

ACADEMIC PROCRASTINATION: PREVALENCE, SELF-REPORTED  
REASONS, GENDER DIFFERENCE  
AND  
IT'S RELATION WITH ACADEMIC ACHIEVEMENT

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## **ABSTRACT**

### **ACADEMIC PROCRASTINATION: PREVALENCE, SELF-REPORTED REASONS, GENDER DIFFERENCE AND IT'S RELATION WITH ACADEMIC ACHIEVEMENT**

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The purpose of the present study was mainly fourfold; 1) to examine the undergraduate students' level of academic procrastination in relation to gender; 2) to investigate the undergraduate students' prevalence of procrastination in relation to gender in six areas of academic functioning namely; writing a term paper, studying for an exam, keeping up reading weekly assignments, performing academic administrative tasks, attendance tasks, and school activities in general; 3) to find out the relationship between academic procrastination score and academic achievement of undergraduate students; and 4) to reveal the self-reported reasons of academic procrastination in relation to gender.

The Procrastination Assessment Scale-Students (PASS) was translated and adapted into Turkish and used as the data collection instrument. The data was gathered from 784 undergraduate students from different grades and 37 departments of Middle East Technical University.

The results of the study revealed that 52% of METU students procrastinate on their academic tasks and the findings revealed that male students procrastinate more than female students. Moreover, the results of the prevalent analysis showed that the students nearly always or always engage in procrastination on the areas of studying for an exam, writing a term paper, and reading weekly reading assignments more than the other three areas namely; academic administrative tasks, attendance tasks and the tasks related to school activities in general. In addition, the results regarding the relationship between academic procrastination and academic achievement revealed a significant negative relationship between the two variables. Finally, factor analysis was conducted to find out the self-reported reasons of academic procrastination and four factors were found as excuses of students namely; fear of failure, risk taking, laziness, and rebellion against control.

Key Words: Academic Procrastination, Academic Achievement, Gender Difference, University Students.

## ÖZ

### AKADEMİK ERTELEME DAVRANIŞI: YAYGINLIĞI, OLASI SEBEPLERİ, CİNSİYET FARKI VE AKADEMİK BAŞARIYLA OLAN İLİŞKİSİ

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Bu çalışmanın amacı; 1) lisans öğrencileri arasında akademik erteleme davranışının ve 2) lisans öğrencilerinin, dönem ödevi hazırlama, sınavlara hazırlanma, haftalık okuma ödevlerini tamamlama, okulla ilgili idari işler, katılım görevleri ve genel olarak okul etkinlikleri alanlarında erteleme davranışının yaygınlığını cinsiyet farkı göz önünde bulundurularak belirlemek; 3) akademik erteleme davranışı ve akademik başarı arasındaki ilişkiyi ve 4) akademik erteleme davranışının olası sebeplerini cinsiyet farkı ile ilişkili olarak incelemektir.

Bu çalışmada, Solomon ve Rothblum tarafından geliştirilen Erteleme Davranışı Değerlendirme Ölçeği-Öğrenci Formu Türkçe'ye çevrilip uyarlandıktan sonra veri toplama aracı olarak kullanılmıştır.

Araştırma Orta Doğu Teknik Üniversitesi'nin 37 bölümünde birinci, ikinci, üçüncü ve dördüncü sınıfta okuyan toplam yedi yüz seksen dört öğrenciyi kapsamaktadır.

Çalışmanın sonuçları, Orta Doğu Teknik Üniversitesi lisans öğrencilerinin % 52'sinin akademik alanda erteleme davranışı sergilediğini ortaya koymuştur ve bulgular, erkek öğrencilerin kız öğrencilerden daha fazla erteleme davranışı sergilediklerini ortaya koymuştur. Ayrıca, erteleme davranışının en sık sergilendiği alanların, sınavlara hazırlanma, dönem ödevi hazırlama ve haftalık okuma ödevlerini tamamlama alanlarında olduğu, okulla ilgili idari işler, katılım görevleri ve okulla ilgili genel görevler alanlarında ertelemenin daha az olduğu belirlenmiştir. Buna ek olarak, akademik erteleme davranışı ile akademik başarı arasında anlamlı ve olumsuz bir ilişki olduğunu bulunmuştur. Son olarak, öğrencilerin erteleme davranışı olası sebeplerini ortaya koymak amacıyla yapılan faktör analizi sonuçları, erteleme davranışının olası sebeplerinin başarısızlık korkusu, risk alma davranışı, tembellik ve kontrol edilmeye karşı isyan olduğunu göstermiştir.

Anahtar kelimeler: Akademik Erteleme Davranışı, Akademik Başarı, Cinsiyet Farkı, Üniversite Öğrencileri

To my Love, Ali ÖZER  
For his unbelievable love and support

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## TABLE OF CONTENTS

<b>PLAGIARISM.....</b>	<b>iii</b>
<b>ABSTRACT.....</b>	<b>IV</b>
<b>ÖZ.....</b>	<b>VI</b>
<b>DEDICATION.....</b>	<b>VIII</b>
<b>ACKNOWLEDGEMENTS.....</b>	<b>IX</b>
<b>TABLE OF CONTENTS.....</b>	<b>XI</b>
<b>LIST OF TABLES.....</b>	<b>XIV</b>
<b>LIST OF FIGURES.....</b>	<b>XV</b>

### CHAPTER

<b>I</b>	<b>INTRODUCTION.....</b>	<b>1</b>
	1.1 Background to the Study.....	1
	1.2 Purpose of the Study.....	4
	1.3 Significance of the Study.....	5
	1.4 Definition of Terms.....	6
<b>II</b>	<b>REVIEW OF THE LITERATURE.....</b>	<b>8</b>
	2.1 Definitions of Procrastination.....	8
	2.2 Nature of Academic Procrastination.....	10
	2.3 Theoretical Models of Procrastination.....	13
	2.4 Prevalence of Academic Procrastination.....	19
	2.5 Reasons and Treatments of Academic Procrastination..	22
<b>III</b>	<b>METHOD.....</b>	<b>33</b>
	3.1 Overall Research Design.....	33
	3.2 Participants.....	34
	3.3 Data Collection Instrument.....	35
	3.3.1 Translation and Adaptation of the Instrument....	38
	3.3.1.1 Translation of the Instrument.....	39

3.3.1.2	Expert and Student Opinion.....	40
3.3.1.3	Revision of the Instrument.....	41
3.3.1.4	Pilot Study.....	41
3.3.1.5	Reliability and Validity Analysis.....	47
	3.3.1.5.1 Part 1: Prevalence of Procrastination.....	42
	3.3.1.5.2 Part 2: Reasons of Procrastination.....	45
3.4	Data Collection Procedures.....	49
3.5	Data Analysis Procedures.....	49
3.6	Assumptions.....	50
3.7	Limitations.....	50
<b>IV</b>	<b>RESULTS.....</b>	<b>52</b>
4.1	Academic Procrastination Levels.....	52
	4.1.1 Gender Difference on Academic Procrastination Levels.....	53
4.2	Prevalence of Academic Procrastination in Six Academic Areas.....	54
	4.2.1 Gender Difference on Prevalence of Academic Procrastination.....	55
4.3	Academic Procrastination and Academic Achievement..	58
4.4	Reasons of Academic Procrastination.....	61
	4.4.1 Gender Difference on Reasons of Academic Procrastination.....	62
<b>V</b>	<b>DISCUSSION.....</b>	<b>72</b>
5.1	Discussion Regarding Levels and Prevalence of Procrastination.....	64

5.2	Discussion Regarding Relationship between Academic Procrastination and Academic Achievement.....	70
5.3	Discussion Regarding Reasons of Academic Procrastination.....	71
5.4	Implications for Practice.....	75
5.5	Recommendations for Further Research.....	75
<b>REFERENCES.....</b>		<b>77</b>
<b>APPENDICES</b>		
A	PROCRASTINATION ASSESSMENT SCALE-STUDENT (Original Version).....	89
B	ITEMS REPRESENT THE REASON.....	95
C	STUDENT OPINION QUESTIONNAIRE.....	99
D	INSTRUCTION OF THE SCALE AND DEMOGRAPHIC INFORMATION QUESTIONNAIRE.....	100
E	ERTELEME DAVRANIŞI DEĞERLENDİRME ÖLÇEĞİ (Turkish Version).....	101

## LIST OF TABLES

### TABLES

Table 3.1	The Results of the Factor Analysis on the First Part of the PASS (Prevalence of Procrastination) items.....	44
Table 3.2	The Results of the Factor Analysis on the Second Part of the PASS (Reasons of Procrastination) items.....	47
Table 4.1	Means, Standard Deviations of Females and Males and t-value of Academic Procrastination Level of the Students.....	53
Table 4.2	Prevalence of Academic Procrastination in Six Areas of Academic Functioning.....	54
Table 4.3	The results of the Independent Sample t-test on Gender Difference of Prevalence of Academic Procrastination in Six Areas of Academic Functioning...	57
Table 4.4	The Results of the Analysis of Variance employed to the Academic Procrastination Scores and Academic Achievement of the Students.....	60
Table 4.5	Overall Academic Procrastination and Academic Achievement.....	60
Table 4.6	Means, Standard Deviations of Females and Males and t-values of the Reasons of Academic Procrastination.....	63

## LIST OF FIGURES

### FIGURE

Figure 3.1	The Translation and Adaptation Process of the Data Collection Instrument.....	39
Figure 3.2	Scree Plot of the First Part of the Turkish version of the PASS, Prevalence of Procrastination.....	45
Figure 3.3	Scree Plot of the Second Part of the Turkish version of the PASS, Reasons of Procrastination.....	48
Figure 4.1	Mean of Academic Procrastination and Academic Achievements.....	61

# CHAPTER I

## INTRODUCTION

### 1.1. Background to the Study

One of the main and essential concerns for educators is to find effective solutions for the students' problems. Hence, for many decades, the researchers have been attempting to understand some issues involving the students' problems that are already existed and the conditions barrier to academic success.

Procrastination is one of the common barriers which have been increasing in academic domains especially among university students. It is seen as an undesirable characteristic which students engage in varying degrees. As known, in the academic setting, students have some tasks to perform such as writing a paper, studying for exams, reading assignments, academic administrative tasks and attendance tasks; however, for one reason or another, completion of these task are often postponed. The research findings suggest that procrastination is impediment to academic success because it decreases the quality and quantity of work as well as the amount of the study (Wadkins, 1999). Regarding the literature, it is obvious that procrastination is common among students (Bishop, Gallagher, & Cohen, 2000) though it has injurious effect on their academic performance such as poor grades and course withdrawal (Keller, 1968; Semb, Glick, & Spencer, 1979). Wadkins (1999) believe that procrastination is a maladaptive behavior which must be overcome if ones expect to achieve any level of success.

Procrastination, which has been defined as "the lack of time spent practicing before an upcoming target task" (Ferrari & Tice, 2000, p.73) is a common problem among students. Although, there does not appear to be a

consensus on the definition of procrastination, all definitions include some delay components. The researchers suggest that when students procrastinate, they needlessly delay or put the priority task off to the next time in a temporal dimension (Lay, Knish, & Zanatta, 1992).

To date, many research studies conducted to find out the level of academic procrastination and the results shows some differences in terms of sample. For example; Ellis and Knaus (1977) suggested that 70% of university students procrastinate. However, in their survey study, Solomon and Rothblum (1984) found 50% of university students admitted to procrastinate on their academic tasks at least half the time, and 38% procrastinate rarely. Similar to level of academic procrastination, gender difference is another indefinite issue on procrastination. Research studies in the literature shows some variation on the difference between the female and male students' academic procrastination level in terms of the characteristics of sample used in studies. Hence, the researchers suggested that the influence of gender on academic procrastination is difficult to predict (Steel, 2004).

The purpose of procrastination seems to make the one's life more pleasant but it nearly always adds the stress, disorganization and failure (Clayton, 2000). The idea underlying procrastination is that "later is better" and this is also a common illusion behind "tomorrow outlook". However, when tomorrow comes, the pattern resurfaces, and the students excuse themselves by promising that "I will do it tomorrow". Hence, procrastination can be seen as "tomorrow syndrome" (Knaus, 2002).

Procrastination is defined in a technical sense as "putting off something until a future time-postponing or deferring action on something you have decided to do" (Ellis and Knaus, 1977; p. 7) and it is asserted that procrastination involves eleven elemental steps that the procrastinators almost inevitably goes through. These steps are:

1. Wishing to accomplish a task,
2. Making a decision to do it;

3. Needlessly delaying doing it;
4. Observing the disadvantage,
5. Continuing to postpone working on the tasks,
6. Scolding oneself for procrastination,
7. Continuing to procrastinate,
8. Completing tasks at a last minute, or never complete,
9. Feeling uncomfortable,
10. Assuring oneself about not procrastinating again, and lastly,
11. Shortly thereafter, engaging in procrastination again.

There has been research studies focused on the students' study habits related to assessment of their academic procrastination. For example; Brown (1983) explains academic procrastination with poor study skills and work habits besides motivation critical. Specifically, Burka and Yuen (1983) suggested that there are numerous possible reasons of procrastination pattern, some of which are evaluation anxiety, difficulty in making decisions, rebellion against control, lack of assertion, fear of the consequences of success, perceived aversiveness of the tasks, and overly perfectionistic standards about competency. Moreover, students who persistently procrastinate would exhibit avoidance motivations (Senecal, Julien, & Guay, 2003) mediated by mechanism such as self-doubts, low frustration tolerance, passive aggressiveness, rebellion, fear of failure, indifference, laziness, task boredom, impulse control problems, and excessive procrastination stimulating inner conditions (Knaus, 2001). In addition, based on Ellis and Knaus (1977) theory that procrastination is the result of irrational thoughts, some researchers (such as Bridges & Roig, 1997; Silver & Sabini, 1982) found strong relationship between irrational thoughts and procrastination.

As aforementioned, every student procrastinates at one time or another in their academic setting. However some of them tend to procrastinate habitually (Dewitte & Schouwenburg, 2002). Procrastination pattern students engage occasionally in interferes with academic achievement. Researchers report the negative effect of procrastination including lost time, low self

confidence, decreased long-term learning and academic esteem in academic domain (Ferrari, 1991b; Tice & Baumeister, 1997; Wadkins, 1999). Nevertheless, procrastination involves far more deficient time management and study skills. It often results in stress (Beswick, Rorhblum, & Mann, 1988; Brownlow & Reasinger, 2000; Jackson, Weiss, & Lundquist, 2000) and it can lead to serious physical health and psychological problems (Kutlesa, 1998; Sirois, Melia-Gordon & Pychyl, 2003; Sirois, 2004).

To further the understanding of academic procrastination level in the university setting, investigating the effects of gender on both level of academic procrastination and its prevalence, and also the reasons of academic procrastination deemed to be important. Because, in spite of increasing the number of students engaging academic procrastination in Turkey; little empirical research has been done to determine the levels and the causal factors that contribute to students' procrastination. At present in Turkey, there exists no published study in the resources available for the researcher that investigated the procrastination construct and the causal factors related to academic procrastination and gender among different age groups.

## **1.2 Purpose of the Study**

The purpose of this study is mainly fourfold with sub questions: 1) to examine the undergraduate students' academic procrastination level in relation to gender, 2) to investigate the undergraduate students' prevalence of procrastination in relation to gender in six areas of academic functioning namely; writing a term paper, studying for an exam, keeping up reading weekly assignments, performing academic administrative tasks, attendance tasks, and school activities in general, 3) to find out the relationship between academic procrastination score and academic achievement (CGPA) of undergraduate students; 4) to reveal the self-reported reasons of academic procrastination in relation to gender.

Thus, the present study is focused on the following research questions:

1. What is the academic procrastination level of undergraduate students?
  - 1.1. Is there any significant difference between female and male students' procrastination levels?
2. What is the prevalence of academic procrastination among undergraduate students in six academic areas of academic functioning?
  - 2.1. Is there any significant difference between female and male students' prevalence of procrastination in six areas of academic functioning?
3. What is the relationship between academic procrastination level and academic achievement of undergraduate students?
4. What are the self-reported reasons of academic procrastination?
  - 4.1. Is there any significant difference between the female and male students' self-reported reasons of procrastination?

### **1.3 Significance of the study**

Academic procrastination is a detrimental habit on the students' academic performance and their psychological health. According to Solomon and Rothblum (1984), procrastination is "...the act of needlessly delaying tasks to the point of experiencing subjective discomfort" (p. 503) and large numbers of the students have negatively been affected by procrastination. More than 40% of all students reported "nearly always" or "always" procrastinating on academic achievement (Rothblum, Solomon, & Murakabi, 1986) and it is obvious that putting off tasks has negative consequences in academic setting (Wesley, 1994).

Although there are many systematic research studies on academic procrastination in Europe and the U.S., there have been few studies on this issue in Turkey. As there are many students being negatively affected by academic procrastination, there is a need for assessing the frequency, prevalence and reasons of procrastination associated with gender in order to understand the conditions contributing to the students' behavior pattern.

When the research questions presented above are taken into account, this study may contribute to the research done in this field in terms of revealing the levels and reasons of academic procrastination along with the possible role of procrastination on students' academic success. Moreover, the findings of this study may also provide some important cues for both counselor and university staff to develop new programs so as to reduce the negative effect of such behaviors on the students' academic performance. In this way, it may be significant for students who would like to reduce the negative effects of dilatory behavior and/or to overcome the "powerlessness of procrastination". It is expected that this study will also contribute to the limited literature about procrastination associated with academic achievement and gender of university students in Turkey.

Moreover, in the present study, a new measure was introduced; Procrastination Assessment Scale-Students (Solomon & Rothblum, 1984). It is expected that the PASS would encourage new studies about students' academic procrastination and the reasons in Turkey.

At last but not least, as mentioned earlier, there is a lack of literature that examined not only the frequency and the reasons of procrastination with Turkish sample but also gender differences of Turkish university students. Therefore, the present research may be a pioneer in this field in Turkey and may facilitate the further research.

In the following chapter, the review of the literature, on academic procrastination and the causal factors are presented. In the third chapter, overall design of the study, population and sample selection, data collection instruments, data collection procedure, and the data analysis are presented. The results of the data are presented in the fourth chapter. Finally, in the fifth chapter discussions and implications that were drawn from the study are presented.

#### **1.4 Definition of Terms**

*Procrastination:* The purposive delay in completing tasks (Solomon & Rothblum, 1984).

*Academic procrastination:* Delaying completion of course assignments and test preparation (Beck, Koons, & Milgrim, 2001).

*Academic achievement:* Students' grade scores that are taken from course success at the end of semester (Owens & Newbegin, 2001).

*Writing a term paper:* The writing projects and reports as a part of the students' semester work or assignments for a particular course.

*Studying for an exam:* Getting prepared for a midterm, final exams or an oral exam.

*Reading weekly assignments:* Additional reading tasks for a unit, section or chapter of a course assigned by the course instructor or as a part of a course requirements.

*Academic administrative tasks:* The tasks related to administrative issues such as registering courses and other bureaucratic procedures for semester.

*Attendance tasks:* Students attendance to the semester lessons, office hours, and recitation hours, as well as scheduled group work.

*School activities in general:* Students participation to the social and cultural activities, such as sports, clubs, conferences etc.

## CHAPTER II

### REVIEW OF THE LITERATURE

In this chapter, the research literature deemed by the author to be most relevant to the purpose of this study is summarized. This chapter includes five sections. Definitions of academic procrastination are presented in the first section. The second section includes the nature of academic procrastination. In the third one, theoretical models of academic procrastination based on the present research studies are addressed. The fourth section of this chapter includes the studies concerning prevalence of academic procrastination. Finally, research studies done related to reasons of academic procrastination are given.

#### 2.1 Definitions of procrastination

The term *procrastination* comes from the Latin verb *procrastinare*, meaning to delay or postpone until another day (DeSimone, 1993 as cited in Burka & Yuen, 1983), is the combination of two words -*pro* means implying forward motion, and *crastinus*, meaning “belonging to tomorrow” (Ferrari, Johnson, & McCown, 1995).

In the contemporary definitions, the term procrastination has been variously defined by researchers and there does not appear to be a consensus on a single definition. Through all definitions include “delay” component. Some authors believe that intentionality of the delay is crucial components, while the others believe there needs to be an affective component related to procrastination. For example; Solomon and Rothblum (1984) defined the procrastination as “the act of needlessly delaying tasks to the point of experiencing subjective discomfort” (p. 503). In addition, Senecal, Koestner and Vallerand (1995) stated that “...procrastination generally

involves delaying the start of a task until one experiences distress about not having performed earlier” (p. 607). Similar to Piccarelli (2003); Hess, Sherman and Goodman (2000) defined procrastination as “the tendency to delay a task to the point that one becomes frustrated about not completing it” (p. 61). Lay’s (1986) definition on procrastination also included the same content which is the failure to spend the most time on important tasks. According to Kachgal, Hansen, and Kevin (2001) procrastination is the feeling of being overwhelmed, lack of motivation, and also poor time management (Lay & Schouwenburg, 1993).

As aforementioned, although the term procrastination has the same component, delaying, the definitions are not consistent. Hence, Milgram (1991) broadened this definition and he emphasized also four essential components of procrastination: (a) a behavior chain of postponement, (b) resulting a substandard behavioral outcome, (c) involving a task perceived by the procrastinator as important to perform, and (d) concluding a state of emotional upset (as cited in Kutlesa, 1998).

In the literature, procrastination pattern have been used in different areas of the various fields and the researchers have described procrastination as their study interests. For example, some researchers conducted studies on academic performance and used the term procrastination as an excuse making of poor performance especially for students who accomplish their tasks at the last minutes (Caron, Whitbourne, & Halgin, 1992; Ferrari et al., 1998). McCown and Roberts (1994) suggested that dysfunctional procrastination can be defined as “the time past the optimal beginning point for completion of an important task that has a high probability of needing completion and that does not have unreasonable demands of personal costs associated with attempted completion” (as cited in Ferrari, Johnson, & McCown, 1995, p.12).

Ferrari (1994) described procrastination as the habitual delay of task that is detrimental to the task success. Similarly, Scher and Osterman (2002) identified it as “a substantial hindrance to academic success” (p. 385).

Procrastination was also described in the literature as an avoidance strategy and a way of escaping self-awareness by Ferrari, Johnson, and McCown (1995). Moreover, Burka and Yuen (1982) called procrastination as “a way of expressing internal conflict and protecting a vulnerable sense of self-esteem” (p. 32).

Rothblum, Solomon and Murakami (1986) explained procrastination as a complex and maladaptive (Sigall, Kruglanski, & Fyock, 2000) phenomenon with affective (state anxiety, anxiety related physical symptoms), cognitive (fear of failure, task aversiveness), and behavioral (dilatory and study behavior) components. According to them, high and low procrastinating students differ from each other in each of these domains. Affective domain has a relationship with test anxiety and gender. Cognitive domain is involved in attributing style (internal and external) and behavioral domain is related with the students' amount of study behavior and frequency of dilatory behavior.

Finally, Bauman (1999) approach the procrastination as a cultural characteristics and described procrastination as a cultural practice came into its own with the down of modernity.

## **2.2 Nature of Academic Procrastination**

Academic procrastination involves voluntarily choosing one behavior or a task over that of other options (Steel, 2004). The nature of procrastination has some effect upon the decision. Similar to its definition, there has not been a consensus on the nature of procrastination. To date, it has been studied and explained various variables.

Subotnik, Steiner, and Chakraborty, (1999) stated academic procrastination as a common nearly universal experience among students. When students procrastinate, “they needlessly delay, postpone, and put off timely, relevant, priority activities until another time” (Knaus, 2001, p. 154) and they often spend their time on trivial, unimportant, unrelated tasks before upcoming an important tasks (Ferrari & Tice, 2000).

Rothblum, Solomon and Murakabi (1986) explained the nature of academic procrastination with claiming test anxiety. According to them, procrastination is also closely associated with semester grades and earning low cumulative general point average (GPA). Although all students have equal amounts of materials, the students who have difficulty to meet instructor-set deadlines obtain lower grades than others (Wesb, 1986).

Fritzsche, Young, and Hickson (2003) specifically focused on writing task associated with academic procrastination tendencies and they claimed that academic procrastination was associated with lower GPAs and grades in writing intensive courses.

Academic procrastination is common problem especially among university students (Burka & Yuen, 1983). The longer a student delays course work, the more difficult it is to be successful. On the other hand, unlike the such researchers as Beswick, Rothblum, & Mann, 1988, and Orpen, 1998; Owens and Newbegin (1997) stated that low scores produce higher levels of procrastination. This is contrary to the original model where procrastination was seen as a prediction of grade scores. The results of the study done by Owens and Newbegin (1997) showed that procrastinative behavior resulted from poor grades.

Watson (2001) suggested that procrastination occurs in different areas of academic activity and it is possible to have a set of factors, so he investigated some of the antecedents of procrastination namely fear of failure, aversiveness of task, risk taking, rebellion against control, dependency, and difficulty in making decision in terms of five factors of personality namely; neuroticism, extraversion, agreeableness, openness, and consciousness. He carried out this study on 349 university students and found that these antecedents of procrastination were strongly related with personality factors (neuroticism, extraversion, agreeableness, openness and consciousness).

Moreover, McCown and Johnson (1991) explained the nature of procrastination with neuroticism. According to them, thinking over the task of

studying for an exam creates a state of arousal and it is the idiomatic reactivity which may make the neurotic individual prone to greater procrastination. Individuals high in neuroticism procrastinate more since they study less, have greater anxiety relating to exams, and lack of confidence in their preparation.

Burka and Yuen (1983) had different perception about the nature of procrastination. According to them, performance is reflection of ability, and that ability is a reflection of self-worth. This assertion reveals an equation among performance, ability and self-worth. Hence, failure at a task becomes an indicator of lack of ability and a low self worth. Consequently, the students develop a fear of failure due to the emphasis placed on success in defining self-worth and procrastination corrupts the equation. Since performance has been impaired by time constraints; performance does not equal ability and therefore does not equal self worth. In this way, procrastination serves as an ego defensive function.

On the other hands, there is another dynamic claimed about consequences of procrastination. Some researchers suggested similar to self-handicapping form, on which individuals have low self-competence and high fear of failure regarding their capabilities on a certain task, people might procrastinate in order to protect their threatened self-esteem (Ferrari, 1991b; Lay, Knish, & Zanatta, 1992; Meyer, 2001).

Similarly, Ferrari and Tice (2000) suggested that it is better to do nothing for procrastinators than risk failure and look foolish. According to them, as procrastination involves maintenance of the start of a task such that no effort is made that could be spent improving one's chances of success, procrastination seems to be a form of self handicapping.

Another perception about the nature of procrastination has seen by Sigall, Kruglanski, and Fyock (2000). They suggested that procrastinators are optimistic wishful thinkers. The researchers explained that students delay studying for the exam due to their preference of another activity such as socializing with friends. They postpone studying aided by the wishful believes

that they would adequately learn the material in one night, or that the exam will be easy, etc (Sigall, Kruglanski & Fyock, 2000). When procrastinating, students don't report unhappy feelings because they would be engaged in relatively enjoyable and pleasant activities (König & Kleninmann, 2004; Pychyl, Lee, Thibodeau & Blunt, 2001).

### **2.3 Theoretical Models of Academic Procrastination**

Investigating the causes of academic procrastination has attracted the interest of researchers and led to the development of several models that have aimed at understanding the nature of procrastination. These models are based on the orientations developed by pre-scientific philosophers. Even though the researchers have not agreed the definition of procrastination yet, they have related it to several cognitive, behavioral and affective constructs and regarded as a “dysfunction of important human abilities” in routine tasks and critical life tasks (Milgram, Sroloff, & Rosebaum, 1988, p. 210).

As aforementioned, studies that have been conducted come from a number of different perspectives. Each of these namely; psychoanalytic, behavioral, learning, and cognitive-behavioral perspectives have focused on different aspects to define and explain the nature of procrastination. The approaches of these perspectives are given below with some empirical research results.

One of the earliest attempts to explain the dynamics of procrastination was made by *Psychoanalytic theorists*. Freud (1953) was the first who explained the avoidance behaviors with the role of anxiety. He stated that tasks are avoided primarily because they are threatening to the ego. Through delaying, the ego is protected from the risk of possible failure. Nevertheless, one of the obvious problems with the psychoanalytic theory is its difficulty to empirically test (Ferrari, McCown, & Johnson, 1995). Birder (1993) was also another psychoanalyst who explained the procrastination with the different dimension of defense. According to him, procrastination is a defense against impulses and separation. He also suggested that procrastination is a result of psychologically or physically dangerous maturation and growth process.

According to him, procrastinators can be seen as passive children who are hesitate to assert themselves actively.

Beaedsworth (1999) explains the procrastination as “the relation between action and time” with psychodynamic perspective. According to him, “procrastinator procrastinates; because his or her effects are haunted by past relations; as a result, the present and the future in which the human being is apparently engaged are refused their temporal particularity” (p. 10).

Another approach of psychodynamic theorists is based on the childhood experience regarding with procrastination. They give more emphasize on the primacy of early childhood emotions that can be expressed during the personality development. Missildine (1964) is one of the authors who attempted to explain the procrastination with childhood experiences. He argued that the “procrastination syndrome” is a caused of parenting style including “overcoerced” achievement and setting unrealistic goal for their child. When the children are unable to meet the demands and expectation of parents, they develop anxiety and feel worthless. When confronting with a task involving evaluation of their personal worth or abilities, these feelings are reexperienced and reenact. Consequently, this brings about procrastinator adults (as cited in Ferrari, et al., 1995). Similarly, Rothblum et al. (1986) suggested that the parents who overly critical and demanding may cause their children’s avoidance of tasks rather than risking failure. Also Davis (1999) found positive relationship between parental criticism and frequency of procrastination.

An empirical study conducted by Ferrari and Olivette (1994) supported the role of authoritarian parenting on the development of procrastinators. 84 young women and their parents involved in the study were administered avoidant and decisional procrastination scales besides anger expression scale. The results yielded that young daughters used procrastination as a coping mechanism to be able to release their anger at their authoritarian fathers in a more socially acceptable way.

Another empirical study done by Pychyl, Coplan, and Reid (2002) aimed at exploring the effect and interaction between gender, maternal and paternal parenting style, and global self-worth in the prediction of procrastination in adolescence. The study including 105 adolescence yielded significant interaction between parenting styles, adolescent, gender and self-worth. Their findings also suggested for females only that while father's parenting style have greater impact on the adolescents' procrastination, the effect of maternal authoritarian parenting on procrastination are mediated through the self-system. The results are consistent with previous research that also verified the influence on parenting style on personality difference but not the gender.

In contrast to Pychyl et al. (2002), Ferrari's (1991a) study did not find significant gender differences among male and female procrastinators. Similarly, Schouwenburg's (1992) study that investigated procrastinators and the reason of fear of failure with 278 students in Netherlands, found no gender difference. Moreover, Beswick, et. al (1988) conducted a study with 245 university students in South Australia to investigate three psychological explanations namely indecision, irrational beliefs about self-worth and low self-esteem for procrastination. Similar to Ferrari's (2002) study, he found procrastination were significantly related with low self-esteem, depending to others and self defeating behaviors, they found the strong relationship among self-esteem, indecision and procrastination, yet, no gender difference was found. On the other hand, Solomon and Rothblum (1984) found that woman reported significantly more fear of failure than man as an antecedent of procrastination. Similarly, in their study, Milgram, Marshevsky, and Sadeh (1994) found significant gender difference among low-delay high-upset students. Their study included 195 Israeli students and man reported time management problems more frequently than women. As the research review shows, gender difference and procrastination is not conclusive concerned with procrastination. While some studies show significant relations of procrastination with the gender issues, some others report no such findings.

*Behavioral theory* includes reinforcement of behaviors. Skinner (1953) suggested that behavior exists since it has been reinforced (as cited in Ferrari, McCown, & Johnson, 1995). According to reinforcement theory, procrastination occurs as a result of a previous history of successful procrastination. Students who procrastinate may have found other tasks that are more reinforcing than studying (Bijou, Morris, & Parsons, 1976). *Classical learning theory* emphasizes the importance of rewards and punishment on behaviors. According to McCown (1986), "behaviorists believe that procrastination is a learned habit developing from a human preference for pleasurable activities and short term rewards" (as cited in Lamba, 1999, p. 5). According to learning theory, procrastination may occur for the reason that the students has been either rewarded or not punished sufficiently for it (Ferrari, McCown, & Johnson, 1995). Ferrari and Tice (2000) directly and experimentally tested this hypothesis in laboratory setting by examining self-reported and actual behavioral procrastination. 59 undergraduate psychology students (40 women and 19 men) were given the opportunity to practice before completing a measure of their cognitive ability. During the practice period they could choose to spent time on boring, unpleasant, but evaluative task that might improve their subsequent task performance. Alternatively, participants could choose to work on an enjoyable, non-evaluative task that was not directly related to the future. After the practicing period the General Procrastination Scale were administered to the participants. The results of the study demonstrated that there were no significant gender differences in General procrastination scores. Specifically, participants spent an average of 9 minutes procrastinating; that is working on a task other than the practicing task. The results also revealed that the more participants identified they were procrastinators, the more they procrastinated by spending time on trivial, unimportant and unrelated tasks.

Regarding punishment which is another important issue for behavioral theorists, Solomon and Rothblum (1984) carried out a study with 342 university students to evaluate the frequency and the reasons of

procrastination. After performing factor analysis, they found “aversiveness of task” as a mostly accounted (one-fourth) factor which showed that students procrastinate on the tasks which they found “unpleasant” (Kachgal, Hansen, & Kevin, 2001).

In their experimental study Senecal, Lavoie, and Koestner (1997) directly evaluated the factors of aversiveness of tasks on students’ academic procrastination by examining the time management of self-reported procrastinators in a laboratory setting. Participants who were 58 female undergraduate students from introductory psychology classes were selected randomly. Four tasks, varied in their levels of interest and difficulty (interesting/easy task, interesting/difficult task, boring/easy task, and boring/difficult task), were given to participants to complete on a computer. One half of participants were informed that they would receive feedback after working on the tasks, while the others were not. The former group was also told that the activities assessed the participants’ abilities to become a professional psychologist; however the latter group was informed that these activities were related to their interests. The results of the study showed that putting off aversive task was a central aspect of academic procrastination. Students who described themselves as a procrastinator were more likely to delay engaging in the boring/difficult activity.

Overall, the results showed that procrastination is not a stable personality disposition; it is a dynamic behavior that may depend on the interaction of the tasks and contexts (Moon & Illingworth, 2005).

*Contemporary learning theory* has broadened the traditional rewards and punishment concepts of classical reinforcement theory. In procrastination, either escaping or avoiding condition can be seen. Escape conditioning occur when a students start to perform a task and then aborts it without completed. Avoidance condition can also occur when the task is never started or is completely avoided (Ferrari, 1991a; Ferrari, McCown, & Johnson, 1995).

The stimulus that controls the avoidance can be internal and external and Solomon and Rothblum (1984) suggested that one stimulus for procrastinators is anxiety. Students who have extreme anxiety have tendency to procrastinate the tasks which is reinforcing to avoid anxiety concerned with studying (Ferrari, McCown, Johnson, 1995; Haycock, McCarty & Skay, 1998). Whether or not the anxiety is a reason of procrastination is a controversial issue in that while some researcher postulated anxiety as a reason of putting the tasks off (Burka & Yuen, 1983; Ellis & Knaus, 1977; Milgram, Dangour, & Raviv, 2001; Solomon & Rothblum, 1984; Stainton, Lay & Flett, 2000;) some others claimed that anxiety has a weak connection to procrastination (Lay, 1986; Lay & Silverman, 1996; McCown, Petzel, & Pubert, 1987).

*Cognitive behavioral theorists* (Ellis & Knaus, 1977) emphasized the effect of irrational beliefs on procrastination. Knaus (2002) suggested that believing oneself inadequate and believing the world is difficult cause a student procrastinate. Procrastination is a maladaptive behavior that stem from interactive dysfunctional cognitive and behavioral avoidance process (Ellis & Knaus, 1977), and this mechanism includes “(a) decision to delay, (b) a promise to get it later (c) engagement in substitute diversionary activities, (d) excuse making to justify delays and to gain exoneration from blame” (Knaus, 2001, p. 155).

One of the common irrational thoughts among students is fear of failure which is also one of the main and important reasons of academic procrastination. Fear of failure was first systematically investigated in procrastination by Solomon and Rothblum (1984). They carried out a study with 342 university students to examine the frequency and reasons of procrastination and they found that the fear of failure accounted for almost 50% of variance in factor analysis of reasons in why students procrastinate. Fear of failure was also positively correlated with perfectionistic standards for one's scores (Onwuegbuzie, 2000). Ellis and Knaus (1977) suggested the strong relationship of procrastination with ones perfectionism (with its

excessive need for social approval), guilt, anxiety (by over generalizing the pessimistic view), and to self-fulfilling prophecies (expectation of failure). According to them, perfectionism creates the idea that “I must do well” to prove “I am a worthwhile person”. Inevitably, the students procrastinate fail to success on the tasks because their standards simply too high. As the standards become higher and more important, the likelihood of procrastination may increase and consequently academic achievement decrease (Steel, 2002, 2004).

#### **2.4 Prevalence of Academic Procrastination**

Procrastination in general, everyday tasks is a common behavior among adults (Harriot & Ferrari, 1996; Milgram & Tenne, 2000). Academic procrastination, which constitutes a problem of epidemic proportions among college students, is a domain-specific form of procrastination (Ellis & Knaus, 1977; Hill, Hill, Chabot, & Barral, 1978; Rothblum, Solomon, & Murakabi, 1986; Solomon & Rothblum, 1984).

The earliest study carried out by Hill et al. (1978) with 500 students at five different universities on academic procrastination. The authors found that approximately 90% of students reported to procrastinate on academic tasks at least occasionally, and 50% reported as procrastinate about half of the time or more. They also found a significant tendency toward increased procrastination among university students.

A later study conducted by McCown and Roberts (1994) aimed to examine the frequency of procrastination on 1,543 university students. The results of the study revealed that 23% of freshmen, 27% of sophomores, 32% of juniors, and 37% of seniors endorsed that their procrastinatory tendencies impeded their academic achievement. The findings also suggested that procrastination increases over years in university (as cited in Farran, 2004).

In their study, Solomon and Rothblum (1984) aimed at investigating the frequency of college students’ procrastination on academic tasks and the

reasons of procrastination behavior. They developed the Procrastination Assessment Scale related to the study and administered to 342 university students. Their study yielded that frequency of procrastination has become widespread among a variety of academic tasks. The results of the study also showed that students procrastinated more often when writing a term paper (46%) than when reading an assignment (30%), studying for an exam (28%), or attending to academic (23%) and administrative (11%) tasks. In terms of viewing students' procrastination as problematic, 24% of the students believed that procrastination on term papers was always or nearly always a problem for them. 24% felt that procrastination on reading weekly assignments was always or nearly always problem for them. 22% reported that procrastination on studying for exams was always or nearly always problem for them. Regarding how much students wanted to decrease their procrastination tendencies, 65% stated they strongly wanted to reduce their procrastination on writing a term papers, compared to 62% on studying for exams and 55% on reading weekly assignments.

In another prevalence study, Clark and Hill (1994) found that among sample of 184 college students, high percentages reported nearly always or always procrastinating on studying for exams (28%), writing a term paper (30%), and reading weekly assignments (36%).

In their correlational study Onwuegbuzie and Collins (2001) specifically focused on the writing apprehension as an area of academic functioning. The study conducted to find the relationship between academic procrastination and writing apprehension among graduate students. Procrastination Assessment Scale-Student (PASS) and The Writing Apprehension Test were used as the data collection instrument and administered to 135 graduate students. The result of the study yielded significant relationship between scores on the Writing Apprehension Test and scores on the Fear of Failure and Task Aversiveness scales of the Procrastination Assessment Scale-Students. They suggested that graduate

students' apprehension about writing appears to be related to academic procrastination stemming from fear of failure and task aversiveness.

In addition, the study conducted by Onwuegbuzie (2004) aimed at examining the prevalence of procrastination and investigating the relationship between procrastination and six dimensions of statistic anxiety. Sample involved in the study was 135 graduate students and they were administered to Statistical Anxiety Rating Scale and Procrastination Assessment Scale-Students. The results of the study revealed that high percentage of students reported problems with procrastination on writing term papers, studying for exams, and completing weekly reading assignments. The findings also supported that academic procrastination resulting from fear of failure and task aversiveness was related to interpretation anxiety, test and class anxiety, and fear of asking for help.

A survey study to examine the prevalence of academic procrastination done by Kachgal et al. (2001) included 141 students. In this study, two types of questionnaires developed by the researchers were administered to participants to identify perceived barriers to academic success and to learn about respondents' gender, year in school, hours worked per week and grade point. Procrastination Assessment Scale-Student (PASS) was also administered to participants to measure self-reported procrastination levels for six academic tasks: (a) writing a term paper, (b) studying for an exam, (c) keeping up weekly reading assignments, (d) performing administrative tasks, (e) attending meetings, and (f) performing academic tasks in general. The results regarding academic tasks showed that three tasks writing term papers, studying for exams and doing weekly readings have the greatest impact on students' academic performance. In addition, no significant grade-level differences were found in total, self-reported procrastination. Findings regarding barriers to academic success revealed that perceived barriers included problems with time management and balancing activities, procrastination and not being able to focus or concentrate on school work.

Similarly, in their experimental study, Ferrari and Scher (2000) found that students procrastinate more on the academic tasks rating as unpleasant such as; doing homework assignments, reading assignments, and studying exams than nonacademic tasks such as household chores, making telephone calls, exercising, and playing sports.

In conclusion, prior research findings indicate that procrastination on academic tasks is a common tendency among university students. The findings also support that procrastination is a maladaptive behaviors that hinders academic achievement. Students also procrastinate more on writing a term paper than school activities.

## **2.5 Reasons and Treatments of Academic Procrastination**

When the sources of procrastination are considered, similar to its definition, many causal factors contributing to academic procrastination have been found by several researchers. Similarly, several treatment programs have been developed to overcome the procrastination. A body of studies on causes of procrastination has shown its associations to several personality traits and characteristics.

Early investigation of procrastination emphasized especially by such clinicians as Burka and Yuen, (1983); Ellis and Knaus, (1977). They emphasized the role of the individual's thinking as a causal factor in procrastination. Subsequent research studies has revealed that a number of factors are related to procrastination including perception of task aversiveness, laziness, peer influence, academic esteem, test anxiety, overly perfectionism, academic locus of control, low self esteem, self handicapping, and fear of failure. Moreover, research studies has revealed the association of procrastination with gender, some personality variables and the effects of cultural and economic diverse on procrastination. Furthermore, some other researchers have studied on the treatment programs to overcome the procrastination. Each of these studies is discussed in detail below.

In their correlational study, Milgram et al. (1988) examined the relationship between task aversiveness and procrastination by asking participants to rate the extent of pleasure they perceived to be associated with 54 different tasks. Of the tasks, 38 were everyday such as “paying bills” or “doing laundry”, 10 were work related such as “asking for a raise” or “preparing assignments” and 6 were academic tasks such as “checking for grades” and “being on the time for lectures”. The results of the study revealed that task aversiveness was significantly related to behavioral procrastination across all tasks and accounted for 33% of the explained variance in procrastination.

A survey study done by Kachgal, et al. (2001) in Arizona included 141 students from 10 sections of an elective study skills course. In this study, researchers presented strategies for prevention and intervention of academic procrastination based on a need assessment of students enrolled in an elective course at Midwestern University. Two types of questionnaires developed by the researchers were administered to participants to identify perceived barriers to academic success and to learn about respondents’ gender, year in school, hours worked per week and grade point. Procrastination Assessment Scale-Student (PASS) was also administered to participants to measure self-reported procrastination levels for six academic tasks: a) writing a term paper, b) studying for an exam, c) keeping up weekly reading assignments, d) performing administrative tasks, e) attending meetings, and f) performing academic tasks in general. The results regarding the reasons of procrastination showed that participants’ reasons for procrastinating were varied. 78.3% of the participant stated that “just felt too lazy to write a term paper” (laziness) and the rest of them responded in different ways such as: “Friends were pressuring you to do other things” (peer influence), “Didn’t have enough energy to begin the task” (tendency to feel overwhelmed and poor managed time), “Really disliked writing term paper” (task aversiveness). In addition, no significant grade-level differences were found in total, self-reported procrastination. Findings regarding barriers

to academic success revealed that perceived barriers included problems with time management and balancing activities, procrastination and not being able to focus or concentrate on school work.

Owens and Newbegin (1997) conducted a correlational study aimed to examine the relationship between academic procrastination, academic esteem, anxiety and academic achievement. The subjects involved in the study were 418 male students attending a Catholic high school in Melbourne, Australia selected randomly. Results yielded that there was a positive relationship between anxiety and academic procrastination. Academic procrastination had also a direct relationship with anxiety but was not directly related to esteem. The data supported also the negative relationship between academic procrastination and grade scores.

Another correlational study carried out by Cassady and Johnson (2002) aimed at two goals; establishing the reliability and validity of a new test anxiety measure and examining the relationships among cognitive test anxiety and gender, procrastination, emotionality and student performance. 168 students participated in the study and they were administered Procrastination Questionnaire, Cognitive Test Anxiety Scale, and self-reported sheet that requested their age, sex, and Scholastic Aptitude Test (SAT) scores. The participants' test performance was evaluated by the scores obtaining from three multiple-choice exams. Test 1 was administered 5 weeks before the test anxiety and procrastination scale, Test 2 was given participants 2 days after the completion of study instruments and finally test 3 was taken during the university finals week. The results of the study revealed that high test anxiety caused students to perform poorly on a test. It was also found that as high test anxiety is causative determinant of test performance and this is a consequence of poor performance, procrastination occurs. The results also demonstrated that although female reported higher levels of test anxiety, there were no observed gender differences in course examination performance.

The research done by Pychyl, Morin, and Salmon (2000) aimed to examine the planning fallacy and academic performance between two groups of students: procrastinators and non-procrastinators. The subjects involved in the study were 62 undergraduate students enrolled in a second year and they were visited eight times over a 2-month period by the researchers. If students failed to complete any of the forms prior to the scheduled deadline, they were not allowed to continue with the experiment. After the last visit, there were 28 students remaining in the study and these students were administered the questionnaire package contained Experimental Agenda for document Completion and Collection, Prediction Forms, Study Time Logs, Aitken Procrastination Inventory and Lay's General Procrastination Scale. The results indicated that neither the students scoring high on procrastination nor the students scoring low on procrastination suffered from fallacy. The results related with the study patterns also demonstrated that students scoring high on procrastination were different from students scoring low on procrastination in study patterns by commencing studying later, studying less and, therefore, achieving lower grades. Students scoring high on procrastination studied 55.8 % of their total study time in the three days before the exam, as compared to students scoring low on procrastination who spread their studying, studying only 37.5% of their total study time in the last three days. Finally, although students who have high procrastination scores studied less and later than non-procrastinators, their grades were not significantly different from the students who have low procrastination scores. The correlation between exam performance and procrastination was also not significant.

Another correlational type of study done by Burns et al. (2001) aimed at examining the association of academic procrastination, perfectionism, and control with vigilant and avoidant coping. Participants who were 157 undergraduate students enrolled in an introductory psychology courses. The results yielded a negative correlation of procrastination with avoidant coping.

Weak relationship was also found between positive/negative perfectionism and academic procrastination.

The other correlational study, done by Janssen and Carton (1999) examined the effects of academic locus of control and task difficulty on academic procrastination. The subjects involved in the study were administered Academic Locus of Control Scale (ALC) and the task difficulty was manipulated by using two articles of equal length and similar topics but of different difficulty levels. They also measured student procrastination by recording the amount of time that passed between the dates assigned the task and the date students began, completed, and returned the task. The results of the study showed strong relationship between academic locus of control and academic procrastination. Specifically, the students who had internal control expectancies for academic outcomes took less time to complete and return the academic assignment than did the students who had external control of expectancies. Results also revealed that the effect of locus of control on students' procrastination did not depend on the difficulty level of the assignment.

Steel, Brothen, and Wambach (2001) conducted a longitudinal study including 152 undergraduate students at six time periods during an 11-week introductory psychology course. The study aimed to clarify the effects of academic procrastination on the personality traits (neuroticism, self-esteem, locus of control, extraversion, and self-regulation), mood and performance. The results showed that neuroticism and locus of control failed to correlate with any measure of procrastination while self-esteem and self-monitoring correlated, but only with irrationality or self report postponement. Moreover, stronger correlation was generated with the remaining personality variables (i.e., psychoticism, extraversion, dominance and defensiveness). However, this stronger correlation was observed with either observed or self-report procrastination, not with both of them. Similarly, mood and anxiety correlated only with self-report irrationality, but not with observed procrastination. Also, anxiety, low self-esteem and depression were effect on self-concept.

Similarly, negative mood or negative effect was associated with one's performance.

Tice and Baumeister (1997) conducted two longitudinal studies aimed at examining procrastination among college students. The first study involved having a due date for a term paper announced. Students were told that if they could not meet the deadline, they could have an automatic extension to a specific later date. After four weeks, they were administered the student version of Lay's General Procrastination Scale. For the next 30 days, students completed daily symptom checklists and weekly measures of stress and work requirements. At the end of the semester, the date that each student handed in the required paper was recorded in terms of whether the paper was turned in early, on time, during the automatic extension of the deadline, or late. They also filled out a questionnaire asking about how relieved they felt about having completed the work. The results of that study revealed that procrastinators reported poorer grades but less stress and illness early in the semester compared to nonprocrastinators. However, the results were reversed later in the semester as the procrastinators' reporting higher of stress and illness as well as lower grades.

The second study was similar to the first study except that students also reported all visits to health-care professionals and a number of additional questionnaires were administered during the last week of class. In addition, the Adult Inventory of Procrastination Scale was used besides Lay's General Procrastination Scale. The final questionnaires were similar to the questionnaires filled out in the first month of class. The findings revealed similar results with the first study in that procrastination reported less stress and illness early in the semester compared to nonprocrastinators. However the results were reversed later in the semester as resulting in higher reports of the stress and illness. The results also revealed no significant relationship between grades and procrastination in the second study.

In their correlational study Specter and Ferrari (2000) aimed at assessing the relationship between cognitive and behavioral forms of

procrastination and perception of time. Decisional Procrastination Scale, Adult Inventory of Procrastination, and Temporal Orientation Scale were administered to 215 college students (174 female, and 41 male). The result of the study revealed no significant gender differences on procrastination or time oriented. On the other hand, the researchers found that males and females with either cognitive or behavioral procrastination tendencies report that they focus more on the past and less on the future.

Beck, Koons and Milgrim (2001) carried out two experimental studies to assess the predictors of academic procrastination and the impact of this behavior on university students' exam performance. In the first experiment, 411 undergraduate students (282 female, 129 male) from a medium size, rural, public university were participated. After completing Procrastination Assessment Scale-Student (PASS), Self Handicapping Scale-Short form (SHS) and Self-Consciousness Scale (SCS), the subjects took part in an experiment entitled "Personality Factors and Test-Taking Behaviors." The results showed that Self-Handicapping was significantly correlated with Public Self-Consciousness and Social Anxiety but not with Private Self-Consciousness. Procrastination was not significantly correlated with any of the Self-Consciousness subscales. Also, the results demonstrated that high academic procrastinators evidenced more delays on exam preparation than low academic procrastinators, and significant main effects were found for the procrastination and self-handicapping on participant's test performance. In the second experiment, similar to Experiment 1 Procrastination Assessment Scale-Student (PASS), Self Handicapping Scale-Short form (SHS), Self-Consciousness Scale (SCS) and "Personality Factors and Test-Taking Behaviors" were administered to 169 (105 female, 64 male) students recruited from the same medium size, rural, state university. The result showed that there were significant main effects for each independent variable with participants scoring high on academic procrastination, self-handicapping and self-esteem delaying more on exam preparation than their counterparts. The

main effects were qualified by a significant interaction between self-handicapping and self-esteem.

Ferrari (2001) carried out a correlational study with the participants of 142 (80 female and 62 male) undergraduate students enrolled in introductory psychology courses at medium size, private Midwestern University. The study aimed to examine whether behavioral (arousal and avoidance) and cognitive (indecision) forms of procrastination were related to attention deficit, boredom proneness, self-esteem and intelligence. The results revealed that different forms of procrastination were related positively with external stimulation, affective responses, and perception of time; and negatively with internal stimulation. Furthermore, all three forms of (decisional, arousal, and behavioral) procrastination was significantly correlated with attention deficit, namely: inattention, impulsivity, underactivity, disorganization, moodiness, and emotional difficulty.

In their causal comparative studies, Prohaska et al. (2001) focused on a different area of procrastination within an ontraditional. The aim of their studies was to find out whether procrastinatory behavior varied among students who were culturally, economically, and ethically diverse. Therefore, they carried out a study involving 286 students enrolled in general psychology course at an urban 4-year college, and 100 students solicited from posters and announcements in class at an urban community college. Ethnic affiliation data were collected using an open-ended format and participants' responses were categorized four ethnic groups: African American, Asian/Pacific Islander, and Native American. The students' procrastination levels were tested by using The Procrastination Scale and their current GPA's were obtained from the college records. The findings of this study showed that the highest levels of academic procrastination were closely related with students' grades. There was negative relationship between procrastination and students' GPA scores. The results also suggested that ethnicity was not a major factor in academic procrastination.

The lack of difference was found approximately equal percentages of high and low procrastination in four year community college samples.

Green (1982) carried out a single subject study with 6 minority college freshmen students. The study aimed to examine the effect of self-control procedures on academically disadvantaged students' academic procrastinative behaviors. In the study, academic behaviors were measured by observing and recording the students' attendance, completion of assignments, and studying; procrastinative behaviors were assessed by derived from the postponement of academic behavior; and grades were measured with the score given on assignment and examination. As the parts of self-control procedures, percentage of accurate self-monitoring was obtained from the agreement between a subject's observation and observers' observation for each instance of the behavior; and the percentage of self-reward was obtained from the number of occasions in which contract fulfillment occurred. The effectiveness of self-monitoring alone and self-monitoring plus self-reward on academic procrastinative behaviors was evaluated by an intra-subject multiple baseline design. Subjects' behaviors were assessed across three conditions: baseline (four week after semester began), self-monitoring (two weeks of baseline), and self-monitoring plus self-reward (two weeks after self-monitoring). The results of the study revealed that the self-monitoring plus self-reward has not effect on increasing in attendance. Nevertheless, while self-monitoring produces a very small effect on tardiness, postponed assignment and postponed studying, self-monitoring plus self-reward has an impact effect on these dilatory behaviors. The results also demonstrated that self-monitoring combined with self reward were effective in increasing grades.

Schubert, Lily, and Stewart (2000) developed a treatment program to overcome the negative effect of procrastination on various personal factors mainly evaluation anxiety, dependence, task aversiveness, fear of failure, perfectionism, irrational beliefs, low self-esteem, and learned helplessness. The treatment approach applied in the study was a structured two-stage, six-

week group therapy series. The participants in experiment group were university students who sought help at a university counseling service due to eliminating negative effect of procrastination on academic success and in comparison group were students enrolled in a study skills group that focused on developing improved academic competencies (i.e., study strategies, time-management). Participants in the group were administered Myers-Briggs Type Indicator and Lay's Procrastination Scale and selected identified 4-type of procrastination (perfectionist, politician, postponer or punisher). Finally, participants in the multidimensional therapeutic sessions reported greater decreases in procrastination than did the participants in the comparison groups who attended traditional study skills sessions or a student transition support group. The results also indicated the importance of providing procrastinators with a therapeutic model that emphasizes a positive, personally designed, empowering approach to changing personal patterns of procrastination.

Another program was developed by Academic Skills Center (2004) by using the Ellis and Knaus theory to overcome academic procrastination. This program included explanations of the four complex reasons of procrastination namely; perfectionism, anger/hostility, low frustration tolerance, and self downing. The treatment program also included some cues and steps to cure for students to beat their procrastination behavior.

Knaus (2001) developed a change process for procrastinators to overcome postponement patterns. The five-phase process, including cognitive, emotive and behavior change techniques to support progressive mastery over procrastination, constituted awareness, action, accommodation, acceptance, and actualization phases.

Research studies presented above support that academic procrastination is a personality trait especially common tendency among university students. However, procrastination behavior has negative effect not only on students' academic achievement but also on their self-esteem, attributing style, moods, anxiety level, and academic performance such as

frequency of study behavior, attendance of the courses, or doing weekly assignments. In other words, prior empirical research studies indicate that procrastination is a maladaptive behavior that hinders academic achievement in addition to psychological well-being. Literature review also appears that academic procrastination is a phenomenon that has many causes and consequences. Research studies support the existing of many factors contributing to academic procrastination. Fear of consequences of success, overly perfectionism, depression, low self-esteem, test and social anxiety, locus of control, self-consciousness, poor self-monitoring and self-handicapping are some of them. Moreover, there are some consequences of academic procrastination such as poor academic performance, low self-esteem, depression, emotional difficulty, stress and illness.

The research studies done on this issue also show that ethnicity and cultural differences are not the indicators of procrastination tendency. Procrastination is a personality trait and whether or not they are traditional or nontraditional, students may procrastinate.

To conclude, the literature related to university students' procrastination habit suggests some implications for future research. First, frequency of procrastination among university students has been increasing and it has detrimental effect on the students' academic performance. Second, the prevalence of academic procrastination shows differences in terms of different domain of academic areas. Third; there are some specific reasons of this injurious habit. The fourth line of research relates variations in the gender differences. In this regard, the present research attempts to address three of these research lines and examine the gender differences on university students' procrastination levels.

## **CHAPTER III**

### **METHOD**

In this chapter, methodological details of the study are presented. This chapter includes six sections. The first section of the chapter contains the overall design of the study. In the second section, the characteristics of the students participated in the study are addressed. The third section includes the data collection instrument and the steps followed through translation and adaptation process. The data collection procedure for the present study is explained in the fourth section. The fifth section provides an explanation of the data analyses procedures. Finally, limitation of the study is presented in the sixth section.

#### **3.1 Overall Design of the Study**

The overall design of this study is mainly survey and correlational. Fraenkel and Wallen (2000) stated that the survey type of research is used to describe the characteristic of a population through asking a set of questions. Moreover, correlational type of research is used to determine the relationships among two or more variables without any manipulation, and to explore their implications for cause and effect. In this study, as there is an examination of the level and the reasons of academic procrastination also revealing the relationship between academic procrastination and academic achievement; survey and correlational type was used.

This study was carried out with 784 Middle East Technical University undergraduate students. The Procrastination Assessment Scale-Student (PASS) was administered to participants to evaluate their self-reported academic procrastination, and to find out some possible reasons of their academic procrastination tendencies.

As the original version of the PASS was in English, it was translated and adapted before using. In order to get the evidence of reliability and validity, and to find out the causal factors of academic procrastination; the study was piloted with 203 students at the spring semester of 2003-2004 academic year. After obtaining data, necessary revision was also made for the data collection instrument.

The data of the present study was collected from 784 voluntarily undergraduate students enrolled in the Middle East Technical University at the fall semester of 2004-2005 academic year. The data collection was completed in four weeks. The participants involved in the present study were selected by taking into account the proportional stratified random sampling method.

### **3.2 Participants**

This study was carried out with 784 undergraduate students enrolled in 37 departments of five faculties of Middle East Technical University. The population of this study consists of twelve thousand and six hundred eighteen undergraduate students registered at Middle East Technical University at 2004-2005 academic year.

When selecting the participants of the present study, first of all five faculties and thirty seven departments of Middle East Technical University were listed. The number and the percentages of the students were obtained from the METU General Catalog (2004). In determining the sample size to represent the population, a method (recommended by Çıngı, 1990) of calculating sample range for different standard errors was used ( $SE = \pm 0.05$ ,  $\alpha = 0.01$ ,  $p = 0.5$ ). Hence, the researcher proposed that the six hundred and thirty students, which generated five percent of the population, would represent the entire population of the study. Finally, proportional stratified random sampling was used and five subgroups from the five different faculties were selected for the sample in the same proportion, as they exist in the population.

The data was collected by the researcher in four week duration. As the data was collected in classroom settings, the number of the participants exceeded the actual number as was expected. In other words the data was collected from 784 students.

In sum, the present study was carried out with a sample of 784 undergraduate level students who were freshmen, sophomore, junior, and senior grades from five faculties of Middle East Technical University namely; Faculty of Education, Faculty of Art and Sciences, Faculty of Architecture, Faculty of Economics and Administrative Sciences, and Faculty of Engineering. The participants involved in the study constituted 215 freshmen (27.4%), 182 sophomores (23.2%), 194 juniors (24.7%), and 193 seniors (24.6%). The mean age of the participants was 20.6 with standard deviation of 1.74 and their ages ranged between 16 and 30. In addition, the numbers and the proportions of the students enrolled in the faculties were reflected as the actual proportion for the sample of the study. In this regard, 82 students (10.5%) from Faculty of Architecture, 141 students (18%) from Faculty of Art and Science, 112 students (14.3%) from Faculty of Economics and Administrative Sciences, 128 students (16.3%) from Faculty of Education, and 321 students (40.9%) from Faculty of Engineering participated in the study. Moreover, 363 of the participants were female (46.3%) and 421 of the participants were male (53.7%).

### **3.3 Data Collection Instrument**

In this study, The Procrastination Assessment Scale-Students (PASS) developed by Solomon and Rothblum (1984) was used as the data collection instrument.

The PASS, a 44 item self-reported instrument, consists of two parts. The first part, consisting of 18 items, assesses *the prevalence of procrastination* in six areas of academic functioning: a) writing a term paper, b) studying for an exam, c) keeping up weekly reading assignments, d) performing administrative tasks, e) attending meeting and f) performing

academic tasks in general (see in the Appendix A). Each of six areas has three items, on a 5-point Likert scale, the degree to which students procrastinate on the tasks (1 = never procrastinate; 5 = always procrastinate) such as “To what degree do you procrastinate on writing a term paper?”; the degree to which procrastination on the task is problem for them (1 = not at all a problem; 5 = always a problem) such as “To what degree is procrastination on writing a term paper a problem for you?”; and the extent to which they want to decrease their procrastination behavior (1 = do not want to decrease; 5 = definitely want to decrease) such as “ To what extend do you want to decrease your tendency to procrastinate on writing a term paper?” . As the definition of procrastination emphasizes both behavioral delay and psychological distress, the degree of procrastination and the degree to which it presents a problem are summed for each academic task (for a score ranging from 2 to 10) as well as across the six areas of academic functioning. In other words, the first two questions of each of the six procrastination areas (1+2+4+5+7+8+10+11+13+14+16+17) are summed to get a total score ranging from 12 to 60. The scores obtained from the first part of the PASS indicate academic procrastination of the respondents (Solomon & Rothblum, 1984).

The second part of the PASS, *the reasons of procrastination*, provides a procrastination scenario which is about delaying on writing a term paper and then lists a variety of possible reasons of the procrastination on the tasks: a) evaluation anxiety, b) perfectionism, c) difficulty in making decision, d) dependency and help seeking, e) aversiveness of the task and low frustration tolerance, f) lack of self-confidence, g) laziness, h) lack of assertion, i) fear of success, j) tendency to feel overwhelmed, and poorly manage time, k) rebellion against control, l) risk taking, and m) peer influence. In this part, which consists of 26 items, two statements are listed (see in Appendix B) for defining each of these reasons, and participants are asked to rate each statement on a 5-point Likert scale (1 = not at all reflects why I procrastinated; 5 = definitely reflect why I procrastinated) according to

how much it reflects why they procrastinated the last time they were in this situation (Solomon & Rothblum, 1984). Two statements are listed for each of these reasons. For example; the two risk taking statements are “You looked forward to the excitement of doing “You liked the challenge of waiting until the deadline”.

Solomon and Rothblum (1984) stated that for research in which the goal of measuring academic procrastination including the degree and/or prevalence of the behavior, a procrastination summary score can be derived through scores from the first part of the PASS. The second part of the PASS provides the self-reported reasons of procrastination. Hence, the purpose of using the PASS in the present study was to measure the level and the prevalence of procrastination besides to find out the self-reported reasons of it.

There are a number of studies that have indicated that PASS possesses adequate reliability and validity. In the study of Ferrari (1989), conducted with university students, and found adequate levels of coefficient alpha, .75 for the first part and .70 for the second part of the PASS. Test-retest reliability over a six-week interval yielded .74 and .65 for the first and the second part of the PASS, respectively. Senecal et al. (1995) also found the scale highly reliable (coefficient alpha = .88).

Onwuegbuzie (2004) carried out a study with 135 graduate students, and he found .85 coefficient alpha scores for the procrastination scale, .82 for the first and .89 for the second part of the scale.

To determine validity of the PASS, it was compared with other personality measures such as indecision (.32), depression (.27), irrational beliefs (.20) (Beswick, Rothblum, & Mann, 1988), and trait anxiety (.13) (Solomon & Rothblum, 1984). Moreover, Rothblum et al. (1986) reported that total PASS/Part 1 scores were negatively correlated with the course grades (-.22).

In the literature, there are procrastination inventories that measure two broad categories, namely academic procrastination and everyday

procrastination. Within the related literature, the PASS constitutes “the most widely used scale to explore procrastination on academically related tasks” (Ferrari, Johnson & McCown, 1995, p. 48). Hence, it was used as the data collection instrument in the present study. The other procrastination scales are Aitken Procrastination Inventory (API, 1982), General Procrastination Scale (GP, 1986), Decisional Procrastination Scale (DP, 1982), Adult Inventory of Procrastination (AIP, 1989), and the Tel-Aviv Procrastination Inventory (TAP, 1983).

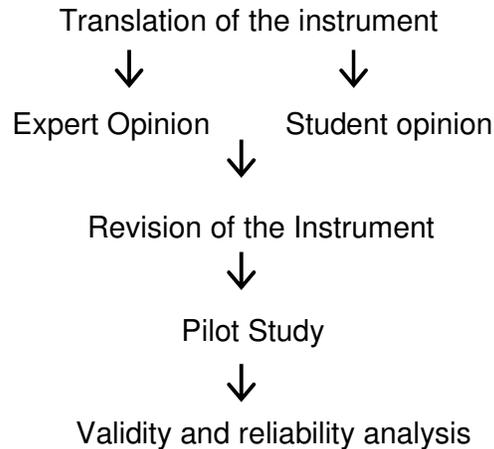
The Aitken Procrastination Inventory (API) is a self-report measure of procrastination developed by Aitken (1982). The API consists of 19 items on a 5- point Likert scale. General Procrastination Scale (GP) developed by Lay (1986) is another self-reported measure. The GP consists of 20 items on a 5- point Likert scale and it measures procrastination in everyday life. Decisional Procrastination (DP) Scale was developed by Mann (1982) a well-known decision making theorists. It examines dilatory behavior as it relates to important decision making situation. The DP has 5 items on a 5-point Likert scale. Finally, Adult Inventory of Procrastination (AIP) was developed by McCown and Johnson (1989) to meet the need for a measure of procrastination not limited to college students. The AIP consists of 15 items on a 5-point Likert scale (Ferrari et al., 1995).

Regarding the purpose of the present study which was to measure procrastination on academic areas, the PASS was used as a data collection instrument.

### **3.3.1 Translation and Adaptation of the Instrument**

As, the original version of the PASS is in English, it was translated and adapted into Turkish so that they referred to the Turkish students. During this adaptation process, five steps were followed, which are summarized in Figure 3.1. According to this procedure, first of all the PASS was translated into Turkish. Then in order to look at the evidence of content related validity, the data collection instrument was given to experts to get feedback and the

students' opinion was taken. Based on the feedback received and the students' opinion about the academic areas that they have in their departments obtained, the PASS was revised and piloted. After the pilot study, validity and reliability studies were conducted. Finally, the last revision of the instrument was formed.



*Figure 3.1* The translation and adaptation process of the data collection instrument

The steps, followed during the translation and adaptation of data collection instrument, are explained in detail below.

### **3.3.1.1 Translation of the Instrument**

For the first step of the adaptation and translation process, the Procrastination Assessment Scale-Students was given to two psychological counselors who know both languages well and three English instructors to translate from English into Turkish. After translation, the items that represent the original version best among five translated instruments were chosen. The researcher thought that some of the original version of the items could not reflect the actual meaning when back translated. Hence, back translation of the instrument was purposefully avoided as the adequacy of the translation

could be threatened and create both concept and item bias (Van de Vijver & Hambleton, 1996).

### **3.3.1.2 Expert and Student Opinion**

After the translation period, the PASS was given to 3 experts in order to get feedback prior to administration of the instrument. All experts, two professors and an associate professor, were actively working in the field of Psychological Counseling and Guidance, in the department of Educational Sciences at Middle East Technical University. Each expert given the Turkish version of the PASS was asked to evaluate the scale critically in terms of its physical layout, wording of the items, and whether they were content relevant or not. They were also asked to think of the items that may be revised for the adaptation to Turkish culture.

Moreover, Students Opinion Questionnaire (see in the Appendix C) was develop to get the information from students about the academic areas that they already have in their departments and their procrastination areas so as to investigate to what extend the original version of the PASS represented the METU students' academic and procrastination areas. The Student Opinion Questionnaire was administered to 44 students who are freshmen, sophomore, junior and senior grades enrolled in five faculties of Middle East Technical University by using convenience-sampling method. Among these 44 students 4 were from Faculty of Education, 14 were from Faculty of Art and Sciences, 5 were from Faculty of Architecture, 5 were from Faculty of Economics and Administrative Sciences, and 16 were from Faculty of Engineering. The results of the study revealed that students' academic procrastination areas were similar to 6 academic areas (writing a term paper, studying for an exam, keeping up weekly reading assignments, performing administrative tasks, attending meeting, performing academic tasks in general) that the original version of the PASS included. Therefore, the data obtained from the METU students showed that the academic areas including

the original version of the PASS could represent the METU students. In other words, responses obtained through the questionnaire demonstrated that writing a term paper, studying for an exam, keeping up weekly reading assignments, academic administrative tasks such as registering for classes and getting ID cards, attendance tasks such as attending the classes and meeting with the advisor, and school activities in general such as cultural and social activities are the most frequently procrastinated areas in an order.

### **3.3.1.3 Revision of the Instrument**

The experts read and evaluated the Turkish version of the PASS in a week time. While the researcher was taking Turkish version of the PASS back from the experts, an informal talk took place with the experts about how changes and/or adaptation they suggested could be met. Finally, the instrument was revised by taking into account the feedback getting from the expert and opinions obtained from the students through the questionnaire aforementioned in the second step. The physical layout of the first part of the original version of the scale was rearranged in accordance with the 3 subscales including six academic areas (see in the Appendix D). In other words, the first 12 questions (1+2+3+4+5+6+7+8+9+10+11+12) are summed to get a total score ranging from 12 to 60.

### **3.3.1.4 Pilot Study**

After the expert and students' opinions were taken and the necessary revision was made, the Turkish version of the PASS was piloted with 203 undergraduate university students. The participants involved in the pilot study were not included in the sample during the administration of the actual study. The volunteer students involved in the pilot study were selected conveniently. In other words, they were the students who were available to collect data for the researcher. The participants involved in the study constituted the undergraduate students from 37 departments and five faculties of Middle East Technical University. Among these 203 students, 23 were from Faculty

of Architecture (11.3%), 33 were from Faculty of Art and Science (16.3%), 30 were from Faculty of Economics and Administrative Sciences (14.8%), 53 were from Faculty of Education (26.1%) and 64 were from Faculty of Engineering (31.5%). The participants of the pilot study also consisted of 54 freshmen (26.6%), 40 sophomore (19.7%), 48 junior (23.6%), and 61 senior (30%) grades. Moreover, 109 of the participants were female (53.7%) and 94 of the participants were male (46.3%). The mean age of the participants was 20.6 with standard deviation of 1.78 and their ages ranged between 17 and 28.

The pilot study was carried out in the spring semester period of 2003-2004 academic year. The administration of the data collection instrument, Turkish version of the PASS, lasted three week.

#### **3.3.1.5 Reliability and Validity Analysis**

In order to look at the internal consistency of the items in the data collection instrument, the SPSS reliability scale procedure was conducted and Cronbach's Alpha estimation was calculated. The results showed that the Cronbach alpha coefficient was .86 for overall scale.

Moreover, for the reliability study, correlation matrix was obtained. As Fowler (1995) defines it, "if several questions are measuring the same or closely related things, then they should be highly correlated with one another" (p. 139). In the matrix, the items that had a correlation more than .55 were carefully examined to avoid repeating expression in the instrument. However, items that had a correlation more than .55 were not found.

In order to look at the evidence of content related validity, the PASS was compared to the Turkish version of the PASS (mentioned in the second step, expert opinion) involved in the opinions of the academics in the field of psychological counseling and guidance.

In addition, for the evidence of content related validity, factor analysis was conducted by using SPSS 11.5 Software Program for both for the first,

*prevalence of procrastination*, and the second, *reasons of procrastination*, part of the Turkish version of the PASS separately.

### **3.3.1.5.1 Part 1 Prevalence of Procrastination**

*Factor Structure:* Prior to factor analysis, missing value analysis was conducted with the data set consisting of 203 cases. Any case involving missing values greater than 5% of the total cases was detected. As the missing values in other cases distributed randomly, expectation-maximization (EM) values were assigned to the cases instead of the missing values.

Factor analysis was performed with the principal component analysis with varimax rotation on a sample size of 203 for the 18 items for the first part of the PASS. The results of the analysis clearly yielded 3 factors with Eigenvalues greater than 1.00 and explained 44.5% of the total variance. The items loading the 3 factors represent the original factor structure for the first part of the scale. In this regard, items 1, 2, 3, 5, 4, 6 accounted for 13.7% of the variance and constituted *frequency of procrastination* for the factor one. The second factor with the items 7, 8, 11, 10, 12, 9 accounted for 12.9% of the total variance and constituted *causing a problem*. The third factor which explained 17.8% of the variance contained the items and constituted *tendency to decrease*. The result showed that the first part of the Turkish form of the PASS represented the same factor structure with the original form developed by Solomon and Rothblum (1984); hence, these three factors were named as the original subscales.

Factor loadings and the items of the first part of the PASS (Prevalence of Procrastination) are presented in the Table 3.1.

Table 3.1

*Factor Loadings of the First Part of the PASS (Prevalence of Procrastination) Items*

Item Numbers	Factor 3 Tendency to decrease	Factor 1 Frequency of Procrastination	Factor 2 Causing a Problem
13	<b>.75</b>	.10	.04
14	<b>.75</b>	.08	-.01
15	<b>.74</b>	-.08	.11
17	<b>.74</b>	.12	.22
16	<b>.65</b>	.01	.14
18	<b>.55</b>	-.14	.23
2	.17	<b>.74</b>	-.07
1	.18	<b>.73</b>	-.13
3	.08	<b>.73</b>	-.12
4	-.05	<b>.59</b>	.17
5	-.13	<b>.54</b>	.24
6	-.09	<b>.31</b>	.15
7	.11	.14	<b>.67</b>
8	.10	.12	<b>.64</b>
11	.23	-.03	<b>.58</b>
10	.12	-.07	<b>.53</b>
12	.00	-.00	<b>.50</b>
9	.07	-.07	<b>.49</b>

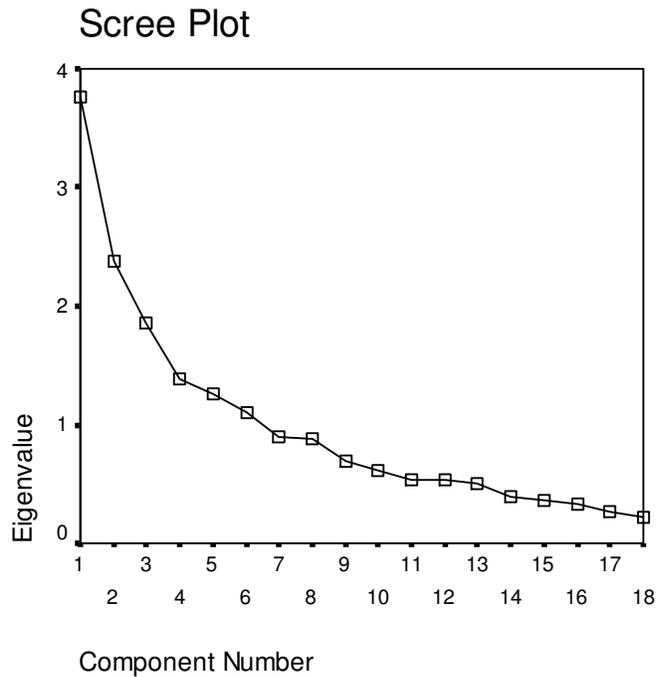


Figure 3.2 Scree Plot of the First Part of the Turkish version of the PASS, Prevalence of Procrastination

*Reliability:* Internal consistency for the first part, *prevalence of procrastination*, of the PASS was calculated through the Cronbach Alpha estimation that was applied to the same sample. The result showed that the Cronbach Alpha coefficient was .76 for 18 items, first part of the PASS; .68 for the Frequency of procrastination, .65 for the Causing a problem, and .81 for the Tendency to decrease subscales.

### 3.3.1.5.2 Part 2 Reasons of Procrastination

*Factor Structure:* For the second part of the PASS, scores on the 26 reasons of academic procrastination were entered into a principal component factor analysis to compute the subscales of academic procrastination. Three criteria were used to determine the number of factors to rotate: the priori hypothesis stemming from the original study that the measure was 2 main factors, the scree-test together with the eigenvalues and interpretability of the

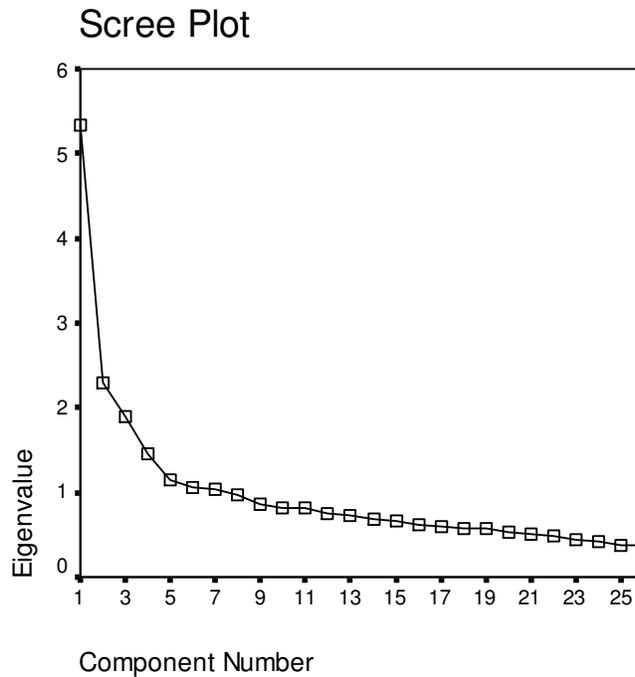
factor solution. The scree plot and eigenvalues indicated that the initial hypothesis of two-dimensionality was incorrect for the METU sample. Consequently, four factors were rotated using a varimax rotation procedure to identify the causal factors of academic procrastination among undergraduate METU students. Varimax rotation of a principal axis produced a four factor solution with eigenvalues greater than 1.00 and explained 46.5% of the common variance. The first factor with 11 scale items accounted for 18.2% of the variance and focused on *fear of failure* as a task delay. The second factor, which explained 10.5% of the variance, contained 7 scale items and focused on *risk taking*. The third factor contained 5 scale items and explained 9.5% of the variance focused on *laziness*. The last and the fourth factor contained 3 scale items, explained 8.2% of the variance and focused on *rebellion against control*. The name of the causal factor was assigned to a given factor when their loading on that factor was higher than their loading on the other factors (Milgram, et al., 1994).

The factor loading and items of the second part of the PASS (Reasons of Procrastination) are presented on the table 3.2.

Table 3.2

*Factor Loadings of the Second Part of the PASS Items*

Item Numbers	Factor 1 Fear of Failure	Factor 2 Risk Taking	Factor 3 Laziness	Factor 4 Rebellion against control
6	<b>.77</b>	.03	-.01	.05
15	<b>.70</b>	.12	.05	.30
1	<b>.67</b>	.12	-.09	.01
24	<b>.65</b>	.03	.11	.34
11	<b>.64</b>	.19	.14	.22
5	<b>.63</b>	.25	.06	-.10
3	<b>.62</b>	.01	.11	-.17
8	<b>.55</b>	.05	.22	.30
10	<b>.50</b>	-.10	.42	.17
23	<b>.49</b>	.47	.10	-.08
13	<b>.41</b>	.26	.14	.01
18	-.00	<b>.73</b>	.17	.10
14	.16	<b>.62</b>	-.14	.29
22	.25	<b>.59</b>	-.11	.29
19	.15	<b>.53</b>	.44	-.08
12	-.23	<b>.51</b>	.09	.36
2	.31	<b>.45</b>	-.03	-.16
26	.21	<b>.36</b>	.22	.19
17	.15	.24	<b>.66</b>	.09
16	.24	-.00	<b>.65</b>	.03
25	.05	.00	<b>.63</b>	.13
9	.01	.00	<b>.52</b>	.25
4	-.13	.06	<b>.49</b>	-.30
20	.00	.28	.20	<b>.68</b>
7	.11	.12	.08	<b>.66</b>
21	.47	.02	.12	<b>.50</b>



*Figure 3.3* Scree Plot of the Second Part of the Turkish Version of the PASS, Reasons of Procrastination

The results of the factor analysis showed that the present factor structure does not match up with the Solomon and Rothblum (1984) study which was produced two main factors out of seven. However, such differences should not be unexpected. Milgram, Batori, and Mowrer (1993) and Watson (2001) clarified that data having to do with reasons of procrastination are effected by population used and the methods employed for collecting data. Although the methods used and the instrument administered in the present study and Solomon and Rothblum's (1984) study are basically the same, the population is different. That the present data gathering approximately 20 years later with a different culture might be another effect of this difference. In this regard, four casual factors of the second part of the PASS, reasons of procrastination, were accepted.

*Reliability:* Internal consistency of the second part of the PASS, *reasons of procrastination*, was also calculated through Cronbach's Alpha estimation that was applied to the same sample. The result showed that the Cronbach Alpha coefficient was .81 for the 26 item second part of the PASS; .86 for the Fear of Failure, .69 for Risk Taking, .61 for the Laziness, and .66 for the Rebellion against Control subscales.

The results of the reliability study indicated that the PASS had "satisfactory" (Argyrous, 2000) internal consistency for the subscales as well as the overall scale.

### **3.4 Data Collection Procedures**

Demographic questionnaires including the explanation of the present study and the two parts of the Turkish version of the PASS were prepared to collect data. The scales were administered by the researcher by getting permission from the instructors of the class. It took the participants approximately 15 minutes to complete the scale and demographic questionnaire sheet. The data was collected in 4 week duration at the end of the fall semester of 2004-2005 academic year.

### **3.5 Data Analysis Procedure**

The statistical analysis was carried out by making use of SPSS-PC software program. In this study, mainly descriptive statistics, independent t-test, Pearson Product Moments Correlation Coefficient, one way Analysis of Variance (ANOVA), and factor analysis were used to analyze the data. Descriptive statistics was used to get the frequencies, percentages, means, and standard deviations of the data. Independent t-test was performed to analyze gender differences of academic procrastination and the reasons of academic procrastination. Moreover, Pearson Product Moments Correlation Coefficient was conducted to examine the relationship between academic procrastination score and academic achievement level (CGPA). As the follow up study, one way analysis of variance was performed to reveal the pairwise

differences among low, medium and high achievers. Finally, principal components analysis was also carried to determine the self-reported reasons of academic procrastination.

### **3.6 Assumptions**

In the study the following assumptions were made:

1. It was assumed that the responses of the participants to the questionnaire used in this study were sincere.
2. It was assumed that while filling in the questionnaire, the participants considered the possible reasons of dilatory behaviors when performing academic tasks.

### **3.7 Limitations of the Study**

In the light of this study, possible limitations should be considered; the scope of the study is limited to the data collected from undergraduate level of students namely; freshmen, sophomore, junior and senior grades, enrolled in the Middle East Technical University. Hence, generalization of findings to prep-school and graduate students is limited.

Regarding the sample size, seven hundred and eighty four students were satisfactory enough to conduct factor analysis. However, all the participants were the students of Middle East Technical University, thus, the generalization of the findings would be limited with this sample.

In addition, as the study was aimed at finding out the possible reasons of academic procrastination by using second part of the Procrastination Assessment Scale-Students (PASS), the results of the study does not provide the clear-cut factors.

Moreover, as the PASS includes the academic procrastination in six areas of academic functioning namely; a) writing a term paper, b) studying for an exam, c) reading weekly assignments, d) academic administrative tasks, e) attendance tasks, and f) school activities in general; prevalence of academic procrastination is limited to the six academic areas.

Another limitation might be owing to the self-report nature of the study; the results might not reflect the students' actual procrastination level and reasons.

## **CHAPTER IV**

### **RESULTS**

This chapter contains mainly four sections. In the first section, the results of the descriptive statistics including means, standard deviations of the data and the degree of the academic procrastination in terms of the gender are presented. In the second section, the prevalence of academic procrastination in six areas of academic functioning and the gender difference are reported. The third section contains the results of the one way Analysis of Variance (ANOVA) which was performed to examine the difference between academic procrastination levels and academic achievement of the students. Finally, the results of the Principal components analysis carried out to find out the causal factors of academic procrastination and the gender differences are given in the fourth section.

#### **4.1 Academic Procrastination Levels**

The first problem statement of the present study was formed as “What is the academic procrastination level of undergraduate student?” In this regard, students’ academic procrastination level was investigated by using descriptive statistics. As the physical lay out of the first part of the Procrastination Assessment Scale- Students was modified, the first 12 question (1+2+3+4+5+6+7+8+9+10+11+12) of the first part was summed to get a total score according to the criteria developed by Solomon and Rothblum (1984). Scores on the PASS ranged from 18 to 60.

The overall academic procrastination mean of the sample was found 36.8 with a 5.7 standard deviation and the score ranged between 18 and 60. The median split of the first part of the PASS which was 37.0 was used to determine the procrastinators and non-procrastinators as used in most

studies for self-reported scales to compare procrastinators and non-procrastinators (Beck Koons & Milgrim, 2001; Brownlow & Reasinger, 2000; König & Kleninmann, 2004; Schouwenburg, 1992; Van Eerde, 2003). Hence, the students who have scoring under 37.0 were defined as non-procrastinators and students scored above 37.0 were defined as procrastinators. Level of the academic procrastination among students was calculated and the result showed that 405 of the students (52%) were procrastinators, while 379 of the students (48%) were non-procrastinators.

#### 4.1.1 Gender Differences on Academic Procrastination Level

The sub-question of the first problem statement was “Is there any significant difference between female and male students’ procrastination level?” in this regard, an independent-sample t-test was conducted to examine the difference between female and male students’ academic procrastination level based on the unequal variances assumed. The participants of the present study consisted of 363 female (46.3%) and 421 male (53.7%) students. The results including means, standard deviations of the female and male subjects and t-values are presented in table 4.1.

Table 4.1

*Means, Standard Deviations of Females and Males and t-value*

	Gender	N	M	Sd	df	t	Sig.
Academic	Female	363	36.14	5.64	767.40	3.0	.002
Procrastination	Male	421	37.39	5.70			

As it is seen on the table, the t-test was found significant  $t(767.40) = 3.0$ ,  $p = 0,002$ . In other words, the result of the t-test showed that male students ( $M = 37.39$ ,  $SD = 5.70$ ) have higher academic procrastination score than female students ( $M = 36.14$ ,  $SD = 5.64$ ).

## 4.2 Prevalence of Academic Procrastination in Six areas of Academic Functioning

The second problem statement of the present study was formed as “What is the undergraduate students’ prevalence of academic procrastination in six areas of academic functioning?” In this regard, academic procrastination in six areas of academic functioning namely; a) writing a term paper, b) studying for an exam, c) reading weekly assignments, d) academic administrative tasks, e) attendance task, and f) school activities in general, was investigated by using Descriptive Statistics including frequencies and percentages.

As recommended by the PASS’s authors (Solomon & Rothblum, 1984), the PASS items pertaining to (a) the frequency with which respondent procrastination on a task (1 = never procrastinate; 5 = always procrastinate), and (b) whether their procrastination on that task is a problem (1 = Not at all a problem; 5 = Always a problem) were summed to provide a score for each task and ranging from 2 to 10. Students who reported on the PASS that they *nearly always* or *always* procrastinate on each task and that such procrastination *nearly always* or *always* create a problem were considered as high self-reported procrastination on each task. That is, students who were defined as high procrastinators had a total score ranging from 8 to 10 on these academic areas. All of the other subjects (with scores ranging from 2 to 7) were considered as low procrastinators. Thus, low procrastinators were considered that they were *infrequent* and *occasional* procrastinators (Rothblum et al., 1986).

The results including METU students’ prevalence of academic procrastination in six areas of academic functioning and students’ frequencies are presented in the Table 4.2.

Table 4.2

*Prevalence of Academic Procrastination in Six Areas of Academic Functioning*

Academic Areas	Procrastination on a Task			
	<i>Nearly always</i> or <i>always</i> procrastinate (4-5)		<i>Never</i> or <i>sometimes</i> procrastinate (1-3)	
	# of student	%	# of student	%
Writing a Term Paper	233	29.7	551	70.3
Studying for an Exam	256	32.7	528	67.3
Reading Weekly Assignments	237	30.2	547	69.8
Academic Administrative Tasks	80	10.2	704	89.8
Attendance Tasks	61	7.8	723	92.2
School Activities in General	41	5.2	743	94.8

As it is seen on the table, METU students reported that they procrastinate more on when studying for an exam (33%), reading weekly assignments (30%) and writing a term paper (30%) then the other three academic areas namely; academic administrative tasks (10%) such as registering courses and/or getting ID cards, attendance tasks (8%) such as attending the courses and meeting with the academic advisor, and school activities in general (5%).

#### **4.2.1 Gender Differences on Prevalence Academic Procrastination**

The sub-question of the second problem statement was “Is there any significant difference between female and male students’ prevalence of

academic procrastination in six areas of academic functioning?” In this regard, an independent-sample t-test was conducted to examine the difference of prevalence of academic procrastination between female and male students based on the unequal variance assumed. The participants of the present study consisted of 363 female (46.3%) and 421 (53.7%) male students. The results including means, standard deviations of female and male subjects and t-values are presented in table 4.3.

Table 4.3

*Independent Sample t-test on Gender Difference of Prevalence of Academic Procrastination in Six Areas of Academic Functioning*

	Gender	<i>N</i>	<i>Mean</i>	<i>Sd</i>	<i>df</i>	<i>t</i>	<i>Sig.</i>
Writing a Term Paper	Female	363	6.52	1.68	754.1	1.8	.078
	Male	421	6.73	1.60			
Studying for an Exam	Female	363	6.69	1.53	756.4	3.3	.001
	Male	421	7.04	1.48			
Reading Weekly Assignment	Female	363	6.79	1.44	767.3	.7	.469
	Male	421	6.87	1.46			
Academic Administrative Tasks	Female	363	5.44	1.62	775.8	2.4	.018
	Male	421	5.72	1.72			
Attendance Tasks	Female	363	5.45	1.40	773.9	1.0	.049
	Male	421	5.65	1.47			
School Activities in General	Female	363	5.22	1.36	766.5	1.3	.210
	Male	421	5.35	1.37			

As it is seen on the table, t-test was not found as significant in the prevalence of procrastination on writing a term paper,  $t(754.099) = 1.8, p = .08$ ; reading weekly assignments,  $t(767.313) = 0.7, p = .47$ ) and school activities in general,  $t(766.538) = 1.3, p = .21$ ). That means, there is no significant difference between female ( $M = 6.52, SD = 1.68$ ) and male ( $M = 6.73, SD = 1.60$ ) students in terms of prevalence of procrastination on writing a term paper; on reading weekly assignments (female:  $M = 6.79, SD = 1.44$ ; male:  $M = 6.87, SD = 1.46$ ); and on school activities in general (female:  $M = 5.22, SD = 1.36$ ; male:  $M = 5.35, SD = 1.37$ ).

On the other hand, the t-test was found significant in the prevalence of procrastination on studying for an exam,  $t(756.439) = 3.3, p = .001$ ); on academic administrative tasks,  $t(775.827) = 2.4, p = .018$ ); and on attendance tasks,  $t(773.983) = 1.0, p = 0.049$ ). That means, there is a significant difference between female ( $M = 6.69, SD = 1.53$ ) and male ( $M = 7.04, SD = 1.48$ ) students in terms of procrastination on studying for an exam; on academic administrative tasks (female:  $M = 5.44, SD = 1.62$ ; male:  $M = 5.72, SD = 1.72$ ); and on attendance tasks (female:  $M = 5.45, SD = 1.40$ ; male:  $M = 5.65, SD = 1.47$ ).

In other words, male students' academic procrastination level were found significantly higher than the female students' on three academic areas namely; studying for an exam, academic administrative tasks (such as registering courses and getting Id cards), and attendance tasks (such as attendance courses and meeting with academic advisor). Whereas, there is no significant difference was found between the female and male students in the other three academic areas namely; writing a term paper, reading weekly assignments and school activities in general.

### **4.3 Academic Procrastination and Academic Achievement**

The third question of the present study was stated as "What is the relationship between academic procrastination level and academic achievement of the students?" In this regard, Pearson Product Moments

Correlation Coefficient was conducted to evaluate the relationship between academic procrastination score and academic achievement of the students. The mean of cumulative General Point Average (CGPA) scores of the participants was 2.74 with standard deviation of 0.58 and their CGPA scores ranged between 1.08 and 3.99. The results of the correlation analysis showed that there is a significant negative relationship between students' academic procrastination level and their cumulative general point average (CGPA) ( $r = -.26$ ;  $p = .001$ ).

Because the significant negative relationship between academic procrastination and academic achievement was found, follow-up tests were conducted to evaluate the pairwise differences among students in terms of their general point average scores.

One way Analysis of Variance (ANOVA) was conducted for follow up test to evaluate the difference between three academic achievements (low-achievement, achievement and high-achievement) and academic procrastination level of students. The independent variable was CGPA scores of the students which were obtained self-reported. Middle East Technical University Regulation Grading System for Undergraduate Programs (Yönetmelikler, 2002) was used for classification of academic achievement. In this regard, the point between 1.00 and 1.99 was accepted as under-achievement, between 2.00 and 2.99 accepted as achievement, and between 3.00 and 4.00 accepted as high-achievement by taking into account the METU grading system. The independent variable was the students CGPA scores and the dependent variable was the sum of scores obtained from the first part of the PASS.

The ANOVA was found significant  $F(2,565) = 21.03$ ,  $p = 000$ . The result of the ANOVA according to academic achievement of the students is presented in the Table 4.4.

Table 4.4

*The result of the ANOVA according to Academic Achievement of the Students*

	<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
Between Groups	1169.21	2	584.60	21.03	.000
Within Groups	15700.07	565	27.78		
Total	16869.29	567			

Follow-up tests were conducted to evaluate pairwise differences among the means. Because the variances among the achievement levels of students ranged from 22.84 to 45.56, we chose not to assume that the variances were homogeneous and conducted post hoc comparison using the Dunnett's C test, a test that does not assume equal variances among the three level of academic achievement (Green & Salkind, 2003). The multiple comparison test indicated that overall academic procrastination level of the students who have under-achievement ( $M = 40.4$ ,  $SD = 6.7$ ), which constituted the highest scoring groups, was significantly higher than the academic procrastination level of the students who have achievement ( $M = 37.5$ ,  $SD = 4.8$ ), and students high-achievement, which constituted the lowest scoring group ( $M = 35.4$ ,  $SD = 5.5$ )., The means and standard deviations of academic procrastination level in terms of academic achievement is presented in Table 4.5.

Table 4.5

*Overall Academic Procrastination and Academic Achievement*

<i>Academic Achievement</i>	<i>N</i>	<i>M</i>	<i>sd</i>
Under-achievement	54	40.37	6,75
Achievement	315	37,47	4,78
High-achievement	199	35,43	5,54

Also, means of academic achievement and academic procrastination is presented on the Figure 4.1.

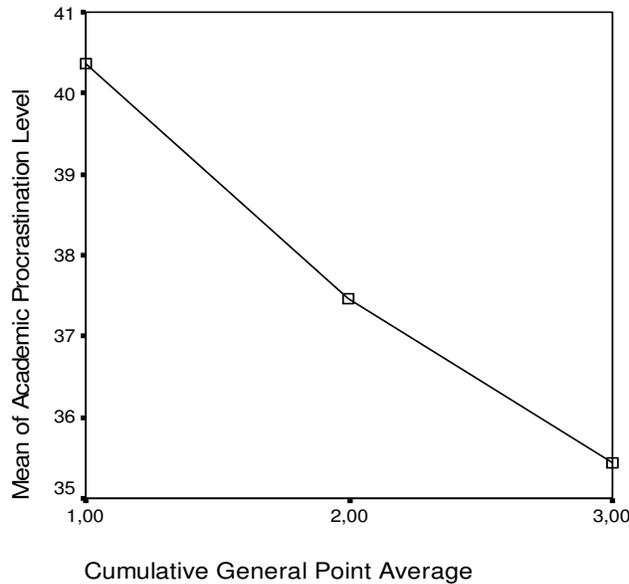


Figure 4.1 *Mean of Academic Procrastination and Academic Achievements*

As it is seen on the Figure 4.1, when academic achievement level of the student increase, academic procrastination level of the students decrease.

#### **4.4 Reasons of Academic Procrastination**

The fourth question of the present was “What are the reasons of academic procrastination?” In this regard, factor analysis was employed to investigate the reasons of academic procrastination of students through examining the factor structure of the second part of the PASS. The analysis was carried out with 784 students which were also the sample. The causal factor of the 26 items from the second part of the PASS was analyzed by using principal component factor analysis. Three criteria were used to determine the number of factors to rotate: the priori hypothesis stemming from the pilot study that the measure was 4 main factors, the scree-test together with the eigenvalues and interpretability of the factor solution. The

scree plot and eigenvalues indicated that the initial hypothesis of four-dimensionality which was the result of pilot study was correct for the sample. Consequently, four components were rotated using a varimax rotation procedure to identify the reasons of academic procrastination among undergraduate METU students. The rotated solution yielded four interpretable reasons with eigenvalues of 5.3, 2.3, 1.9, and 1.5 for fear of failure, risk taking, laziness, and rebellion against control, respectively. The *fear of failure factor* accounted for 16.4% of the item variance and included the evaluation anxiety, perfectionism, lack of assertion and lack of self confidence; *risk taking* factor accounted for 9.4% of the item variance and included peer influence, fear of success, and dependency and help seeking; the *laziness* factor accounted for 8.7% of the item variance and included aversiveness of task; and the final factor, *rebellion against control*, accounted for 7.6% of item variance. The result of the factor analysis with sample 784 students yielded the same factor loading with pilot study only that an item (item 21) converged under the rebellion against control factor. Item 21 converged under the fear of failure factor in the pilot study.

Consequently, the result regarding the reasons of procrastination showed that undergraduate students enrolled in Middle East Technical University in 2004-2005 academic year have procrastinated their academic tasks due to the reasons of fear of failure, risk taking, laziness, and rebellion against control.

#### **4.4.1 Gender Differences on Reasons of Academic Procrastination**

The sub-question of the fourth problem statement was “Is there any significant difference between female and male students’ reasons of academic procrastination?” In this regard; independent-sample t-test was conducted to examine the difference between female and male students’ reasons of academic procrastination based on the unequal variances assumed. The participants of the present study consisted of 363 female (46.3%) and 421 male (53.7%) students. The results including means,

standard deviations of the female and male subjects and t-values are presented in Table 4.6.

Table 4.6

*Means, Standard Deviations of Females and Males and t-values*

Reason	Gender	N	Mean	Sd	df	t	Sig.
Fear of Failure	Female	363	29.14	7.60	747.063	4.6	.000
	Male	421	26.73	7.09			
Risk Taking	Female	363	16.54	4.60	775.390	-3.8	.000
	Male	421	17.81	4.86			
Laziness	Female	363	17.20	3.55	754.207	2.8	.005
	Male	421	16.49	3.40			
Rebellion against Control	Female	363	4.22	2.02	765.900	-2.3	.019
	Male	421	4.57	2.03			

Fear of Failure: 11 item; Risk Taking: 7 item; Laziness: 5 item; Rebellion against Control: 3 item.

As it is seen on the table, the t-test was found significant  $t(747.063) = 4.6$ ,  $p = 0,00$  for the reason of fear of failure,  $t(775.390) = 3.8$ ,  $p = 0,00$  for the reason of risk taking,  $t(754.207) = 2.8$ ,  $p = 0,01$  for the reason of laziness, and  $t(765.900) = 2.3$ ,  $p = 0,02$  for the reason of rebellion against control. The results specifically showed that female students have higher procrastination score on the reason of fear of failure ( $M = 29.14$ ,  $SD = 7.60$ ) and laziness ( $M = 16.54$ ,  $SD = 4.60$ ) then do male students. On the other hands, male students have higher academic procrastination score on the reason of risk taking ( $M = 17.81$ ,  $SD = 4.86$ ) and rebellion against control ( $M = 4.57$ ,  $SD = 2.03$ ) than female students. In other words, the result showed that female students reported that they procrastinate on their academic tasks due to the reasons of fear of failure and laziness, while male students reported that they

procrastinate on their academic tasks for the reasons of risk taking and rebellion against control.

## **CHAPTER V**

### **DISCUSSION**

The aim of the present study was mainly fourfold; first; to investigate the academic procrastination level of undergraduate METU students, second; to examine the prevalence of academic procrastination in six areas of academic functioning, third; to find out the relationship between academic procrastination levels and academic achievement of university students, finally, fourth; to reveal the self-reported reasons of academic procrastination. Throughout this section, findings of the study which were presented in the previous section will be discussed in relation to relevant literature. Discussion of the findings follows the same sequence as does the result section.

#### **5.1 Discussion Regarding Levels and Prevalence of Academic Procrastination**

The first aim of the present study was to investigate the academic procrastination levels of undergraduate Middle East Technical University students. The results of the descriptive statistics showed that the overall mean of the sample was 36.8 with a 5.7 standard deviation. A total of 405 out of 784 undergraduate students (52%) scored high on procrastination, based on the median split criteria. In other words, 52% of undergraduate students enrolled in METU in 2004-2005 academic year procrastinate on their academic tasks.

The lack of literature regarding procrastination level in Turkey made it difficult to compare the findings with the Turkish students. Hence the findings were compared with the original study and the other studies done on this field in Europe or U.S.

The present findings was found consistent with the previous studies (Damacela, Tindale & Balcazar, 2000; Hil et al., 1976; Solomon & Rothblum, 1984) in university students samples, approximately 50% of the participants reported moderately high level of procrastination.

The findings also validated Solomon and Rothblum's (1984) Procrastination Assessment Scale-Students (PASS) measure and showed that most of the university students procrastinate on their academic tasks. The mean score of the Turkish university students was found 36.8 and the result showed little difference from the study done by Solomon and Rothblum (1984) on which mean score was found 33.5; 34.3 in the study done by Lamba, (1999) and the study done by Meyer (2001) the mean score was 37.23.

The difference between female and male students' on the score of academic procrastination level was analyzed as the sub-question of the first problem statement. The results showed that academic procrastination is connected with gender. In other words, male students procrastinate more on their academic tasks than does the female students.

The literature concerning gender differences on academic procrastination has been showing some differences. To date, many research studies have been conducted with varied samples in different countries. Each study has showed unique results regarding gender. Some research indicated no significant gender difference in the incidence of procrastination (Effert & Ferrari, 1989; Ferrari, 1991; Haycock, McCarty, & Skay, 1998; Hess, Sherman, & Goodman, 2000; Johnson & Bloom, 1995; Rothblum, Solomon, & Murakabi, 1986; Solomon & Rothblum, 1984; Watson, 2001) while others suggested that women are at risk than the men on being more procrastinator (Doyle & Paludi, 1998). Therefore, even though some research points towards no gender differences, there is some research that indicates that women procrastinate more as compared to men (Effert & Ferrari, 1989, Rothblum, Solomon, & Murakabi, 1986; Solomon & Rothblum, 1984). Specifically, Schouwenburg's (1992) study which conducted to investigate

the academic procrastinations with 278 students in Netherlands revealed no gender difference. Similarly, in the study done by Beswick, Rothblum, and Mann (1988) in South Australia yielded no gender difference.

More specifically Lamba (1999) investigated the effect of gender-role (masculinity, femininity, androgyny and unidentified) on academic procrastination with 118 Midwestern Caucasian college students and the results showed no significant effect of gender-role on procrastination.

One study stated that increased frequency of procrastination was not related to gender but to the consequence of procrastination that differed due to the sex or gender (Rothblum, Solomon, & Murakabi, 1986). The study showed some evidence that women may experience more anxiety than men because of their procrastination. Solomon and Rothblum (1984) and Kutlesa (1998) found that woman reported significantly more procrastination than man as a result of the reason of fear of failure. Similarly, in their study, Milgram, Marshevsky, and Sadeh (1994) found significant gender difference among low-delay high-upset students. Their study included 195 Israeli students and was found man more frequently procrastinate their academic tasks than do women as a result of time management problem. Also the study conducted by Milgram et al. (1994) yielded that the female Israeli students delayed less than the male students. In a similar vein, Senecal et al. (1995) carried out a study with 498 French-Canadian students and they found females procrastinated less than the males.

To conclude, as the research review showed, gender differences are not conclusive concerned with procrastination. While some studies showed significant relations of procrastination with the gender issue, some others reported no such findings. Based on these findings, it can be speculated that procrastination and gender difference might be a personality variable along with the cultural factors. More specifically, some studies reported no significant gender difference on procrastination done in the South Australia, Netherlands, and some district of U.S.A.; some other studies done in Israel and other state of U.S.A. reported significant difference.

Making inferences from the studies mentioned above, it could be argued that the difference in the results among the countries might be the cultural effects. The reasons of such behavior patterns such as procrastination may affect the cultural effects and may show variation. Lay (1995) explained the cultural contrast with the impact of individualistic and collectivistic cultural forces. The culture is an important determinant shape the behavior (Eskin, 2003). A study compared the values of Turkish and American university students showed that “individualistic or personal values to be more prevalent among U.S. students whereas loyalty to the family and to the society were predominant among the Turkish sample” (Karakitapoğlu & İmamoğlu, 2002, p. 335). More specifically, procrastinators in the American culture would be prone to experience actual-ideal discrepancy, in contrast with the members of more collectivistic or interdependent societies such as Turkey, Greece, who would be more likely to experience actual-ought discrepancies (Lay, 1995, Verkuyten, Thijs, & Canatan, 2001). In the collectivistic cultures female might be expected to be more successful and less procrastinator on their academic tasks. Because they are dependent in the traditional segment of the Turkish society and it might be difficult for them to express their individualistic concerns (Karakitapoğlu & İmamoğlu, 2002). In terms of the behaviors and the role, females are subject to stricter control (Yıldırım, 1997) which may bring to have more responsibility in the school. Their motivation to achievement is strongly determined by feelings of loyalty and obligation toward her parents and family (Verkuyten, Thijs, & Canatan, 2001). In the light of the information above, the cultural effect might be bringing the result that the female students in Turkey procrastinate less than male do.

Prevalence of academic procrastination in six areas of academic functioning was investigated as the second question of the present study. Descriptive statistics was used to examine the level of academic procrastination in six areas of academic functioning namely; a) writing a term paper, b) studying for an exam, c) keeping up weekly reading assignments,

d) academic administrative tasks, e) attendance task, and f) school activities in general.

The results showed that a substantial proportion of students reported strong tendencies to procrastinate on their studies. For example, 30% of students reported they “nearly always” and “always” procrastinate when writing term papers. A similar pattern of the responses was found on the task of studying for an exam (33% nearly always or always procrastinate) and keeping up weekly reading assignments (30% nearly always or always procrastinate). Moreover, while 10% of students reported to procrastinate on academic administrative tasks such as registering courses and/or getting ID cards, 8% of student was found as procrastinator on attendance tasks such as attendance courses and/or meeting with the academic advisor. Finally, 5% of students stated that they nearly always or always procrastinate on school activities in general.

The lack of the evidence in the Turkish literature regarding prevalence of academic procrastination made it difficult to interpret the findings of the present study. Hence, the findings were compared with the study original in procrastination term and the studies conducted in some other countries.

In the study done by Solomon and Rothblum (1984) carried out with Caucasian-American college students, 46% of the sample reported that they nearly always or always procrastination on writing a term paper, 28% on studying for an exam, 30% on keeping up weekly reading assignments, 23 % attendance tasks, 11% on performing academic administrative tasks, and 10 % of the students procrastinate on school activities in general.

Kachgal et al. (2001) found the consistent results with the Solomon and Rothblum’s (1984) original study in terms of prevalence of academic procrastination in six areas of academic functioning. The students participated in the study reported higher frequency of procrastination for three tasks that might have greatest impact on students’ academic performance: writing a term paper, studying for an exam, and keeping up weekly reading assignments. Also the other area of academic functioning were found less

procrastination areas, as consistent with the Solomon and Rothblum's (1984) study, namely; academic administrative task, attendance tasks, and school activities in general.

In another prevalence study, Clark and Hill (1994) found that among sample of 184 African-American undergraduate university students, high percentages reported nearly always or always procrastinating on writing a term paper (30%), studying for exams (28%), and reading weekly assignments (36%). The other areas of academic functioning were not indicated in the study as they had fewer percentages.

Consistent with the studies mentioned above, the present findings revealed that the students enrolled in Middle East Technical University in 2004-2005 academic year procrastinate more on studying for an exam, reading weekly assignments and writing a term paper than academic administrative tasks, attendance tasks, and school activities in general.

The more frequency of self-reported procrastination on studying for an exam, reading weekly assignments, and writing a term paper indicated that "these tasks are likely to be viewed as most important by students" (Solomon & Rothblum, 1984, p. 505) and they are probably the tasks that have a greatest effect on their academic life and academic success. Such tasks as academic administrative tasks, attendance tasks, and school activities in general are less important to the students; and they might view procrastination as less of a problem with those tasks, consequently, the students tend to procrastinate on these tasks less.

The present findings validated the study done by Tuckman (1998). He stated that students are likely to put off school assignments and they may study until the last possible moments. "They may study for exams but cannot necessarily be counted on to keep up with assignments reading. As a result, their study burden immediately preceding an exam that covers a number of chapters of assigned reading can be overwhelming" (p. 146).

The difference between female and male students' scores on academic procrastination was analyzed as the sub-question of the second

problem statement. The result showed that prevalence of academic procrastination in six areas of academic functioning is connected with gender apart from the area of writing a term paper, reading weekly assignments, and school activities in general. The findings specifically revealed that male students procrastinate more than the female students on three academic areas namely; studying for an exam, academic administrative tasks, and attendance tasks.

The findings are inconsistent with the studies done regarding the prevalence of academic procrastination in six areas of academic functioning (Kachgal, Hansen, & Kevin, 2001; Watson, 2001; Solomon and Rothblum, 1984) in which no significant gender difference was found in any areas of academic procrastination. The difference of the findings from the other studies presented above can be explained with cultural differences and the gender roles as does in the total procrastination difference between females and males. Studying for an exam might have a greatest impact of one's academic success. Hence, when culture effect is taken into consideration, the results which male procrastinate more than do female is an expected result. The difference can be explained by the reasons of academic procrastination which found and explained below as fear of failure, risk taking, laziness and rebellion against control. The male's procrastination on studying for an exam might be a cause of risk taking. Academic administrative tasks such as registering courses and/or getting ID card, and attendance tasks such as attending courses and/or meeting with the advisor might be seen as less important academic areas for the male students. When they procrastinate on registering the courses, they might have possibility to do that task at the add-drop period offered by METU registration system to the students a month later from the actual registration time.

## **5.2 Discussion Regarding Relationship between Academic Procrastination and Academic Achievement**

The relationship between academic procrastination and academic achievement of students examined as the third question of the present study. In order to find out the relationship between these two variables, Pearson product correlation coefficient was applied. As the correlation study showed a significant negative relationship between academic procrastination and academic achievement, one way ANOVA was conducted to evaluate the pairwise differences. The findings revealed an expected result that as the CGPA scores, which was the indicator of the academic achievement for the present study, increases the academic procrastination score decrease.

The findings validated the study done by Beswick et al., (1988) and Solomon et al., (1986), self-reported procrastination was found negatively correlated with academic performance; however, didn't support the study conducted by Solomon and Rothblum (1984).

Similar to the other recent research studies, students who have high score on procrastination tended to be performed more poorly (e.g. Jackson et al., 2003; Tice & Baumeister, 1997; Wesley, 1994) and gain lower grades (Fritzsche, Young, & Hickson, 2003; Wesb, 1986). However, we can not say the present study revealed that procrastination has a negative impact on overall general point average (GPA) and it is detrimental to academic performance (Senecal, Koestner, & Vallerand, 1995) as it is a correlational type of study.

## **5.3 Discussion Regarding Reasons of Academic Procrastination**

In order to investigate the reasons of academic procrastination, which was the fourth question of the present study, 26 reasons included in the second part of the PASS entered the principal component analysis, as does in some study to reveal cause and reasons of self reported scales (e.g. Çirakçioğlu, Kökdemir, & Demirutku, 2003). The result yielded four

interpretable factors, as found in the pilot study, which were fear of failure, risk taking, laziness and rebellion against control, respectively.

In other words, the findings regarding the reasons of procrastination revealed that undergraduate students enrolled in Middle East Technical University in 2004-2005 academic year have procrastinated their academic tasks due to the reasons of fear of failure, risk taking, laziness, and rebellion against control.

The lack of evidence in the Turkish literature regarding the reasons of academic procrastination made it difficult to interpret the findings of the present study. When looked at the empirical studies conducted in U.S. and Europe, it is seen that the reasons of procrastination have shown some differences. However, such differences should not be unexpected. Milgram et al. (1993) and Watson (2001) clarified that data having to do with reasons of procrastination are effected by population used and the methods employed for collecting data. Although the methods used and the instrument administered in the present study are basically the same with the Solomon and Rothblum's (1984) original study, the population is different.

In the literature, when the reasons of academic procrastination are taken into account, fear of failure and evaluation anxiety are seem to be more common reasons as excuse than others. In the study done by Solomon and Rothblum (1984); fear of failure and task aversiveness were found primary reasons for procrastinating. The fear of failure factor included the items which relate to evaluation anxiety, overly perfectionistic standards for one's performance and low self confidence.

Similarly, in the study done by Onwuegbuzie (2004) fear of failure was found the primary excuses of student for academic procrastination. On the other hand, Brownlow & Reasinger (2000) found that students put off school works more due to task aversion and difficulty in making decision.

In the study conducted by Watson (2001) six different causal factors were found. Similar to other studies mentioned above, the first result accounted the reason of fear of failure. And the other five reasons were

aversiveness of tasks, difficulty in making decision, rebellion against control, risk taking, and dependency, respectively.

The study done by Ferrari et al. (1998) yielded three causal factors for academic procrastination. In their study, the first reason focused on fear of failure as a motive for task delay, the second one was fear of social disapproval or possible threat to getting along with peers for quality performance as a motive for procrastination. The last factor was named as task aversiveness as a motive for procrastination.

In the study done by Ariley and Wertenbroch (2002) showed that the students were willing to take the risk of losing grade points to apply the self control mechanism of precommitment.

As the results of the studies presented above showed, the reasons of academic procrastination have been showing uniqueness for each sample used. The lack of Turkish literature regarding the reasons of procrastination made it difficult to interpret the present findings with the Turkish sample. Hence the findings were compared with the studies conducted in other countries.

The present findings, as consistent with the previous studies, yielded the fear of failure as the first causal factor. As seen in the recent studies mentioned above reasons of procrastination may show some differences. This diversity can be explained by cultural effect. Similar to this view, in the study done by Prohaska et al., (2001) any ethnic and/racial differences was found and the researchers suggested the probability of cultural effect on procrastination.

Finally, the difference between female and male students' reasons of academic procrastination was analyzed as the sub-question of the last problem statement. In order to examine the difference between genders with respect to the reasons of academic procrastination a serial measures independent t-test was applied. The results showed the significant difference between female and male subjects' reasons of procrastination. The findings specifically revealed that female students procrastinate on their academic

tasks more than the males as a result of fear of failure and laziness. On the other hand, the male students procrastinate on their tasks due to the reason of risk taking and rebellion against control.

According to Archer and Lloyd (1982), when masculine and feminine stereotypes are taken into account, females found more fearful than males as a result of hormonal constitution. Different from the males, females shows a fear of strangers and unfamiliar events at an earlier age. Then they develop avoidance from a fearful object. In the line with Archer and Lloyd's explanation regarding gender differences, it might be speculated that female students procrastinate or avoid performing their academic task due to the reason of fear of failure. Moreover, Erkut (1982) stated that few female achieve more than a primary education in Turkey, but those that go on in school are more successful than man in general. Erkut's view might be another explanation for the reasons of female procrastination. As the findings of the factor analysis and the t-test, female students procrastinate on their academic tasks due to the reasons of fear of failure attached with the perfectionism.

The females' reason of laziness can be explained in the line with Ferrari et al. (1995), in that "as society became dominated by clocks and calendars, and exact and measurable deadlines loomed more widely in people's lives, procrastination became associated with idleness and or sloth" (as cited in Subotnic, Steiner & Chakraborty, 1999).

To conclude and additionally, in the study done by Senecal and Lavolie (1997), 58 female students measured in an experimental condition. The researchers provided the participants interesting/easy task, interesting/difficult task, boring/easy task and boring/difficult tasks in an experimental setting. The result revealed that females procrastinate on boring/difficult test more than the other. Participants reported to procrastinate on boring/difficulty tasks due to feel less enjoyment, less competent, and more anxiety to failure. The study explained the reasons of the females' fear of failure and laziness factor which include aversiveness of tasks.

The findings of the present study regarding the reasons of academic procrastination as male engaged validated a meta-analysis study conducted by the researchers in three universities in Maryland. They summarized 150 studies on sex differences in risk taking (see Lippa, 2002). Some of these studies measured risk taking through self reported scales, and others observed actually risk taking behavior. The results revealed that male proved to take more risk than female did in exposing themselves to danger in experiments, exposing themselves to intellectual risks, and in the games of physical skills. When the results are taken into account, it can be speculated that the male students tend to procrastinate on their academic tasks for the reasons of risk taking behavior.

Similarly, another meta-analysis study (see Lippa, 2002) showed that male show more aggression behavior than female toward the physical attacks, psychological and social pressure. This result can indirectly explain the reasons of rebellion against control for male students.

Adolescents is a transition period characterized by relative differentiation from family, increased demands for freedom and enjoyment (Ericson, 1986) and adolescent from collectivistic society may emphasize values that serves individualistic emphasized (Karakitapoğlu & İmamoğlu, 2002). Also, perception of external control is strongly related with academic performance and failure (Hortaçsu & Üner, 1993). Accordingly, it could be speculated that the male student, who are more dominant and independent in the Turkish culture, engage procrastination on academic tasks more than the female students for the reason of rebellion against control.

Female gender role is assumed more communal/passive, while male gender role is assumed more agentic and active (Eskin, 2003). As this assumption is taken into consideration, it is expected result that the reasons of procrastination as fear of failure and laziness for female and risk taking and rebellion against control for the male students.

#### **5.4 Implications of the Findings**

Several implications may be drawn from the findings of the present study for counselors and the educators. The results of the present study pointed that more than half of the university students engage in procrastination nearly always or always. More specifically, the results of the present study pointed to the importance of the negative effects of procrastination on academic achievement. Hence the results of the present study may provide valuable data for university counselor and educators to be aware of the procrastination levels of the students on academic tasks.

Another important implication may drawn from the present study is gender differences on the reasons of procrastination. Therefore, counselor working on procrastination should understand that what indicates to reasons of procrastination for males may not be the same for females. Consideration of the gender differences in procrastination issue will aid the counselors in setting appropriate techniques and treatment goals.

Finally, making inferences from the results from the present study that point the personality difference among the students with respect to some factors, it can be suggested that overcoming procrastination workshops should arranged for university students.

#### **5.5 Recommendations for Further Research**

Because the present study is one of the first attempts to investigate the level and the reason of academic procrastination in the university population in Turkey, the results are clearly preliminary. Certainly, further research with larger and more demographically diverse populations would strengthen the findings of the study. Therefore, it is suggested to conduct future studies with samples from different universities, different regions of Turkey.

Another suggestion for future research might include conducting further research that investigate the level and the reasons of procrastination

with different age population as well as the examining the influence of age on levels of procrastination.

Furthermore, future direction for research with university students may include studies that examine the relationship between academic procrastination levels and the actual behavioral procrastination.

In addition, future research in this area should consider involving diverse samples within demographical and psychological variables. As mentioned in the introduction and the literature review sections, academic procrastination has been found to be associated with wide range of psychological variables such as perfectionism, locus of control, self-esteem, self-monitoring, motivation, stress and illnesses, self-handicapping, and learned helplessness. All these variables may be studied in relation to academic procrastination in Turkey.

At last, but not least, as the present study showed some cultural differences when compare with the other studies done on this issue in other countries with different cultures. Hence, future studies on this field should consider studying on cross-cultural issues regarding academic procrastination.

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## **APPENDICES**

### **APPENDIX A**

(Original Version of the Instrument)

## Procrastination Assessment Scale for Students (PASS)

### Areas of Procrastination

For each of the following activities, please rate the degree to which you delay or procrastinate. Rate each item on an “a” to “e” scale according to how often you wait until the last minute to do the activity. Then indicate on an “a” to “e” scale the degree to which you feel procrastination on that task is a problem. Finally, indicate on an “a” to “e” scale the degree to which you would like to decrease your tendency to procrastinate on each task.

#### I. WRITING A TERM PAPER

1. To what degree do you procrastinate on this task?

Never Procrastinate	Almost Never	Sometimes	Nearly Always	Always Procrastinate
a	b	c	d	e

2. To what degree is procrastination on this task a problem for you?

Not At All a Problem	Almost Never	Sometimes	Nearly Always	Always a Problem
a	b	c	d	e

3. To what extent do you want to decrease your tendency to procrastinate on this task?

Do Not Want to Decrease		Somewhat		Definitely Want to Decrease
a	b	c	d	e

## II. STUDYING FOR EXAMS

4. To what degree do you procrastinate on this task?

Never	Almost Never	Sometimes	Nearly Always	Always
Procrastinate				Procrastinate
a	b	c	d	e

5. To what degree is procrastination on this task a problem for you?

Not At All	Almost Never	Sometimes	Nearly Always	Always
a Problem				a Problem
a	b	c	d	e

6. To what extent do you want to decrease your tendency to procrastinate on this task?

Do Not Want		Somewhat		Definitely
to Decrease				Want to Decrease
a	b	c	d	e

## III. KEEPING UP WITH WEEKLY READING ASSIGNMENTS

7. To what degree do you procrastinate on this task?

Never	Almost Never	Sometimes	Nearly Always	Always
Procrastinate				Procrastinate
a	b	c	d	e

8. To what degree is procrastination on this task a problem for you?

Not At All a Problem	Almost Never	Sometimes	Nearly Always	Always a Problem
a	b	c	d	e

9. To what extent do you want to decrease your tendency to procrastinate on this task?

Do Not Want to Decrease		Somewhat		Definitely Want to Decrease
a	b	c	d	e

**IV. ACADEMIC ADMINISTRATIVE TASKS: FILLING OUT FORMS, REGISTERING FOR CLASSES, GETTING ID CARD**

10. To what degree do you procrastinate on this task?

Never Procrastinate	Almost Never	Sometimes	Nearly Always	Always Procrastinate
a	b	c	d	e

11. To what degree is procrastination on this task a problem for you?

Not At All a Problem	Almost Never	Sometimes	Nearly Always	Always a Problem
a	b	c	d	e

12. To what extent do you want to decrease your tendency to procrastinate on this task?

Do Not Want to Decrease		Somewhat		Definitely Want to Decrease
a	b	c	d	e

**V. ATTENDANCE TASKS: MEETING WITH YOUR ADVISOR, MAKING AN APPOINTMENT WITH A PROFESSOR**

13. To what degree do you procrastinate on this task?

Never Procrastinate	Almost Never	Sometimes	Nearly Always	Always Procrastinate
a	b	c	d	e

14. To what degree is procrastination on this task a problem for you?

Not At All a Problem	Almost Never	Sometimes	Nearly Always	Always a Problem
a	b	c	d	e

15. To what extent do you want to decrease your tendency to procrastinate on this task?

Do Not Want to Decrease		Somewhat		Definitely Want to Decrease
a	b	c	d	e

## VI. SCHOOL ACTIVITIES IN GENERAL

16. To what degree do you procrastinate on this task?

Never	Almost Never	Sometimes	Nearly Always	Always
Procrastinate				Procrastinate
a	b	c	d	e

17. To what degree is procrastination on this task a problem for you?

Not At All	Almost Never	Sometimes	Nearly Always	Always
a Problem				a Problem
a	b	c	d	e

18. To what extent do you want to decrease your tendency to procrastinate on this task?

Do Not Want		Somewhat		Definitely
to Decrease				Want to Decrease
a	b	c	d	e

### Reasons for Procrastination

Think of the last time the following situation occurred. It's near the end of the semester. The term paper you were assigned at the beginning of the semester is due very soon. You have not begun work on this paper. There are reasons why you have been procrastinating on this task.

Rate each of the following reasons on a 5-point scale according to how much it reflects why you procrastinated at the time. Mark your answers on your answer sheet.

Use the scale:

Not At All Reflects Why I Procrastinated		Somewhat reflects		Definitely Reflects Why I Procrastinated
a	b	c	d	e

19. You were concerned the profession wouldn't like your work.
20. You waited until a classmate did his or hers, so that he/she could give you some advice.
21. You had a hard time knowing what to include and what not to include in your paper.
22. You had too many other things to do.
23. There's some information you needed to ask the professor, but you felt uncomfortable approaching him/her.
24. You were worried you would get a bad grade.
25. You resented having to do things assigned by others.
26. You didn't think you knew enough to write the paper.
27. You really disliked writing term papers.
28. You felt overwhelmed by the task.
29. You had difficulty requesting information from other people.

30. You looked forward to the excitement of doing this task at the last minute.
31. You couldn't choose among all the topics.
32. You were concerned that if you did well, your classmates would resent you.
33. You didn't trust yourself to do a good job.
34. You didn't have enough energy to begin the task.
35. You felt it just takes too long to write a term paper.
36. You liked the challenge of waiting until the deadline.
37. You knew that your classmates hadn't started the paper either.
38. You resented people setting deadlines for you.
39. You were concerned you wouldn't meet your own expectations.
40. You were concerned that if you got a good grade, people would have higher expectations of you in the future.
  
41. You waited to see if the professor would give you some more information about the paper.
42. You set very high standards for yourself and you worried that you wouldn't be able to meet those standards.
43. You just felt too lazy to write a term paper.
44. Your friends were pressuring you to do other things.

## APPENDIX B

(The Items Represent the Reasons)

# of Items	PASS Items	Reasons
19	Concerned professor wouldn't like your work	Evaluation Anxiety
20	Waited until a classmate did his/hers to get you some advice	Dependency and help seeking
21	Hard time knowing what to include and what not to include in your paper	Difficulty Making Decisions
22	Had too many other things to do	Tendency to feel overwhelmed and poorly manage time
23	Needed to ask professor for information, but felt uncomfortable approaching him/her	Lack of Assertion
24	Worried you would get a bad grade	Evaluation Anxiety
25	Resented having to do things assigned by others	Rebellion Against Control
26	Didn't think you knew enough to write the paper	Lack of self-confidence
27	Really disliked writing term papers	Aversiveness of Task
28	Felt overwhelmed by the task	Tendency to feel overwhelmed and poorly manage time
29	Had difficulty requesting information from other people	Lack of assertion
30	Looked forward to the excitement of doing this task at the last minute	Risk-Taking

(Continued)

<b># of</b>	<b>PASS Items</b>	<b>Reasons</b>
31	Couldn't choose among all the topics	Difficulty in making decision
32	Concerned that if you did well, your classmates would resent you	Fear of Success
33	Didn't trust yourself to do a good job	Lack of self confidence
34	Didn't have enough energy to begin the task	Laziness
35	Felt it just takes too long to write a term paper	Aversiveness of Task
36	Liked the challenge of waiting until the deadline	Risk-Taking
37	Knew that your classmates hadn't started the paper either	Peer influence
38	Resented people setting deadlines for you	Rebellion Against Control
39	Were concerned you wouldn't meet your own expectations	Perfectionism
40	Were concerned that if you got a good grade, people would have higher expectations of you in the future	Fear of Success
41	Waited to see if the professor would give you some more information about the paper	Dependency and help seeking
42	Set very high standards for yourself and worried that you wouldn't be able to meet those standards	Perfectionism
43	Just felt too lazy to write a term paper	Laziness

(Continued)

---

# of	Items	PASS Items	Reasons
44	Friends were pressuring you to do other things		Peer influence

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## APPENDIX C

(Students Opinion Questionnaire)

Sevgili Öğrenciler,

Eğitim yaşantısında erteleme davranışı, oldukça yaygın olarak gözlenmektedir. Öğrencilerin başarılarını olumsuz yönde etkileyebilecek bu davranışın anlaşılması, erteleme davranışının önlenmesinde ilk adım olarak düşünülmektedir. Üniversite öğrencilerinin erteleme davranışlarını anlamaya yönelik olarak planlanan araştırmada, öncelikli olarak yapılan ve ertelenen akademik çalışmaların neler olduğunun belirlenmesi gerekmektedir. Sizden istenilen yerine getirdiğiniz ve ertelediğiniz akademik çalışmalarınızı en fazladan en aza doğru derecelendirerek listelemenizdir. Yardımlarınız için teşekkür ederim.

Bilge Uzun Özer  
Eğitim Bilimleri Bölümü  
Araştırma Görevlisi

Bölümünüz :

Sınıfınız :

**Yaptığınız akademik çalışmalar** (Örnek; derslere katılma, ödev yapma, okuma ödevlerini tamamlama, sınavlara hazırlanma, kayıt yapma, akademik danışmanınızla görüşme, genel olarak okul aktiviteleri vb.)

1. ....
2. ....
3. ....
4. ....
5. ....
6. ....

**Yapmayı ertelediğiniz akademik çalışmalar** (Örnek; derslere katılma, ödev yapma, okuma ödevlerini tamamlama, sınavlara hazırlanma, kayıt yapma, akademik danışmanınızla görüşme, genel olarak okul aktiviteleri vb.) :

1. ....
2. ....
3. ....
4. ....
5. ....
6. ....

## APPENDIX D

Sevgili öğrenciler,

Üniversite öğrencilerinin akademik çalışmalar konusundaki erteleme davranışlarını anlamaya yönelik olarak yürütülen bu çalışmada sizden istenilen, bölümlerin başında bulunan yönergeleri dikkatle okuyarak soruları yanıtlamanızdır.

**Ertelme Davranışı Değerlendirme Ölçeği** iki bölümden oluşmaktadır. Birinci bölüm, öğrenim hayatında sıklıkla yapılan etkinliklerde *ertelme davranışının ne ölçüde* kullanıldığına, ikinci bölüm ise *ertelme davranışının nedenlerini* anlamaya yönelik olarak düzenlenmiştir.

Sorulara vereceğiniz tüm yanıtlar gizli tutulacak ve bu çalışmadan elde edilen veriler grup olarak değerlendirilecektir. Bu nedenle ölçeğin üzerine kimliğinizi belirleyecek bilgileri yazmayınız.

Bu ölçeğe vereceğiniz yanıtlar, çalışmanın amacına ulaşması açısından büyük önem taşımaktadır. Bu nedenle tüm soruları cevaplamanızı diliyorum.

Bu çalışma için ayıracağınız zaman ve katkılarınızdan dolayı şimdiden teşekkür ederim.

Bilge Uzun Özer  
Eğitim Bilimleri Bölümü  
Yüksek Lisans Öğrencisi

### Kişisel Bilgiler:

- Cinsiyetiniz : K ( ) E ( )
- Yaşınız : .....
- Sınıfınız : 1. Sınıf ( ) 2. Sınıf ( ) 3. Sınıf ( ) 4. Sınıf ( )
- Bölümünüz : .....
- Genel Akademik ortalamanız : .....

## APPENDIX E

### Translated and Adapted Version of the Instrument (Erteleme Davranışı Değerlendirme Ölçeği- Öğrenci Formu)

#### **ERTELEME DAVRANIŞI DEĞERLENDİRME ÖLÇEĞİ - ÖĞRENCİ FORMU**

Aşağıda, öğrenim hayatınızda sıklıkla yaptığınız etkinliklerde, erteleme davranışını ne ölçüde kullandığınızı ölçmeyi amaçlayan birtakım ifadeler yer almaktadır. Her bir ifadeyi okuduktan sonra öncelikle, **erteleme davranışını ne ölçüde kullandığınızı**, daha sonra **bu davranışınızın size ne ölçüde problem yarattığını** ve son olarak **ertelediğiniz bu davranışları ne ölçüde azaltmak istediğinizi** ilgili seçeneği işaretleyerek belirtiniz.

<b>Aşağıdaki konularda ne dereceye kadar erteleme davranışı gösterirsiniz? KONULAR</b>	<b>Hiçbir zaman ertelemem</b>	<b>Ertelemem</b>	<b>Bazen ertelerim, bazen ertelemem</b>	<b>Erteleirim</b>	<b>Her zaman</b>
1. Dönem Ödevi Hazırlama					
2. Sınavlara Hazırlanma					
3. Haftalık Okuma Ödevlerini Tamamlama					
4. Okulla İlgili İdari İşler (Derslere kayıt yapma, kimlik belgesi alma vb.)					
5. Katılım Görevleri (Derslere katılma, akademik danışmanınızla görüşme vb.)					
6. Genel Olarak Okul Etkinlikleri (Kültürel, bilimsel, sosyal etkinlikler vb.)					

<b>Aşağıdaki konularda erteleme yoluna gitmeniz size ne ölçüde problem yaratır? KONULAR</b>	<b>Hiç problem yaratmaz</b>	<b>Problem yaratmaz</b>	<b>Bazen problem yaratır, bazen yaratmaz</b>	<b>Problem yaratır</b>	<b>Her zaman problem yaratır</b>
7. Dönem Ödevi Hazırlama					
8. Sınavlara Hazırlanma					
9. Haftalık Okuma Ödevlerini Tamamlama					
10. Okulla İlgili İdari İşler (Derslere kayıt yapma, kimlik belgesi alma vb.)					
11. Katılım Görevleri (Derslere katılma, akademik danışmanınızla görüşme vb.)					
12. Genel Olarak Okul Etkinlikleri (Kültürel, bilimsel, sosyal etkinlikler vb.)					

Aşağıdaki konularda erteleme eğiliminizi ne ölçüde azaltmak istersiniz? KONULAR	Kesinlikle azaltmak istemem	Azaltmak istemem	Kararsızım	Azaltmak isterim	Kesinlikle azaltmak isterim
13. Dönem Ödevi Hazırlama					
14. Sınavlara Hazırlanma					
15. Haftalık Okuma Ödevlerini Tamamlama					
16. Okulla İlgili İdari İşler (Derslere kayıt yapma, kimlik belgesi alma vb.)					
17. Katılım Görevleri (Derslere katılma, akademik danışmanınızla görüşme vb.)					
18. Genel olarak okul etkinlikleri (Kültürel, bilimsel, sosyal etkinlikler vb.)					

### ERTELEME DAVRANIŞININ NEDENLERİ

Aşağıda, bir durum ve bunu takiben erteleme davranışınıza neden olabilecek ifadeler yer almaktadır. Öncelikle böyle bir durumla karşılaştığınızı düşününüz ve verilen ifadelerin sizin erteleme nedenlerinizi ne ölçüde yansıttığını belirtiniz.

**Durum:** Neredeyse dönemin sonu gelmiş. Dönemin başında size verilen ödevin teslim tarihi çok yakında, ancak siz bu ödevi yapmaya henüz başlamadınız. Bu ödevi yapmayı ertelemenizin bazı nedenleri vardı.

**Aşağıdaki her bir ifadenin, erteleme davranışınızın nedenini ne ölçüde yansıttığını belirtiniz.**

	Hiç yansıtmıyor	Yansıtmıyor	Biraz yansıtmıyor, biraz yansıtmıyor	Yansıtıyor	Tamamıyla yansıtmıyor
1. Hocanızın yaptığınız ödevi beğenmeyeceği konusunda endişeleriniz vardı.					
2. Sınıf arkadaşınızın, kendi ödevini bitirmesini ve size bu ödev konusunda tavsiye vermesini beklediniz.					
3. Ödevinize neleri katıp, neleri katmayacağınıza karar vermekte zorlandınız.					
4. Yapacak daha başka bir sürü işiniz vardı.					
5. Hocanıza sorma ihtiyacı hissettiğiniz bazı bilgiler vardı, ancak bu bilgileri sormak için kendinizi rahat hissetmediniz.					
6. Kötü bir not alacağınız konusunda endişeliydiniz.					
7. Başkaları tarafından verilen şeyleri yapmak zorunda kalmaya içerlediniz.					

8. Dönem ödevi yapmak için yeterli bilgiye sahip olmadığınızı düşündünüz.					
9. Dönem ödevi yapmaktan gerçekten hoşlanmıyordunuz.					
10. Ödev altında ezildiğinizi hissettiniz.					
11. Diğer insanlardan bilgi istemekte zorluk çektiniz.					
12. Bu ödevi son dakikada yapmanın heyecanını yaşamak istediniz.					
13. Tüm konular arasından bir seçim yapmakta zorlandınız.					
14. Ödevinizi zamanında verirsiniz sınıf arkadaşlarınızın size içereceğini düşündünüz.					
15. İyi bir iş çıkarma konusunda kendinize güvenmediniz.					
16. Ödevi başlamak için yeterli enerjiniz yoktu.					
17. Dönem ödevi hazırlamanın çok uzun zaman alacağını hissettiniz.					
18. Teslim tarihine kadar beklemenin daha doğru olacağını düşündünüz.					
19. Sınıf arkadaşlarınızın da ödevi başlamadıklarını biliyordunuz.					
20. Başkalarının sizin için teslim tarihleri koymasından hoşlanmadınız.					
21. Kendi beklentinizi karşılayamayacağınıza ilişkin endişeleriniz vardı.					
22. İyi bir not aldığınız takdirde insanların gelecekte sizden daha yüksek beklentiler taşıyacakları konusunda endişeleriniz vardı.					
23. Hocanızın ödevle ilgili size daha fazla bilgi verip vermeyeceğini görebilmek için beklediniz.					
24. Kendinize çok yüksek ölçütler koydunuz ve bu ölçütlere ulaşamayacağınız konusunda kaygıya kapıldınız.					
25. Dönem ödevi hazırlamak için fazlasıyla tembellik yaptığınızı hissettiniz.					
26. Arkadaşlarınız, ödeviniz dışında başka şeyler yapmanız konusunda size baskı yapıyorlardı.					