graduate programs were gathered under the Institute of Graduate Studies in many universities. A similar situation is observed in the distribution of the theses by the institute regarding the program type.

Distribution of Graduate Theses by the Department Where the Study was Conducted

The distribution of the graduate theses according to the department of the study is presented in Table 5.

Table 5. Distribution of Graduate Theses by the Department Where the Study was Conducted

Department	Frequency (<i>f</i>) Master's	Frequency (<i>f</i>) Doctorate	Frequency (<i>f</i>) Total	Percentage (%) Total
Educational Sciences	47	7	54	53.47
Psychology	12	-	12	11.88
Physical Education and Sports Teaching	4	3	7	6.93
Clinical Psychology	5	-	5	4.95
Computer Education and Instructional Technologies	4	1	5	4.95
Guidance and Psychological Counselling	3	-	3	2.97
Psychological Services in Education	2	1	3	2.97
Primary Education	1	2	3	2.97
English Language Teaching	2	-	2	1.98
Education of Fine Arts	1	-	1	.99
Mathematics and Science Education	1	-	1	.99
Turkish Language and Literature	1	-	1	.99
Basic Education	1	-	1	.99
Nursing	1	-	1	.99
Turkish and Social Sciences	1	-	1	.99
Higher Education Administration and Policy	1	-	1	.99
Total	87	14	101	100.00

It was observed in Table 5 that half of the analyzed theses ($f=54$, 53.47%) had been written in the Department of Educational Sciences, followed by the Department of Psychology ($f=12$, 11.88%). Considering the distribution of the theses in terms of the program type, it was identified that about half of both master's and doctoral theses had been written in the Department of Educational Sciences.

Distribution of Graduate Theses by the Language

The distribution of the theses based on the language in which they were written is presented in Table 6.

Table 6. Distribution of Graduate Theses by the Language

Language	Frequency (<i>f</i>) Master's	Frequency (<i>f</i>) Doctorate	Frequency (<i>f</i>) Total	Percentage (%) Total
Turkish	80	13	93	92.08
English	7	1	8	7.92
Total	87	14	101	100.00

As observed in Table 6, the great majority of the theses ($f=93$, 92.08%) had been written in Turkish. Out of 93 theses written in Turkish, only 13 theses were in the doctoral program. Moreover, out of eight graduate theses published in English, only one was a doctoral thesis, while the remaining seven were master's theses.

Distribution of Graduate Theses by Gender of the Researcher

The distribution of the theses regarding the gender of the researcher conducting the graduate study is presented in Table 7.

Table 7. Distribution of Graduate Theses by Gender of the Researcher

Gender	Frequency (<i>f</i>) Master's	Frequency (<i>f</i>) Doctorate	Frequency (<i>f</i>) Total	Percentage (%) Total
Female	55	5	60	59.41
Male	32	9	41	40.59

Total	87	14	101	100.00
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Table 7 indicated that 60 of the theses (59.41%) had been written by female researchers. When these theses were examined in themselves, it was identified that they consisted of 55 master's theses and 5 doctoral theses. Even though the ratio of female researchers was higher in total, the number of male researchers was higher in doctoral theses.

Distribution of Graduate Theses by Research Design

The distribution of the analyzed theses according to research design is presented in Table 8.

Table 8. Distribution of Graduate Theses by Research Design

Research Design	Frequency (<i>f</i>)	Frequency (<i>f</i>)	Frequency (<i>f</i>)	Percentage (%)
	Master's	Doctorate	Total	Total
Survey	85	10	95	94.06
Experimental	1	3	4	3.96
Mixed-Method	1	1	2	1.98
Total	87	14	101	100.00

When Table 8 was examined, it was observed that the vast majority of both master's and doctoral theses ($f=95$, 94.06%) had been carried out based on survey design. On the other hand, a limited number of studies based on experimental ($f=4$, 3.96%) or mixed methods ($f=2$, 1.98%) research designs were also encountered in the analysis.

Distribution of Graduate Theses by Sampling Method

The distribution of the graduate theses according to the sampling method used in the study is presented in Table 9.

Table 9. Distribution of Graduate Theses by Sampling Method

Sampling Method	Frequency (<i>f</i>)	Frequency (<i>f</i>)	Frequency (<i>f</i>)	Percentage (%)
	Master's	Doctorate	Total	Total
Random sampling	53	7	60	59.41
Non-random sampling	34	7	41	40.59
Total	87	14	101	100.00

As seen in Table 9, the random sampling method ($f=60$, 59.41%) had been used more frequently in the graduate theses. Considering the distribution of the theses regarding the program type, the random sampling method is dominant in the master's theses, and both random and non-random sampling methods were used equally in the doctoral theses.

Distribution of Graduate Theses by Sample Size

The distribution of the analyzed theses based on the sample size of the study is presented in Table 10.

Table 10. Distribution of Graduate Theses by Sample Size

Sample Size Between	Frequency (<i>f</i>)	Frequency (<i>f</i>)	Frequency (<i>f</i>)	Percentage (%)
	Master's	Doctorate	Total	Total
1 – 99	1	3	4	3.96
100 – 199	3	1	4	3.96
200 – 299	11	-	11	10.89
300 – 399	10	-	10	9.90
400 – 499	23	-	23	22.77
500 – 599	19	1	20	19.80
600 – 699	6	2	8	7.92

700 – 799	4	-	4	3.96
800 – 899	4	1	5	4.95
900 – 999	2	1	3	2.97
1000 – 1099	1	1	2	1.98
1100 – 1199	-	1	1	.99
1200 – 1299	2	-	2	1.98
1600 – 1699	1	-	1	.99
1700 – 1799	-	1	1	.99
2000 – 2099	-	1	1	.99
4500 – 4599	-	1	1	.99
Total	87	14	101	100.00

It was observed in Table 10 that the sample size in the theses was mostly between 400 and 499 ($f=23$, 22.77%), followed by the sample size between 500 and 599 ($f=20$, 19.80%). Considering the distribution of the theses in terms of the program type, it was identified that master's theses reflected the aforementioned situation, while doctoral theses mostly included a sample between 1 and 99 ($f=3$).

Distribution of Graduate Theses by Region of Data Collection

The distribution of the theses regarding the region where the data were collected is presented in Table 11.

Table 11. Distribution of Graduate Theses by Region of Data Collection

Region	Frequency (f) Master's	Frequency (f) Doctorate	Frequency (f) Total	Percentage (%) Total
Central Anatolia* (Ankara, Konya, Sivas, Karaman, Eskişehir, Aksaray, Kayseri)	24	5	29	28.71
Marmara** (İstanbul, Kocaeli, Sakarya, Balıkesir, Bursa...)	21	2	24	23.76
Mixed	15	2	17	16.83
Mediterranean (Mersin, Adana, Kilis, Antalya, Kahramanmaraş)	8	1	9	8.91
Black Sea (Trabzon, Karabük, Amasya, Samsun, Sinop, Ordu)	8	-	8	7.92
Southeastern Anatolia (Gaziantep, Adıyaman)	6	-	6	5.94
Eastern Anatolia (Elazığ, Malatya, Van)	2	2	4	3.96
Aegean (İzmir, Denizli, Muğla, Afyon)	3	1	4	3.96
Total	87	14	101	100.00

*Ankara; Master's $f=10$, Doctorate $f=3$, Total $f=13$, Total 12,87%

**İstanbul; Master's $f=18$, Doctorate $f=0$, Total $f=18$, Total 17,82%

When Table 11 was examined, it was observed that most of the studies had been conducted with participants from Central Anatolia ($f=29$, 28.71%) and Marmara ($f=24$, 23.76%) regions, and they were followed by mixed samples consisting of participants from different regions ($f=17$, 16.83%). Regarding the distribution of the theses in terms of the program type, it was found that nearly half of both master's and doctoral theses had been carried out with the participants from Central Anatolia and Marmara Regions.

Distribution of Graduate Theses by Level of Education

The distribution of the theses based on the level of education of the study sample is presented in Table 12.

Table 12. Distribution of Graduate Theses by Level of Education

Level of Education	Frequency (f) Master's	Frequency (f) Doctorate	Frequency (f) Total	Percentage (%) Total
Undergraduate	47	7	54	53.46

High School	23	3	26	25.74
Elementary School	10	3	13	12.87
Mixed (associate degree-undergraduate-master's-doctorate)	5	1	6	5.94
Mixed (high school-undergraduate)	2	-	2	1.98
Total	87	14	101	100.00

As seen in Table 12, little more than half of the analyzed theses ($f=54$, 53.46%) had investigated the academic procrastination behaviors of undergraduate students, followed by high school students ($f=26$, 25.74%). Considering the relevant distribution in terms of the program type, little more than half of the master's theses ($f=47$) and half of the doctoral theses ($f=7$) had been carried out with undergraduate students.

Distribution of Graduate Theses by the Data Collection Tool

The distribution of the theses based on the data collection tool used to measure academic procrastination is presented in Table 13.

Table 13. Distribution of Graduate Theses by the Data Collection Tool

Academic Procrastination Scale	Frequency (f) Master's	Frequency (f) Doctorate	Frequency (f) Total	Percentage (%) Total
Academic Procrastination Scale (Çakıcı, 2003)	51	6	57	56.43
Aitken Procrastination Inventory – Turkish Adaptation (Balkıs, 2006; 2007)	16	3	19	18.81
Tuckman Procrastination Scale (Uzun Özer, Saçkes & Tuckman, 2013)	6	3	9	8.91
Procrastination Assessment Scale (Uzun Özer, 2005)	9	-	9	8.91
The Scale of Academic Procrastination (Ocak & Bulut, 2015)	5	2	7	6.93
Total	87	14	101	100.00

When the values in Table 13 were examined, it was observed that the most preferred measurement tool to measure academic procrastination was the 19-item “Academic Procrastination Scale” ($f=57$, 56.43%) developed by Çakıcı (2003). This measurement tool had been used in nearly half of both doctoral and master's theses.

Distribution of Graduate Theses by Research Topics

The distribution of the graduate thesis according to the research topics studied along with academic procrastination is given in Table 14.

Table 14. Distribution of Graduate Theses by Research Topics

Research Topics*	Frequency (f) Master's	Frequency (f) Doctorate	Frequency (f) Total	Percentage (%) Total
Academic Performance	40	6	46	45.54
Anxiety/Stress	18	1	19	18.81
Social Media Usage	12	1	13	12.87
Perfectionism	13	-	13	12.87
Time Management	8	5	13	12.87
Self-Efficacy	9	3	12	11.88
Academic Motivation	8	5	12	11.88
Parental Attitudes	11	-	11	10.89
Psychological Disorders	10	-	10	9.90

Self-Esteem	8	2	10	9.90
General Procrastination	9	-	9	8.91
Students' Evaluation of Their Success	7	-	7	6.93
Internet Addiction (Digital Game, Smartphone, etc.)	5	1	6	5.94
Decision-Making Style	3	2	5	4.95
Locus of Control	5	-	5	4.95
Satisfaction	4	1	5	4.95
Negative School Behaviors (Cheating, Absenteeism, etc.)	5	-	5	4.95
Irrational Belief	3	1	4	3.96
Distance Learning	3	1	4	3.96
Self-Regulation	3	1	4	3.96
Attitude towards School	3	-	3	2.97
Emotional Intelligence Trait	1	1	2	1.98
Duration of Exercise	1	1	2	1.98
Well-Being	1	1	2	1.98
Effects of the Covid-19 Pandemic	2	-	2	1.98
Defense Mechanism	2	-	2	1.98
Students' Perceptions of Their Teachers' Effectiveness	2	-	2	1.98
Learning Disability	2	-	2	1.98
Perception of Making Mistakes	2	-	2	1.98
Perception of Being Precious	2	-	2	1.98
Academic Attribution Styles	2	-	2	1.98
Cognitive Distortion	1	1	2	1.98
Taking Responsibility Skill	1	1	2	1.98
Perception of Perfectionist Familial Criticism	1	1	2	1.98
The Big-Five Personality Traits	1	1	2	1.98
Learned Helplessness	1	-	1	.99
Social Belonging	1	-	1	.99
Epistemological Beliefs	-	1	1	.99
Parents' Evaluation of Their Child's Success	-	1	1	.99
Learned Resourcefulness	1	-	1	.99
Problem Solving Skills	1	-	1	.99
Hopelessness	1	-	1	.99
Defined Academic Duties (Term Paper, Weekly Readings, Homeworks, etc.)	1	-	1	.99
Psychological Resilience	-	1	1	.99
Action Identification	1	-	1	.99
Cognitive Flexibility	1	-	1	.99
Impulsivity	1	-	1	.99
Submissive Behavior	1	-	1	.99
Metacognition	1	-	1	.99
Intolerance of Uncertainty	-	1	1	.99
Computational Thinking Skills	1	-	1	.99

Wisdom	1	-	1	.99
Self-Acceptance	1	-	1	.99
Imagination	1	-	1	.99
Lifestyle	1	-	1	.99
Thinking Styles	-	1	1	.99
Self-Perception	-	1	1	.99
Social Problem Solving	1	-	1	.99
Indecisiveness	1	-	1	.99
Self-Critical Rumination	1	-	1	.99
Mindfulness	1	-	1	.99

*Because some of the theses involved more than one research topic, the line indicating the total values exceeds the total number of theses. Therefore, total numbers are not given in this table.

According to Table 14, it was apparent to say that several subjects had been studied accompanied by academic procrastination. Until now, academic procrastination was commonly studied together with academic performance ($f=46$, 45,54%) approximately in half of the graduate theses. It was followed by anxiety/stress ($f=19$, 18.81%). Social media usage, perfectionism, and time management were investigated in 13 (12.87%), self-efficacy and academic motivation in 12 (11.88%), and parental attitudes in 11 (10.89%) studies along with students' academic procrastination. This arrangement was almost the same for masters' theses. As for dissertations, time management and academic motivation came after academic performance.

Distribution of Graduate Theses by Examined Independent Variables

The distribution of the graduate thesis by examined independent variables is given in Table 15.

Tablo 15. Distribution of Graduate Theses by Examined Independent Variables

Independent Variables*	Frequency (<i>f</i>)	Frequency (<i>f</i>)	Frequency (<i>f</i>)	Percentage (%)
	Master's	Doctorate	Total	Total
Gender	71	6	77	76.24
Grade Level	42	5	47	46.53
Parents' Education Level	28	2	30	29.70
Field of Study (Faculty at University, Major Discipline at High School, etc.)	23	5	28	27.72
Age	26	2	28	27.72
Socio-Economic Status	20	1	21	20.79
Number of Siblings	12	1	13	12.87
Intervention Studies to Overcome Academic Procrastination	2	9	11	10.89
School Type	11	-	11	10.89
Whether Parents Living Together	7	-	7	6.93
Personal Choice of Field of Study	6	1	7	6.93
Type of Accommodation	6	-	6	5.94
Perceiving Teaching as a Respected Profession	6	-	6	5.94
Participation in Sports Activities	4	2	6	5.94
Birth Order	4	1	5	4.95
Preferred Study Time	3	1	4	3.96
Working Status	4	-	4	3.96

Taking Psychological Treatment	4	-	4	3.96
Participation in Extracurricular School Activities	4	-	4	3.96
Being Satisfied with the Field of Study	2	1	3	2.97
Educational Club Membership	3	-	3	2.97
Education Level	3	-	3	2.97
Having Personal Room	3	-	2	1.98
Number of Friends	3	-	2	1.98
Mostly Lived Place	1	-	1	.99
Father's Employment Status	1	-	1	.99
Parents Being Alive	1	-	1	.99
Year at University	1	-	1	.99
Marital Status	1	-	1	.99
Status of School Extension	1	-	1	.99
Enrolling in Double Major or Minor Program	1	-	1	.99
Being Gifted Student or not	1	-	1	.99
Change of Teacher	1	-	1	.99
Attendance of Training Center	1	-	1	.99
Age of Parents	1	-	1	.99
Profession of Parents	1	-	1	.99
Type of Individual Instrument	1	-	1	.99
Taking a course from lower grades	1	-	1	.99
Taking a course in upper grades	1	-	1	.99
Finishing School on Time	1	-	1	.99
Branch of Sport	-	1	1	.99
Study Style	-	1	1	.99
Geographic Region	1	-	1	.99
Status of Romantic Relationship	1	-	1	.99
Total	87	14	101	100.00

*Because some of the theses involved more than one independent variable, the line indicating the total values exceeds the total number of theses. Therefore, total numbers are not given in this table.

As seen in Table 15, researchers investigated several independent variables that might explain the variation in academic procrastination. Among those, gender ($f=77$, 76,24%) and grade level ($f=47$, 46,53%) were the most frequently considered ones while examining students' academic procrastination. This was followed by parents' education level (29.70%), the field of study (27.72%), age (27.72%), and socio-economic status (20.79%). The situation was comparable for masters' theses. However, as for the doctoral program, the intervention studies to overcome academic procrastination were the most studied. Although intervention studies consisted of 10.89% of total graduate theses, they comprised 64.29% (9 out of 14) of doctoral theses.

4 | DISCUSSION & CONCLUSION

As a result of this study, which has been carried out to reveal the current situation in master's and doctoral theses on academic procrastination and to guide future studies, it is observed that the examined graduate theses are mostly at the master's level. Nonetheless, it is notable that the number of doctoral theses on this subject has increased, albeit partially, in recent years. This situation may arise that more students are admitted to master's programs or that some universities lack doctoral programs. For example, even though there has been a master's program in the field of science education at Tokat Gaziosmanpaşa University for many years, the doctoral program has just been opened in 2021. Likewise, in the study where Köseoğlu and Eroğlu Doğan (2020) analyzed graduate

theses, 265 out of 334 theses in the field of science education in Türkiye between 2010 and 2017 were at the master's level whereas 69 were at the doctorate level.

When the graduate theses are reviewed by year of publication, it is observed that the first thesis on academic procrastination was a master's thesis published in 2003, the number of theses published on the relevant subject was highest in 2019, and there was a significant increase in the number of both master's and doctoral theses after 2016. These results indicate an increasing interest in academic procrastination. Even though the studies are mostly at the master's level, a significant increase has also been observed in doctoral studies over time. Besides, this study is limited to the open-access theses in the National Thesis Center, and the number of studies in recent years will be even more when non-accessible theses are also included. In addition, it is believed that the number of studies on academic procrastination will increase in the coming years due to the ongoing effect of the pandemic on education since March 2020. With the distance education activities initiated as a new practice during the pandemic period, students were left alone with their self-regulation (Saltürk & Güngör, 2020). It is considered that this situation will lead to academic procrastination in students who lack self-regulation skills (Yurtseven & Doğan, 2019). For students to avoid the adverse effects of these processes, academic procrastination will be addressed from a different perspective in new learning environments during the upcoming period.

Considering the distribution of the graduate theses according to their universities, it is observed that Gazi University ranks first, and that master's theses are written at all universities in the list, yet doctoral theses are limited to the universities in metropolitan cities. Moreover, regarding the distribution of the graduate theses based on the regions of the data collection, it is identified that the data were collected from every region of the country; however, nearly half of both master's and doctoral theses were carried out with participants from Central Anatolia and Marmara Regions. This situation can be explained by the fact that universities in each geographical region offer graduate programs. Furthermore, it is expectable that the studies are mostly centered in these regions since the student potential of the universities in metropolitan cities is high, it is easy to reach the sample due to location, and doctoral programs have been offered in well-established universities for many years.

The relevant studies have been carried out mostly in the Department of Educational Sciences within the Institute of Graduate Studies in Educational Sciences. The great majority of these studies consist of master's theses. It is an expected result considering that graduate programs for teaching are structured under the umbrella of graduate schools of educational sciences. On the other hand, the fact that most of the studies are conducted in the Department of Educational Sciences indicates that the subject is addressed with a general pedagogical approach, but field-specific studies including those in science education or social studies education are inadequate.

When the languages of the theses are reviewed, it is observed that the great majority of both master's and doctoral theses are in the Turkish language, which is an expected result since the language of instruction at many universities in Türkiye is Turkish. However, considering that most of the studies are at the master's level and researchers have limited foreign language proficiency, to what extent these theses written in Turkish can cover the international literature needs questioning.

As for the gender of the researchers, little more than half of the graduate theses have been written by female researchers. This finding also coincides with that of the study by Köseoğlu and Eroğlu Doğan (2020). Considering the social perception that teaching is most appropriate for women, this situation is not very noticeable. It may result that the number of female students is higher than that of males in education faculties, and that females have a more positive attitude towards graduate education. On the other hand, although the ratio of female researchers is higher in total, the number of male researchers is higher in doctoral theses. It can be associated with the fact that Türkiye is a patriarchal society and females attend doctoral programs less since they are assigned more meanings and duties in daily life.

The review of the graduate theses according to research design has revealed that the great majority of the theses are based on "Survey Design", one of the quantitative research methods, and a limited number of studies on experimental or mixed research design. Survey designs are aimed at revealing the unique characteristics of a population or identifying the relationship between these characteristics and other variables. The reason why the quantitative research method is mostly preferred, as in the study by Köseoğlu and Eroğlu Doğan (2020), maybe

due to its advantages including easy and rapid access to samples and the ability to collect and interpret data in a shorter time. It is also understandable since the duration of a master's education is limited. On the other hand, researchers may not have preferred other methods because they are not competent enough in qualitative or mixed research methods. In qualitative research, why and how the subject in question happens is investigated in more detail; therefore, conducting this kind of research requires more effort and time.

It is observed in the theses that the random sampling method has been preferred more often to determine the sample to be studied. On the other hand, the number of theses using the non-random sampling method is considerable. Nevertheless, it was identified during the analysis that the sampling method was not clearly stated in most of the theses examined. Similarly, Köseođlu and Erođlu Dođan (2020) state that the most preferred method was random sampling, and the sample was not specified in the theses included in their analysis.

In terms of sample size, it is observed that the master's theses mostly include samples between 400 and 499 and the doctoral theses between 1 and 99. It is considered that this situation is mostly because the "survey design" as a quantitative research method is preferred in the studies, the sample consists of undergraduate students, all students in a department or students from different faculties are included in the research.

Considering the level of education in the theses, nearly half of both master's and doctoral theses have been carried out by undergraduate students followed by high school students. It may be because academic procrastination is a common behavior among undergraduate students (Berber Çelik & Odacı, 2015; Ocak & Karataş, 2019). It may also result that undergraduate students are easily accessible. Considering that the participants need to be at a certain level to answer the questionnaires and scales conducted in the studies, researchers may have preferred to work with high school and undergraduate students instead of younger age groups in order not to experience loss of both data and time.

Regarding how academic procrastination is measured in the theses, it is revealed that the 19-item Academic Procrastination Scale developed by Çakıcı (2003) has been utilized in almost half of both doctoral and master's theses. It can be explained by the fact that the scale is a valid and reliable measurement tool, its recognition is high since it is the first scale developed, and it is easy to administer and score due to the small number of items.

This study reveals that a wide range of research topics are studied along with academic procrastination among which academic performance and anxiety/stress are found to be the most frequently studied ones. In the same vein, Kim and Seo (2015) exhibit that academic procrastination is commonly related to a deficiency in academic performance and motivation. On the other hand, it is observed that self-regulation and metacognition have not drawn Turkish researchers' attention despite their recognition of self-regulatory failure (Steel, 2007; Zhou et al., 2022).

Finally, several independent variables are assessed in association with academic procrastination. Likewise, Steel (2007) presents many factors affecting procrastination and classifies them under the categories of task characteristics, individual differences, outcomes, and participant demographics. Kim and Seo (2015) also explain the role of the demographic profile of participants in procrastination. Gender and grade level is found to be the most studied variables among Turkish researchers. Similarly, earlier meta-analyses show that gender is one of the most frequently studied demographic characteristics; yet, studies conducted in different cultures reveal somewhat inconsistent results (Kim & Seo, 2015; Steel, 2007). For example, Solomon and Rothblum (1984) find that females are more procrastinators; while, Uzun Özer et al. (2009) state that males are at more risk. Uzun Özer et al. (2009) also show that male and female students procrastinate for different reasons and suggest that gender differences should be explored with other cultural factors.

In conclusion, the graduate thesis on students' academic procrastination has been published since 2003 in the National Thesis Center of Türkiye and there is a noticeable increase in the number of theses after 2016. Most of them are conducted at the master's level using survey design. Researchers explore academic procrastination concerning several research topics mostly with academic performance and anxiety/stress. Additionally, the effect of gender and grade level are assessed. Nearly in half of the theses, the Academic Procrastination Scale developed by Çakıcı (2003) is used. Considering the findings of the present study, the following suggestions are listed for future researchers.

Suggestions for Further Research

It is observed that the majority of the research on academic procrastination behavior includes quantitative studies based on survey design and that there is a need for qualitative studies to reveal in detail the reasons for academic procrastination and how it affects student performance. It is also identified that the number of experimental studies is quite limited. An intervention program aiming at preventing academic procrastination can be developed and evaluated through implementation with experimental studies. In addition, longitudinal studies can be carried out to investigate the change in academic procrastination behavior over time.

The fact that most of the studies reviewed are in the Department of Educational Sciences indicates that the subject is addressed with a general pedagogical approach. Academic procrastination behavior can be studied in a specific context such as science education or social studies education, leading to field-specific evaluations.

Moreover, the sample group in the relevant theses mostly consists of university and high school students. Accordingly, it is identified that there is a need for studies to be conducted with primary school or graduate students.

It is also observed that the research design and sampling method applied in the theses are not clearly expressed. Regarding the nature of thesis writing, these points need elaborating.

Furthermore, it is revealed that mostly scales are preferred for data collection in the great majority of the studies. Along with the scales applied, different data collection techniques such as interview, observation, and document analysis can be used.

Most of the time students' academic procrastination is studied together with academic performance. Researchers are suggested to consider two other highly related but less frequently studied topics: self-regulation and metacognition.

Considering the assumption that cultural factors influence academic procrastination, cross-cultural studies might be conducted.

Limitations of the Study

This study is limited to the graduate theses that investigate the procrastination behavior of students in the context of academic settings at different educational levels in Türkiye.

The graduate theses reviewed within the study are limited to the open-access theses in the National Thesis Center published between 2003 and 2021.

The analysis of the theses is limited to the program type, year of publication, the university, institute, and department where the study was conducted, language, gender of the researcher, research design, sampling method, sample size, region of the data collection, level of education and the data collection tool used to measure academic procrastination.

Statements of Publication Ethics

The authors declare that they obey the principles of publication ethics. Since this study involves open-access theses in the National Thesis Center, Ethics Committee approval is not required.

Researchers' Contribution Rate

The first author carried out the following processes under the supervision of the second author: conceptualization of the theoretical framework, determining the research design, searching for the theses in the National Thesis Center, determining the variables to be analyzed, analyzing the data, and discussing the results. The first author wrote a Turkish draft of the manuscript on which both authors worked in collaboration. Finally, the second author edited the English version, applied the article template before submission, and submitted the manuscript to the journal.

Conflict of Interest

The authors declare that they have no conflicts of interest.

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