

**ACADEMIC PROCRASTINATION AMONG FACULTY OF
EDUCATION STUDENTS: THE ROLE OF GENDER, AGE, ACADEMIC
ACHIEVEMENT, PERFECTIONISM AND DEPRESSION**

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ABSTRACT

ACADEMIC PROCRASTINATION AMONG FACULTY OF EDUCATION STUDENTS: THE ROLE OF GENDER, AGE, ACADEMIC ACHIEVEMENT, PERFECTIONISM AND DEPRESSION

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The aim of the study was to investigate to what extent gender, age, academic achievement, depression and perfectionism predict academic procrastination among Faculty of Education students. The participants were 368 undergraduate students enrolled in five departments of Middle East Technical University, Faculty of Education. Data was collected by a questionnaire packet including demographic data form; Procrastination Assessment Scale-Students (PASS), Beck Depression Inventory (BDI) and Multidimensional Perfectionism Scale (MPS).

The results of the multiple regression analysis for the total sample revealed that, self-oriented perfectionism, others-oriented perfectionism, academic achievement and depression were significant predictors of academic procrastination among Faculty of Education students. However age and socially prescribed perfectionism did not have any significant contribution to the prediction of academic procrastination.

Predictive roles of the variables were differentiated across genders. While self-oriented perfectionism, others-oriented perfectionism, depression and academic achievement had significant predictive role on academic procrastination among females, self-oriented perfectionism was the only variable that

had a significant contribution in predicting the academic procrastination of male students.

Implications of the findings were discussed and some suggestions were made for further research.

Keywords: Academic Procrastination, Academic Achievement, Gender, Depression, Perfectionism

ÖZ

EĞİTİM FAKÜLTESİ ÖĞRENCİLERİNDE AKADEMİK ERTELEME DAVRANIŞI: CİNSİYET, YAŞ, AKADEMİK BAŞARI, MÜKEMMELİYETÇİLİK VE DEPRESYONUN ROLÜ

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Bu çalışmanın amacı cinsiyet, yaş, akademik başarı, mükemmeliyetçilik ve depresyonun akademik erteleme davranışını ne derecede yordadığını incelemektir. Araştırmaya, Orta Doğu Teknik Üniversitesi Eğitim Fakültesi'nde farklı bölümlerde eğitim görmekte olan 368 lisans öğrencisi katılmıştır. Veri toplama aracı olarak, demografik bilgi formu, Erteleme Davranışı Değerlendirme Ölçeği-Öğrenci Formu (EDDÖ-Ö), Beck Depresyon Envanteri (BDE) ve Çok Boyutlu Mükemmeliyetçilik Ölçeği (ÇBMÖ) kullanılmıştır.

Tüm katılımcıların akademik erteleme davranışı puanları üzerinde yapılan çoklu regresyon analizi sonuçları, kendine yönelik mükemmeliyetçilik, başkalarına yönelik mükemmeliyetçilik akademik başarı, ve depresyonun akademik erteleme davranışını bir arada anlamlı düzeyde yordadığını göstermiştir.

Çalışmada kullanılan değişkenler akademik erteleme davranışını yordamada cinsiyete göre farklılık göstermiştir. Kendine yönelik mükemmeliyetçilik, başkalarına yönelik mükemmeliyetçilik, depresyon ve akademik başarı kız öğrenciler için yordayıcı değişkenler iken, erkek öğrencilerde erteleme davranışını yordayan tek değişkenin kendine yönelik mükemmeliyetçilik olduğu bulunmuştur.

Elde edilen bulgular tartıřılmıř ve gelecek alıřmalara ynelik bir takım nerilerde bulunulmuřtur.

Anahtar kelimeler: Akademik Erteleme Davranıřı, Akademik Bařarı, Cinsiyet, Depresyon, Mkemmeliyetilik

To my all memories..

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CHAPTER I

INTRODUCTION

This chapter has been categorized into five sections: (1) Background to the study, (2) Purpose of the study, (3) Research Questions, (4) Significance of the study and (5) Definitions of terms.

1.1 Background to the Study

All of us have paid the bills at the last minute, brought the library book at the last day of overdue, studied for an exam or wrote a term-paper just the night before some time in our lives. These examples of missing deadlines and rushing to meet them at the last minute are classic examples of procrastination. All of these will most probably sound familiar to most of us. Because many people put off things until tomorrow and then the next tomorrow.

The term procrastinate comes from the Latin verb ‘procrastinare’ which means “putting forward until tomorrow”. Since the ancient time we can see the traces of procrastination theme. The ancient Babylonian King Hammurabi incorporated the procrastination into his laws by setting a deadline for making a complaint and the Roman Emperor Marcus Aurelius cautioned against needless delays. Even the folk sayings such as the English saying “A stitch in time saves nine” (Knaus, 2002) and Turkish saying ‘Never put off till tomorrow what you can do today’ [Bugünün işini yarına bırakma] highlight the importance of doing tasks in time.

Procrastination has long been identified as a negative behavior and procrastinators perceived this behavior as a problem that they wanted to reduce because of its serious negative outcomes (Ferrari, 1991a; Solomon & Rothblum, 1984). Today in achievement oriented societies individuals are supposed to

accomplish certain goals and duties in a certain time period, so procrastination is still perceived as a serious problem.

While reviewing the literature, we can see that there is no complete consensus on the definition of procrastination. Webster's Ninth New Collegiate Dictionary (1987) defines procrastination as "putting off intentionally and habitually". This definition suggests that one who procrastinates for a legitimate reason can not be labeled as a procrastinator. Procrastination is recently been described by Wolters (2003) as "failing to perform an activity within the desired time frame or postpone until the last minute activities one ultimately intends to complete" (p. 179).

The research literature that addresses the origins, course, experiential and emotional effects of procrastination goes back only 15 to 20 years. Many researchers agree on the idea that procrastination has behavioral, cognitive, and emotional dimensions. Behavioral dimension includes wasting the time reserved for accomplishing a task or getting a decision (Rothblum, Solomon, & Murakami, 1986; Senecal, Lavoie, & Koestner, 1997). Such as completing or not completing a task (Birder, 1993), delaying or not completing a task in a specific time (Tuckman, 1998) or not only delaying or not completing a certain task but also some dilatoriness behaviors like watching television or going out with friends (Lay, 1996). Cognitive dimension explains procrastination as accomplishing the tasks which are less in priority and delaying the ones in high priority. So this may be an indicator that procrastination is nothing to do with being busy (Lay, 1996). The emotional dimension includes the emotional distress resulting from not beginning or not completing a task and thus we can not talk about procrastination in the absence of experiencing emotional distress (Haycock, McCarthy, & Skay, 1998; Senecal, Koestner, & Vallerand, 1995; Solomon & Rothblum, 1984).

Many contributing factors to procrastination have been studied in the literature including lack of motivation (Brownlow & Reasinger, 2000; Lee, 2005; Senécal & Guay, 2000), perfectionism (Flett, Blankstein, Hewitt, & Koledin,

1992; Saddler & Sacks, 1993; Stöber & Joormann, 2001; Walsh & Ugumba-Agwunobi, 2002) and poor time management (Burns, Dittman, Nguyen, & Mitchelson, 2001). Procrastination has also been found to correlate with a variety of negative mental health variables such as depression, irrational beliefs, low self-esteem and anxiety (Pychyl, Lee, Thibodeau, & Blunt, 2001; Solomon & Rothblum, 1984) poor self-regulation (Tice & Baumeister, 1997) and low conscientiousness (Ferrari, Johnson, & McCown 1995).

Despite its negative effects, procrastination is a still poorly understood phenomenon. Studies on procrastination have been conducted from different perspectives: psychoanalytic, behavioral, cognitive and affective. Psychoanalytic theorists view procrastination as a form of rebellion against overindulgent and over demanding parents (Haycock, McCarthy, & Skay, 1998). On the contrary, many behaviorists claimed that procrastination is a learned habit developed from caretakers or human preferences to do pleasurable activities (McCown, 1986). According to cognitive theorists many variables, such as irrational beliefs, meta-cognitions, self-esteem and optimism, beliefs about time, self-handicapping strategies, attribution styles and fear of failure are among the predictors of procrastination (Flett, et al, 1991; Rothblum, 1990).

A majority of the population admits to procrastinate at least sometimes, while a substantial minority admits to procrastinating habitually (Ferrari et al., 1995). Procrastinators by doing so, suffer the costs of procrastinating. Failure to pay the bills in time, remembering important days like anniversaries at the last minute, doing the registrations to classes on the last day, completing the term papers on the due day, or delaying check-ups can result in very serious negative, perhaps fatal consequences. Researchers especially focus on the area of academic procrastination by taking the serious negative consequences of procrastination such as depression, anxiety, impaired academic work, lost opportunities, decreased academic performance and self-esteem.

In Turkey, little empirical research has been done to examine the

nature of procrastination behavior. Majority of studies conducted on procrastination are unpublished master or doctoral theses. In these studies, the relationship between procrastination and perfectionism, self-efficacy, academic performance among university and high school students (Çakıcı, 2002); perceived vocational adequacy, professional experience, and type of branch among elementary school teachers (Gülebağlan, 2003); prevalence, self-reported reasons for procrastination among undergraduate students (Özer, 2005) and lastly thinking and decision-making styles in terms of psychosocial variables and procrastination behavior among prospective teachers (Balkıs, 2006) were investigated. However, at present there exists no published empirical research that investigated the possible causal factors of procrastination among prospective teachers or Faculty of Education students in Turkey.

To conclude, the literature related with procrastination behavior, suggests some implications for future research. Studies investigating the adaptive and maladaptive aspects of procrastination would provide important findings on the duality of this behavior that is whether it is a way of coping and managing several tasks in time or constituting an obstacle to complete tasks in time. Identifying factors that contribute to procrastination will also provide information helpful to researchers in developing interventions to reduce procrastination. In future studies, researchers should consider diverse populations to determine the robustness of the findings. Thus the present study aimed to gain insight about the correlates of the Faculty of Education students' academic procrastination behavior.

1.2 Purpose of the Study

The primary purpose of this study is to gain an understanding of the association between age, GPA, perfectionism (self-oriented perfectionism, others-oriented perfectionism and socially prescribed perfectionism), depression and, procrastination among undergraduate faculty of education students.

1.3. Research Questions

The main research question of this study is, “To what extent age, GPA, perfectionism (self-oriented perfectionism, others-oriented perfectionism and socially prescribed perfectionism), depression do predict the academic procrastination scores of faculty of education students?”

The sub-questions are, “To what extent age, GPA, perfectionism (self-oriented perfectionism, others-oriented perfectionism and socially prescribed perfectionism) and depression do predict the academic procrastination scores of female faculty of education students and, “To what extent age, GPA, perfectionism (self-oriented perfectionism, others-oriented perfectionism and socially prescribed perfectionism) and depression do predict the academic procrastination scores of male faculty of education students?”

1.4 Significance of the Study

Procrastination is a complex problem which manifests itself in both general public and the academic area (Ferrari et al., 1995). Procrastination has been linked to several negative consequences like; impaired work, lost opportunities, impaired academic success (Rothblum et al., 1986), strained relationships, negative emotional states (anxiety and depression) (McCown, Petzel, & Rupert, 1987; Lay, 1996), feelings of helplessness, disorganization (Ferrari, 2001), forgetfulness, learned helplessness (McKean, 1990), self-handicapping (Beck, Koons, & Milgrim, 2000) and worry (Stöber & Joormann, 2001). In conclusion, procrastination can have a profound impact on individual’s overall wellbeing.

Stevens and Pfof (1984) stated that university presents significant amount of stress and performance demands. Large number of students also reported that they suffer from “problematic procrastination” (Ferrari et al., 1995). It has been estimated that from 50% to 75% of college students procrastinate regularly

and 20% to 25% do so to the point that it interferes with academic performance and quality of life (Solomon & Rothblum, 1984). According to Haycock et al., (1998) procrastination continues to impact students' life even after leaving the university. Thus procrastination is a life time phenomenon that leads to negative consequences.

Although both general and academic procrastination has been a frequently studied subject in Western countries for about 20 years, it has recently gained researchers attention in Turkey and there are very few studies on this topic. Thus this study attempts to understand and analyze the association between, age, academic achievement, gender, depression, perfectionism and procrastination among faculty of education students. In the current study, the association between procrastination, depression and perfectionism was studied through its stable and consistent trait dimensions which includes intrapersonal and interpersonal facets namely, self-oriented perfectionism, others-oriented perfectionism and socially prescribed perfectionism. By investigating the contribution of perfectionism and depression in procrastination, this study is expected to provide an increased understanding of the role of those traits in procrastination to further understanding the underlying factors of this behavior. The findings of this study might provide valuable information to counselors, instructors in understanding the correlates of procrastination among university students; may also help researchers and counselors at university counseling centers to gain further insight into developing intervention programs for procrastination.

Procrastination as a construct widely studied in Western countries. There are few studies focusing on academic procrastination among students who are older and ethnically, and economically diverse (Prohaska, Morill, Atilas, & Perez, 2000). Thus this study may contribute global efforts to understand and prevent procrastination among university students.

Another significance of this study is its contribution of new and relevant information regarding procrastination among university students who are faculty of education students. To the best of our knowledge there is no research

regarding procrastination and its potential contributors among university students who are faculty of education students in the procrastination literature other than Balkis's (2006) study which investigated the thinking and decision-making styles and procrastination behavior among prospective teachers. Thus, by investigating the contribution of perfectionism and depression in procrastination among specific group of students, this study is expected to provide an increased understanding of the role of those traits in procrastination. For instance procrastination related with socially prescribed perfectionism may bring us to the need of considering procrastination from a social perspective. On the other hand, procrastination related with depression may bring the idea that depressive students are more prone to procrastinate. Thus, findings of this study may provide valuable information to university counseling services about students who are more at risk for academic procrastination.

1.5 Definition of terms

Procrastination: "Act of needlessly delaying tasks to the point of experiencing subjective discomfort" (Solomon & Rothblum, 1984, p. 503).

Academic Procrastination: "(a) self reported tendency to put off academic tasks nearly always and always (b) the experience nearly always and always problematic levels of anxiety associated with procrastination" (Rothblum, Solomon, & Murakami, 1986, p. 388).

Perfectionism: Setting and pursuing highly unrealistic standards to be accomplished (Hewitt & Flett, 1991).

Self-Oriented Perfectionism: "Setting exacting standards for one-self and stringently evaluating and censuring one's own behavior" (Hewitt & Flett, 1991, p. 457).

Socially Prescribed Perfectionism: "People's belief or perception that

significant others have unrealistic standards for them and evaluate them stringently and exert pressure on them to be perfect” (Hewitt & Flett, 1991, p. 547).

Other-Oriented Perfectionism: “Have unrealistic standards for significant others, places importance on other people being perfect and stringently evaluate other’s performance” (Hewitt & Flett, 1991, p. 457).

Depression: Diagnostic and Statistical Manual of Mental Disorders (DSM-IV, American Psychiatric Association [APA], 1994) described it as a state of mood in which loss of pleasure or depressed mood and reduction in daily life activities are experienced.

Academic achievement: GPA (Grade Point Average) It is a method of weighing the academic performance calculated by averaging the grades that student receives in their courses in each semester.

CHAPTER II

REVIEW OF THE LITERATURE

This chapter describes literature relevant to the purposes of this study. The literature has been categorized into four sections: (1) Definitions, Types and Prevalence of Procrastination (2) Models of Procrastination, (3) Variables associated with Procrastination, and (4) Research on College Student Procrastination in Turkey.

2.1 Definitions, Types and Prevalence of Procrastination

It is important to consider what constitutes procrastination before discussing this behavior. Is it simply putting off a task? Does it have to have any deadline or can we say one is procrastinating if he or she completes it after a deadline? There does not seem to be a consensus on an absolute definition of procrastination.

The English verb itself is based on the Latin verb “procrastinare”, combining the common adverb “pro” implying forward motions with “crastinus” meaning belonging to tomorrow. It was noted that “Roman use of this term seemed to reflect the notion that deferred judgment may be necessary and wise, such as when it is best to wait the enemy out and demonstrate the patience in military conflict” (Ferrari et al., 1995, p. 4). Also, they noted that, in the ancient times procrastination seems to include sophisticated decisions regarding when to act and when not to act without adequate forethought.

The first historical analyses on procrastination was written by Milgram (1988) who defines procrastination as a series of actions in which there is a task that is perceived important and has a priority along with emotional confusion. He argues that technically advanced societies require numerous commitments and deadlines which give rise to procrastination. Ferrari and his

colleagues (1995) claimed that procrastination has existed throughout the history but that it only acquired truly negative connotations with the advent of the industrial revolution. Before the industrial revolution, it was viewed neutrally and explained as a course of inaction.

In the literature, procrastination has been defined variously by different researchers. Although, there has been no consensus on the exact definition of it, nearly all definitions include some delay component and focus on the negative aspects of this behavior. According to Solomon and Rothblum (1984), procrastination differs from a decision to accomplish a task at a later date by an associated element of emotional distress. Procrastination can be distinguished from planning, because the delay is not purposely chosen but instead postpones the implementation of what was planned (Van Eerde, 2003). Individuals when confronted by an unpleasant situation or a task may behave in one of two ways; one is working to complete it, other one is to escape. Procrastination is one way of escaping from the unpleasant situation or task. Fiore (1989) stated that procrastination can catch individuals in a vicious nowin cycle, that is; it starts with a pressure of being overwhelmed and ends with escape through procrastination.

Procrastination is also described as a self-regulation style that involves delay in the start and/or completion of a task (Ferrari & Tice, 2000). It does not only include behavioral self-regulation issues, but also affective and cognitive components (Ferrari, 1991b; Rothblum et al., 1986). According to Lay (1987), procrastination is an irrational tendency to delay tasks that should be completed. In a similar vein, Ferrari (1991a) underlines the delay of tasks and defines procrastination as putting off doing things and making decisions to the last minute, although there is an enough time to do. Later, Ferrari et al. (1995) defined procrastination as the act of needlessly delaying the task until the point of discomfort. Procrastination has also been defined as a trait or behavioral disposition to postpone or delay performing a task or making decisions (Milgram, Mey-Tal, & Levison, 1998).

Definitions for procrastination tend to be as numerous as there are people researching this topic. It is evident that all conceptualizations of procrastination highlight that there must be a postponing, delaying or putting off of a task or a decision. In addition, nearly all definitions regarding procrastination focus only on its negative aspects.

In literature, procrastination appears to be divided into four different categories, which are; academic procrastination (Solomon & Rothblum, 1984), general procrastination (Lay, 1987), decisional procrastination (Effert & Ferrari, 1989) and compulsive/dysfunctional procrastination (Ferrari, 1991a). Academic procrastination can be defined as putting off academic work until the last minute. It may refer to delaying the completion of homework, getting prepared for exams and writing up assignments (Solomon & Rothblum, 1984). The second type of procrastination, which is general procrastination, refers to the difficulty in planning and scheduling daily routine tasks and responsibilities (Lay, 1987). The third type; decisional procrastination, refers to difficulty in making timely decisions such as where to go to dinner, which car to buy etc. (Effert & Ferrari, 1989). The final type; compulsive/dysfunctional procrastination is the most severe and pathologic one in which the individual suffers both decisional and behavioral procrastination (Ferrari, 1991b). Those four categories of procrastination interfere with both interpersonal and intrapersonal relationships of the individual and cause feelings of inadequacy to cope with difficulties.

When we examine the prevalence studies of procrastination, we can see that it is reasonably widespread among both general and academic processes. Almost everyone procrastinate at one point or another in their lives. In other words, procrastination is not just a problem of students; about 20% of adults report that they are chronic procrastinators (Harriot & Ferrari, 1996). However, it is much more acute among students. For this reason, procrastination literature seems to center on academic procrastination.

Research indicated that about 95% of students rate themselves as

chronic procrastinators (Ellis & Knaus, 1977) and most of them report that procrastination is a serious problem they would like to eliminate (Solomon & Rothblum, 1984). Similarly Hill, Hill, Chabot and Barral (1978) conducted a study with 500 university students and they concluded that 90% of the students reported to procrastinate on academic tasks on occasionally and 50% of them reported to procrastinate about the half time.

There also are studies examining the frequency of each academic task that are procrastinated by university students. In their pioneering study, Solomon and Rothblum (1984), aimed to investigate the frequency of procrastination on academic tasks. The results revealed that students procrastinate more in writing term paper (46%) than when reading an assignment (30%), studying for an exam (28%), or attending academic (23%) or administrative (11%) tasks. A decade later, Clark and Hill (1994) found similar results as well. They concluded that students procrastinate “nearly always” or “always” on reading weekly assignments (36%), writing a term paper (30%), and studying for an exam (28%). Moreover, 55 to 60 percent of these students want to decrease their procrastination on those tasks.

Kachgal, Hansen and Nutter (2001) examined the self-reported prevalence and severity of academic procrastination among 141 university students. Results showed that students were more likely to procrastinate on three tasks; which are writing term papers, studying for exams and doing weekly readings. Many studies reported that procrastination tends to increase as students advance in their academic careers. Onwuegbuzie (1999) for example, suggested that the level of procrastination behavior increases as the students advance in their academic career. Consistent with this statement, Semb, Glick and Spencer (1979) and Hill et al. (1978) reported that freshmen procrastinate the least; seniors the most. The study conducted by McCown and Roberts (1994) with 1,543 university students showed that prevalence of procrastination increases with grade; 23% of freshmen, 27% of sophomores, 32% of juniors and 37% of seniors reported to procrastinate.

In his study, Onwuegbuzie (1999) aimed to investigate the relationship between procrastination and statistics anxiety. The author found that 41.7% of graduate students reported that they “always” or “almost always” procrastinate on writing term papers, 39.3% of them on studying an exam, and 60% of them on keeping up with weekly assignments. In addition, 21 to 42 percent of the participants reported that procrastination was “always” or “almost always” a problem and between 65 and 72 percent wanted to decrease their tendency to procrastinate. Furthermore, Onwuegbuzie (1999) stated that graduate students were nearly three and half times more likely to procrastinate and two and half times more likely to report that procrastination was “always” or “nearly always” a problem.

Most research on academic procrastination has been conducted among university students and mostly undergraduate sample, because of the ease of reaching the college population. In these studies mostly self-report measures are used. Thus, the subjective nature of procrastination is being investigated. That is, when one puts off a task for a justifiable reason or for no reason, only the person responsible for completing the task is likely to identify whether they are procrastinating or not.

Why college students procrastinate? In the literature, the reasons for procrastinating have been widely examined in various studies. According to Szalavitz (2003) depression can keep students from reaching their goals or accomplishing their responsibilities because of the fatigue and apathy that come with it. They tend to get overwhelmed with the heavy workload, tend to perceive themselves helpless and avoid. The result is procrastination. Another reason may stem from the fact that, during the first years of college, many young people live independently and autonomously for the first time in their lives. They have the opportunity to make their own decisions and choose what to do and not to do. Campus life presents the most plentiful social activities that will be more prioritized than the academic work. Then, academic procrastination comes on stage.

Academic procrastination is also considered to be situation specific in that it involves an intentional delay in completing academic-related tasks and may result from a fear of failure (Senecal, Koestner, & Vallerand, 1995; Schouwenburg, 1992), a tendency to postpone tasks to achieve a specific goal (Schouwenburg, 1995), poor time management (McCown et al., 1987; Milgram, Marshevsky, & Sadeh, 1995) and task aversiveness (Solomon & Rothblum, 1984).

Studies in literature showed that there are various negative consequences of procrastination among students. From those consequences, decreased academic performance (Burka & Yuen, 1983; Ferrari, et al., 1995; Knaus, 2001; Tice & Baumeister, 1977), decreased attendance to courses and withdrawal from school (Knaus, 2001), lost time, poorer health, decreased long-term learning and lower self-esteem (Burns et al., 2001) are the most impressive consequences for the students. And when we look into the possible reasons for procrastination, we can take the poor time management, fear of failure, and task aversiveness at the top of the list. Despite its apparent negative consequences, academic procrastination is a widespread problem among students. Thus, further studies that would investigate the causes and correlations of procrastination are needed.

2.2 Models of Procrastination

Procrastination has been associated with both internal and external consequences. External consequences may include impeded progress, lost opportunities or strained relationships. Internal consequences may include low self-esteem, self blame, regret, despair, subjective discomfort, anxiety or depression. Many theorists have tried to explain this behavior and the roots of this complex problem. In this part of the current study, four major theoretical models' explanations of procrastination will be discussed in order to understand this construct more clearly.

2.2.1 Psychoanalytic and Psychodynamic Theories

Freud (1926) explained the avoidance problems like procrastinating with anxiety. According to him, tasks are avoided because they are threatening the ego. Another psychoanalyst Birner (1993) explained procrastination as a defense against impulses and separation. Psychodynamic theorists view procrastination as a result of rebellion against overindulgent or overly demanding parents (Haycock et al., 1998).

From the point of psychodynamic view, procrastination has been viewed as a result of faulty child-rearing practices. Some studies even indicate that certain characteristics such as perfectionist tendencies, low frustration tolerance, high need for autonomy, high need for approval and fears of failure, success and separation related with faulty child-rearing practices, lead to chronic procrastinatory behavior (Burka & Yuen, 1983; Ellis & Knaus, 1977). Many researchers have tried to explain procrastination and investigated the influences of parental expectations on the personality traits of the individual (Burns, 1980, cited in Busko, 1998; Frost, Lahart, & Rosenblate, 1990; Hamacheck, 1978; Hollender, 1965; Missildine, 1963; Pacht, 1984; Pychyl, Coplan, & Reid, 2002). For instance, Missildine (1963) emphasized the role of parents in the development of procrastination tendencies. According to him, overcoercion in the family causes procrastination. Another discussion came from Spock (1971) who suggested three elements in parental management creating procrastination. These are; parents' unconscious impulse to dominate the child, anger of the parent toward child's undone work, and an attitude of not expecting to be defeated by the child.

Similarly, Frost et al. (1990) associated high parental expectations with socially prescribed perfectionism, which positively relates to procrastination. Also, those who procrastinate tend to be perfectionist, have low frustration tolerance, high needs for autonomy and approval, and fears of failure

(Muszynski & Akamatsu, 1991) because of the unrealistic goals set by the parents.

MacIntyre (1964) on the other hand, argued that not only parents who have over controlling attitudes but also those parents who are too permissive may cause procrastination tendency in their child.

2.2.2 Behavioral Theory

Behaviorists explain procrastination with motives, reinforcement, reward and punishment. According to Briody (1980) students procrastinate while doing academic work because of the absence of motivation. They claimed that procrastination occurs as a result of successful history of procrastination or tendency to find different activities that motivate them instead of studying. Also those theorists view procrastination as a learned habit from primary caregivers and preference for doing pleasurable activities while gaining short-term rewards (McCown, 1986). The study conducted by Kachgal et al. (2001) suggested that “aversiveness of the task” is the most eminent factor showing that students procrastinate most on the tasks they found unpleasant.

Senecal et al. (1995) suggested that academic procrastination is a motivational problem including more than time management or trait laziness. They also suggested that procrastination may be associated with self-regulation styles, and that students who had intrinsic reasons were less likely to procrastinate compared to the ones who had extrinsic reasons. Similarly, Tuckman (1998) claimed that procrastinators are difficult to motivate and they may have difficulty acquiring new knowledge if steps are not taken to enhance their motivation. In contrary to the researchers mentioned above, Lee (2005) examined the relationship of academic procrastination to motivation and flow experience. Lee (2005) defined flow as “becoming totally immersed in the activity to the point of losing awareness of time, surroundings and all other things except the activity itself” (p. 7) and suggested different results. According to Lee (2005)

students who were motivated in a self-determined manner reported low procrastination levels. Furthermore the relationship of extrinsic motivation with procrastination varied depending on whether the task was self-determined or non-self-determined. This can be an indication that procrastination was an individual behavioral tendency associated with the lack of self determination. Lastly, motivation did not contribute significantly to the variance in procrastination when the effects of flow experience were considered.

2.2.3 Cognitive Behavioral Theory

Pioneering researchers of cognitive behavioral theory (Ellis & Knaus, 1977) emphasize the role of irrational beliefs on procrastination. They claim that affect, behavior and environment have effects on the individual whereas beliefs have a profound mediator role in this relationship. More specifically, in daily life of an individual, affect and behavior have no influence on the experiences; however, cognitive interpretations of the individual for a specific situation are effective.

In general, cognitive behavioral theory claims that individuals' way of behavior and thinking are consistent with their beliefs, attitudes and thoughts towards the world they live on and themselves. While some of those beliefs, attitudes and thoughts are rational, the other ones may be irrational. Thus, cognitive behavioral theorists try to explain maladaptive behaviors like procrastination as stemming from the interactive dysfunctional cognitive and behavioral processes. In the light of their clinical studies, Ellis and Knaus (1977, p. 7) proposed 11 steps which are seem to be inevitable for procrastinators. 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 the 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.

According to Ellis and Knaus (1977) during this eleven step procrastination process, feelings of anxiety, depression, and despair accompanied by low self-esteem and feelings of worthlessness are experienced again and again in a vicious cycle. These authors claim that procrastination stems from three reasons; self-doubt, low frustration tolerance and rebellion against control. Moreover, they state that individuals who have a tendency to procrastinate seem to find an excuse for their perfectionist manner/behaviour.

According to Knaus (2002) irrational beliefs like viewing oneself as inadequate causes procrastination. One of the most accounted reasons of procrastination is “fear of failure”. It is an irrational thought and leads to procrastination. Schouwenburg (1992) clarified the discrepancy between fear of failure for a noteworthy reason and test fear of failure unrelated to procrastination. He tried to validate the findings of Solomon and Rothblum (1984) by examining the responses of procrastinating students and provide an explanation for the lack of correlation between fear of failure as a trait and trait procrastination. The study was conducted with 278 students and they were administered Lay’s (1987) Procrastination Scale, Procrastination Checklist Study Tasks (Schouwenburg, 1991) and the reasons part of the PASS (Solomon & Rothblum, 1984). In various factor analyses, it was found that trait procrastination and trait fear of failure loaded on different factors. No substantial relationship between fear of failure and procrastination was found.

2.3 Variables associated with Procrastination

Most of the studies in literature are related with the personality factors that lead to the development of a tendency to procrastinate. Lay (1987) investigated the personality which is defined in the five factor model of Eysenck and dimension of procrastination tendency and found that this construct is associated with mostly the neuroticism dimension. On the other hand, Johnson and Bloom (1993) suggested that procrastination is significantly associated with the conscientiousness dimension of the five-factor modal.

Cognitive variables have been among the most frequently studied topics associated with procrastination. However there are no consistent results among them. Spada, Hiou and Nikcevic (2006) investigated the relationship between metacognitions, negative emotions and procrastination. Their results showed that metacognitions that are associated with procrastinatory behavior are independent from negative emotions. They also suggested that modifications of beliefs about cognitive confidence and positive beliefs about worry might be helpful in the treatment of procrastinatory behavior.

Fear of failure has been suggested as one of the factors underlying procrastination (Flett et al., 1991; Rothblum, 1990). Also, Saddler and Buley (1999) have argued that concerns of negative evaluation are another major factor. We can say that those factors are closely related to perfectionism. Empirical evidence has also been found for the positive relationship between perfectionism and procrastination (Flett et al., 1992).

Solomon and Rothblum (1984) suggested that the fear of failure accounted for 49% of the variance, in a factor analysis of reasons why students procrastinate. Task aversiveness, on the other hand, accounted for 18% variance. In the study of Solomon and Rothblum (1984) participants who report high procrastination and perceive it to be a problem also report depressed affect, low self-esteem and irrational cognitions. So, procrastination may be related to general negative affect

and cognitions about oneself. They found significant correlations between PASS and depression, affective measure, irrational cognitions, punctuality and organized study. Procrastination resulting from aversiveness of the task correlates not only with study habits, a behavioral self-report measure, but also with a number of cognitive and affective components. Procrastination resulting from fear of failure similarly correlates with study habits, as well as cognitions and affect.

In one study, Stainton, Lay and Flett (2000) investigated the mediator effect of procrastinatory cognitions between trait-procrastination and negative affect relations. They first developed the Procrastinatory Cognitions Inventory, drew from other cognition questionnaires, from the Perfectionism Cognitions Inventory (Flett, Hewitt, & Dyck, 1989) and adopted those items to refer dilatory behavior and thoughts. It is found that the frequency of procrastinatory thoughts was associated with self-reported dilatory behavior and anticipated procrastinatory cognitions at Times 1 and retrospectively reported procrastinatory cognitions at Time 2 were positively related to the negative affect at Time 2. It is understood that trait procrastinators may be highly susceptible to trait-specific ruminations about their dilatory behavior. This study highlighted the importance of examining behavior/trait specific cognitions and doing side of personality traits.

In another study conducted by Jackson, Weiss and Lundquist (2000) the relationship between optimism, stress and procrastination was investigated. Results showed that optimistic students were less inclined to delay or avoid tasks and were more likely to persevere in the face of aversive tasks compared to their less optimistic peers. Beck et al. (2000) investigated the relationship between academic procrastination, self-handicapping and self-esteem. The results showed that individuals use academic procrastination as a self-handicapping strategy and they are highly correlated with each other.

In another study, Fee and Tagney (2000) investigated the relationship of chronic procrastination with affective experiences of shame and guilt among 86 undergraduate students. Correlation analyses revealed that shame-proneness

was related to procrastination tendencies, whereas guilt-proneness was not. Also, shame was found to be a moderator between chronic procrastination and perfectionism, especially socially-prescribed perfectionism. So, we can infer from the results that affect plays an important role in understanding the complex dynamics of procrastination.

2.3.1 Age, Academic Achievement, Gender

There exists limited number of research examining the association between procrastination and age. Moreover, majority of these studies did not yield significant age differences in terms of procrastination scores. For instance, Haycock et al. (1998) investigated the relationship of procrastination with self-efficacy and anxiety among 141 university students and they found no significant difference in terms of age and gender. Watson (2001) investigated the relationship between procrastination and Big-Five Personality Factors among 349 university and high school students aged between 18 and 53. The results of the study revealed that there is a significant difference between age and self-reported reasons for procrastination. For instance, participants who were aged between 25 and 53 were found to have lower scores on the rebellion against control and task aversiveness, compared to those participants who were aged between 18 and 25. Another study by McCown and Roberts (1994) was conducted with 360 participants aged between 18 and 77; and results of this study showed that males who were aged 20 and higher got the highest scores on procrastination. Procrastination scores for males decreased towards the age 60 and increased later on. Similar findings were also reported for females. Another study by Prohaska and et al. (2000) investigated the academic procrastination among an ethnically, economically and culturally different/diverse university student population (N = 386). Their mean age was 25.64 and the results revealed that there is a significant negative relationship between age and academic procrastination.

A number of researchers investigated the relationship between procrastination and academic and non- academic outcomes. However, studies

investigating the association between procrastination and academic achievement yielded different results. In Solomon and Rothblum's (1984) study, course grade was not found to be significantly correlated with self-reported procrastination. This relationship was apparent for all types of academic tasks. Similarly Prohaska et al. (2000) have found no significant relationship between academic procrastination and academic achievement.

Researchers also claimed that there is a significant relationship between procrastination and academic achievement. For instance, in an earlier study of Semb et al. (1979) significant relationship between procrastination and poor academic achievement was found. Rothblum, Solomon and Murakami (1986) also found similar results; they stated that procrastination is negatively associated with course grades. Moreover in the experimental study of Tice and Baumeister (1997) procrastinators were found to get lower grades from final and mid-term exams compared to non-procrastinators. In a similar vein, Senecal et al. (1995) who claimed that self-regulation and amotivational difficulties are associated with procrastination found that grade point average is significantly negatively correlated with academic procrastination. In the light of these findings, it is reasonable to conclude that procrastination has some maladaptive aspects that are associated with undesirable academic outcomes such as decreased learning, impaired academic work and low grades.

On the other hand, Ferrari (1991a) stated that higher ability students procrastinate more than lower ability students and procrastination increases as students advance in their academic careers and become more self-regulated. This finding suggests that procrastination, which is common among successful students, has no negative impact on academic performance and even may be adaptive. However, if procrastination does not play an adaptive role in certain situations, many students have low academic performance because of regular academic procrastination.

Extensive research conducted on procrastination shows little evidence of

gender differences. For example, Milgram et al. (1995) conducted a study investigating the relationship between procrastination and related variables among 115 male and 85 female students, concluding that males were more likely to procrastinate than females. Similarly, Senecal et al. (1995) conducted a study with 498 French-Canadian junior university students and investigated the role of autonomous self-regulation as a predictor of academic procrastination. As they expected, female university students reported to have less procrastination tendency compared to their male peers. They explained this gender difference by the fact that females are more intrinsically motivated than males. In another study by Brownlow and Reasinger (2000), the relative impact of intrinsic and extrinsic motivation toward academic work, fear of failure, perfectionism and locus of control on academic procrastination were investigated among 96 university students. The results of this study revealed that low extrinsic motivation coupled with perfectionism lead to academic procrastination, especially for female students. On the other hand, procrastination of male students was not predicted by perfectionism, but by the lack of extrinsic motivation. External attribution style predicted procrastination behavior of male students.

On the other hand, majority of the studies in the literature did not reveal gender difference. For instance, Solomon and Rothblum (1984) did not find any gender difference for the total self-reported procrastination. Another study conducted by Haycock et al. (1998) investigating the role of self-efficacy and anxiety on general procrastination of 141 university students, showed that there was no main gender effect. Also in the same study, the results revealed that there was no relationship between the age and procrastination level. Similarly Flett et al. (1992) who investigated the components of perfectionism and procrastination in college students, and multivariate effect of gender, was not found to be significant neither for perfectionism nor procrastination scores. In other studies, procrastination scores of males and females were not significantly different (e.g. Onwuegbuzie & Jiao, 2000; Effert & Ferrari, 1989; Ferrari, 1989; Ferrari, 1991b).

2.3.2 Depression

Depression is one of the most common psychological problems (Scott & Ingram, 1998). It can affect individual's psychosocial relationships negatively. The literature related with depression showed that negative self-belief, and irrational beliefs can play an important role on the development of depression (Beck, Rush, Shaw, & Emery, 1979). Thus we can expect that those individuals who are in depression and those who have a tendency to procrastinate may share the same irrational beliefs and automatic thoughts about their self-concepts.

According to Clay and Anderson (1993) prevalence ratings showed that at least 7 million women and a half million men in the United States could be diagnosed as suffering from major depression. Similarly a recent screening study conducted among 7979 people living in various regions of Turkey revealed that depression is the second most common psychiatric problem in our country (Erol, Kılıç, Ulusoy, Keçeci, & Şimşek, 1998).

Diagnostic and Statistical Manual of Mental Disorders-IV (DSM-IV, American Psychiatric Association, 1994) describes major depression as a mood state which includes deep sorrow and significant decrease in daily activities, in addition to at least four of the following symptoms: a decrease in appetite and significant weight loss, insomnia and differences in daily rhythm, fatigue, feelings of worthlessness and guilt, and difficulty in concentration. There is a significant body of literature examining depression. Those studies address the signs, symptoms, prevalence and possible treatment options. In order to explore the experience of depression, it is important to have an understanding of depression and what entails it.

Research shows that depression is a serious problem among university students. Miller and Rice (1993) found that 53% of students attending a university counseling center admitted that depression is problematic for them. In Turkey, a recent study conducted among Turkish university students revealed that 31% of university students are mildly or moderately depressed and 6.5% of

university students have symptoms of clinical depression (Ceyhan, Ceyhan, & Kurtyılmaz, 2005). Depression is found to be associated with cognitive variables which are high self conscientiousness, low self-esteem (Lewinson, Gotlib, & Seeley, 1997), negative emotions (Stader & Hokanson, 1998), self criticism (Murphy & Bates, 1997), and gender (women are more vulnerable to depression than men). Önen, Kaptanoğlu and Seber (1995) explained the gap between the depression levels of males and females with the assumption that those women who are less educated and exposed to both psychological and physical pressure from their husbands and families, so they are significantly more depressed compared to more educated women. Although being educated and having a more health family life are effective in reducing the depression experienced, the traditional gender role has a strict societal pressure on the female university students. Thus, they suffer from the difficulties while trying to gain their independence and social identity like their male peers, live both interpersonal and intrapersonal problems such as depression.

Lay (1996) found that negative affect was related to chronic everyday procrastination. He concluded that chronic procrastinators compared with non-procrastinators more often experienced dejection-related emotions such as depression when faced academically related tasks.

Many studies conducted with university students showed a significant relationship between academic procrastination and depression (Beswick, Rothblum & Mann, 1988; Pychyl et al., 2001; Saddler & Sacks, 1993; Senecal et al., 1995; Solomon & Rothblum, 1984). For instance Solomon and Rothblum (1984) who are the pioneering researchers in procrastination literature investigated the cognitive and behavioral correlates of academic procrastination among 342 university students enrolled in psychology department and depression was found to be significantly and positively correlated with PASS scores, fear of failure factor and aversiveness of the task factor. Similarly, Beswick et al. (1988) found that self-reported procrastination was associated more significantly with lower self-esteem and higher rates of both depression and anxiety compared to

behavioral procrastination. Saddler and Sacks (1993) on the other hand, attempted to investigate whether multidimensional perfectionism and academic procrastination were related to depression in both undergraduate and graduate students. The results of their study showed that self-oriented perfectionism, socially prescribed perfectionism and procrastination were independently related with depression. Senecal et al. (1995) specifically aimed to assess the role of self-regulation as a predictor of academic procrastination among 498 junior college students and found that depression, low self-esteem and anxiety were significantly correlated with procrastination and these three variables explained the 14% of the variance in academic procrastination. In another study, Pychyl et al. (2000) aimed to investigate the affective variables that are related with procrastination at the time that students were actually procrastinating. In this study, 45 undergraduate students participated and the findings suggested that these students, who procrastinated in academic tasks in favor of other activities which they perceived pleasant, did not experience positive affect, yet some negative affect such as shame or guilt related to depression.

Considering the fact that procrastination leads to negative consequences; like impeded progress, lost opportunities, strained relationships, low self-esteem, self blame, regret, despair, subjective discomfort or anxiety; individuals who have a tendency to procrastinate may have also higher depression scores. In the light of the studies mentioned above, we can conclude that depression, which is a serious problem among university students, is highly associated with academic procrastination as well.

2.3.3 Perfectionism

Extant research provides us with ample evidence regarding perfectionism as both an independent and dependent variable. Despite the fact that there are a number of researchers interested in this topic, it is impossible to conclude on a commonly accepted definition of this construct.

Studies on perfectionism base their roots to the psychoanalytic theory, in which Freud described it as a function of superego, making harsh demands for high achievement. Similarly Horney's (1950) description "tyranny of the shoulds", referred to a perfectionist personality or superego. Perfectionism is also described by Hewitt and Flett (1991) as "setting and pursuing highly unrealistic standards to be accomplished". One of the most frequently used definitions of perfectionism over the past 20 years, is Burns' (1980, p. 34) definition, which refers to perfectionist as individuals "whose standards are high beyond reach or reason, people who strain unremittingly toward impossible goals and measure their own worth entirely in terms of productivity and accomplishment" (as cited in Busko, 1998).

In the perfectionism literature the most common way to differentiate one model from another is to view perfectionism as one-dimensional or multidimensional. This personality factor, which has been a widely growing research subject in the recent years, (Rice, Ashby, & Slaney, 1998) was first presented by Burns (1980) based on a one-dimensional model. Basically he focused on self-directed cognitions (as cited in Busko, 1998). He claimed that people who have perfectionist tendencies evaluate their self-worth according to their productivity and accomplishment. Eventually, this behavior becomes a self-defeating rather than a self-improving behavior.

Later this construct was developed into many multidimensional models of conceptualizations (Frost, et al., 1990; Hewitt & Flett, 1991; Johnson & Slaney, 1996; Rheaume, Freeston, Dugas, Letarte, & Ladouceur, 1995). However, it is universally conceptualized as a personality variable that underlies many psychological difficulties (Bieling, Israeli & Antony, 2004).

Although a number of different definitions and measures of perfectionism have been provided over the past two decades, one of the most popular and studied models of perfectionism was the one proposed by Hewitt and Flett (1991). They viewed perfectionism as a multidimensional construct that has both

intrapersonal and interpersonal content. Moreover, they identified three separate dimensions of perfectionism on the bases of their high standards: Socially prescribed perfectionism (a perception that others expecting one to be perfect and they are harsh-punitive judges), self-oriented perfectionism (setting excessive personal standards and stringently evaluating one's behavior) and other-oriented perfectionism (expectations of perfection that one has for others). Based on their conceptualization of perfectionism, they developed a scale consisting of three separate dimensions. They are clear that all three dimensions are pathological. However, Chang (2006) conducted a study with the aim of examining the links between perfectionism, stress and dimensions of psychological well-being among 265 college students. The findings revealed that socially prescribed perfectionism, and to a lesser degree, others-oriented perfectionism contributes to the experience of stress among college students. In contrast, self-oriented perfectionism does not seem to contribute in this population. Also, socially prescribed perfectionism was found to be significantly and negatively associated with all six dimensions of psychological well being. Thus, within Hewitt and Flett's (1991) model, socially prescribed perfectionism may represent the most harmful dimension among college students population.

On the contrary, earlier theorists such as Hamachek (1978) claimed that some forms of perfectionism are adaptive in achieving important goals and leading excellence. On the last decades, theoretical researches interest on perfectionism is based on the negative correlations, reasons and consequences. Does perfectionism always lead to difficulties in individuals' lives? The question whether perfectionism is a harmful disposition is asked many times in the literature. Hamachek (1978), in his early study, concluded that perfectionism has two dimensions, which are normal perfectionism and neurotic perfectionism. These two groups differ in the standards they set for themselves and to what extent they are satisfied with whatever they accomplished. Terry-Short, Owens, Slade and Dewey (1995) also concluded that there are two distinct types of perfectionism. These are positive and negative perfectionism. Similarly Rice and his colleagues (1998) identified two types of perfectionism, namely adaptive

and non-adaptive perfectionism. Adaptive perfectionism was described as having high standards, need for organization, order and tendency not to procrastinate. Maladaptive perfectionism, on the other hand, describes people who have an excessive concern over mistakes, doubts about their actions and a tendency to procrastinate. Contrary to the common belief that perfectionism is harmful, these researchers claim that perfectionism could include some positive characteristics and benefit individuals who have high standards. In conclusion, recent research suggests that perfectionism contain both adaptive and non-adaptive features (Hamachek, 1978; Terry- Short et al., 1995; Rice et al., 1998).

There has been a considerable interest in perfectionism. College counselors encounter perfectionist clients because of the high prevalence of perfectionism among college students. Grzegorek, Slaney, Franze and Rice (2004) reported that as many as two thirds of the college students' sample have been categorized as perfectionists. Considering the high prevalence of perfectionism and consequences of failure anxiety and anxious procrastination (Topman, Kruse, & Beijne, 2004), new approaches are needed in academic settings.

The role of perfectionist standards for procrastination is an area of research in the field of perfectionism. Perfectionism as a disposition has been stated as one of main causes of procrastination. There is a common belief that procrastination stems from excessively high standard setting behavior. Several authors suggest that there is a link between procrastination and perfectionism. For instance Burka and Yuen (1983) observed that procrastinators demonstrate many of the cognitive characteristics of perfectionism such as the tendency to endorse a continual success. Another similarity is; both perfectionism and procrastination's being related to increased endorsement of irrational beliefs (Beswick et al., 1988; Flett et al., 1992). Moreover, both procrastination and perfectionism are associated with excessive fear of failure (Solomon & Rothblum, 1984). Especially socially prescribed perfectionism was found to be related with procrastination (Flett et al., 1992; Flett, Hewitt, & Martin, 1995; Onwuegbuzie, 2000; Saddler & Sacks, 1993; Walsh & Ugumba-Agwunobi, 2002). According to Hamachek (1978) neurotic

perfectionists tend to procrastinate because even the idea of achieving a goal is so painful, and they are driven by their needs for perfection. Another construct; self-worth contingency, is a potential contributor to the relationship between perfectionism and procrastination.

In the literature, self-worth contingency is described by performance evaluations and social approval (Kuiper & Olinger, 1986). They described self-worth contingency as a tendency to link feelings of self worth with personal performance evaluations and social approval. Because both self-oriented and socially-prescribed perfectionists evaluate themselves by certain high standards, we can say that they possess contingent self-worth. This is a good explanation for why maladaptive perfectionism is more related to concerns about evaluations of others. Both procrastination and perfectionism are negatively correlated with level of self-esteem. Burka and Yuen (1983) claimed that procrastinators place unrealistic demands on themselves. According to them, procrastinators demonstrate many of the cognitive characteristics associated with perfectionism, including the tendency to endorse the importance of continual success.

On the basis of clinical and counseling observations, Burka and Yuen (1983) suggested that perfectionist procrastinators have an ideal notion of their abilities which remains untested because they delay working on the task at hand until it is too late to do a conscientious job. So, they use procrastination as a self-handicapping technique. By this way, they can attribute less than perfect result to the last minute effort rather than limited ability, and can protect their vulnerable self-esteem. While Burka and Yuen (1983) referred to perfectionism as having a role on procrastination and posited perfectionism as a behavioral disposition, Flett and Hewitt (1991) suggested that underlying motivation of perfectionism should be considered.

Blankstein Flett, Hewitt and Eng (1993) examined the relationship between dimensions of perfectionism and irrational fears, and found that both dimensions are correlated with fears of failure, making mistakes and loss of

control. However, only socially prescribed perfectionism was found to be related with more socially oriented fears, like looking foolish and being criticized. This resembles the relationship between procrastination and social approval. Because, procrastinators are most likely to delay tasks in order to serve plausible excuses for their failures. So, by procrastinating, they can protect themselves from negative evaluations of others, and maintain social approval and good impressions of themselves in the eyes of others. They are motivated by a desire to win social approval and self-handicapping is the most frequently used method of maintaining social approval and avoiding negative evaluations among those with high procrastination rates.

Saddler and Sacks (1993) attempted to determine if multidimensional perfectionism and academic procrastination were related to depression in college students. By using Multidimensional Perfectionism Scale, the Aitken Procrastination Inventory and the Beck Depression Inventory, they found that self-oriented and socially-oriented perfectionism and procrastination are independently related to depression.

In his study, Onwuegbuzie (2000) investigated the relationship between academic procrastination and perfectionism among 135 graduate students. By administering the PASS and the Multidimensional Perfectionism Scale, he found two important results. The first result is academic procrastination is significantly related to socially prescribed perfectionism and the second one is procrastination resulting from fear of failure is related to self-oriented perfectionism and socially prescribed perfectionism with others-oriented perfectionism serving as a suppressor. Academic procrastinators are mostly driven by how they are perceived by others and the extent to which they are expected to be perfect. Some may engage in perfectionism in order to show their effort to others and impress them.

In their study, Flett et al. (1992) examined the relations between individual differences in multidimensional perfectionism and procrastinatory behavior among 131 college students. Results showed that socially prescribed

perfectionism is broadly associated with procrastination. However, they did not find any significant relationship between self-oriented perfectionism and procrastination. Correlation analyses showed that socially prescribed perfectionism was not significantly correlated with both generalized procrastination and academic procrastination, especially among males. Fear of failure dimension was found to be associated with all perfectionism dimensions. However, this study did not answer why there's this difference between these two dimensions of perfectionism.

Solomon and Rothblum's (1984) study of correlations of procrastination revealed a procrastinators group with high levels of fear of failure and perfectionism. Ferrari (1992) claimed that procrastinators engaged in perfectionism because they feel anxious about how others will evaluate them. In fact it is hard to claim that; perfectionism causes procrastination or vice versa. We can also say that perfectionists choose to procrastinate in order to avoid others evaluation or failure to accomplish their highly impractical standards. On the other hand, Johnson and Slaney (1996), Muszynski and Akamatsu (1991) and Schouwenberg (1992) offer no relationship between procrastination and perfectionism.

Stöber and Joormann (2001) studied worry, perfectionism and procrastination together and tried to find out whether perfectionism and procrastination were related to worry. Procrastination and perfectionism were specific characteristics of worry by controlling anxiety and depression and whether there were differences with respect to amount of worry and pathological worry. They measured procrastination, perfectionism, worry, anxiety, and depression and aspiration level. Analyses revealed three main results. First of all, worry showed reliable and substantial relationship with procrastination and perfectionism from three core dimensions of perfectionism; concern over mistakes and doubts about actions were found significant. So perfectionist concern over mistakes and doubts about actions may be responsible for worriers' procrastination and also indecision. Moreover, results revealed no

significant correlation between personal standards and worry. Instead, worriers were found to be more likely to lower their standards when under stress. This is so because worriers do not try to be the best. They are just afraid of making mistakes.

In summary, literature shows extensive research reporting correlations among perfectionism with various psychological constructs and among them, procrastination. . Studies investigating the relationship between procrastination and perfectionism have found different correlations with each subscale of perfectionism. However, from those analyses, it is not evident whether the variables associated with perfectionism are antecedents or consequences. There is a lack of scientific evidence of the direction and strength of the relationships. This study will be providing analyses showing the strength and direction of the relationship between perfectionism and academic procrastination.

2.4 Research on College Student Procrastination in Turkey

In Turkey, procrastination has taken the attention of the researchers since the beginning of the 2000s. As far as our knowledge, there are four studies conducted on procrastination as unpublished masters or doctoral dissertations. ÇAKIRCI (2002) investigated the relationship between academic and general procrastination with perfectionism, self-efficacy and academic performance among 260 high school and 287 university students. Results showed that university students procrastinate more on both academic and general areas compared to high school students. However, among university students, procrastination levels did not differ in terms of grade. Among high school students, self-oriented perfectionism, socially prescribed perfectionism and age were found to be associated with academic and general procrastination positively. Also, boys were more likely to procrastinate than girls. On the other hand, university students' procrastination levels showed no difference in terms of gender. Interestingly, among university students, self-oriented perfectionism and academic performance were found to be negatively correlated with procrastination. In summary, results of the Çakır's study showed that

significant predictors of procrastination were academic performance and self-oriented and socially prescribed perfectionism.

Another study (Gülebağlan, 2003) focused on academic procrastination behavior with thinking and decision making styles among prospective teachers . Gülebağlan investigated the relationship between procrastination and perceived vocational efficacy professional experience, and type of branch among 472 elementary school teachers. The author developed an 18 item General Procrastination Scale and a 17 item Adult Life Procrastination Scale. Results of the study revealed that perceived vocational adequacy of the teachers was a significant predictor of general procrastination level, adult life procrastination level and procrastination in vocational life. While gender was not found to be a significant predictor of general procrastination scores, it significantly predicted the adult life procrastination scores. However, age was found to be significantly associated with levels of procrastination. That is to say; as age increases, procrastination scores decrease .

The other two studies investigated the procrastination behavior among university and high school students. For instance Özer (2005) investigated the procrastination behavior among 784 undergraduate students from 37 departments in METU. The author also translated and adapted the Procrastination Assessment Scale-Students (PASS) into Turkish. The results of this study revealed that 52% of METU students procrastinate on their academic tasks and the findings showed that male university students procrastinate more than females. Furthermore, students always or nearly always procrastinate the academic tasks of studying for an exam, writing a term paper and reading weekly assignments more than academic administrative tasks, attendance tasks and tasks related with school activities in general. Finally, factor analyses showed that, students' self-reported reasons for procrastination differ in terms of gender; females reported fear of failure and laziness, males on the other hand reported risk taking and rebellion against control as reasons for their procrastination behavior. However, results showed no difference in terms of the type of program enrolled.

In his doctoral dissertation, Balkis (2006) investigated the relationship between procrastination behavior, thinking style, decision-making styles in terms of psychosocial variables (gender, age, grade, major field, satisfaction with major field, time preferences for study, academic achievement, source of motivation and preferred activity in free time) among 984 prospective teachers enrolled in different departments of Pamukkale University. The results of his study showed that procrastination was negatively related to rational thinking and decision making style, while positively related to dependent, avoidant and spontaneous decision making styles.

In the Turkish procrastination literature, recommendations for further research included study of procrastination with larger and demographically diverse populations from different universities, different high schools in Turkey; study of various psychological variables that were investigated in the western literature, such as perfectionism, locus of control, self-esteem, self-monitoring, motivation, stress and illnesses, self-handicapping and learned helplessness.

To conclude, the review of the literature related to procrastination shows that procrastination behavior which has detrimental effects on both adult and student population has been increasing. Thus, procrastination which is claimed to include affective, cognitive and behavioral components, needed to be investigated through those dimensions in order to understand the nature and various motives behind this behavior. This study attempts to provide further information about the correlations of procrastination among university students. The next chapter describes the research participants and how the data was collected and analyzed.

CHAPTER III

METHOD

In this chapter there are six sections. The first section of the chapter summarizes the overall design of the study. In the second section the characteristics of the students participated in the study are described. The third section includes the data collection instruments. The data collection procedure is explained in the fourth section and data analysis in the fifth section. Finally limitations of the study are presented in the sixth section.

3.1. Overall Design of the Study

The overall design of the study is mainly survey and correlational. The aim of the study was to investigate the role of age, academic achievement, gender, depression and perfectionism on predicting procrastination levels of university students. This study was conducted with 384 undergraduate Middle East Technical University (METU) Faculty of Education students. Demographic Data Form, Multidimensional Perfectionism Scale (MPS), Procrastination Assessment Scale-Students (PASS), and Beck Depression Inventory (BDI) were administered to participants. The data of the current study was collected during the spring semester of 2006-2007. Descriptive statistics and multiple regression analyses were conducted to analyze the collected data.

3.2. Participants

The participants of this study were 384 (259 female and 123 male) volunteer undergraduate students, enrolled in five different departments (Computer Education and Instructional Technology (CEIT), Foreign Language Education (FLE), Early Childhood Education (ECE), Elementary Science Education (ESE) and Elementary Mathematics Education (EME) in

Faculty of Education at METU. The data was collected in the beginning of the spring semester of 2006-2007 academic year. Using the Mahalanobis distance with $p < .001$, 16 cases were identified as outliers. These cases were extracted from the study, thus leaving 368 cases for the main analyses of the current study. Participants' age ranged between 18 and 28 ($M = 21.45$ $SD = 1.63$) and GPA .75 to 3.93 ($M = 2.85$, $SD = 0.55$). Table 3.1 presents data related to the demographic characteristics of those 368 cases.

Table 3.1
Demographic Characteristics of Participants

Variable		n	%
Gender	Female	250	67.9
	Male	118	32.1
Department	CEIT	86	23.4
	FLE	85	23.1
	ECE	61	16.6
	ESE	63	17.1
	EME	73	19.8
Class	Freshmen	91	24.7
	Sophomore	77	20.9
	Junior	95	25.8
	Senior	105	28.5

3.3. Data Collection Instruments

Data were collected by a questionnaire packet including demographic data form; Multidimensional Perfectionism Scale (MPS), Procrastination Scale (PASS) and Beck Depression Inventory (BDI).

3.3.1 The Multidimensional Perfectionism Scale (MPS)

Perfectionistic tendencies of students were assessed by the

Multidimensional Perfectionism Scale (MPS) of Hewitt and Flett (1991). This scale is a 45-item self-report questionnaire, including three dimensions: Self-oriented Perfectionism, Socially Prescribed Perfectionism, and Others-oriented Perfectionism.

The first dimension, self-oriented perfectionism is setting high personal standards and strict evaluation of one's own behavior (15 items). Socially prescribed perfectionism involves the perceived demands that other people make on an individual (15 items). The last dimension of others-oriented perfectionism is the perfectionist beliefs and expectations towards other people (15 items). Items are rated from 1 "strongly disagree" to 7 "strongly agree". Eighteen items are reverse scored.

The Multidimensional Perfectionism Scale (MPS) was translated and adapted to Turkish by Oral (1999). Parallel to the original dimensions of Hewitt and Flett (1991) Oral reported three factors that explained 37% of variance in a sample of 333 METU students. The alpha coefficients were .91 for self-oriented perfectionism, .80 for the socially prescribed perfectionism and .73 for the others-oriented perfectionism.

Later on, Dinç (2001) and Yorulmaz (2002) conducted pilot studies to test the reliability and validity of translated MPS by Oral (1999). Dinç (2001) conducted her study with 210 students from different departments of METU and reported alpha coefficient of 0.82 for the total scale, 0.90, 0.83 and 0.74 for the self-oriented, socially prescribed and others-oriented perfectionism, respectively. Likewise, the full scale reliability was 0.70 in Yorulmaz's study (2002), reliability coefficients for the subscales were as follows; 0.88 for self-oriented, 0.78 for socially prescribed and 0.71 for others-oriented perfectionism. Overall, both Dinç and Yorulmaz found similar factor structures to both the original study (Hewitt & Flett, 1991) and Oral's study (1999). In conclusion, the studies indicated that the translated MPS by Oral (1999) is a reliable and valid measure for assessing the individual differences in perfectionism of Turkish population.

In the current study, internal reliability coefficients for the subscales of the Multidimensional Perfectionism Scale (MPS) were found to be .73 for the self-oriented perfectionism, .77 for the socially prescribed perfectionism, .55 for the other-oriented perfectionism and .71 for the total scale as well.

3.3.2 The Procrastination Assessment Scale-Students (PASS)

In this study, The Procrastination Assessment Scale-Students (PASS) developed by Solomon and Rothblum (1984) adapted to Turkish by Özer (2005) was used.

The PASS, is a 44 item inventory assessing procrastination tendencies in academic settings. Specifically it assesses affective, cognitive and behavioral components of procrastination. The PASS consists of two parts in which participants respond on a 5-point Likert scale. The first part, consisting of 18 items, assesses the prevalence of procrastination in six different 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. Each of six areas has three questions. The first one is assessing 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 second one is assessing 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 last one is assessing 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?”. For the first 18 items which assess 6 areas of procrastination, scoring is as follows. Because the definition of procrastination emphasizes both behavioral delay and psychological distress, the first two items (the degree of procrastination and the degree to which it presents a problem) are added to obtain a score

that can range from 2 to 10 points. 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 levels of the respondents (Solomon & Rothblum, 1984).

The second part of the PASS which includes 26 items provides a procrastination scenario describing a student procrastinating while 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 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 a procrastination summary score can be derived through scores from the first part of the PASS for the goal of measuring academic procrastination including the degree and/or prevalence of the behavior.

There are a number of studies that have indicated that PASS possesses adequate reliability and validity (Beswick et al., 1988; Ferrari, 1989; Onwuegbuzie, 2004; Senecal et al., 1995; Solomon & Rothblum, 1984). 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 that the scale highly reliable (alpha coefficient = .88). Onwuegbuzie (2004) carried out a study with 135 graduate students, and he found .85 coefficient alpha scores for total 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 et al., 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 current study, the first dimension of the PASS which is the prevalence of procrastination was used and internal reliability coefficient was found to be .66.

3.3.3 The Beck Depression Inventory (BDI)

It is a self-report instrument measuring the behavioral, cognitive, motivational and somatic symptoms of depression (Beck et al., 1979). The BDI is consisted of 21 items with 4 options for each item scored from 0 to 3. The possible total score has a range from 0 to 63, where scores between 0 to 9 were considered as 'non-depressed', 10 to 18 were considered as 'mildly depressed', 19 to 25 as 'moderately depressed' and 26 and above as 'severely depressed' (Beck et al., 1979).

The standardization and adaptation studies of BDI were conducted by Tegin (1980) and Hisli (1989). The split half reliability of .78 was found with university sample (Tegin, 1980), .74 for normal sample (Hisli, 1989) and .61 for depressives (Tegin, 1980). The concurrent validity of the scale, when compared to Minnesota Personality Inventory, was found to be .63, for the psychiatric sample (Hisli, 1989), and .50, for the university sample (Hisli, 1989). Hisli also indicated that the cut score of BDI for the Turkish sample was 17. In this study BDI adapted by Hisli (1989) was used. In the current study, internal reliability coefficient was

found to be .87 for the Beck Depression Inventory (BDI).

3.4 Procedure

The data was collected during the 2007 spring semester. A questionnaire packet, including MPS, PASS and BDI and also a demographic form asking for gender, age, department, grade level and GPA, was used to collect data. Prior to data collection, necessary permission was taken from the METU Registers Office, Faculty of Education Dean's Office and course instructors. Administration of the packet took place during the class hours. All instruments took approximately 30 minutes to complete.

3.5 Data Analysis

Three multiple regression analyses were conducted in order to examine whether age, GPA, depression and perfectionism would predict procrastination levels of male, female students and the total sample. Differences between the procrastination levels of participants in relation to gender were analyzed using independent samples t-test. SPSS 10.0 (Statistical Package for Social Sciences) for windows was used to perform data analyses.

3.6 Limitations of the Study

Although the sample size (368) is satisfactory for conducting a multiple regression analyses, all participants were METU faculty of education students, there is a limitation of external validity. Thus, generalization of the findings to Faculty of Education students in different universities or students in other faculties of METU is limited. Data were collected by the use of only one instrument for the assessment of procrastination, one for perfectionism and one for depression. Although the PASS, MPS and BDI were easy to administer and psychometrically adequate, results of the study should in no way be considered an endorsement for the PASS, MPS and BDI because several similar instruments

are available for assessing these three constructs; procrastination, perfectionism and depression. Finally, self-report nature of the measures might not be reflecting the actual procrastination level, depression or perfectionism of the participants.

CHAPTER IV

RESULTS

This chapter presents descriptive statistics including means and standard deviations for the quantitative predictor variables; intercorrelations between predictor variables and the criterion variable; and the results of three multiple regressions analysis for the total sample, female and male participants.

4.1 Correlation Coefficients, Means and Standard Deviations among the Predictor Variables and the Criterion Variable

Prior to regression analyses, in order to find strength and direction of the relationship between the predictor variables and the criterion variable, the Pearson Product-Moment Correlation Coefficients were computed for the total sample, female and male students.

Table 4.1.1
Means, Standard Deviations and Pearson Product-Moment Correlation Coefficients among Predictor Variables and Criterion Variable for the Total Sample

Variables	Means	SD	1	2	3	4	5	6	7
1. Procrastination	36.41	6.23	-						
2. Age	21.45	1.64	.01	-					
3. GPA	2.85	.55	-.28**	.02	-				
4. Depression	10.99	7.73	.18**	-.14**	-.09	-			
5. Self-oriented perfectionism	67.12	11.39	-.31**	-.08	.14**	.04	-		
6. Socially-prescribed perfectionism	42.72	9.19	-.05	-.11*	-.08	.24**	.5**	-	
7. Others-oriented perfectionism	52.04	8.24	.22**	.11*	-.05	.00	-.16**	-.13*	-

** $p < .01$

* $p < .05$

The results of Pearson Correlations for the total sample revealed statistically significant but weak correlations (See Table 4.1.1). Academic procrastination scores of students were significantly and positively correlated with depression ($r = .18, p < .01$) and others-oriented perfectionism ($r = .22, p < .01$). On the other hand, self-oriented perfectionism ($r = -.31, p < .01$) and GPA scores ($r = -.28, p < .01$) were found to be significantly and negatively correlated with academic procrastination scores. Since, the higher scores in Procrastination Scale (PASS) indicates high academic procrastination behavior, these relationships suggest that, students who score high in depression and others-oriented perfectionism; score low in self-oriented perfectionism and GPA, are more likely to procrastinate.

*Table 4.1.2
Means, Standard Deviations and Pearson Product-Moment Correlation Coefficients among Predictor Variables and Criterion Variable for Females*

Variables	Means	SD	1	2	3	4	5	6	7
1. Procrastination	36.08	5.72	-						
2. Age	21.38	1.61	-.04	-					
3. GPA	3.01	.47	-.22**	.07	-				
4. Depression	10.74	8.06	.24**	-.13*	-.09	-			
5. Self-oriented perfectionism	66.99	11.54	-.33**	-.12	.12	.03	-		
6. Socially-prescribed perfectionism	41.88	9.36	-.04	-.16**	-.05	.24**	.5**	-	
7. Others-oriented perfectionism	52.18	8.59	.29**	.14*	-.04	.04	-.26**	-.17**	-

** $p < .01$

* $p < .05$

As can be seen from the Table 4.1.2, the results of Pearson Correlations for the female students revealed statistically significant but weak correlations. Academic procrastination scores of female university students were significantly and positively correlated with depression ($r = .24, p < .01$) and others oriented perfectionism ($r = .29, p < .01$). Significant negative correlations were also found between academic procrastination, GPA ($r = -.22, p < .01$) and self-oriented

perfectionism ($r = -.33, p < .01$). Overall results presented that, female students with higher depression and others-oriented perfectionism scores and lower self-oriented perfectionism and GPA scores tend to have higher academic procrastination scores.

*Table 4.1.3
Means, Standard Deviations and Pearson Product-Moment Correlation Coefficients among Predictor Variables and Criterion Variable for Males*

Variables	Means	SD	1	2	3	4	5	6	7
1. Procrastination	37.11	7.16	-						
2. Age	21.59	1.68	-.07	-					
3. GPA	2.50	.56	-.24*	.03	-				
4. Depression	11.55	6.99	.03	-.17	-.03	-			
5. Self-oriented perfectionism	67.42	11.11	-.30**	-.01	.21*	.04	-		
6. Socially-prescribed perfectionism	44.52	8.57	-.16	-.02	-.05	.23*	.51**	-	
7. Others-oriented perfectionism	51.78	7.46	.12	.03	-.11	-.08	.07	-.02	-

** $p < .01$

* $p < .05$

As Table 4.1.3 presents, correlations among the measures of the present study revealed that academic procrastination scores of male university students were significantly and negatively correlated with GPA ($r = -.24, p < .05$) and self-oriented perfectionism ($r = -.30, p < .01$). However, these statistically significant correlations were weak. The results suggest that male students with lower self-oriented perfectionism and lower GPA scores tend to have higher academic procrastination scores.

4.2 Predictors of Academic Procrastination: Age, GPA, Depression and Dimensions of Perfectionism

The three multiple regression analyses were conducted for the total sample female and male students to examine whether the three sets of variables (Age, GPA, depression and perfectionism) would predict the academic procrastination scores of students.

4.2.1 Predictors of Academic Procrastination for the Total Sample: Age, GPA, Depression and Dimensions of Perfectionism

The first multiple regression analysis was conducted for the total sample. The age and GPA that were entered as first predictors, accounted for a significant amount of variation in procrastination scores ($R^2 = .08$, adjusted $R^2 = .071$, $F(2, 349) = 14.46$, $p < .001$). When the depression scores added to the model as a predictor, the model accounted for the %10 of the variation in procrastination scores ($R^2 = .101$, adjusted $R^2 = .093$, $F(1, 348) = 9.41$, $p < .01$). Finally, three dimensions of perfectionism added to the model as the third predictor set. Results indicated that combination of three sets of variables explained 21 % of variance in procrastination scores ($R^2 = .213$, adjusted $R^2 = .199$, $F(3, 345) = 16.36$, $p < .001$). Accordingly the findings show that GPA ($\beta = -.208$) contributed to the equation at the .001; depression ($\beta = .15$) contributed to the equation at the .01; self-oriented perfectionism ($\beta = -.294$) at the .001 and others-oriented perfectionism ($\beta = .167$) contributed to the equation at the .01 level. In the overall model, 21% of the variability in the procrastination scores was predicted by GPA, depression scores and two dimensions of perfectionism. As the semipartial correlations in Table 4.2.1 indicated, self-oriented perfectionism was the most important and significant predictor of academic procrastination with a significant regression weight, followed by GPA, others-oriented perfectionism and depression. Both self-oriented perfectionism and GPA contributed negatively to the academic procrastination among faculty of education students.

Table 4.2.1 displays the correlations between the variables, the unstandardized regression coefficients (B), standard error of estimate (SE), the standardized regression coefficients (β), (p) the semipartial correlations (sr^2) after entry of all predictors.

Table 4.2.1

Results of the Multiple Regression Analysis for the Age, GPA, Depression, and Perfectionism (Self-Oriented Perfectionism, Socially Prescribed Perfectionism, Others-Oriented Perfectionism) for the Total Sample

Variables	B	SE	β	p	sr^2
Step 1					
Age	.001	.02	.021	.68	.021
GPA	-.363	.06	-.276	.00	-.276***
Step 2					
Age	.018	.02	.039	.44	.039
GPA	-.345	.06	-.263	.00	-.262***
Depression	.317	.10	.158	.002	.156**
Step 3					
Age	.002	.02	.005	.91	.005
GPA	-.274	.06	-.208	.00	-.203***
Depression	.302	.10	.150	.003	.144**
Self-oriented perfectionism	-.287	.06	-.294	.00	-.244***
Socially prescribed perfectionism	.052	.05	.059	.31	.048
Others-oriented perfectionism	.205	.06	.167	.001	.163**
				R ² = 0.21	
				Adjusted R ² = 0.19	
				R= 0.46***	

***p<.001

**p<.01

*p<.05

The multiple regression results suggest that higher levels of depression and others-oriented perfectionism and lower levels of GPA and self-oriented perfectionism were found to be associated with higher levels of academic procrastination.

4.2.2 Predictors of Academic Procrastination for Females: Age, GPA, Depression and Dimensions of Perfectionism

Taking into consideration the literature highlighting significant gender difference in procrastination level (Milgram, Marshevsky, & Sadeh, 1995; Solomon and Rothblum, 1984) and results of independent sample t-test that indicated gender differences in academic procrastination levels of female and male participants ($t(365) = -3.75, p < .001$), two separate multiple regression analyses were conducted for female and male students.

In the first multiple regression analysis conducted for females, age and GPA were entered into equation first. Result indicated that the GPA accounted for a significant amount of procrastination level, $R^2 = .05$, adjusted $R^2 = .04$, $F(2, 239) = 6.04, p < .01$. In the second step, depression scores added to the model. Results indicated that linear combination of two sets of variables significantly related to procrastination ($R^2 = .09$, adjusted $R^2 = .08$, $F(1, 238) = 11.9, p < .01$). In the third step with three dimensions of perfectionism added to the equation and the model was significant $R^2 = .24$, adjusted $R^2 = .22$, $F(3, 235) = 15.2, p < .001$. Accordingly the findings show that GPA ($\beta = -.145$) depression ($\beta = .188$), self-oriented perfectionism ($\beta = -.326$) others-oriented perfectionism ($\beta = .20$), significantly contributed to the prediction of academic procrastination (See table 4.2.2). In the overall model, 24% of the variability in the female students' procrastination scores was predicted by GPA, depression scores, self-oriented perfectionism and others oriented perfectionism. As the semipartial correlations in Table 4.2.2 indicated, self-oriented perfectionism was the most important and significant predictor of academic procrastination with a significant regression weight, followed by others-oriented perfectionism, depression and GPA.

Overall, higher levels of depression and others-oriented perfectionism were found to be associated with higher levels of academic procrastination among female students. On the other hand, lower levels of GPA and self-oriented

perfectionism were associated with higher levels of academic procrastination.

Table 4.2.2 displays the correlations between the variables, the unstandardized regression coefficients (**B**), standard error of estimate (SE), the standardized regression coefficients (β), (*p*) the semipartial correlations (*sr*²) after entry of all predictors.

Table 4.2.2

Results of the Multiple Regression Analysis for the Age, GPA, Depression, and Perfectionism (Self-Oriented Perfectionism, Socially Prescribed Perfectionism, Others-Oriented Perfectionism) for Females

Variables	B	SE	β	<i>p</i>	<i>sr</i> ²
Step 1					
Age	-.006	.02	-.015	.81	-.015
GPA	-.313	.09	-.218	.001	-.217**
Step 2					
Age	.003	.02	.007	.90	.007
GPA	-.287	.09	-.200	.001	-.199**
Depression	.390	.11	.215	.001	.213**
Step 3					
Age	-.020	.02	-.047	.42	-.046
GPA	-.208	.08	-.145	.01	-.142*
Depression	.341	.10	.188	.002	.180**
Self-oriented perfectionism	-.297	.06	-.326	.00	-.268***
Socially prescribed perfectionism	.081	.05	.098	.16	.081
Others-oriented perfectionism	.225	.06	.202	.001	.193**
				R ² = 0.24	
				Adjusted R ² = 0.22	
				R= 0.38***	

****p*<.001

***p*<.01

**p*<.05

4.2.3 Predictors of Academic Procrastination for Males: Age, GPA, Depression and Dimensions of Perfectionism

The third multiple regression analysis was conducted for male students. The age and GPA that entered equation first accounted for the significant amount of procrastination level, $R^2 = .06$, adjusted $R^2 = .04$, $F(2, 107) = 3.35$, $p = .039$. In the second step with depression scores added to model and result was not significant, $R^2 = .06$, adjusted $R^2 = .03$, $F(1, 106) = .19$, $p = .66$. In the third step, with three dimensions of perfectionism added to the model and results were significant ($R^2 = .15$, adjusted $R^2 = .10$, $F(3, 103) = 3.43$, $p = .02$). Accordingly the findings show that self-oriented perfectionism ($\beta = -.246$) contributed to the equation at the .05. In the overall model, 15% of the variability in the male student procrastination scores was predicted by the GPA, depression scores and self-oriented perfectionism. As the semipartial correlations in Table 4.2.3 indicated, self-oriented perfectionism was the most important and significant predictor of procrastination scores of male students with a significant regression weight. In conclusion, the results of multiple regression analysis for males indicated that lower levels of self-oriented perfectionism were associated with higher levels of academic procrastination.

Table 4.2.3 displays the correlations between the variables, the unstandardized regression coefficients (B), standard error of estimate (SE), the standardized regression coefficients (β), (p) the semipartial correlations (sr^2) after entry of all predictors.

In general, the results of multiple regressions for the total sample and female students suggest that students with higher levels of depression and others-oriented perfectionism and lower levels of GPA and self-oriented perfectionism are more likely to procrastinate. Furthermore, lower levels of self-oriented perfectionism were found to be associated with higher levels of procrastination among males. However, age and socially prescribed perfectionism did

not explain any significant variance neither in the total sample nor among female and male students.

Table 4.2.3

Results of the Multiple Regression Analysis for the Age, GPA, Depression, and Perfectionism (Self-Oriented Perfectionism, Socially Prescribed Perfectionism, Others-Oriented Perfectionism) for Males

Variables	B	SE	β	p	sr ²
Step 1					
Age	.032	.04	.068	.46	.068
GPA	-.329	.13	-.234	.01	-.234*
Step 2					
Age	.035	.04	.075	.43	.074
GPA	-.327	.13	-.233	.01	-.233*
Depression	.099	.23	.041	.66	.041
Step 3					
Age	.035	.04	.074	.42	.073
GPA	-.231	.13	-.164	.08	-.159
Depression	.182	.23	.076	.43	.072
Self-oriented perfectionism	-.262	.12	-.246	.02	-.203*
Socially prescribed perfectionism	-.057	.11	-.056	.61	-.046
Others-oriented perfectionism	.165	.13	.114	.22	.111
				R ² = 0.15	
				Adjusted R ² =0.96	
				R= 0.49***	

***p<.001

**p<.01

*p<.05

CHAPTER V

DISCUSSION

Throughout this section, the results of the study will be discussed in relation to relevant literature, implications of the findings and recommendations for the future research will be presented.

5.1.1 Predictors of Academic Procrastination for the Total Sample: Demographic Variables, Depression and Dimensions of Perfectionism

The main aim of this study is to investigate the role of age, academic achievement, depression and perfectionism (self-oriented, socially prescribed and other-oriented perfectionism) in predicting academic procrastination among the faculty of education students. In the overall model, 21% of the variability in the procrastination scores was predicted by academic achievement, self-oriented perfectionism, others-oriented perfectionism and depression. However, age and socially prescribed perfectionism were found to have no significant contributions in predicting academic procrastination. In the model, self-oriented perfectionism was the most important and significant predictor of procrastination with a significant regression weight followed by academic achievement, others-oriented perfectionism and depression. More specifically, findings showed that lower levels of self-oriented perfectionism and academic achievement, higher levels of others-oriented perfectionism and depression lead to higher procrastination scores among undergraduate faculty of education students.

According to current findings, students who have high self-oriented perfectionism scores tend to have lower procrastination scores. That is; if individuals impose perfectionist expectations to themselves, they will be less likely to procrastinate. This finding coincides with the negative correlation found between procrastination, perfectionism and (Busko, 1998; Frost et al. 1990)

dimensions of perfectionism (Flett et al., 1992; Solomon & Rothblum, 1984). Taking into account the Hewitt and Flett's (1991) suggestion about the association between perfectionism, both adaptive characteristics and maladaptive characteristics, we can conclude that in this study, some adaptive characteristics of self-oriented perfectionism might have shown itself in predicting procrastination tendency in a negative manner. Another, reason behind this finding may be that, students who are self-oriented perfectionists are motivated to achieve, have time management skills, deal with stressful situations better and are less likely to postpone academic tasks.

Some researchers have theorized that perfectionism is not always associated with negative constructs. For instance, factor analysis of the two multidimensional perfectionism scales; Frost et al.'s (1990) and Hewitt and Flett's (1991) yielded two distinguishable factors. Frost et al. (1990) named the first factor as "positive strivings" and the second factor as "maladaptive evaluation concerns". Hewitt and Flett's (1991) self-oriented perfectionism and others-oriented perfectionism and Frost et al.'s (1990) high standards and organization scales loaded on the positive striving factor. Consistent with this classification, the current study found that self-oriented perfectionism is negatively associated with academic procrastination. That is, the higher the self-oriented perfectionism, the lower the procrastination scores. On the other hand, contrary to the findings of Frost et al. (1990), the results of the current study showed positive relationship between others-oriented perfectionism and academic procrastination. That is, those university students who hold high standards for others are more likely to procrastinate more compared to the ones who have lower others-oriented perfectionism scores. This difference may result from cultural or socio-demographic differences among the samples of these two studies. In the study of Frost et al. (1990) all participants were female and they were enrolled in psychology department of a university of England. However, in the current study both male and female undergraduate students who are enrolled in five different departments of Faculty of Education at METU participated. In this respect, the differences in the participated sample should be taken into consideration while

reviewing the findings of these two studies.

While others-oriented and self-oriented perfectionism was found to predict academic procrastination, socially prescribed perfectionism did not explain the procrastination level significantly in the current study. In the literature, there has been no consensus on the significant association between socially prescribed perfectionism and procrastination. Furthermore, Hart et al. (1998) concluded that socially prescribed perfectionism is associated with a high self-efficacy, which is defined as beliefs concerning one's ability to perform actions/engage in behavior that will yield expected outcomes and perceived irrational beliefs causing failures, lies outside of the individual. However, in self-oriented and others-oriented perfectionism, the unrealistic beliefs those lead to a low self-efficacy lies within the individual. This difference again proves the multidimensional nature of perfectionism and the possibility of possessing both maladaptive and adaptive features in one construct.

There have been a number of studies conducted on investigating the mediator and moderator variables between these two constructs. For instance, Fee and Tangney (2000) stated that shame is a moderator variable between socially prescribed perfectionism and procrastination. They stated that perfectionists, who are not vulnerable to feelings of shame, would need procrastination less. On the other hand, the study of Flett et al. (1992) revealed that the fear of failure is the common feature of socially prescribed perfectionism and procrastination. Klibert, Langhinrichsen-Rohling and Saito (2005) pointed out that self-oriented perfectionism had negative relationships with many of the maladaptive variables measured, such as depression, suicide proneness, procrastination, shame and guilt. They also stated that socially prescribed perfectionism is not associated with procrastination. Consistent with the Klibert et al.'s (2005) findings in this study, socially prescribed perfectionism was not found to be significantly associated with procrastination.

In addition to socially prescribed perfectionism, in the current model, age

did not explain procrastination level significantly. In the literature there has not been many studies claiming that age is a significant predictor of procrastination. However, there are some researchers who stated that reasons of procrastination may differ with age (Watson, 2001). Contrary to this study, the current findings revealed that procrastination tendency among faculty of education students did not differ with age. Onwuegbuzie (1999) stated that students procrastinate more as they grow older, however, age was not found to be a significant predictor of procrastination tendency in the current sample whose mean age was 21.45 and can be considered as old for undergraduate students.

Academic achievement was found to be the second strong predictor of procrastination. The Faculty of Education students who have lower GPA scores tend to have higher procrastination scores. This finding overlaps with the studies of Fritzsche, Young and Hickson (2003) and Owens and Newbegin (2000) that showed negative relationship between academic performance and procrastination scores. One possible explanation for this finding might be that, students who procrastinate may not be accomplishing the academic tasks such as writing term papers, studying for an exam, or reading weekly assignments on time. Because of not doing academic work properly, it's possible that they get lower grades. As they get low grades, academic tasks may seem as aversive tasks to those students, and lead them to procrastinate regularly. Thus, they might be caught in a vicious cycle of procrastinating and failure in academic work.

Another significant predictor of procrastination found in this study is depression. In the literature depression was also found to be positively and significantly related with procrastination. Those studies related with depression showed that negative self-belief and irrational beliefs (Beck et al., 1979), low self-esteem (Lewinson et al., 1997) can play an important role on the development of depression. Similarly, literature related to procrastination showed that the individuals who are in depression and those who have a tendency to procrastinate share the same negative self-beliefs, irrational beliefs (Solomon & Rothblum, 1984) and low self-esteem (McCown, Johnson, & Petzel, 1988; Beswick et al.,

1988). Moreover, considering the fact that procrastination leads to negative consequences; like impeded progress, lost opportunities, strained relationships, low self-esteem, self blame, regret, despair, subjective discomfort or anxiety; individuals who have a tendency to procrastinate may also have a tendency to experience depressive symptoms. For instance, Washington (2004) aimed to examine the relationship between depression and procrastination among 420 graduate and professional students. Analysis of the study showed that there is a statistically significant relationship between levels of procrastination and degree of depression. Findings of Lay (1996) and Washington (2004) also yielded similar results.

Overall results suggest that, students who have tendency to procrastinate, tend to be more depressed, have low academic performance, set high expectations for others while tend to set not too excessive standards for themselves.

5.1.2 Predictors of Academic Procrastination for Females and Males: Demographic Variables, Depression and Dimensions of Perfectionism

The results of the second regression analysis predicting procrastination scores of female students showed that variables in the model explained %24 of the total variance for academic procrastination scores. Similar to the findings of the total sample; self-oriented perfectionism is again the most important and significant predictor of academic procrastination among female students. The other significant predictors of procrastination tendency among females are others-oriented perfectionism, depression and academic achievement. However, age and socially prescribed perfectionism were found to have no significant contribution in predicting procrastination levels.

In the overall model for male students, self-oriented perfectionism as the only significant predictor of academic procrastination explained 15% of the variability in the males' procrastination scores. However, the total amount of variance in procrastination scores explained by the model among males

was less than the variance explained by the model for the total sample and females. This finding may imply that there may be other possible predictors explaining the procrastination scores of male students.

The issue of gender differences in procrastination can be explained by two ways; one in terms of the correlates of procrastination, second in terms of the amount of procrastination by males and females. Current results revealed that male students had higher procrastination scores than female students. Contrary to the findings of this study, some researchers (Haycock et al., 1998) reported a greater risk of procrastination for women than men, and explained this finding by the greater levels of procrastination is related to the anxiety experienced by women.

Results of this study also revealed that procrastination scores of males and females are explained by different predictor variables in different amounts. For instance, while females' procrastination was explained by academic achievement, depression, self-oriented perfectionism and others oriented perfectionism, from those predictor variables, only self-oriented perfectionism contributed significantly to the prediction of males' procrastination. One possible explanation for the gender difference in academic procrastination may be the influence of differentiated parenting styles towards males and females. According to Dökmen (1996), contrary to other countries where there is no difference in the behaviors of parents towards different sexes of children, the parents in Turkey behave differently to their sons and daughters. Expectations of parents from their sons and daughters also differ. For instance, Kağıtçıbaşı (1981) stated that mothers expect their sons to be well educated, independent and high earning, while they expect their daughters to be good wives and mothers. Frost et al. (1991) have concluded that individuals respond to harsh and excessively controlling attitudes of their parents by procrastinating. It can be concluded that boys who place high importance on their parents' expectations and evaluations about them may fear that they will be disapproved and rejected by their parents, thus they set

excessively high standards to meet, and whenever possible they are more likely to procrastinate.

In conclusion, the findings of the current study showed that the role of gender and parenting styles in procrastination needs to be clarified by further understanding the core of this problem and its etiology.

5.2 Implications

Several implications may be drawn from the findings of the current study. The results of the current study revealed that academic procrastination can be explained by the academic achievement, degree of depression and the dimensions of perfectionism. From those predictor variables, the most significant predictor of academic procrastination among faculty of education students enrolled in different programs in METU Education Faculty was found to be the self-oriented perfectionism. However, the question whether perfectionism always leads to difficulties in one's life can be answered by the findings of the current study, which implies the fact that self-oriented perfectionism may be an adaptive feature in predicting low tendency to procrastinate. Thus this implication has been supported by the theories (Frost et al, 1990; Hamachek, 1978; Pacht, 1984; Rice et al, 1998; Terry-Short et al, 1995) which propose perfectionism to be associated with both adaptive and maladaptive features.

However some researchers stated that perfectionism diminishes the effectiveness of the intervening strategies and leads to the onset of distress (Blatt, 1995). They claimed that it is critical to assess perfectionism before it becomes a problem. In fact, the more effective way of dealing with perfectionism may be dealing with the all-or-none approach and low satisfaction from achievement. Individuals who possess an all-or-none approach have a high tendency to delay the completion of a task, because of the fear that the task will not meet the unrealistically high standards they hold. Considering the fact that perfectionism may also be detrimental on students' academic performance by leading

procrastination on academic tasks, we can conclude that students who have a tendency to hold unrealistic standards for both themselves and others should be identified at the onset of this tendency and should be recruited to the educational groups by the university counseling center in order to deal with those irrational all-or-none thinking pattern. In this regard, preventive psychological counseling will be helpful in identifying the problem and taking appropriate actions to guide those students who have a high tendency to procrastinate, develop maladaptive perfectionism and experience depressive symptoms.

According to the results of the current study, there is a significant positive correlation between procrastination and depression. Thus, this finding points out that, depressive students may be more under risk in terms of procrastination and also those procrastinating students may be more prone to experience depressive symptoms.

Another important implication of the current study can be drawn from the differences in the strength of the predictor variables between males and females. This finding underlines the importance of taking into account the different factors that contribute the male and female students' procrastination while developing and implementing preventive programs in university campuses.

Literature (e.g., Pychyl et al., 2002) investigated the relationship between procrastination and parenting style. In the current study, parenting styles were not included as predictor variables for procrastination. Yet in the light of this evidence, we can infer that parenting styles which are differentiated for males and females in Turkey may be an important factor in explaining the gender differences. In sum, these results may reflect the cultural differences in terms of gender roles and socialization process in a Turkish sample of university students that should be investigated in conjunction with procrastination and perfectionism in future studies.

Although the literature discusses the parents as authority figures, the role

of parents as models have not been investigated in relation with the development of procrastination in the children. In this respect, future studies investigating the influence of parents on personality traits should also consider the procrastination as a learned behavior from significant others. Furthermore, whether those university students live with their parents or not should also be questioned in order to investigate the effects of parental influence on procrastination behavior.

If, in fact such personality traits as procrastination and perfectionism, actually stem from the way that individuals' parents behave as many researchers claim, the onset of those problems may most probably be before getting into university. Thus, preventive strategies should be employed in elementary school years when the personality starts being shaped.

5.3 Recommendations for Further Research

There are certain methodological weaknesses of the current study. The first one concerns a problem about the generalizability of the results. This study aimed to investigate the predictive roles of age, academic achievement, depression and perfectionism on academic procrastination tendency among faculty of education students enrolled in different programs of Middle East Technical University (METU) Education Faculty. Considering the facts that only the students of METU, being used in the analysis and METU being a highly competitive university, we can say that this is a special sample and the results are limited to this sample. Therefore, future studies conducted with larger, demographically more diverse samples from different universities, different faculties and from different grade levels will be helpful in extending the generalization and strengthening of the findings.

In the current study, the PASS, MPS and BDI were administered to university students at one point in time and it may not be possible to assert that these patterns are stable. Recent or specific events on the day of assessment could have led students to describe themselves in such a manner. Therefore, a test-

retest analysis would be required to decide whether these patterns are consistent over time or not. Additionally, the design of the study is cross-sectional. Thus, future research would benefit from longitudinal studies which could provide more information about the nature of procrastination, perfectionism and depression among university students. Future studies that consider how these variables interact across time/in time will be essential. Exploring the onset and development of those personality variables and also the interaction between them through university education would be helpful in identifying when these variables become dominant, pervasive and dysfunctional. Moreover, in the current study the results are based on self-report responses and in this kind of survey type studies participants may be subject to social desirability demands and response biases. Considering the fact that procrastination is best understood when it is evoked in a context of a particular task, future studies may be conducted by utilizing context-specific measures of this construct.

Contrary to the literature on dimensions of perfectionism which mostly found socially prescribed perfectionism as having the highest correlation with procrastination and others-oriented perfectionism as having no association with procrastination, the present study found that socially prescribed perfectionism had no significant relationship and others-oriented perfectionism had significant relationship with procrastination in this sample. Therefore, further research might investigate the possible cultural effects of these findings.

In the current study, 21% of the variability in the procrastination level was predicted by the academic achievement, depression scores and three dimensions of perfectionism. Thus, we assume that many other variables may explain the remaining variance of the procrastination level. It is expected that further research investigating various personality variables such as self-esteem, motivation, locus of control, attribution styles, time management, Big-Five personality factors, negative affect, anxiety, and irrational beliefs and also parenting styles will help researchers, clinicians and counselors to gain a wider scope of the nature and causal factors of procrastination and to gain an understanding on possible

moderative and mediative effects of those variables in procrastination tendencies of Turkish samples.

Lastly, considering the fact that the research area of procrastination has just gained attention of the researchers in Turkey, there are a limited number of measurement instruments for this behavior. PASS which is adapted to Turkish by Özer (2005) is the only instrument measuring the procrastination behavior among students. Because of having a great number of items, students may have difficulties in concentrating on such a long instrument and answering those items. So, another suggestion for future studies may be to develop effective scales for measuring both academic and general procrastination behavior.

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